



Commitment Systems in Cross-boundary Work

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Work increasingly takes place across organizational boundaries. This has implications for workers' commitments to a plethora of targets, including the organization and the client, as well as for the conflicting nature of the interrelation between these commitments. In this paper, we draw on commitment system theory (CST), which views commitment as a malleable and interconnected system. Using a pragmatic abductive and quantitative discovery approach, we distinguish and develop commitment systems to consist of *strength*, including the multiple targets and types of commitment, as well as *interaction* between commitments, including *coupling* and *nature*. In particular, we develop a theoretical understanding of the *nature* dimension by identifying two target-neutral types of conflict and one context- and target-specific type of conflict. Three commitment systems are identified: 'balanced system', 'conflicting system', and 'detached system'. Furthermore, we provide insights into how job demands resources and contextual job aspects influence membership of these commitment systems. This paper is the first to empirically explore commitment as a system, and it advances the theoretical understanding of commitment systems in a cross-boundary space. Our study discusses the theoretical, methodological and practical implications for cross-boundary organizations that compete with their clients for the commitment of their employees.

Introduction

Recent changes in the world of work mean that work is increasingly taking place across organizational boundaries. Indeed, these boundaries have become blurred, as products and services are delivered in close collaboration with clients to reduce costs, improve flexibility and co-create knowledge (Cappelli and Keller, 2013; Heaphy *et al.*, 2018; Marchington, Rubery and Grimshaw, 2011; Weil, 2019). Consequently, organizations often manage people they do not employ and employ people they do not manage (Kinnie and Swart, 2012; 2019). Such triadic arrangements among the individual, the organization, and their client(s) have impor-

tant implications for the management of workers' commitments (van Rossenberg *et al.*, 2018).

Previous research has given some insights into the implications of cross-boundary issues at the organizational level. It is known that cross-boundary work creates tensions between the organization and the client (Collins and Butler, 2020; Donnelly, 2011; Olsen *et al.*, 2016; van Rossenberg *et al.*, 2018). However, we know little about the perceptions, experience, and consequences of such tensions at the individual level (Borg and Söderlund, 2014; Olsen *et al.*, 2016). Insights into this are relevant and timely, given how recent events have limited engagement and communication between the worker, the organization, and the client, as

observed in particular in information technology (IT) and professional services (Collins and Butler, 2020; Shankar, 2020).

Recent scholarship has urged researchers to jointly study commitment targets and types (Klein, Brinsfield and Cooper, 2020a; Loscher, Ruhle and Kaiser, 2020), as well as considering commitment targets that are specific to the work context (Meyer, 2016; van Rossenberg et al., 2018). The recently developed Commitment System Theory (CST) (Klein, Solinger and Dufлот, 2020b) provides a fitting theoretical grounding for this purpose. CST views the overall construct of commitment as a dynamic system, in which multiple commitments are interconnected structures developing over time. CST is particularly recognizant of the role of context in shaping the commitment system, therefore drawing on this theoretical framework will provide a deeper understanding of workplace commitment in the context of cross-boundary work.

Following a pragmatist abductive approach, we draw on CST (Klein, Solinger and Dufлот, 2020b) with the aim of extending this theory in the light of the cross-boundary context. We draw on CST to further develop and identify the elements of the commitment system, including the strength of commitments and the interrelation between commitments. In particular, we extend and provide further conceptual clarity to the interrelation by identifying two dimensions: *coupling* and the experienced *nature* of the interrelation. The *nature* of the interrelation is developed by identifying and exploring how commitments are experienced in the cross-boundary context. Furthermore, we develop insights into when and how commitment systems are shaped based on job demands, resources and contextual factors. An overview is provided in Figure 1. We specifically ask: *How do individuals experience commitment systems when working between the boundaries of the organization and the client?*

A quantitative discovery approach (Bamberger, 2018; Bamberger and Ang, 2016) is applied towards the analysis of survey data from 591 employees in a medium-size UK-based professional service firm (PSF). We explore and develop the measurement of commitment systems, by combining existing measurement of the strength of commitment (*type* and *target*) with the development of the measurement of the interrelation between commitments (*coupling* and *nature*). We adopt a person-centred approach to explore the prototypi-

		<i>Commitment System</i>
<i>Elements of the Commitment System</i>	Strength	Multiple Commitment <i>Targets</i>
		Multiple Commitment <i>Types</i>
	Interrelationship	<i>Coupling</i> : dynamic correlation
		How is the interrelationship experienced? Development <i>nature</i> dimension
<i>Drivers of Commitment Systems</i>	JDR	Job Demands Resources
	Context	Cross-boundary work

Figure 1. The nature of commitment systems

cal commitment systems (profiles) of employees in the cross-boundary work setting.

Cross-boundary work poses a managerial dilemma to the employing organization of how to service its clients' needs while retaining the commitment of their employees to the organization (Doorewaard and Meihuizen, 2000; Olsen, Sverdrup and Kalleberg, 2019; Swart and Kinnie, 2013). The empirical exploration of commitment systems in this setting identifies levers that could lead to commitment experiences in this context that are more positive and synergistic than conflicting. Finally, we provide practical insights into how the employer and the client can manage the individual experiences associated with cross-boundary working, which is central to future managerial and increasingly virtual contexts.

The paper is structured as follows. First, we develop theoretical insights into commitment systems in the cross-boundary context based on: (1) CST; (2) the interrelation dimension including the *coupling* and the *nature*; (3) the role of job demands and resources (JDR); and (4) the role of context. Second, we outline our research approach

and setting, measurement development and analytical strategy. This includes how we explore and develop the measurement of commitment systems. Third, we draw on the person-centred approach to identify three prototypical commitment systems. Fourth, we interpret the membership of commitment system profiles. Fifth, we give insights into the role of JDR and context in relation to commitment systems. Finally, we discuss the theoretical, empirical, and practical contributions of our study, its limitations, and the opportunities for further research.

Theory

CST

Research on workplace commitment can be divided into three approaches (van Rossenberg, Cross and Swart, 2022). First, commitment is increasingly viewed as a set of multiple *targets* (Becker, 2009; 2018; Olsen *et al.*, 2016). Second, commitment is assessed as consisting of multiple *types* (Loscher, Ruhle and Kaiser, 2020), often focusing on a single target. The Three Component Model (Allen and Meyer, 1996) is the most commonly used typology of commitment, consisting of affective commitment (i.e., an emotional attachment), normative commitment (i.e., a sense of moral obligation to continue), and continuance commitment (i.e., commitment based on the costs of leaving) (Allen and Meyer, 1996). The third approach is the least common and studies the nature of the interrelation between commitments (conflicting, neutral, or synergistic) (Donnelly, 2011; Johnson, Groff and Taing, 2009).

Recent conceptual work indicates that commitment is most appropriately represented as a dynamic system (Klein, Solinger and Dufflot, 2020a). Indeed, CST is developed on the premise that commitment(s) should not be studied in isolation. A commitment system consists of the *strength* of the commitment and the *interrelation* of the commitment elements. The *strength* refers to the level of commitment, which includes commitment to multiple *targets* as well as commitment consisting of different *types*. The *interrelation* of the commitment elements is identified by CST as *coupling*, which is ‘a parameter that captures the degree of temporal synchrony between two commitments’ (2020, p. 119). Coupling between commitments might be strong (or tight), when changes

in one commitment strongly predict changes in another commitment, or weak, when commitments do not develop in completely the same direction (Klein, Solinger and Dufflot, 2020b). Coupled commitments work together, while decoupled commitments function independently.

Concurrently, coupling can be positive, neutral, or negative in nature. Positive coupling occurs when commitments function in parallel; that is, when commitment to one target intensifies commitment to the other target will also intensify, and when commitment to one target diminishes commitment to the other target will also diminish. and vice versa. This notion is similar to what McLean Parks, Kidder and Gallagher (1998, p. 718) identify as ‘commitment in one level is likely to spill-over and magnify commitment in another’. Negative coupling includes the experience of two commitments working ‘against each other’ (Johnson, Groff and Taing, 2009, p. 434), which is best represented as a negative dynamic (over time) correlation. Neutral commitments are decoupled, which means that commitments function independently; that is, commitment to one target comes at neither the advantage nor the expense of the other.

The interrelation between commitments: nature

Another layer of the interrelation between multiple commitments that we seek to unpack in our study is the individual experience of the *nature* of commitment interaction. Multiple commitments can be conflicting in nature, as recognized by Reichers (1985, 1986), as the organization consists of coalitional entities that compete for the individual’s energies, identifications and commitments. On the other hand, employees can also successfully align their commitments and experience the interrelation as synergistic (e.g., Johnson, Groff and Taing, 2009; Jørgensen and Becker, 2015).

We argue that when commitments are experienced as conflicting in *nature*, this may lead to an adjustment in commitment to one or multiple commitments in the system. For example, when the interrelation between two commitments is experienced as conflicting, the individual may decide to choose commitment to one target at the expense of the other (i.e., negative coupling) as a way to deal with the experienced conflict. Another reaction may be to reduce commitment to both targets, which then results in positive coupling.

Alternatively, commitments that are experienced as conflicting in nature may be decoupled such that commitment to one target may be adjusted independently from the other target. In this way, the *nature* and *coupling* may be related but, crucially, the nature and coupling between commitments are not one and the same construct.

Recently, progress has been made with regard to the conflicting nature of the commitment interrelation, in that value-based conflict and behaviour-based conflict have been identified (van Rossenberg et al., 2018). Value-based conflicts result from tensions in moral norms and principles underlying different commitment targets (Klein, Solinger and Duflot, 2020b). Behaviour-based conflicts occur when individuals are unable to balance the available resources of time, energy, and attention between their commitments (e.g., Klein, Solinger and Duflot, 2020b; van Rossenberg et al., 2018), which is similar to the conflict experienced in the enactment of multiple commitments (Becker, Klein and Meyer, 2012). The theoretical ground for these types of conflict has not been extensively developed, and this type of conflict, which is inherently part of the nature of the commitment interrelation, has not yet been empirically assessed. Hence, we draw on an abductive process to develop the *nature* dimension of commitment systems by exploring how the interrelation between commitment to the organization and commitment to the client is experienced in the cross-boundary context.

Job demands–resources as a driver of commitment systems

CST identifies the elements and dynamics of commitment systems. However, it provides few insights into what factors would shape a commitment system and how changes in the system might occur. Recent exploratory work on the drivers of commitment to multiple targets indicates that many factors in extant commitment models are still relevant, including social exchange mechanisms (Klein, Brinsfield and Cooper, 2020a). Hence, we draw on job demands–resources (JDRs) to identify potential drivers of commitment systems (Purcell, 2014).

First, we understand that a balance between job demands and job resources is the foundation for a reciprocal social exchange relationship that may involve commitment (van Rossenberg

et al., 2018). Job overload, the incompatibility between work demands and the time available to fulfil these demands, represents an imbalance between job demands and job resources (Bacharach, Bamberger and Conley, 1990). Second, perceived support, the general belief that one's 'organization values their contribution and cares about their well-being', positively contributes to the sense of purpose and meaning (Rhoades and Eisenberger, 2002, p. 698). This is how perceived support creates a higher sense of commitment, particularly in relation to the affective and normative commitment types. Third, we explore how JDR may relate to how employees experience the interrelation between commitments. When commitments simultaneously involve two sets of pressures, compliance with one keep would make compliance with the other more difficult (role conflict) (Katz and Kahn, 1978). Similarly, when there is a lack of necessary information available for a given organizational position, this role ambiguity may increase job demands (Rizzo, House and Lirtzman, 1970, p. 151). Hutchinson and Purcell (2010) find that under high levels of support, reduced applies to workload, role conflict and ambiguity, fewer instances of conflict occur. That is, JDR may shield against the conflicting *nature* of the commitment interrelation.

The role of context: The cross-boundary work setting

Context is vital to the experience and development of commitment systems (Klein, Solinger and Duflot, 2020b). However, the role that clients play in human resources (HR) management and in the shaping of employee commitments has been largely neglected (Kirkpatrick, Hoque and Lonsdale, 2019). Clients influence their supplying organization's management practices by carrying out a detailed pre-contract audit, and then applying their recruitment, socialization, training, quality, and performance standards (Weil, 2019). Clients seek their peripheral staff to commit and to become indistinguishable from their own employees, particularly those working on clients' sites. The employing organization then faces a dilemma: retaining employees' commitment to the organization or to the client while minimizing any conflict these employees may experience in this process. Workers may experience conflicts between the organization and the client over expectations, tasks,

			<i>Commitment Systems in the cross-boundary work setting</i>		
<i>Elements of Commitment Systems</i>	Strength	<i>Commitment Targets</i>	organization (employing organization)	Client organization	
		<i>Commitment Types</i>	a. Affective b. Normative c. Continuance	a. Affective b. Normative c. Continuance	
	Interrelationships	<i>Dynamic Coupling</i>	a. Positive, negative or neutral coupling between commitment b. Dynamic coupling: intention to stay / leave		
		<i>Nature / experience</i>	a. Value-Based Conflict b. Behaviour-based conflict		
<i>Drivers of Commitment Systems</i>	JDR	<i>Support</i>	organization supervisor	Client organization	
		<i>Role ambiguity</i>	organization and Supervisor	Client organization	
		<i>Role overload</i>	Working at both organization and client		
	Context	<i>Location</i>	organization	Client organization	
		<i>Position</i>	organization	Client organization	

Figure 2. Commitment systems in the cross-boundary work setting

and values, all of which make it more difficult to meet client's needs (Donnelly, 2011; Doorewaard and Meihuizen, 2000; Swart and Kinnie, 2013).

It is hardly surprising that for the employees working across boundaries, closely with clients, the organization is no longer the primary target of their commitment. Instead, the organization and the client are the two central *targets* of their commitment. Consistently, Liden *et al.* (2003) find that contingent workers develop attachments to their employing agencies, and Coyle-Shapiro and Morrow (2006a) find that employees display dual commitment to both their clients and their employers. Moreover, Yalabik *et al.* (2015) show that commitment to both the organization and the client is necessary for employees to experience all three dimensions of work engagement in a cross-boundary setting.

Of the three components of commitment, affective commitment has the strongest impact on employee attitudes, behaviours, and turnover intentions (Maertz and Boyar, 2012; Nguyen, Felfe and Fookan, 2015). However, Swart *et al.*

(2014) show how both the commitment targets and types have a differential effect on knowledge sharing in a cross-boundary work setting. They find that affective and normative types of commitment to the organization, the team, and the profession enhance knowledge sharing, whereas continuance commitment to the client inhibits knowledge obtaining and knowledge providing. Their findings further explicate the relevance of including both multiple *targets* and multiple *types* of commitment in the commitment system, particularly in cross-boundary work settings.

In summary, Figure 2 provides an overview of the elements and the nature of commitment systems in the cross-boundary work setting that we have developed based on the theory, and that we aim to shed more light on. This overview will function as a theoretical ground for the abductive exploration of our case data. In the following section, we outline our research approach, measurement development, and analyses.

Method

This study is grounded in a pragmatist philosophy and abductive research approach (Martela, 2015). Pragmatism adopts an experientialist ontology that centres on fallibilist instrumentalism. The aim is to provide warranted guidance that is historically contextual rather than objectively 'true' theories. Central to our design is the logic of abduction, which offers a third way or 'middle ground' between inductive approaches and the hypothetical-deductive model (Bamberger, 2018; Bamberger and Ang, 2016). Abduction requires us to 'hold theories lightly' (Martela, 2015) and use pre-understanding to iteratively move between the theory and the empirical material (Mueller, 2018). At the end, this approach enables us to make sense of what we find, to demonstrate plausible relationships, and to offer what we see as the best available explanation based on existing and relevant community standards of rigour.

Our approach here is particularly fitting, given the relative novelty of CST and the idea that commitment systems are contextually contingent (Klein, Solinger and Duffot, 2020b). It is also a more honest account of our research journey, since we do not test hypotheses, fill gaps, or seek to develop a new theory (Bamberger, 2018). Instead, we seek to deepen and extend knowledge, accommodate new experiences and inputs, and highlight both the theoretical and the practical implications of our research process.

First, based on CST and existing theoretical insights, we develop a way to measure commitment systems by drawing on existing measurement scales where possible (*types* and *targets*) and by developing measurement scales where needed (*coupling* and *nature*). Second, we adopt an explorative analytical approach (specifically, a person-centred approach) to identify the prototypical commitment systems. Third, commitment system membership is assessed on its relationship with JDR and contextual aspects consistently. This is how we develop our interpretations of the commitment systems; that is, through an abductive process of iteration between CST, other existing theory, and our empirical insights.

Research setting, design, and sample

Our research setting is a global organization ('ProClient' hereafter), with a head office in the UK.

ProClient, which provides outsourced business services and HR consulting, is a prime example of a cross-boundary work setting. Our research design, implemented over a four-year period, consisted of three stages: (1) insights into the business context and development of the measurement; (2) identification of commitment systems and test of associations with JDR and commitment system membership; and (3) interpretation of the insights.

We held two formal research meetings with the senior head office staff to gain contextual insights. This was followed by a total of 13 meetings with six senior managers to further understand the business context, the HR strategy and practices, and the nature of cross-boundary space(s). We used these meetings to help shape our questionnaire, which was sent to all ProClient employees (N = 1334), with 591 responses (44% response rate) included in the final sample. After analysis and identification of the commitment systems, two further formal meetings with senior managers took place four months and 15 months after the survey. These meetings enabled us to review and interpret our analysis, triangulate our data, and position our findings in the context of the organization.

Measurement development and approach to studying commitment systems

A person-centred approach has frequently been applied in the study of workplace commitment (van Rossenberg, Cross and Swart, 2022). This approach is fitting because it captures the heterogeneity of individuals' commitment experiences in the commitment profiles (Meyer and Morin, 2016; Morin et al., 2011). It is particularly appropriate for studying commitment as a system because it allows for all possible interactions between commitment dimensions in the analysis, whereas the variable-centred approach is restricted to a two-way or three-way interaction (Howard and Hofman, 2018). Furthermore, the person-centred approach identifies underlying prototypical subpopulations, which enables both inductive and abductive theorizing (Hofmans, Wille and Schreurs, 2020). Previous work has analysed commitments as profiles consisting of (1) multiple targets of commitment (e.g., Morin et al., 2011; 2015); (2) multiple types of commitment (e.g., Kabins et al., 2016); (3) both types and targets (Loscher, Ruhle and Kaiser, 2020; Meyer, Morin and Vandenberghe, 2015; Morin et al., 2015); and

(4) commitment in combination with other constructs that are inherent or inter-related to commitment, such as Gouldner's (1958) latent 'Cosmopolitans' and 'Locals'.

On the basis of our theorizing, commitment systems consist of the *strength* of the commitment (targets and types) as well as of the *nature* of the interrelation between commitments (Figure 2). To represent this in our quantitative discovery, we identified commitment systems to consist of two dimensions of *strength* (target and type) and two dimensions of *interaction* (coupling and nature). Two *targets*, the organization and the client organization, are included in the system. The three *types* of commitment – affective, normative, continuance – were measured by the short three-item scale (Gellatly, Meyer and Luchak, 2006). In total, we have six commitment variables representing *strength*: affective commitment (AC) to the organization (ProClient), AC to the client, normative commitment (NC) to the organization, NC to the client, continuance commitment (CC) to the organization, and CC to the client. An example item for AC to the organization is 'I really feel as if my client organization's problems are my own'. The confirmatory factor analysis for these six factors demonstrated a good fit [$\chi^2(120) = 455.60$, $p < 0.001$, CFI = 0.95, RMSEA = 0.07].

The *coupling* of commitments is described in CST as the dynamic correlation between commitments. This element of commitment systems is represented in the analysis by the person-centred approach, which allows commitments to freely interact with each other in the system. In other words, the interaction between commitment to the organization and commitment to the client is used as a source to identify the profiles in the analysis. A *post-hoc* correlation was calculated for each identified system (i.e., profile) to interpret and to provide insights into the coupling between the commitments in the system. Furthermore, working within the limitations of our cross-sectional data, we sought to capture some indications of the dynamic element of coupling by assessing the mean levels of the intention to quit the organization and the client in each commitment system.

Within CST, the *nature* of the interrelation between commitments has been theorized to consist of value-based and behaviour-based types of conflict (Klein, Solinger and Dufлот, 2020b).

Yet, previous studies have neglected to empirically assess commitment-related conflict (e.g., Johnson, Groff and Taing, 2009). Following an abductive approach, value-based and behaviour-based types of conflict are represented whilst also allowing for other types of commitment-related conflict to be experienced, which may be context-specific. The value-based conflict dimension was represented in the survey by drawing on Meyer, Allen and Smith's (1993) six-item scale. This scale was reworded to reflect the commitments that are experienced as conflicting. The behaviour-based type of conflict was discussed in the meetings with senior managers, who confirmed that employees might indeed experience conflict over operational issues. These issues include speed of service, adherence to deadlines, quality of the service, level of discretion, expected results, scope of service, and prioritization of tasks.

In addition to the value-based and the behaviour-based conflict dimensions, we used both a theoretical and a case-based classification to identify a third dimension, which we labelled as 'expectation conflict'. For this dimension, we drew on Donnelly's (2011) notion of conflict over the expectations of the organization and those of the client. This dimension is specifically linked to the differences between the organization's and the client's expectations from the employee. In addition, we drew on the concept of role ambiguity (Rizzo, House and Lirtzman, 1970). We did not adopt the original ambiguity measurement but reworded it into *expected* incompatibilities between the organization and the client.

In total, a set of 19 items was developed to measure the three conflict dimensions: value-based, behaviour-based, and expectation conflict (Table 1). To evaluate the psychometric properties, we assessed the item reliability and the convergent validity (Fornell and Larcker, 1981). The composite reliability of all constructs was above the threshold value of 0.70. Table 1 shows the factor loadings of three conflict scales, which exceed the recommended thresholds indicating sufficient convergent validity (Shah and Goldstein, 2006). Reliability was also confirmed for the value-based conflict ($\alpha = 0.96$), the behaviour-based conflict ($\alpha = 0.94$), and the expectation conflict ($\alpha = 0.86$). For Cronbach's alphas of all measurements, see Table 2. Additional confirmatory factor analysis

Table 1. Factor analysis of the nature of the commitment interrelations

	Component		
	1	2	3
Value-based conflict			
<i>When I think about my interactions between [my organization] and my client organization....</i>			
1. I feel a tension between 'my sense of belonging' in [my organization] and my client organization.	0.82	-0.01	0.09
2. I feel torn between what it personally means for me to work for [my organization] and what it means for me to work for my client organization.	0.95	0.02	-0.07
3. There is a conflict between being 'part of the family' at [my organization] and being 'part of the family' at my client organization.	0.90	0.02	0.01
4. My sense of obligation to [my organization] and my client organization pulls in opposite directions.	0.83	0.02	0.13
5. I feel a tension between the loyalty I have for [my organization] and my client organization.	0.91	0.04	0.02
6. I feel a conflict between how much I owe to [my organization] and my client organization.	0.90	0.04	-0.02
Behaviour-based conflict			
<i>I experience conflict between what [my organization] has agreed with the client organization and what my client organization expects me to do in the following areas....</i>			
1. The speed of the service required.	0.01	0.88	-0.02
2. Adherence to deadlines when providing the service.	0.01	0.91	-0.06
3. The quality of the service I provide.	-0.04	0.86	0.06
4. The level of discretion I have to provide the service.	0.02	0.84	0.01
5. The expected results of my service.	-0.02	0.86	0.06
6. The provision of services that are outside the scope of the existing agreement without payment.	0.02	0.68	0.15
7. How I prioritize the tasks required to provide the service.	0.08	0.90	-0.08
Expectation conflict			
<i>When I think about my interactions between [my organization] and my client organization....</i>			
1. I experience conflict between my commitment to [my organization] and my commitment to my client organization.	0.17	0.03	0.67
2. I have compatible expectations from [my organization] and from my client organization.	-0.10	0.09	0.78
3. I experience conflict between the values of [my organization] and the values of my client organization.	0.09	-0.06	0.76
4. There is a good match between what is expected of me by [my organization] and by my client organization.	-0.13	0.12	0.83
5. Overall, I experience conflicting demands from [my organization] and from my client organization.	0.12	-0.02	0.80
6. I experience conflict between the organizational goals and objectives of [my organization].	0.17	-0.07	0.78

Note: Extraction method: principal component analysis; rotation method: oblimin with Kaiser normalization. Rotation converged in 7 iterations.

confirmed the three-factor solution, and the measurement model demonstrated a satisfactory fit with the data [$X^2(131) = 464.03$, $p < 0.001$, CFI = 0.96, RMSEA = 0.07]. In comparison, the three-factor solution represents the variance in the data significantly better than a two-factor solution, with a change in $X^2(17) = 564.02$, $p <$

0.001. According to our analysis, there is evidence that respondents identify expectation conflict to be a different and separate dimension from value-based and behaviour-based conflict. However, we should note that the correlation between value-based conflict and expectation conflict is relatively high ($\mu = 0.69$).

Table 2. Descriptive statistics, correlations, and reliabilities

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 AC organization	0.90																
2 NC organization	0.73**	0.81															
3 CC organization	0.21**	0.30**	0.75														
4 AC client	0.33**	0.40**	0.07	0.89													
5 NC client	0.28**	0.43**	0.20**	0.67**	0.86												
6 CC client	0.00	0.09	0.64**	0.22**	0.43**	0.88											
7 Value-based conflict	-0.37**	-0.36**	-0.08	-0.09*	0.00	0.11*	0.96										
8 Behaviour-based conflict	-0.20**	-0.26**	0.01	-0.19**	-0.14**	0.04	0.46**	0.94									
9 Cross-boundary conflict	-0.31**	-0.39**	-0.12*	-0.18**	-0.14**	0.07	0.69**	0.57**	0.90								
10 PS organization	.67**	.64**	0.09*	0.34**	0.23**	-0.10*	-0.36**	-0.38**	-0.37**	0.86							
11 PS client	0.26**	0.27**	-0.01	0.59**	0.54**	0.08	-0.29**	-0.27**	-0.18**	0.43**	0.87						
12 PS supervisor	0.39**	0.45**	0.08	0.26**	0.12**	-0.08	-0.28**	-0.33**	-0.34**	0.59**	0.30**	0.92					
13 RA organization	-0.51**	-0.53**	-0.17**	-0.37**	-0.24**	0.00	0.37**	0.50**	0.46**	-0.59**	-0.31**	-0.49**	0.89				
14 RA client	-0.29**	-0.32**	-0.05	-0.50**	-0.38**	-0.05	0.40**	0.47**	0.39**	-0.45**	-0.53**	-0.39**	0.62**	0.88			
15 Job role overload	-0.26**	-0.26**	-0.12**	-0.87*	-0.11*	-0.07	0.34**	0.34**	0.28**	-0.33**	-0.20**	-0.24**	0.37**	0.28**	0.69		
16 ITQ organization	-0.52**	-0.58**	-0.14**	-0.37**	-0.28**	-0.00	0.22**	0.24**	0.29**	-0.56**	-0.26**	-0.43**	0.40**	0.32**	0.22**	0.84	
17 ITQ client	-0.22**	-0.38**	-0.13**	-0.42**	-0.43**	-0.11*	0.24**	0.30**	0.27**	-0.27**	-0.33**	-0.26**	0.29**	0.37**	0.21**	0.48**	0.63
<i>M</i>	4.64	4.48	3.35	4.84	4.25	3.02	3.41	3.06	2.69	4.90	4.25	5.25	2.69	1.21	4.55	2.75	3.33
<i>SD</i>	1.43	1.36	1.44	1.51	1.59	1.64	1.66	1.36	1.57	0.99	1.09	1.41	1.25	2.59	1.25	1.63	1.45

Notes: * Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed). Cronbach's alphas are reported on the diagonal.

Abbreviations: AC, affective commitment; NC, normative commitment; CC, continuance commitment; A-N, affective-normative; PS, perceived support; RA, role ambiguity; IrQ, intention to quit.

Analytic procedure for identifying commitment systems. In the first step of the analyses, the nine commitment constructs were included in the latent profile analyses (LPA) and the latent mixture analyses (LMA) models using a robust maximum likelihood estimator in MPlus 7 (Kam et al., 2016; Morin et al., 2011; Muthén, 2004). As developed in the previous section, the commitment system includes commitment *strength* of three types (affective, normative, and continuance commitment), to two *targets* (the organization and the client), and three dimensions of the *nature* of the interrelation (value-based, behaviour-based, and expectation conflict). These nine constructs were used to explore the prototypical combinations (profiles) of the commitment systems. MPlus 7 was used to test the measurement model using CFA, which also draws on maximum likelihood estimation. The CFA confirms the nine-factor structure of these constructs as a set, sufficiently representing the variance in the data [$X^2(593) = 1679.852$, CFI = 0.93, NFI = 0.92, IFI = 0.92, RMSEA 0.06].

Analytic procedure for analysing commitment systems in relation to JDR and context. In the second step of the analyses, commitment system profile membership was tested on its association with (1) JDR, and (2) a set of personal and job-related characteristics (context). Latent mixture modelling (Muthén, 2002) was used to conduct a Wald chi-square (W^2) test of mean equality of the auxiliary analyses; that is, to test the association between the probability of profile membership and the following JDR-related variables (Lubke and Muthén, 2005; Muthén and Muthén, 2017).

Job demands-resources (JDR) include perceived support from the organization, the client and the supervisor, role ambiguity at the organization and at the client, job role overload, and intention to quit the organization and the client.

Perceived organizational, client and supervisor support are measured on the eight-item scale adopted from Rhoades, Eisenberger and Armeli (2001). An example item is 'ProClient/My client/My supervisor is willing to help me if I need a special favour'. The factor structures for the three support variables are as follows: perceived support from ProClient [$X^2(18) = 76.68$, $p < 0.001$, CFI = 0.97, RMSEA 0.08], perceived support from the client [$X^2(17) = 33.76$, $p < 0.001$, CFI = 0.99, RMSEA 0.04], and perceived support from the supervisor [$X^2(2) = 6.17$, $p < 0.001$, CFI = 0.99, RMSEA 0.06].

Role ambiguity at the organization and role ambiguity at the client are measured separately on the six-item scale of Rizzo, House and Lirtzman (1970). Example items are 'I know exactly what is expected of me by ProClient', and 'I know what my responsibilities are at my client'. The confirmatory factor analysis confirmed the factor structure of role ambiguity at the organization [$X^2(9) = 32.63$, $p < 0.001$, CFI = 0.99, RMSEA 0.07], and role ambiguity at the client [$X^2(9) = 48.14$, $p < 0.001$, CFI = 0.97, RMSEA 0.09]. Additional analyses for these two role ambiguity scales and the expectation conflict dimension were conducted on the basis that the two scales have similarly worded items; however, the results of the analyses did not show any sign of convergent validity issues.

Job role overload is measured on the three-item scale of Bacharach, Bamberger and Conley (1990). An example item is 'I do not have time to finish my job'. The internal consistency of this scale is slightly under the accepted threshold (Cronbach's alpha = 0.69). The confirmatory factor analysis showed a nearly sufficient fit of the data with the combined factor structures of the role ambiguity in the organization, the role ambiguity of the client, and the job role overload [$X^2(83) = 456.53$, $p < 0.001$, CFI = 0.92, TLI = 0.90, RMSEA 0.09]. These results indicate that the internal consistency of the job overload construct is somewhat limited in our data.

Intention to quit the organization and the client are measured on a three-item scale developed by Colarelli (1984). At ProClient, employees do have a choice in which client they decide to (continue to) work with, and any requests from employees to switch clients are usually granted by ProClient. An example item is 'I am currently considering leaving ProClient'. The intention to leave the organization and the intention to leave the client are tested on their fit in a confirmatory factor analysis [$X^2(8) = 27.24$, $p < 0.001$, CFI = 0.99, RMSEA 0.06].

The descriptive statistics, reliabilities, and correlations for all constructs are reported in Table 2.

Work context: personal and job-related characteristics

To provide insights into the role of work context, we explored the roles of age (42% of the respondents were in the age group of 25–30 years) and organizational tenure (46% of the respondents had worked for ProClient for less than

Table 3. Fit indices LPA models one to nine classes

Model	No. parameters	LL	AIC	BIC	ABIC	Entropy	LMR (p)	LMR (ad. p)	BLRT (p)
One class	18	-8565	17166	17245	17188	na	na	na	na
Two classes	28	-8207	16471	16593	16504	0.77	0.00	0.00	0.00
Three classes	38	-8028	16132	16298	16177	0.81	0.03	0.03	0.00
Four classes	48	-7930	15957	16167	16015	0.79	0.41	0.40	0.00
Five classes	58	-7855	15827	16081	15897	0.79	0.22	0.22	0.00
Six classes	68	-7779	15694	15992	15776	0.82	0.29	0.29	0.00
Seven classes	78	-7724	15604	15946	15698	0.82	0.34	0.34	0.00
Eight classes	88	-7660	15496	15882	15602	0.84	0.67	0.67	0.00
Nine classes	98	-7621	15437	15867	15555	0.83	0.28	0.28	0.00

Abbreviations: AIC, Akaike information criterion; BIC, Bayesian information criterion; BLRT, bootstrap LRT; LL, log likelihood; LMR, La-Mendell-Rubin LRT; LRT, likelihood ratio test.

Table 4. Class size and means commitment system profiles

Class size	Balanced system 272	Conflicting system 237	Detached system 81
Means			
AC organization	5.44	4.18	3.36
NC organization	5.29	4.15	2.92
CC organization	3.61	3.40	2.38
AC client	5.37	4.98	2.66
NC client	4.72	4.56	1.77
CC client	3.05	3.46	1.62
Value-based conflict	1.42	4.12	2.64
Behaviour-based conflict	2.44	4.22	4.01
Expectation conflict	2.01	3.99	3.57
Coupling: Intra-system correlations			
AC organization * AC client	0.33**	0.13	0.30*
NC organization * NC client	0.43**	0.28**	0.50**
CC organization * CC client	0.54**	0.66**	0.62**

Abbreviations: AC, affective commitment; NC, normative commitment; CC, continuance commitment; A-N, affective-normative.

6 months). We distinguished five generic job roles – administrator, specialist, principal specialist, manager/consultant, and leadership team. Work location includes the head/regional office, at the client site, at a ProClient Global Service Centre, and at a mobile site, which was often their home office. Data were collected at three geographical locations, with 84% of the respondents based in the UK.

Results

Identifying commitment systems

Table 3 includes an overview of the profiles estimated by the LPA, including their fit indices and the tests of likelihood ratio. The Lo-Mendell-Rubin (LMR) likelihood ratio test indicates that the three-class solution explains significantly more

of the variance than the two-class solution¹. The class sizes and the variable means are presented in Table 4 and displayed in Figure 3.

Balanced system. The first profile is the largest of the three profiles ($n = 272$, 46% of the sample), representing individuals who have the highest levels of commitment to both the organization and the client combined with the lowest experiences of all three types of conflict. The relatively higher levels of affective and normative commitment to the organization contrast with much lower levels of continuance commitment to these targets. Members of this profile experience a moral duty or obligation to be committed as opposed to feeling tied in or

¹The four-class solution does not significantly explain more than the three-class solution.

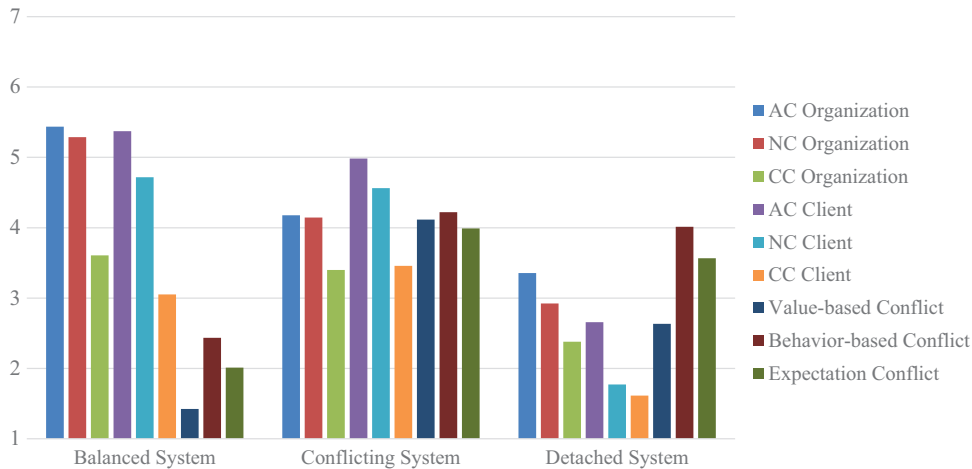


Figure 3. Commitment system profiles extracted by the latent profile analysis. [Colour figure can be viewed at wileyonlinelibrary.com] Note: AC, affective commitment; NC, normative commitment; CC, continuance commitment; A-N, affective-normative

feeling that the costs of leaving either target are too high.

For these individuals, both dimensions of the interrelation between the commitments are positive. The *coupling* of the commitments is positive, with significant positive correlations between commitment to the organization and to the client for all three commitment types. Also, intention to leave the organization and the client are the lowest in this profile. Consistently, the *nature* of the interrelation is low in conflict in this profile. Value-based conflict is particularly low ($\mu = 1.42$), and behaviour-based conflict is somewhat experienced ($\mu = 2.44$). We label this profile the *balanced system* because this group experiences a strong bond with both the organization and the client and seems to be able to balance this connection for mutual benefit.

Conflicting system. The members of the second profile ($n = 237$, 40%) experience similar levels of commitment to the client as the members of the *balanced system*; however, their level of commitment to the organization is lower than experienced in the *balanced system*. Affective and normative commitments to the organization are still high ($\mu = 4.18$ and $\mu = 4.15$), but not as high as in the *balanced system*. The difference between the levels of affective and normative commitment with continuance commitment is smaller than the difference between these types of commitment in the *balanced system*. High commitment is combined with high levels of tension between commitment to the organization and to the client. All three dimensions of conflict are experienced at a high level.

The interrelation between commitments with regard to *coupling* is reflected as a non-significant correlation between affective commitment to the organization and affective commitment to the client. Correlations between normative commitment and continuance commitment are positive and significant. The correlations between commitment to the organization and commitment to the client are weakest for this commitment system in comparison to the other commitment systems. The members of this profile are more likely to leave the organization and the client than those of the *balanced system*, but less likely to leave than those of the *detached system*. We label this profile the *conflicting system* because of the tensions experienced in the interrelation between commitment to the organization and commitment to the client.

Detached system. The third profile identified by the analyses is the smallest group ($n = 81$, 14%). Members of this profile have the lowest level of commitment to both their organization and the client in comparison with the other profiles. The interrelation in terms of *coupling* for this profile is positive; that is, there is a positive correlation between the commitment to the organization and that to the client for all three commitment types. Intention to leave both the organization and the client is high – the highest of all the profiles. This can be seen as an indication of positive coupling with low commitment to the organization to be correlated with low commitment to the client over time; however, a definite conclusion about

Table 5. Means and results from the Wald chi-square test of mean equality of the auxiliary analysis

	Balanced system	Conflicting system	Detached system	Global χ^2	1 versus 2	1 versus 3	2 versus 3
PS organization	5.40	4.56	4.39	150.64	109.76 **	64.26 **	3.17
PS client	4.59	4.19	3.28	70.68	14.10 **	64.47 **	30.96 **
PS supervisor	5.75	4.87	4.72	67.77	49.57 **	24.12 **	0.46
RA organization	2.03	3.22	3.33	164.8	118.36 **	56.25 **	0.36
RA client	2.01	2.96	3.37	114.84	75.63 **	55.44 **	14.54 *
Job role overload	4.17	4.87	4.88	44.78	39.09 **	15.17 **	0.01
ITQ organization	2.08	3.11	3.99	96.81	49.01 **	56.17 **	11.16 **
ITQ client	2.81	3.55	4.54	88.51	28.47 **	69.64 **	22.54 **

Notes: *Mean difference is significant at the 0.05 level

**Mean difference is significant at the 0.01 level.

Abbreviations: PS, perceived support; RA, role ambiguity; ItQ, intention to quit.

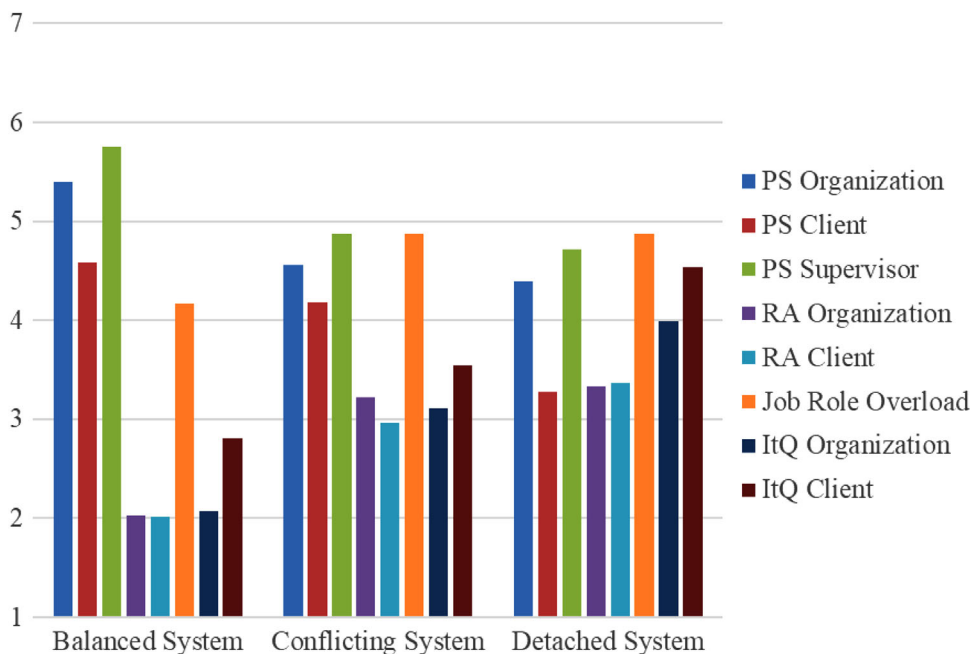


Figure 4. Auxiliary analysis commitment system profiles. [Colour figure can be viewed at wileyonlinelibrary.com]

Note: RA, role ambiguity; PS, perceived support; ItQ, intention to quit

coupling cannot be drawn, given our cross-sectional data.

The *nature* of the interrelation between commitments in this system is experienced as conflicting, with particularly high levels of behaviour-based conflict ($\mu = 4.01$) and expectation conflict ($\mu = 3.57$). Value-based conflict ($\mu = 2.64$) is experienced; however, it is higher in the *conflicting system*. We characterize this profile as the *detached system*, representing individuals floating between the organization and the client while being committed to neither, but operating in a constrained

space experiencing both behaviour-based conflict and expectation conflict.

Commitment systems, JDR, and context

In the second step of the analysis of the data, factor mixture analyses (FMA) are used to test the relation between the probability of membership of the three profiles and the set of JDR (Table 5 and Figure 4). In the second FMA, the relation between the commitment systems and a series of personal and job-related characteristics are tested

Table 6. Wald test of equality of personal and job characteristics across profiles

	Balanced system	Conflicting system	Detached system	Global χ^2	1 versus 2	1 versus 3	2 versus 3
Age	3.62	3.14	3.48	0.86	0.00	0.89	0.77
Organization tenure	2.60	2.67	2.96	2.81	0.16	2.80	1.83
European	0.35	0.24	0.32	5.02	5.47*	0.19	1.58
Asian	0.15	0.11	0.04	10.14	1.24	10.20**	4.60*
UK	0.54	0.41	0.40	10.51	7.06**	4.59*	0.02
Head/regional office	0.05	0.06	0.06	0.12	0.09	0.05	0.00
Global service centre	0.53	0.31	0.41	20.36	20.50**	3.18	2.05
Client site	0.39	0.61	0.45	16.64	19.61**	0.62	5.28*
Mobile site	0.03	0.03	0.09	2.87	0.07	2.91	3.30
Administrator	0.23	0.23	0.22	0.06	0.00	0.07	0.07
Specialist	0.35	0.24	0.29	5.25	5.67*	0.70	0.70
Principal specialist	0.17	0.33	0.25	14.58	15.08**	2.02	1.56
Manager/consultant	0.19	0.17	0.17	0.41	0.31	0.17	0.00
Leadership team	0.07	0.03	0.07	2.29	3.45	0.02	1.54

Notes: *Mean difference is significant at the 0.05 level,

**Mean difference is significant at the 0.01 level.

(Table 6). The results are discussed for each of the commitment system profiles.

Balanced system. Membership of this profile is associated with high perceptions of support, and the lowest levels of both role ambiguity and job role overload. This profile shows how (increased) job resources and (reduced) job demands might help to buffer the conflicting *nature* of the interrelation between commitment to the organization and commitment to the client. The key finding here is the perceived strong support from supervisors, who play a vital role in protecting employees and buffering the conflicting demands of the organization and the client.

Members of this profile are less likely to work on the client site and more likely to work in a Global Service Centre (GSC), which is indicative of the positive influence of the proximity of the organization in this context. Working in a GSC means that these employees are based in ProClient offices, where direct and senior managers are more proximal and involved in the day-to-day work. The junior specialists working on operational issues are significantly more likely to be members of this commitment system profile. They develop a strong reputation for success if they can achieve client goals, which is more likely to be supported and recognized by their ProClient manager at the GSC. In other words, the context of the system and working in closer proximity to the organization interacts with the perceptions of higher levels of job re-

sources and lower levels of job demands and the experience of the commitment system.

Conflicting system. Members of this profile experience less support overall, and more ambiguity at both their organization and their client. They also experience a higher job role overload than members of the balanced system profile do. Moreover, these employees experience high commitment to both their organization and the client, since they engage in dialogue between themselves and the parties with whom they interact. However, having to cope with high levels of conflict, their job overload and role ambiguity in relation to both their organization and the client seems to coincide with their experience of all three types of conflict.

Members of this profile are significantly more likely to work on client-site than in a GSC. In addition, the members of this profile are also more likely to be senior specialists; hence, they often represent their employer to the client on a one-to-one basis. The fact that they work in closer proximity to the client explains the higher level of client commitment relative to organizational commitment. Employees within this profile know that they must place the interests of their client first, but at the same time they must achieve the performance targets set by their employer (i.e., ProClient). This situation provides insights into the role of context in shaping the commitment system, in which the proximity to the client influences the experience of the conflicting *nature* of the commitment interre-

		Commitment Systems identified in the Cross-Boundary Setting			
		1. Balanced System (46%)	2. Conflicting System (40%)	3. Detached Subsystem (14%)	
Elements of the Commitment System	Strength	Commitment Targets	High commitment to the organization and high commitment to the client	Medium-high commitment to the organization and high commitment to the client	Low commitment to both the organization and the client
		Commitment Types	Strongest A-N dominant	A-N dominant	Low somewhat AN-dominant organization, low A-dominant client, but low on all ANC
	Interrelationships	Coupling	Positive coupling, Low Intentions to Quit the organization and the Client	Decoupled affective and normative commitment, coupled continuance commitment, Medium levels of Intentions to Quit the organization and the Client	Positive Coupling, High Intentions to Quit the organization and the Client
		Nature	Low Value-Based Conflict Medium Behaviour-based Conflict Medium-low Expectation Conflict	High Value-Based Conflict High Behaviour-based Conflict High Expectation Conflict	Medium Value-Based Conflict High Behaviour-based Conflict High Expectation Conflict
Drivers of the commitment system	JDR	Support	High Support: organizational-Client-Supervisor	High support organization and client, medium high support supervisor,	High support organization medium support client, medium high support supervisor
		Role ambiguity	Low Role Ambiguity	Medium Role ambiguity	Medium Role ambiguity
		Role overload	Low Job Role Overload	High Job Role Overload	High Job Role Overload
	Context	Location	More likely to work at Global Client Centre, less likely to work at client-site	More likely to work at client-site	Less likely to work at client site
		Position	More likely to work as (junior) specialist	More likely to work as Principal Specialist	

Figure 5. Commitment systems identified in the cross-boundary setting

lation and the neutral *coupling* between affective commitment to the organization and to the client.

Detached system. Out of the three profiles, members of the detached system profile experience the lowest levels of job resources and the highest level of job demands in comparison to the other profiles. What sets the detached system apart from the conflicting system are the low levels of support from the client and the high levels of client-specific role ambiguity.

The analysis of the survey data was unable to provide conclusive insights into some of the contextual dimensions of this system. As such, we sought to gain an understanding of the nature of this profile through meetings with Pro-Clients’ managers and HR professionals. In the words of the ProClient Global Head of HR, ‘they [*the employees experiencing a detached system*] have checked out’. Indeed, the members of this profile have the highest levels of intention to leave the organization and the client. Yet, it is interesting that even though their commitment is low and their intention to leave is high, they still experience behaviour-based conflict and expectation conflict at substantial levels.

Figure 5 provides an overview of the elements and the nature of commitment systems that were found in this study in the cross-boundary work setting.

Discussion

The key contributions of this paper are: (1) the clarification and development of the interrelationship dimension of the commitment system, identifying and developing *coupling* and the *nature* of the commitment experience; (2) the development of the *nature* of the commitment experience, consisting of three types of conflict; (3) the quantitative discovery of three prototypical commitment systems in the cross-boundary work setting; and (4) insights into the drivers of commitment systems.

First, we have further developed the interrelation dimension of commitment systems, by unpacking the *coupling* dimension and by introducing the *nature* dimension. Previous research has considered *either* commitment strength, *or* multiple types of commitment, *or* commitment interrelationships. Unlike these studies, we have studied commitment as a system consisting of multiple types and targets – in our case, affective, normative and continuance commitment to the organization and the client, which are *coupled* and can be experienced as conflicting in *nature*. By distinguishing between *coupling* and *nature*, we have shown that these dimensions are unique and experienced in a variety of combinations in the commitment systems.

Second, we have developed the *nature* dimension of commitment systems, identifying three types of conflict experienced in the interrelation between commitment to the organization and commitment to the client. Value-based conflict and behaviour-based conflict, which have been grounded in the commitment literature and commitment systems (Klein, Solinger and Duflo, 2020b; van Rossenberg et al., 2018), seem to be generic or target-neutral. Expectation conflict, on the other hand, may be unique to the tensions specific to working between the organization and the client. This type of conflict may be theoretically grounded in the experienced tensions with regard to the (conflicting) expectations from the organization and the client, identified by previous work in cross-boundary work settings (Donnelly, 2011; Doorewaard and Meihuizen, 2000; Swart and Kinnie, 2013). Our explorative analysis shows indications of this third conflict type, while the theoretical and conceptual groundings of this third dimension are limited. We recommend, therefore, that future research seeks further insights, particularly into which commitment interrelation may be experienced to be conflicting in *nature*, what type of conflict is experienced, and to what extent this type of conflict may be context- or target-specific.

Third, our analyses identified three commitment systems: the *balanced system*, the *conflicting system*, and the *detached system*. The *balanced system* gives insights into the synergistic commitment relationship (Askew, Taing and Johnson, 2013; Johnson, Groff and Taing, 2009; Jørgensen and Becker, 2015), represented by high levels of commitment, positive coupling, and low levels of commitment-related conflict. Theoretical sense-making is grounded in coping with and balancing the demands of conflicting parties (i.e., the organization and the client) (Jørgensen and Becker, 2015).

The *conflicting system* provides insights into how commitments can be high, positively coupled (high levels of commitment and low intention to stay for both the client and the organization), and at the same time commitment is experienced as conflicting in *nature*. Working at the client site and working in a principal specialist role make it more likely that the employees will experience a *conflicting commitment system*. The employee experience in this system may be grounded in the search for psychological closeness, whilst being physically and socially distant from ProClient, which leads to

conflicting experiences (Becker, 2009; Olsen, Sverdrup and Kalleberg, 2019).

The *detached system* gives insights into how commitment can be positively *coupled* whilst also experienced as conflicting in *nature*. Low levels of commitment to the organization and to the client are combined with high intentions to leave the organization and the client, and substantial levels of behaviour-based and expectation conflict. Our findings add to existing work in the cross-boundary context, giving insights into how workers experience becoming 'structurally invisible' within their organization and 'socially separated' from their client (Beech, 2011, p. 297): they are employed by one, work for another, but are committed to neither.

Fourth, our results provide insights into the drivers of commitment systems, including JDR and context. Consistent with previous research, we find balance in JDR in the *balanced* commitment system. In the *detached* commitment system, low commitment is combined with low levels of job resources (perceived support) and with high job demands (role ambiguity and job role overload) (Becker, 2009; Boshoff and Mels, 2000; Cooper et al., 2016; Coyle-Shapiro and Morrow, 2006a, 2006b). Interestingly, we find that the JDR related to the client is the key difference between the *conflicting* commitment system and the *detached* commitment system. Client support and lower role ambiguity at the client may buffer the experience of high conflict, allowing employees to maintain high levels of commitment to both the organization and the client. Future research may consider providing insights into the dynamics of the relationship between JDR and commitment systems.

Our findings show that the job role and proximity of the client relate to the experience of a commitment system. This finding contributes to the relevance and the complex interaction of the work context in shaping commitment systems, thereby contributing to CST. This highlights the relevance of studying commitment systems in relation to their context (Becker, 2009; Klein, Becker and Meyer, 2009, 2020b; van Rossenberg et al., 2018).

Methodological contributions

In addition to the empirical insights into the theory, we have made two methodological contributions. First, we explored and developed a way of representing commitment systems in survey data.

This includes the *strength* of commitment (types and targets) based on existing measurement scales, and a development of the measurement of the *interrelations* between commitments (coupling and nature). We followed a quantitative discovery approach, seeking how to represent *coupling* in the analysis of our data.

Second, the person-centred approach (Morin *et al.*, 2011) enabled us to study the experience of commitment strength and the interrelation between commitments as one commitment system, rather than simply examining the interactions between the targets, the types, and the interrelation separately (Baruch and Winkelmann–Gleed, 2002; Bentein, Stinglhamber and Vandenberghe, 2002; van Rossenberg *et al.*, 2018). Crucially, our person-centred approach and use of profile analysis enabled us to move away from the four ‘high/high’, ‘high/low’, ‘low/high’ and ‘low/low’ groups frequently seen in the dual commitment literature (Carson *et al.*, 1999; Magenau, Martin and Peterson, 1988; Olsen *et al.*, 2016, 2019) to a holistic solution that enabled us to identify prototypical commitment systems rather than assuming homogeneity in the commitment systems (Houle *et al.*, 2020). Again, this is consistent with CST.

Unique to this approach is that our analyses give insights into how commitment to the organization and the client is experienced in combination with *coupling* and *nature*. We found that conflict between commitments can be experienced when commitment is high (*conflicting system*), while behaviour-based and expectation conflicts can also be experienced when commitment is low (*detached system*). In addition, high commitment to the organization and the client may result in the experience of conflict (*conflicting system*), whereas high commitment also be combined without the experience of any of these conflicts (*balanced system*).

Implications for practice

Our research has managerial and practical implications for those seeking to manage the organizational dilemma of needing to retain as well as to develop professionals and to satisfy the requirements of their clients at the same time (Donnelly, 2011; Doorewaard and Meihuizen, 2000; Swart and Kinnie, 2013). The irony from the point of view of ProClient is that the employees experiencing the conflicting commitment systems are vital to the financial success of the ProClient, as they gen-

erate the most revenue. Yet, they have one of the toughest roles and have strong bargaining power owing to intensive client contact (Olsen, Sverdrup and Kalleberg, 2019). They are also prone to ‘going native’ or being poached by their clients for higher salaries and benefits (Coyle-Shapiro and Morrow, 2006a). This is a major issue for our case company (i.e., ProClient), and our data corroborate this situation. It would be interesting for future research to consider the impact of financial compensation on retention. Would a client paying more encourage a valuable employee to join the client organization?

We have identified that JDR practices embedded within the client are the key difference between the conflicting system and the detached system. These practices might be particularly key when employees are present on the client site for long periods. This situation poses questions about the way in which organizations manage their employees across boundaries. If organizations want their own management practices to predominate, they need to consider the transaction costs of keeping a client at arm’s length. Furthermore, there is an increasing need to understand how a constellation of managerial practices would need to be integrated to generate advantage beyond the boundaries of the organization (Kinnie and Swart, 2019).

Limitations and Future Research

Commitment systems are inherently dynamic, and hence the cross-sectional nature of our data limits our ability to address and provide insights into this aspect of commitment systems. In particular, in assessing *coupling*, our analysis is unable to do justice to the dynamic nature when drawing on a static snapshot correlation of commitment to the organization and to the client. To compensate, we assessed the intention to leave the organization and the client as an indication of future commitment intentions, which is limited. Furthermore, our data show that the detached system is associated with low levels of support *from* the client and a higher role ambiguity *at* the client. Although tempting, we cannot confidently state that these two factors *cause* employees to adjust their commitment system from a conflicting commitment system to a detached commitment system. Neither can we conclude that, if employees experience enough support and low levels of role ambiguity from their client, their commitment system will

become balanced. It is of particular relevance for future research to gain insights into such dynamics of commitment systems in relation to the impact of HR interventions.

When tensions and conflict between commitments occur, CST proposes that the individuals adjust and change their commitment system into either positive coupling or decoupling. Another way to balance a commitment system is by modulation, which involves a loss of efficiency and switching costs given the time and the energy needed (Klein, Solinger and Dufлот, 2020b). Future research should explore whether employees who experience a conflicting commitment system use modulating between commitments, potentially as a way to deal with the conflicting nature.

Furthermore, we have focused on commitment to the organization and to the client, which is limited because previous work indicates the relevance of the supervisor and the profession (Olsen et al., 2016; Swart et al., 2014; Yalabik et al., 2017). In addition, 46% of our respondents had a tenure of less than six months at ProClient, which is typical of employees in the cross-boundary work setting. We did not find any indication that the low average tenure in our sample or age was related to the employees' experience of the commitment system. Still, future research might provide insights into the roles of tenure and age in the development of commitment systems, which is particularly relevant in aging societies.

The exploration of commitment systems in a cross-boundary work setting using the person-centred methodology holds great promise for future research. However, our sample is somewhat limited in size for a LPA. One fruitful avenue would be to explore large-scale heterogeneous samples including different types of cross-organizational working, such as law and audit (Malhotra and Morris, 2009; von Nordenflycht, 2010), with varying amounts of time spent at the client site.

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