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Review

Commitment System Theory: The Evolving Structure of Commitments to Multiple Targets

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| Abstract: | <p>Employees form commitments to multiple targets and the coordination of those multiple commitments has become a ubiquitous part of the contemporary workplace. However, commitments are still largely studied in isolation or in one-off combinations and current commitment theory does not account for the dynamic interrelationships among multiple commitments. To address this deficiency, we propose commitment system theory (CST). We draw upon general systems theory to depict commitment systems as malleable and interconnected structures. We present the defining elements by which commitment systems can be described and studied, develop theory regarding when commitment systems will diverge or converge over time, and discuss how taking a systems perspective resolves discrepant findings in the literature. Specifically, CST advances the commitment literature by offering an alternative perspective to explain how commitments behave as parts of larger systems. Specifically, CST accounts for (a) why and when commitments have synergistic, neutral, or conflicting inter-relationships and (b) the temporal dynamics of those inter-relationships as commitments develop, change, and dissipate. CST thus offers a new vocabulary and conceptual "toolkit" for understanding the evolving structure of commitments to multiple targets.</p> |
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Running Head: Commitment System Theory

**Commitment System Theory:
The Evolving Structure of Commitments to Multiple Targets**

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Commitment System Theory: The Evolving Structure of Commitments to Multiple Targets

Abstract

Employees form commitments to multiple targets and the coordination of those multiple commitments has become a ubiquitous part of the contemporary workplace. However, commitments are still largely studied in isolation or in one-off combinations and current commitment theory does not account for the dynamic interrelationships among multiple commitments. To address this deficiency, we propose commitment system theory (CST). We draw upon general systems theory to depict commitment systems as malleable and interconnected structures. We present the defining elements by which commitment systems can be described and studied, develop theory regarding when commitment systems will diverge or converge over time, and discuss how taking a systems perspective resolves discrepant findings in the literature. Specifically, CST advances the commitment literature by offering an alternative perspective to explain how commitments behave as parts of larger systems. Specifically, CST accounts for (a) why and when commitments have synergistic, neutral, or conflicting inter-relationships and (b) the temporal dynamics of those inter-relationships as commitments develop, change, and dissipate. CST thus offers a new vocabulary and conceptual “toolkit” for understanding the evolving structure of commitments to multiple targets.

Commitment System Theory:

The Evolving Structure of Commitments to Multiple Targets

Commitment, defined as “a volitional psychological bond reflecting dedication to and responsibility for a particular target” (Klein, Molloy, & Brinsfield, 2012: 137), continues to be widely studied in the management literature because of its influence on outcomes important to organizations and employees (Meyer, 2016). Yet, despite decades of research, there are significant gaps in what we know about workplace commitments because commitment theory has generally taken an isolated and static focus that fails to explain how multiple commitments behave dynamically. Specifically, the literature currently does not adequately explain the conditions under which any two commitments will be conflicting versus synergistic, how those interrelationships may change over time, or how sets of commitments collectively impact worker behavior. To better address the issue of how people coordinate the multiple commitments they hold, we present an alternative perspective to explain how commitments behave as parts of larger systems. In doing so, we account for why and when commitments have synergistic, neutral, or conflicting inter-relationships and the temporal dynamics of those inter-relationships.

It has long been recognized that individuals have multiple commitments in the workplace (e.g., Merton, 1957; Simon, Smithburg, & Thompson, 1950). The targets (i.e., that to which one is committed) of these workplace commitments include, but are not limited to, the employing organization, other organizations (e.g., unions, client, professional organizations), groups and individuals within (e.g., supervisor, coworkers, team, department, top management teams) and outside of the organization (e.g., customers, suppliers), organizational initiatives (e.g., projects, strategies, change efforts), individual initiatives, and attributes (e.g., values, goals, plans, decisions, roles, career). Although widely studied, different researchers in different literatures

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2
3 have tended to study commitments to different targets in isolation (e.g., goal commitment,
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5 escalation of commitment, and career commitment in the motivation, decision making, and
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7 careers literatures respectively), with commitment to the employing organization receiving the
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9 bulk of the prior research attention. Understanding commitment across the full range of
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11 workplace targets is increasingly important given the changing nature of work, organizations,
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13 and the employment relationship. Consider, for instance, the increased prominence of temporary
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15 work (e.g., short-term, project-based, contractual work; Boudreau, Jesuthasan, & Creelman,
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17 2015), advancements in technology that facilitate the spatial separation of work (e.g., flex
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19 offices, geographically dispersed teams; Ashcraft et al., 2011), and the advent of flexible
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21 organizational forms (e.g., semisttructures) where cooperation relies on commitments rather than
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23 formal hierarchy (Brown & Eisenhardt, 1997). Because of these and other changes, commitment
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25 is as important as ever—organizations still need committed employees. However, the employing
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27 organization is no longer always the most relevant commitment target.
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33 Furthermore, because of the interrelationships among commitments, examining any one
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35 commitment in isolation is likely to lead to incorrect predictions. As recognized by Randall and
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37 Cote (1991: 194): “By failing to consider the larger web of relationships encompassing the
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39 various work commitment constructs, researchers may incorrectly identify the strength and
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41 direction of the relationships between these constructs.” The coordination of one’s commitments,
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43 which we define as *the process of prioritizing, structuring, reconfiguring, and alternating*
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45 *multiple, simultaneously held commitments*, is a fundamental aspect of organizational life. Yet,
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47 apart from early work by Tuma and Grimes (1981) and Reichers (1985), there is little theory to
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49 explain the coordination of multiple simultaneously held commitments. The present paper
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51 addresses these issues by articulating multiple commitments as systems, defined as *a network of*
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inter-relating commitments to a set of targets. Specifically, we propose commitment systems theory (CST) to provide the vocabulary and tools needed to study interrelated sets of commitments. In doing so, we draw from general systems theory (GST) (e.g., von Bertalanffy, 1968; Skyttner, 2005) to build theory regarding the structure of commitment systems (as wholes as opposed to atomistic parts), and the temporal dynamics around the coordination of, and changes to, commitment systems.

PRIOR WORK ON MULTIPLE COMMITMENTS

Commitment scholars have begun studying multiple commitments with greater frequency, but typically in dual combinations or occasionally in larger, one-off groupings. Results from these efforts are difficult to integrate and ignore the wider interconnectedness among other unexamined targets. Below we highlight the four current approaches to examining multiple commitments and the limitations of each of those approaches.

First, matching theories have been put forth (e.g., target similarity theory; Lavelle, Rupp, & Brockner, 2007) based on evidence that commitments to multiple targets predict workplace outcomes over and above each other, and in distinct ways (e.g., Becker, Randall & Riegel, 1995; Becker, Kernan, Clark, & Klein, 2015). For instance, if an injustice is attributed to a supervisor, commitment to that supervisor should only be impacted, not other workplace commitments (e.g., Conway, Kiefer, Hartley, & Briner, 2014). There is support in the literature for this view (e.g. Becker & Kernan, 2003; Belschak & den Hartog, 2010), but overall, the evidence suggests commitment spillovers (e.g., from supervisor to organization) happen more often and to a greater extent than matching theory would predict (e.g., Tsoumbris & Xenikou, 2010; Wasti & Can, 2008). In addition, numerous studies (e.g., Wallace, 1993; Wang & Armstrong, 2004) and a

meta-analysis (Cooper-Hakim & Viswesvaran, 2005) suggest that commitments to multiple targets are generally positively related.

An alternative, synergistic view holds that multiple commitments can complement each other in an additive or multiplicative manner such that their combination produces results beyond each of those commitments alone (Askew, Taing & Johnson, 2013; Tsoumbri & Xenikou, 2010). For instance, Herscovitch and Meyer (2002) found that occupational and organizational commitments added to each other in predicting reactions to organizational change. From this perspective, however, one would expect conflicting workplace commitments to be rare or readily resolved. The evidence, however, suggests that multiple commitments can, and often do, conflict (e.g., Jones, Taylor, & Bansal, 2008; Kinnie & Swart, 2012). Several theorists have recognized the possibility of conflicts among commitments (Gouldner, 1957; Klein et al., 2012; Reichers, 1986) and commitment conflicts have been demonstrated in numerous empirical studies across a variety of contexts and targets (e.g., Golden-Biddle & Rau, 1997; Liden, Wayne, Kraimer, & Sparrowe, 2003; Reichers 1986; Wallace, 1993). These works do not, however, explain when or why commitments conflict.

A third perspective is that commitments are hierarchically arranged. From the multiple goal literature, we know that goals may complement one another in an additive fashion when hierarchically nested, where more proximal and concrete goals are means to achieve more distal and abstract ones (e.g., Kruglanski et al., 2002). Hierarchy alone, however, cannot explain the relationships among multiple workplace commitments, as those commitments are not necessarily hierarchically nested (e.g., a coworker and client organization).

Finally, some studies have used a person-centered approach (e.g., Morin, Morizot, Boudrias, & Madore, 2011) to identify multiple sub-groups with different commitment target

profiles. These studies do not explain the mechanisms or contingent factors that account for profile emergence or membership (Meyer & Morin, 2016) but further demonstrate that the same target commitments may be compatible or conflicting depending on the person and context. In sum, the approaches to date used to explain multiple commitments fail to account for critical issues such as why the same target commitments can be synergistic, unrelated, or conflicting depending on the person and context and when each type of relationship can be expected. Taking a systems theory perspective provides these missing explanations.

Focus and Assumptions

In developing CST, we primarily focus on workplace commitments even though CST is applicable to all commitments in all life domains (e.g., work-life conflicts due to competing commitments across roles). In addition, we do not try to present or explain every possible configuration of commitment systems but focus on articulating a few exemplar systems. We seek to demonstrate the value and applicability of viewing multiple commitments as systems and to initiate new lines of inquiry, not to be exhaustive. A final focus issue is that we primarily discuss within person dynamics even though we are presenting a *process-based* theory that allows for predictions across individuals (e.g., using system parameters as independent variables to predict between-individual differences in behavior or other outcomes) in addition to making within-person predictions for how multiple commitments are structured and changes in that structure.

Two key assumptions we make are that (a) subsystems operate the same way as systems (a common systems theory assumption; Barabási, 2016; Skyttner, 2005), and (b) commitments all operate similarly. The latter assumption is consistent with the “target neutral” view posited by Klein et al. (2012) that holds that the antecedents, meaning, operation, and outcomes of commitment are fundamentally the same regardless of the target (e.g., Klein et al., 2012; Meyer

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3 & Herscovitch, 2001). As such, the construct of commitment can be consistently applied across
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5 all targets. This does not mean that targets are interchangeable or that the target does not matter.
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8 **MULTIPLE COMMITMENTS AS SYSTEMS**

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10 General systems theory (GST) provides the vocabulary and tools for describing the
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12 structure and operation of any system by mapping system parameters in a geometric framework
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14 (e.g., Barabási, 2016; Feynman, 1967). Applying those parameters to the multiple work
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16 commitments individuals hold leads to new insights into how multiple commitments are
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18 interrelated and the dynamic operation of those commitments. Taking a systems perspective
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20 addresses the complexities of acting upon multiple commitments, the interrelationships among
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22 commitments, accounts for the dynamics of commitments over time, and also helps explain the
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24 shifts between sets of commitments that are often needed as individuals shift between roles and
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26 contexts. From a systems perspective, interrelated parts cannot be understood by investigating
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28 those parts in isolation (von Bertalanffy, 1968). Indeed, systems are defined as “a network of
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30 interacting parts” (Skyttner, 2005: 45) that interacts with its environment.
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35 GST relies on a set of system parameters that can be applied to any system (von
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37 Bertalanffy, 1968) and have been well-established across various scientific disciplines (e.g.,
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39 mathematics, physics, biology, psychology, sociology, and organizational sciences). Any system
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41 can be understood based on three essential parameters—the number, strength, and coupling
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43 between system elements (von Bertalanffy, 1968). From those essential parameters, additional
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45 parameters can be derived to further understand and map the system (e.g., a system’s boundary
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47 and compactness). These parameters, and hence systems themselves, are inherently dynamic
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49 (von Bertalanffy, 1968) because they are open to local environmental inputs (Katz & Kahn,
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51 1978). That is, environment changes can alter systems parameters (Barabási, 2009).
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Essential System Parameters

Number of Elements. The first parameter is the number of elements within the system. Systems vary in the number of commitments they contain. In a commitment system, each element is a different target commitment. A system could have just two elements, a handful of elements, or in the case of large complex systems, more than 30 elements (e.g., Jeong, Albert, & Barabási, 1999). A simple work role commitment system is illustrated in Figure 1 for a hypothetical a nurse employed by a hospital. The solid dots in Figure 1 are target commitments. The circle in the middle of the system is the barycenter, which is a system’s mathematical center. Any system can be mapped by positioning its elements in relation to the system barycenter (Hahn, 1998; Ungar, 2010). The boundary of the system is also shown in Figure 1, differentiating the space within versus outside of the system. Commitment system boundaries can be calculated and plotted, but unlike some physical systems, have no actual surface or physical properties.

Insert Figure 1 about here

In this system, there are seven elements (i.e., target commitments): the nurse’s commitment to their supervisor, three coworkers, the employing hospital, a key task goal, and patient care. The number of elements in a system is dynamic, because systems may grow (e.g., a commitment to a new task goal or coworker added), shrink (e.g., commitments dropped due to a goal being completed, or a coworker leaving), split, or merge with other systems (Barabási, 2016). Figure 1 thus captures a dynamic commitment system at a set point in time. Research has demonstrated that commitments are added and dropped at any time due to changes in the person (e.g., divesting of commitments after overload) or context (e.g., being reassigned to different job

tasks) (Breitsohl & Ruhle, 2016; Klein, Brinsfield, Cooper, & Molloy, 2017; Solinger, Hofmans, & Van Olffen, 2015). A change in the number of elements also impacts other system parameters, as many are based on the number of elements in the system.

Strength of Elements. The strength associated with each element in the system is the second essential parameter. In a commitment system, this is the strength of each commitment. That is, “*how committed*” the worker is to each target in the system. For example, if a self-report survey is used to assess commitment, the higher the score on that commitment measure, the greater the strength. System elements tend to, but need not, differ in strength. The size of the dots in Figure 1 reflect the strength of the elements with the nurse being more committed to some workplace targets than others (e.g., commitment to patient care is stronger than commitment to the employing hospital). The fact that workers differentiate between different commitment targets and can be differentially committed to different targets has been well established using both variable-centered (e.g., Klein, Cooper, Molloy, & Swanson, 2014) and person-centered (e.g., Morin et al., 2011) research strategies. Commitment strength has been shown to be dynamic over time at the within-person level (Solinger, Van Olffen, Roe, & Hofmans, 2013).

Coupling of Elements. The final essential system element is coupling, which reflects the interrelationship between any two system elements. In commitment systems, coupling is the *dynamical* correlation between two commitments. A dynamical correlation is a parameter that captures the degree of temporal synchrony between two variables (i.e., two curves representing within-person change over time; see Liu, Zhou, Palumbo, & Wang, 2016; Solinger et al., 2015). Defining coupling in this way (versus a static correlation) is necessary because commitment systems are person-specific rather than population-specific (see Molenaar & Campbell, 2009). Further, dynamical correlations capture the essence of coupling—that a change in one element

produces a concomitant change in the other element (or vice versa; Von Bertalanffy, 1968). Coupling is thus a dyadic parameter that varies in strength. That is, the interrelationship between any two commitments in a system may be strong (i.e., tightly coupled), weak (i.e., loosely coupled) or nonexistent (i.e., decoupled). Moreover, certain thresholds may apply such that commitments remain decoupled only until a certain equilibrium value is exceeded (see Hofmans, 2017). In Figure 1, solid lines are used to indicate coupling between elements, with the length of those lines (i.e., the distance between elements) used to inversely reflect the strength of the coupling (i.e., shorter lines reflecting stronger interrelationships). For example, commitment to coworker A is more tightly coupled with commitment to patient care than is supervisor commitment, and commitment to coworker C is decoupled from commitment to patient care, perhaps because that coworker does not have patient care responsibilities.

To make our figures less cluttered, the coupling is positive unless accompanied by a negative sign (-) and, in Figure 1, all of the interrelationships are positive. The coupling between system commitments is dynamic and there is substantial empirical evidence in other fields indicating that the coupling between system elements can evolve in both a continuous and disruptive manner, yet can also remain in a relatively stable equilibrium for an extended time period (Barabási, 2016; Jha, 2005). When there is tight coupling, change in the strength of one commitment can be used to predict changes in the other commitment. In Figure 1, for example, if commitment to patient care increased further, one can predict that commitment to coworker A will also increase, but not commitment to coworker C. Surprisingly, among all the studies examining changes in commitment (e.g., Morrow, 2011) or commitment profiles (e.g., Kam, Morin, Meyer, & Topolnytsky, 2016), we were unable to find prior research predicting changes in one commitment as a result of changes in other commitments. It has been shown, however,

that even with high static correlations, commitments can still diverge dynamically (e.g., Solinger et al., 2015; Thompson & Van de Ven, 2002). Consistent with the role of the environment in GST, we next discuss the role of context in CST, particularly in relation to coupling.

The Pivotal Role of Context

Despite the acknowledgement that commitments can conflict or have synergistic relationships, the present literature is replete with inconsistencies regarding whether any given commitments will be conflicting (see van Rossenberg et al. 2018). It appears that any two commitments can be synergistic, neutral, or conflicting, depending on the person and situation. Thompson and Van de Ven (2002), for instance, found that physicians' forced role-transitions from private practitioner to hospital employee resulted in (a) a no change group where commitments were unaffected, (b) a compatible change group where organizational and occupational commitment increased concomitantly, and (c) a conflicting change group where occupational commitment increased at the expense of organizational commitment, which decreased over a time. The difference between the compatible and conflicting change groups was explained by a contextual factor, namely the degree to which physicians felt enabled by the organization to exert their professional role. When not enabled, physicians felt they had to choose between the two commitments. Similarly, research shows that when an industrial relations climate is adversarial, commitment is expressed toward either the union or organization, whereas when the climate is cooperative, commitment is expressed toward both (Lee, 2004). The deciding factor determining conflict versus synergy is thus emergent, perceptual, and locally constrained. As such, context, is crucial in understanding the coupling among commitments.

Coupling provides a better representation of the possible interrelationships between any two commitments than current treatments of multiple commitments. Multiple commitments are

synergistic when they are positively coupled and have “non-redundant, multiplicative effects on work outcomes [... in such a way that...] the joint effects of high levels of multiple commitments have more favorable effects than is attainable by any one commitment.” (Johnson, Groff, & Taing, 2009: 433). Because of this synergy, the same behaviors help advance the set of commitments (i.e., multifinality) and the results of that behavior are greater than if there had been high commitment to only one of those targets (Askew et al., 2013). Commitments have neutral relationships when they are decoupled, whether within or between systems, such that acting on one commitment neither advances nor comes at the expense of the other. For example, the nurse’s commitment to the hospital and coworker B are not coupled in Figure 1 and thus neutral. Finally, commitments are conflicting when they are negatively coupled. As described by (Johnson et al., 2009: 434), commitments conflict when “high levels of multiple commitments work against each other.” In such cases, modulating between commitments is not sufficient for attaining desired outcomes related to both commitments due to inherent behavior- or value-based incompatibilities. As such, individuals have to choose between acting in accordance with one commitment or the other. As a result of that required choice, individuals struggle to meet the felt dedication implied by those multiple commitments (van Rossenberg et al., 2018).

Coupling allows for prediction, but alone does not explain why or when any two commitments will be positively, negatively, or unrelated. However, coupling, along with the role of context, accounts for the variation in findings observed in the literature and, when combined with other system parameters, allows for a better explanation of the dynamic interrelationships between multiple commitments. Specifically, coupling is the more proximal explanation with differences in coupling resulting from contextual factors. Consider, for instance, findings that supervisor commitment is sometimes more strongly related to team commitment than

organizational commitment, while at other times the opposite is observed (e.g., Redman & Snape, 2005). This is consistent with the idea that one could find either loose or tight coupling between commitments due to different environmental factors (e.g., a supervisor having limited interactions with versus regularly interacting with and assisting their worker).

Coupling also provides an explanation for the mixed results regarding the spillover among commitments (i.e., little to no spillover observed in some studies and considerable spillover observed in others). Results from person-centered studies, for example, often find groups with very different degrees of spillover (e.g., “locally oriented,” “globally oriented,” “committed,” “uncommitted”; Morin et al., 2011). This variability in the interrelationship between commitments is inconsistent with the predictions of both the matching (consistently low spillover) and synergistic views (consistently high spillover), but is expected when commitments are viewed as embedded within a system open to environmental influences. The connection between coupling and context is addressed further in the next section.

Social Construction in the Local Environment: The Role of “Typification”

Some prior commitment researchers have used roles to account for context in discussing multiple commitments (e.g., Merton, 1957; Randall, 1988). Roles, however, are only one of several potential sources of the meanings that can be attached to commitments and roles alone are insufficient to explain the evolving structure of multiple commitments. A more encompassing concept is typification (Berger & Luckmann, 1966), referring to the process by which individuals ascribe meaning to one’s commitments—through the use of language. Through typification, commitments are tagged according to recognizable stocks of knowledge (“this commitment is of type *X*”) that are predictable for all members of a particular social group (Berger & Luckmann, 1966). Specifically, the *meaning* ascribed to a commitment is locally

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negotiated through social interactions and subsequently internalized such that typifications become experienced as deeply subjective and personal (Berger & Luckmann, 1966; Weber & Glynn, 2006). The resulting differences in typification account for local differences in whether and how commitments are coupled.

The typification process results in sets of commitments having the same typification, providing a common meaning to those commitments which ‘colors’ those commitments according to that common theme. Commitments may, for instance, be assigned meaning based on being performed by *actors* of type *X* (e.g., roles), involving *actions* of type *X* (e.g., expectations), or occurring in *situations* of type *X* (e.g., frames; Weber & Glynn, 2006). To wit, a nurse role still permits divergent typifications of “appropriate” patient care (e.g., based on a certain professional ethos versus the values of efficiency set by a hospital). The meaning tags resulting from typification are similar to institutional logics (Thornton, Ocasio, & Lounsbury, 2012). Based on terminology used in institutional logics research, some examples of these tags include: corporate, family, community, civic, green, and profession (Boltanski & Thévenot, 2006; Patriotta, Gond, & Schultz, 2011; Thornton et al., 2012). Typification explains the remarkable consistency in the meaning of certain commitments among employees in a particular organizational context (e.g., the widely shared “love for country” among military officers).

Commitments will form sub-systems according to how they are typified. That is, shared typification leads to the emergence of internally coherent commitment systems. The assertion that commitments combine into coherent systems is consistent with Ackoff’s (1971) general system principle that systems can have an inherent *meaning* derived from a certain function (e.g., a system of heart muscles has a different function compared to a system of jaw muscles; Kashtan & Alon, 2005; Newman, 2006). Teaching for university professors, for instance, implies several

different target commitments (e.g., commitments to the value of education, current students, a co-instructor or teaching assistant, and various teaching tasks [i.e., preparing lectures, grading, etc.]). These different commitment are all rendered coherent because they are similarly typified as “teaching.” Because of this shared typification, the set of teaching commitments will be positively coupled within the same system.

Even if systems initially have a mix of positive and negatively coupled commitments, eventually they will segregate into internally homogenous subsystems where all commitments are positively coupled. Agent-based models of systems, for instance, clearly show how negatively coupled elements (e.g., incompatible values) are unlikely to linger in the same system. Instead, they automatically segregate into internally homogenous but globally polarized groups (Dandekar, Goel, & Lee, 2013; Schelling, 1971; Paolillo & Lorenz, 2018). The mechanism responsible for this segregation process is called “biased assimilation” (Dandekar, et al., 2013), where, as the system grows or shrinks over time, new commitments are included or excluded from a subsystem based on its preexisting typification. Specifically, commitments consistent with the typification of a current set of commitments will be incorporated into that system whereas commitments that do not will be excluded from the system.

Proposition 1: Commitments that share the same typification will form a distinct subsystem of positively coupled commitments.

Note that it is also possible for a commitment to exist in isolation, outside of any system. These could be emergent, one-off commitments that do not share a typification with other commitments or a commitment that was previously part of a system but expelled from that system due to a change in typification and increasingly negative coupling with other system commitments. If this is a strongly-held commitment, a new system will likely be generated around that commitment (e.g., commitment to a romantic partner evolving into a subsystem of

family commitments). Alternatively, if this isolated commitment is weak, it is unlikely to be enacted on a regular basis because of the lack of synergy with other commitments. This lack of enactment along with it not being strongly held suggests that if it is not incorporated within the boundaries of a system of commitments, it will likely become a peripheral concern and dissipate over time (e.g., the ending of a romantic commitment that is at odds with other commitments).

Commitment System Structures

CST, in addition to highlighting the foundational role of typification in the emergence of commitment systems, provides the means to describe and understand the *structure* of commitments to multiple targets. Specifically, system parameters can be used to map and predict structural changes to commitment systems. We next describe some of the more common types of these evolving structures: separate, intersecting and centralized systems.

Segregation under Conflicting Typifications. Prior treatments of conflicting commitments (as well as conflicting goals and identities) suggest that conflict may occur due to either value-based or behavioral incompatibility (e.g., Horton, Bayerl, & Jacobs, 2014; Klein, Austin & Cooper, 2008; van Rossenberg et al., 2018). Value-based conflicts arise from incompatibilities between the moral norms and ideals underlying different target commitments (Riketta & Nienaber, 2007; Golden-Biddle & Rao, 1997; van Rossenberg et al., 2018) such that holding both commitments creates dissonance (Festinger, 1962). Behavior-based conflicts occur due to an individual’s time, attention, and energy being limited (e.g., van Rossenberg et al., 2018; Wallace, 1993; Werhane & Doering, 1995) and finding that it is not possible to adequately divide those resources among one’s commitments. The recognition that commitments can receive *conflicting* typifications accounts for both value-based (i.e., decoupled) and behavioral

(i.e., negatively coupled) conflict, better unifying the two types of conflict in terms of behavioral separability and coupling.

When commitments receive conflicting typifications, they develop value-based incompatibilities. This incompatibility is based on existing institutional contradictions, defined as preexisting inconsistencies or incompatibilities within and between social systems (Greenwood et al., 2011; Seo & Creed, 2002). For example, prior research has illustrated how differentially typified commitments can create conflicts such as contradictions between corporate and family-oriented commitments (Friedland & Alford, 1991), market (e.g. profit making) versus civic or green typifications (e.g., Almandoz, 2012), and between market and community typifications (Ramus, Vaccaro, & Brusoni, 2017). As another example, Golden-Biddle and Rao (1997) found that commitments with a “family” typification in a nonprofit organization started to clash with “corporate” commitments following lavish expenditures. In the case of our hypothetical nurse, commitment to the value of efficiency/productivity in a “corporate” typification could be contradictory to a “professional” commitment to patient care (Wright, Zammuto, & Liesch, 2017).

CST would predict that commitments in the same subsystem with conflicting typifications will start to conflict (negative coupling) and begin to segregate into subsystems that have neutral mutual relationships (decoupling). This segregation tends to develop automatically when an environment poses multiple, sometimes conflicting demands (Kashtan & Alon, 2005; Newman, 2006) and allows the individual to meet expectations and demands via separate functional modules that offer “separability of the design into units that perform independently, at least to a first approximation” (Kashtan & Alon, 2005: 13773). Recent theory and evidence from multiple fields (e.g., work on multiple identities [Kaplan & Garner, 2017; Ramarajan, 2014]) and

neurological studies on the functionality of the brain (Fuchs, Ayali, Ben-Jacob, & Boccaletti, 2009; Jiang & Zuo, 2016; Pessoa, 2014) corroborate the importance of modular (i.e., subsystem) structures (Newman, 2006), as the most economic and flexible adaptation to environments that offer conflicting demands (Bullmore & Sporns, 2012; Pessoa, 2014). Indeed, individuals often balance their commitments across different roles by shifting or modulating between them, with different subsystems activated by context. Although not conflicting, as noted above, there is still some efficiency loss when modulating between unrelated commitments due to switching costs (Ashforth, Kreiner, & Fugate, 2000). Thus, whereas the focus of Proposition 1 was on the formation of a system of commitments (as opposed to commitments existing in isolation), our next proposition predicts the segregation of commitments into positively coupled subsystems (as opposed to random or “mixed” systems with positively and negatively coupled commitments).

Proposition 2a: Commitments that have conflicting typifications will generally segregate into separate, decoupled commitment subsystems.

Behavioral separability. The above discussed segregation into decoupled subsystems requires behavioral separation on the part of the individual. For instance, while “family” and “corporate” typifications are fundamentally incompatible (Friedland & Alford, 1991), they can be decoupled if tied to distinct commitments subsystems that can be attended to separately, either geographically (i.e., commitments with “family” typifications at home and commitments with “corporate” typifications at work) or temporally (i.e., commitments with “corporate” typifications weekdays from 9am to 5pm). In such cases, the two commitment subsystems can be combined unproblematically in one’s life as two decoupled systems. Whether the subsystems can truly be, or remain, decoupled depends on how well the behavioral requirements of the commitments in the two subsystems remain separable. The behavioral separability of two commitments is often not evident until one needs to act upon both commitments. Through

“boundary work” (e.g., Kreiner, Hollensbe, & Sheep, 2009; Solinger, Jansen, & Cornelissen, 2020) individuals can actively increase or decrease the degree of coupling between commitment subsystems that have different typifications, but the work-life literature highlights the perpetual struggles many individuals face in attempting to manage this separability (Ashforth, et al., 2000; Kreiner et al., 2009). Without behavioral separability, the commitment subsystems become negatively coupled (i.e., conflicting) rather than decoupled.

Proposition 2b: Behavioral separability moderates the relationship between the presence of conflicting typifications and the coupling between subsystems (P2a), such that decoupling results under high behavioral separability while negative coupling results under low behavioral separability.

Intersecting subsystems. Systems with conflicting typifications can sometimes be managed by creating some form of synergy or mutual enrichment despite the underling conflict (e.g., Greenhaus & Powell, 2006). A parallel to this in the organizational theory literature is the way organizational actors navigate conflicting demands (c.f., Greenwood et al., 2011; Pache & Santos, 2010) by making deliberate arrangements such as selective coupling (i.e., the purposeful enactment of selected practices among a pool of competing alternatives; Pache & Santos, 2013). This macro concept provides insights into how tensions between typifications can be resolved (Pache & Santos, 2010; 2013), but they lack detail in terms of micro foundations. CST provides the missing micro-level account by explaining that these phenomena occur when two commitment subsystems intersect.

The intersection of two commitment subsystems is defined as a form of selective coupling where one or more commitments within a designated area of overlap between otherwise decoupled subsystems are positively coupled with other commitments in both subsystems. Two conditions are necessary for subsystems to intersect. First, there must be a situation of conflicting demands (and negatively or decoupled subsystems of commitment as a result) that the individual

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3 must somehow seek to reconcile. In contemporary work arrangements including cross-boundary,
4 temporary, contractual and/or project-based types of work (van Rossenberg et al., 2018), for
5 instance, individuals often find themselves in such a position, needing to create common ground
6 between conflicting expectations. Second, for an area of overlap to exist between two
7 subsystems, it is necessary for at least one commitment to be part of both subsystems (Star &
8 Griesemer, 1989).

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10 Consider, for instance, Figure 2, where our hypothetical the nurse has two overlapping
11 commitment subsystems, one typified as “corporate” (on the left, with commitments to the
12 employing hospital, the supervisor, task goals, etc.), and the other typified as “professional” (on
13 the right, including commitments to a professional organization and colleagues in other
14 hospitals). Career commitment, coupled with other commitments in both systems, is in the area
15 of intersection (i.e., the space within the boundaries of multiple systems). Note that there could
16 be more than one commitment in the area of intersection. Any commitments in the area of
17 intersection should have *multiplicit* typifications (see Star & Griesemer, 1989), suggesting that
18 the meanings attached to these commitments be ambiguous, simultaneously carrying multiple
19 meanings, or serving multiple purposes. This equivocality of meaning (Sonenshein, 2016) allows
20 for partial synergy between otherwise de- or negatively coupled systems. Not all commitments
21 will have multiplicit typifications, but when they do, those multiple meanings allow individuals
22 to create win-win solutions when faced with conflicting demands.

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52 One’s career has high interpretative flexibility and therefore is a commitment target that
53 may often be found at the intersection of multiple subsystems. Specifically, the notion of

“career” can simultaneously carry multiple meanings, supporting the employing organization (“corporate” typification), providing status and professional competence (“professional” typification), and allowing one to provide for one’s family (“family” typification). Depending on which subsystem is currently active, the meaning of “career” will change accordingly. The results reported by Conway et al. (2014) are consistent with this position as they found the relationship between employee’s organizational commitment and commitment to customers was moderated by occupational commitment. The above two conditions—competing expectations and multiplicit typifications—are both necessary and sufficient to predict the emergence of intersecting subsystems. That is, without either of these conditions, the intersection of subsystems is unlikely, whereas the presence of both is sufficient for explaining the emergence and persistence of subsystem intersection.

Proposition 3: Two decoupled or negatively coupled subsystems will intersect under two conditions: (1) competing expectations that must be reconciled and (2) multiplicit typifications of at least one commitment allowing for positive coupling with other commitments in both subsystems.

Centralized Commitment System. Systems may or may not have a centralized structure, defined as being organized around a central element (Barabási, 2016). When there is a central element, that element is the “leading part” of the system such that the system becomes “centered around it” (von Bertalanffy, 1968: 71). In CST, a central element is a relatively strong commitment near the center of the system. In the subsystem illustrated in Figure 1, commitment to patient care is the central commitment. Again, recent theory and evidence from multiple fields (e.g., work on multiple identities; Kaplan & Garner, 2017; Ramarajan, 2014) and neurological studies on the functionality of the brain (Fuchs et al., 2009; Jiang & Zuo, 2016; Pessoa, 2014) corroborate the importance of centrality. In human systems, central elements tend to impose a primary goal or function on the system (Ackoff, 1971; von Bertalanffy, 1968; Jiang & Zuo,

2016; Sporns & Kötter, 2004). Central commitments, when present, thus act as the psychological center of the system and reflect the system’s purpose, even if not located exactly at the mathematical center of the system.

The degree to which a commitment system takes on a centralized structure depends on “self-centrality” (Verplanken & Holland, 2002; Aquino & Reed, 2002), the degree to which a typification is important to the individual’s self-concept and self-esteem. Prior research shows that the meanings attached to commitments have nontrivial effects on commitment strength. For example, Markow and Klenke (2005) found that commitment was stronger when typified as self-central (i.e., work framed as “calling”) than when work was typified as peripheral to one’s sense of self (i.e., work framed as “just a job”). In our nurse example, commitment to patient care would likely be self-central when the nurse *role* is typified as a “calling.” Alternatively, a commitment to the employing organization could emerge as a central commitment when a worker has a great deal of organization-based self-esteem (see Pierce & Gardner, 2004). Central commitments can become powerful self-regulation devices (c.f., Carver & Scheier, 2001) when highly self-central, helping individuals order their lives according to key themes that create a sense of order and predictability in their lives (Verplanken & Holland, 2002).

Consistent with the GST principle of “preferential attachment”, newly added elements tend to form links with strong (not weak) elements (Barabási & Albert, 1999). Likewise, newly added commitments can be expected to couple with strong commitments, leading to a situation where the strongest commitments become increasingly central over time. As such, strong commitments with self-central meanings tend to become central commitments in commitment systems. In addition, because of their relative strength and location, central commitments are often more strongly coupled with other commitments in that system in comparison with

peripheral commitments (Barabási, 2016). There are also factors which slow down, or stop this process of centralization; think, for instance, of incompatible behavioral expectations, which force the system not to “specialize” according to only one function at a time (see Kashtan & Alon, 2005). Other checks and balances that prevent the over-centralization of a commitment system include behavioral constraints, the environment demands for a strong commitment, the attractiveness and availability of alternatives (Powell & Meyer, 2004), and disruptive events. It is because of these factors that the set of targets in any commitment subsystem is bounded.

Proposition 4: A strong self-central typification predicts the emergence of a central commitment and a centralized commitment system structure.

Commitment System Dynamics

GST can also be used to explain the dynamics of systems as a whole including a system’s reaction to changes to individual elements (e.g., Barabási, 2016), the robustness of systems to environmental shocks (Barabási, 2016; Weng, Menczer, & Ahn, 2013), and dynamic interactions among systems in terms of merging or splitting (Barabási, 2016; McCoy & Wu, 2014). Examples of these dynamics in commitment systems are discussed below.

Central versus noncentral commitments. The effects on a commitment system resulting from an individual dropping a commitment within that system, or becoming substantially less committed to that target, depends on the centrality of the altered commitment. For instance, if a noncentral commitment (e.g., the nurse in Figure 1’s commitment to the hospital) is dropped or changed, that change would not result in much disruption to the system, with the system remaining largely intact (see Barabási, 2016, for a GST review of evidence). In contrast, drastic changes would be expected that if a central commitment is disrupted (e.g., a serious accident resulting in our hypothetical nurse being unable to continue in a direct patient care position). The more self-central the central commitment, the greater the magnitude of

change following a disruption. Such changes to central commitments have been shown to occur with job loss (Eby & Buch, 1995), retirement (Kulik, Ryan, Harper, & George, 2014), or drastic career changes (Baillile & Danish, 1992; Vinkenburg & Weber, 2012). If a central commitment is disrupted, we expect high-amplitude changes in the commitment system and a redefinition of the system as a whole whereas systems changes would be minimal when a peripheral commitment is disrupted.

Proposition 5: The centrality of a specific commitment in a commitment system moderates the magnitude of the change in that commitment following a disruption, such that central commitments will be impacted less than peripheral commitments.

System Compactness. System compactness refers to the location of system elements, in terms of distance, to the mathematical center of the system. Compactness reflects the total area occupied by the system and the dispersion of the system elements within that space. In a compact system, the commitments are tightly coupled in a small space whereas in loose system, those commitments are widely dispersed across a large area. Changes in essential system parameters can result in a system becoming more or less compact. Such changes are indicative of a system’s degree of exchange with the environment (with highly compact systems having less exchange) and the relative stability of the system (with more compact systems being more stable; Landau & Lifshitz, 1969). In short, GST suggests that when systems are more compact, they will be more inert and resilient to disruption because the strong effects system elements have on each other counter the effects of external influences.

At one extreme, when the system is extremely compact, the commitments within the system are so tightly coupled that they act as single body. Such system structures would account for findings that that show that commitments can be remarkably stable despite disruptions like organizational change (Schraeder, Swamidass, & Morrison, 2006; Jimmieson, Terry, & Callan,

2004; Amiot, Terry, Jimmieson, & Callan, 2006). It should be noted that even in compact systems, while lasting directional changes are less likely, there will still be small day-to-day fluctuations around a dynamic equilibrium given that commitment is a psychological state (Hofmans, 2017; Klein et al., 2012; Solinger et al., 2013).

At the other extreme, when systems are extremely loose, commitments barely function as a system in that the commitments have little to no influence on each other because they are so loosely coupled. Such systems account for prior findings that have supported “Target Similarity Theory” (Lavelle et al., 2007), namely that commitments will respond to disruption in largely independent ways (see e.g., Becker & Kernan, 2003; Belschak & den Hartog, 2010). In loosely coupled systems, because of the minimal influence among commitments it is more likely that commitments will be susceptible to durable, directional change (versus small fluctuations). This sort of change in commitment strength can happen after a psychological contract breach (Liden, Anand, & Vidyarthi, 2016; Solinger, Hofmans, Bal, & Jansen, 2016), or after completely dropping or abandoning a commitment (Klein et al., 2017; Solinger et al., 2015). Such changes occur unabated in loosely coupled systems.

Finally, at moderate compactness, commitments may exhibit some autonomous behavior within a system, but depending on the coupling of that commitment with other system commitments, that change may be short-lived. Specifically, in moderately compact systems, the positive coupling between commitments predict the extent and rate of recovery of a specific commitment following a disruption. For example, assume that something happens making the attainment of the task goal in Figure 1 far less desirable (e.g., a change in the incentive system to save costs). If that goal commitment was examined in isolation, one would likely predict the nurse would become less committed to, and perhaps even abandon, that goal. In an extremely

loose system, that prediction would likely be accurate. However, that is not the case in Figure 1. As the compactness of a system increases, the coupling among commitments increasingly serves as a buffer, limiting the degree to which that goal commitment will drop, because the commitments with which it is coupled will “pull” that goal commitment back towards previous levels even if it does initially drop (Solinger et al., 2016).

A key insight from viewing multiple commitments from a systems perspective is the recognition that, in most cases, the effects and operation of a commitment depends in part upon the other commitments in the system. This also addresses the concern raised by Randall and Cote (1991) that ignoring the interrelationships among commitments may lead to incorrect conclusions. Consider the inconsistent findings regarding the general stability of individual commitments over time, with some studies finding stability (e.g., Schraeder et al., 2006; Jimmieson et al., 2004; Amiot et al., 2006), expected with highly compact systems; other studies showing changes that are soon reversed (e.g., Solinger et al., 2016), expected with moderate compactness; and yet other studies finding durable changes that do not return to prior levels (Klein et al., 2017; Solinger et al., 2015; 2016), expected with extremely loose systems. Commitment theory cannot currently explain such differences, but the role of system compactness in CST provides that missing explanation.

Proposition 6: The impact of an environmental disruption on the change in a single commitment within a system is moderated by the system’s compactness such that, change may not occur and will likely be muted and quickly reversed with high compactness, whereas change will be greater and more durable with low compactness.

Splitting of Commitment Systems. Because the typifications attached to commitments within a system are also dynamic (Berger & Luckmann, 1966), changes in the context (e.g., an organizational change, leadership change, a geographical relocation, etc.) or in the person (e.g.,

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3 an injury, a career switch, etc.) can change how commitments are typified. Such changes would
4 have consequences for the structure of the commitment system. If commitments within a system
5 become typified in accordance with two different logics, that system will begin to uncouple and
6 eventually split into two subsystems—a divergent movement over time. In some cases,
7 alternative, incompatible typifications may have always existed, but may not have been
8 perceived as such, or remained latent, because a more encompassing prior typification remained
9 sufficiently salient. A change in context or the person can, however, alter that typification and
10 bring latent contradictions to the surface (Hahn & Knight, 2019), resulting in previously neutral
11 or even synergistic commitments becoming conflicting. Indeed, inductive studies like Wright et
12 al. (2017) and Golden-Biddle and Rao (1997) demonstrate how commitments can suddenly
13 receive different typifications that highlight latent incompatibilities such that a previously
14 synergistic system splits apart.

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16 The study by Wright et al. (2017), for instance, shows how doctors' commitment to
17 patient care could suddenly become controversial following shifts from "professional" to
18 "corporate" typifications. The commitment to patient care had become a focal point of conflict
19 between emerging efficiency pressures under the "corporate" typification versus the commitment
20 to patient care under the "professional" typification. Changes in typification can occur through a
21 slow accumulation of experiences or occur immediately following a critical event or shock.
22 System compactness is expected to initially prevent a person's awareness of incompatibilities.
23 Moral emotions play a key role well, such that a shift in typifications is not experienced
24 neutrally, but is considered as a deeply personal matter (Solinger et al., 2020; Wright et al.,
25 2017). Note also that one's emotional reactions to such incompatibilities should act as a
26 moderator given prior research on the dynamics of commitment showing especially sharp and

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3 durable decline when breaches of the psychological contract were accompanied by strongly felt
4 emotions (Solinger et al., 2016).
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8 Consider our hypothetical nurse perceiving that their manager is increasingly siding with
9 the hospital’s cost-cutting policies at the expense of patient care under a reinvigorated
10 “corporate” typification. Should the nurse continue to find that they are spending less time on
11 patient care or providing lower quality care because of these policies, commitments to the
12 hospital and supervisor, if they remain, are unlikely to still share the same typification as the rest
13 of the commitments in the system shown in Figure 1. Specifically, faced with the supervisor
14 explicitly taking sides with hospital’s bureaucracy and strong moral emotions, the nurse’s
15 commitments associated with patient care are be expected to initially uncouple from supervisor
16 and hospital commitments, decreasing the compactness of the system. Indeed, the coupling
17 between these commitments and the central commitment of patient care could become negative
18 (i.e., repulsive) leading to those two commitment targets being pushed out of the system, creating
19 two separate subsystems, one focused on meeting job role expectations and the other on patient
20 care. Whereas Proposition 2 specified the initial segregation of positively coupled commitments
21 into subsystems, and would not hold if the systems was a mix of both positively and negatively
22 coupled commitments, the next proposition focuses on the case where previously positively
23 coupled commitments become mixed and as a result split into separate subsystems.
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44 **Proposition 7:** If commitments in a system receive different, incompatible typifications,
45 the subsystem will start to uncouple and eventually split into separate subsystems.
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48 **Merging of Commitment Subsystems.** A change in typification can also cause distinct
49 subsystems to converge, first to a point of intersecting (see Figure 2) and eventually merging into
50 a single, larger system (see Figure 3). We argue that such a convergent movement over time is
51 explained by a change in the typification of commitments. In particular, a change from
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3 previously incompatible to compatible typifications will cause previously decoupled subsystems
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5 to move towards each other, potentially to a point of intersection or even merging into a single
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7 system. These alternative configurations reflect findings in the literature (e.g., Meyer & Morin,
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9 2016; Tsoumbris & Xenikou, 2010), namely that commitment to organization and occupation
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11 exhibit similar profiles for some people, but not for others. Large, complex systems of the type
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13 illustrated in Figure 3 are alluded to in commitment research examining cross-boundary work
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15 arrangements such as expatriate work, outsourcing, co-employment, and subcontracting
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17 (Gallagher & McLean Parks, 2001; van Rossenberg et al., 2018). Other examples of merged
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19 commitment systems in the literature can be found in studies of volunteer and craft work where
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21 “community” typifications are merged with “market” or “professional” typifications (e.g.,
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23 Toraldo, Islam, & Mangia, 2019; Weber, Heinze, & DeSoucey, 2008).
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34 To illustrate how a convergence may occur, assume the events noted above led our
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36 hypothetical nurse to quit and take a new job at a different, more patient focused, hospital.
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38 Assume further that this new employer places a much higher emphasis on professional
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40 development than the prior hospital. As a result of a shared professional typification (see
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42 Patriotta et al., 2011; Thornton, et.al., 2012), what were two separate “work” and “profession”
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44 subsystems would begin to converge, first intersecting (Figure 2) and then fully merging
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46 (Figure 3). The commitments the nurse had to coworkers in the previous hospital could remain as
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48 commitments to colleagues in other organizations in the merged system. The key to whether or
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50 not one maintains a commitment after leaving (i.e., a residual commitment; Breitsohl & Ruhle,
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52 2016), may depend on whether or not such commitments fit within another commitment
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subsystem. Note that because the system illustrated in Figure 3 did not originate around a single central commitment, it is less compact and still retains some lingering multi-modality. As a result, the commitments in this system mainly have connections with adjacent commitments, with commitments to the employing hospital and supervisor being unrelated to commitments to the Nursing Association and colleagues from other organizations.

Therefore, although there is now a shared typification allowing positive coupling among these commitments, there are also institutional contradictions in the background (see Hahn & Knight, 2019). If this typification is strengthened, and/or those latent contradictions minimized, the system could become more compact with additional and stronger coupling among the commitments in the merged system. Indeed, acts of leadership and framing can move some meanings to the background (Solinger et al., 2020). Alternatively, such backgrounding can happen iteratively through frame-based interactions in the hospital community at large. Regardless of the means, the deliberate backgrounding of undesirable (i.e., mutually incompatible) typifications, reduces potential conflicts and allows commitments belonging to different societal registers to coexist in a synergistic manner. This argument is corroborated by the study of Golden-Biddle & Rao (1997) where a potential conflict between “family” and “corporate” typifications was nascent. That study shows how, through the use of language and framing in social interactions, the nonprofit organization worked to keep the “family” typification intact while diminishing the contrasting “corporate” typification to prevent conflict from escalating. Whereas our first proposition focused on the initial formation of a system of commitments based on a shared typification, our last proposition focuses on a newly shared typification causing the merger of two previously decoupled or intersecting subsystems.

Proposition 8: A *change* in the typification of commitments from incompatible to compatible will cause previously decoupled or intersecting subsystems to merge into a single system.

The challenge in creating a typification that allow for two previously independent commitment subsystems to merge, is to create an integrative and compelling frame that either fully blends potentially competing typifications into a compelling vision or allows for multiplicity typifications (Greenwood et al., 2011; Pache & Santos, 2010). An example using our nurse example might be found at “magnet” hospitals which place a high value on transformational leadership, structural empowerment, exemplary professional practice, new knowledge/innovation/improvements, and empirical results (Kelly, McHugh, & Aiken, 2011) – a set of principles that should background any incompatibilities between organizational and professional typifications. Indeed, research has shown that “hybrid” systems can only remain intact if the common ground is formalized into work procedures and incentive systems (Ramus et al., 2017). Without a strong vision or structure, the contradictory typifications that lurk in the background are likely to surface and fracture the system. As with any system, the more compact a large, merged system the more stable it will be in the face of potential disruptions (P6).

A graphical summary of the propositions derived from CST, and the interrelationships among the discussed concepts, is provided in Figure 4.

Insert Figure 4 about here

DISCUSSION

Drawing upon GST, we have articulated CST as a means for describing, modeling, and studying interrelated sets of multiple commitments. In doing so, we have introduced a new vocabulary and a conceptual “toolkit” to the commitment literature to better understand and

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3 predict the interplay among multiple commitments as parts of larger systems, address
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5 inconsistencies in the current literature, and open new streams of future inquiry. The system
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7 principles and parameters we apply are well established, but uniquely address the problems of
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9 understanding the dynamics of multiple commitments in a manner that yields new insights that
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11 advance commitment research in several important ways. Throughout, we have illustrated how
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13 CST, by considering differences in typification, coupling, compactness, etc., accounts for a wide
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15 range of findings in the commitment literature that currently appear contradictory.
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19 **Implications for Future Research**
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21 **Advancing the Study of Work Commitments.** One of the most significant implications
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23 from adopting a systems perspective is that it exposes the limitations of examining a single
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25 commitment in isolation and expecting to understand or predict the causes or consequences of
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27 that commitment (Randall & Cote, 1991). That is, some of the inconstant effects of commitment,
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29 particularly on behavior, may be due to the failure to consider other simultaneously held
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31 commitments. Commitment researchers have tended to studying commitments in isolation, or in
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33 dyads or one-off groupings, which limits the ecological validity of commitment research by
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35 ignoring the totality in which workers are immersed (Sandberg & Tsoukas, 2011). Doing so is
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37 like trying to predict the movement of the earth independent of the gravitational forces of the rest
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39 of the solar system. It may not always be possible to anticipate and assess all of the commitments
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41 in a system, but the more commitments considered, along with their interrelationships, the more
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43 accurate the predictions. For example, future research could explicitly test whether the expected
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45 outcome of a work commitment (e.g., team commitment and team-focused extra-role behavior)
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47 occurs or not depending on the presence of competing commitments.
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Another area for future research based on CST is to clarify apparent inconsistencies in the literature with respect to conflicting versus synergistic interrelationships among commitments. Prior commitment research has tended to seek generalizable results regardless of context. That is, whether pairs of target commitments (e.g., career and organization, team and supervisor) tend to be synergistic or conflicting. In contrast, CST suggests that any two workplace commitment targets can be synergistic, neutral, or conflicting depending on the context, and the resulting meanings workers attach to their commitments through typification, which influences the coupling of those two commitments. Future research thus needs to understand the local context, and the typifications assigned to commitments, to test whether typification does indeed explain the genesis of synergy, neutrality or conflict between commitments as predicted by CST. Future research should also seek to identify contextually salient types of typifications for workplace commitments, which suggests studying the *social* construction of how commitments become typified. Such research would require examining workers as members of a community, within which meaning is shared—a departure from the traditional research assumption of independence.

Taking a CST approach also suggests the need for greater attention to the role of time in the study of commitments. Prior studies have demonstrated that individual commitments are dynamic (e.g., Solinger et al., 2013), but CST predicts that commitment systems are also dynamic (e.g., emerging, expanding, shrinking, changing relative to other subsystems, splitting, and merging) and that the dynamics of individual commitments within systems are contingent upon system characteristics. Again here, inconsistent findings regarding the effects of commitment and interrelationships between commitments may be due to failures to account for temporality. Several of the proposition we have put forth, for example, can only be tested by repeatedly assessing multiple commitments over time. Those relationships are unlikely to be

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evident in cross-sectional studies (e.g., Grice, Ramsey & Chaney, 2015). The repeated assessment of multiple commitments also has measurement implications, necessitating the use of short scales (e.g., Klein et al., 2014), single-item measures (Van Olffen, Solinger, & Roe, 2016), or alternatives to self-report measures (e.g., drawings, mapping mental models, or neural imaging; Nadkarni, 2003; Senior, Lee, & Butler, 2011; Swart & Cross, 2017).

Testing the specific propositions put forth in this paper will help address other inconsistencies and limitations of prior commitment research. For example, explicitly testing Proposition 6 concerning the role of compactness on the extent and durability of changes in commitment will help address inconsistent findings in the literature regarding the stability of commitments over time. Specifically, studies could be designed to evaluate the extent of change in commitment strength, as well as whether those commitments return fully or partially to prior levels, depending on how loosely or tightly coupled the effected commitment is with other, related commitments. There are additional issues that CST can also address to inform our understanding of multiple commitments (e.g., antecedents and enactment of commitment systems, system responses to different types of environmental disturbances), which we acknowledge are relevant, but were beyond the scope of the current paper.

CST also benefits the commitment literature by facilitating the examination of how different types of work, organizations, and employment relationships impact the importance of different workplace commitments. In addition to identify the key commitments in different contexts, research is also needed examining how those different contexts impact various commitment system structures. For example, are different commitment system structures more common, or more effective, for different organizational arrangements including cross-boundary, temporary, contract, and/or project-based work, or for more complex, multimodal arrangements

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3 such as expatriate assignments, co-employment, and subcontracting (van Rossenberg et al.,
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5 2018)? Future research could also examine the outcomes associated with different structures
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7 (i.e., centralized, compact, intersecting, merged). For example, is greater well-being,
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9 performance, or career success more likely with some structures (e.g., compact) than others, or,
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11 on the negative side, might some structures (e.g., merged) be associated with greater stress or
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13 exploitative working conditions (Torald, et al., 2019)?
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17 **Advancing other Literatures.** In addition to advancing the commitment literature, CST
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19 has implications for future research in other areas. First, although our focus has been on
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21 workplace commitments, individuals have multiple commitments outside of work (e.g., family,
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23 friends, community). CST should be equally applicable all commitments, but that assumption
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25 needs to be tested. This may be particularly valuable for work-life balance research (Greenhaus
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27 & Powell, 2006), in terms of better understanding the intersection of work and nonwork
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29 commitments and providing unique insights regarding competing commitments across work and
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31 nonwork roles. Research on calling and meaningful work could also be informed by CST in
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33 terms of the use of typification to justify or realize a set of commitments (Lepisto & Pratt, 2017).
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35 Given the importance of commitment for organizational change, CST can also open new lines of
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37 research regarding change efforts (e.g., predicting worker reactions based on the compactness of
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39 their commitment system). Furthermore, while our focus has been on commitments, GST may
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41 add similar value to the study of multiple social identities (Kaplan & Garner, 2017), multiple
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43 goals (Unsworth, Yeo & Beck, 2014), multiple “contractors” in distributed psychological
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45 contracts (e.g., Alcover, Rico, Turnley, & Bolino, 2017), multiple stakeholders in one’s career
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47 ecosystem (e.g., Baruch & Rousseau, 2019), or multiple work values and routines.
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The implications of CST may also help explain organization-level phenomena receiving increased attention in organization theory and strategy. Our formulation of CST has logically integrated macro-level assumptions and concepts that are common these fields (e.g., typification, institutional contradictions). As a result, CST can spur future theorizing at macro, cross, and micro levels. For macro topics such as institutional logics, contradictions, and complexity (Greenwood et al., 2011; Seo & Creed, 2002), cross-individual similarity in commitment system structures at the unit-level (e.g., all nurses having patient care as a central commitment) assists the required relational coordination toward a common strategy (e.g., delivering high-quality care in interdependent units; Burke et al., 2006; Ocasio, Laamanen, & Vaara, 2018). Similarly, proponents of the attention-based view in strategy have argued for “attentional engagement” (defined as the process of intentional, sustained allocation of cognitive resources to guide problem solving, planning, sensemaking, and decision making; Ocasio, 2011; Ocasio et al, 2018) as key in the process of strategy-making and execution. Commitment systems, through employees’ shared dedication and responsibility for organizational goals, provides the micro foundation for that attentional engagement. Future research is needed to explore such cross-level effects of commitment system parameters such as compactness and shared central commitments.

Methodological Implications. CST introduces additional complexity to the study of workplace commitments (i.e., the consideration of multiple commitments that are dynamic and dependent on context), complexity that, in some cases, will require a broader research repertoire (Cornelissen, 2017). For example, depending on the questions being asked, the appropriate methodologies may include system mapping, modeling system changes, formal mathematical and computational modeling (e.g., Barabási, 2016), case studies exposing contextual differences

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3 in typification (e.g., Golden-Biddle & Rao, 1997; Toraldo et al., 2019), or person-centered
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5 research (Delbridge & Fiss, 2013; Meyer & Morin, 2016).
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8 We explicitly chose to not include the formulas and modeling tools from other disciplines
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10 in this introduction to CST, but an important avenue for future research is to apply those
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12 formulas and tools to map commitment systems and changes in those systems over time (e.g.,
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14 Dubossarsky, Tsvetkov, Dyer, & Grossman, 2015). Any system can be depicted, and changes in
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16 systems accurately modeled, by calculating the mathematical center of the system (i.e., the
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18 barycenter; Hahn, 1998; Ungar, 2010) and depicting system elements as vectors (de Berg, van
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20 Kreveld, Overmars, Schwarzkopf, 1998; McCoy & Wu, 2014). Picture a pin cushion, with pins
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22 of different lengths sticking out in different directions. The center of the cushion is the
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24 barycenter and each pin a vector associated with a different commitment. The lengths of the pins
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26 reflect the relative strength of each commitment (shorter pins being stronger) and the coupling
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28 between commitments conveyed by the angles between vectors (smaller angles indicating
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30 stronger coupling). These multiple vectors describe a system of coordinates, relative to an origin
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32 point (the barycenter), allowing the distances of dynamic features to be plotted (Pfeiffer, 2008).
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38 Specifically, relative positions of system elements, movement in positions, and the speed
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40 of those movements can be traced from one time to the next. Mapping commitment systems in
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42 this way also allows the determination of a system's boundary (Floater, 2016; Rustamov,
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44 Lipman, & Funkhouser, 2009). Through the mapping of system movements and boundaries, it is
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46 possible to determine whether subsystems are converging or diverging, and whether two
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48 subsystems intersect (de Berg et al, 1998; Newman, 2006; Weng et al., 2013). Many different
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50 fields (e.g., quantum mechanics, optics, cognitive linguistics) have applied these system
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52 modeling tools. CST allows using those tools for the precise mapping of commitment systems
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3 and plotting the dynamic changes in systems over time. These same tools could be applied to
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5 other micro (e.g., multiple social identities, work-family) and macro (e.g., selective coupling,
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7 boundary work) topics that discuss boundaries and intersections in suggestive, figurative terms,
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9 but have not applied systems tools to quantitatively map system boundaries and intersections.
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12 **Boundary conditions.** Future research also needs to address the bounded focus and
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14 assumptions we outlined at the beginning of this article. First, we have not presented all system
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16 parameters (e.g., system density or target centrality) or every possible configuration of
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18 commitment systems; focusing instead on articulating a few exemplar systems. There are
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20 additional nuances in the application of CST that remain to be explored and which may provide
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22 additional insights to our understanding of multiple workplace commitments. Other issues of
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24 restricted focus pertain to our having primarily discussed within person dynamics even though
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26 we have presented a process-based theory that allows for predictions across individuals. As
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28 illustrated in some of the above future research needs, CST can generate hypotheses using
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30 system parameters as independent variables to predicting between-individual differences in
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32 behavior or other outcomes of interest.
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37 In terms of assumptions, we have presumed that (a) subsystems operate and interact in
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39 the same way as systems, and (b) that all commitment targets operate similarly. The first of these
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41 is a common assumption in systems theory (Barabási, 2016), but if false, would require
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43 modifying our predictions regarding the operation of commitment subsystems. The assumption
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45 that commitment is “target neutral” may be less accepted, but is consistent with the observation
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47 that substantial similarities are found in the literature across commitments to different targets
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49 (Klein, 2014; Klein et al., 2012). Should this assumption prove unwarranted, however, CST
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51 would need to be modified to account for differences in different types of commitments.
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Practical implications

In terms of the practical usefulness of CST, all organizations need committed workers, but traditional exchange paradigms and the historic focus on *organizational* commitment are no longer always relevant. It is increasingly important for managers to identify, foster, and manage a set of workplace commitments appropriate for their unit. Commitment theory has not, however, provided clear prescription for managing those multiple commitments. Testing and further developing the ideas in this article should yield that needed prescription. As an example, CST can be used to assess the tangible effects of leadership, policies, and other symbolic forms of management to ensure that desired workplace commitments share the same typification. Leadership can, for example, be expected to impact the local sensemaking that impacts the degree of synergy (or conflict) among commitments. The Golden-Biddle and Rao (1997) study highlights the importance of a leader's use of language in creating or preventing conflicting commitments. Leaders may rhetorically separate existing commitments from undesirable typifications (e.g., Weber et al., 2016), helping workers abandon commitments that are no longer desirable (e.g., from "corporate" to "green" typifications in firms making a sustainability transition). Leaders can then put forth alternative, compelling frames to connect desired commitments under a new typification (e.g., being "green" as a new way to cut costs) and continue to play a role in maintaining the new commitment system under that shared typification (e.g., via formalization and guardianship efforts; Ramus et al., 2017; Solinger et al., 2020), resulting in the desired compact and socially shared commitment subsystem.

Another practical extension of CST would be to explore the *optimality* of given configurations of commitments for individuals and organizations. That is, different commitment system configurations (e.g., degree of overlap versus independence, degrees of compactness) can

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be expected to be differentially effective in different contexts. Actions can be taken to achieve and maintain the adaptive fit of commitment systems in the face of changing environmental demands or even changes in the self over one’s career. To do so, different strategies can be used to organize or reorganize commitments to facilitate that adaptive fit (Chakravarthy, 1982). For example, nonintersecting systems often provide more efficiency within each subsystem, but it can be arduous to switch between them and the resistance to change of those compact subsystems can be a liability when needing to adapting quickly to changes in the environment. A larger, merged systems may thus be more efficient and adaptable, but such systems may be difficult to maintain over time due to their relatively low compactness.

Conclusion

We have introduced CST to better explain and predict the multiple commitments individuals simultaneously hold and the temporal interrelationships among those commitments. CST robustly advances the commitment literature by resolving prior inconsistencies and providing a new vocabulary and key organizing principles for describing commitment systems and explaining the interrelationships among multiple commitments over time as well as the generative principles behind the emergence and transformation of commitment systems.

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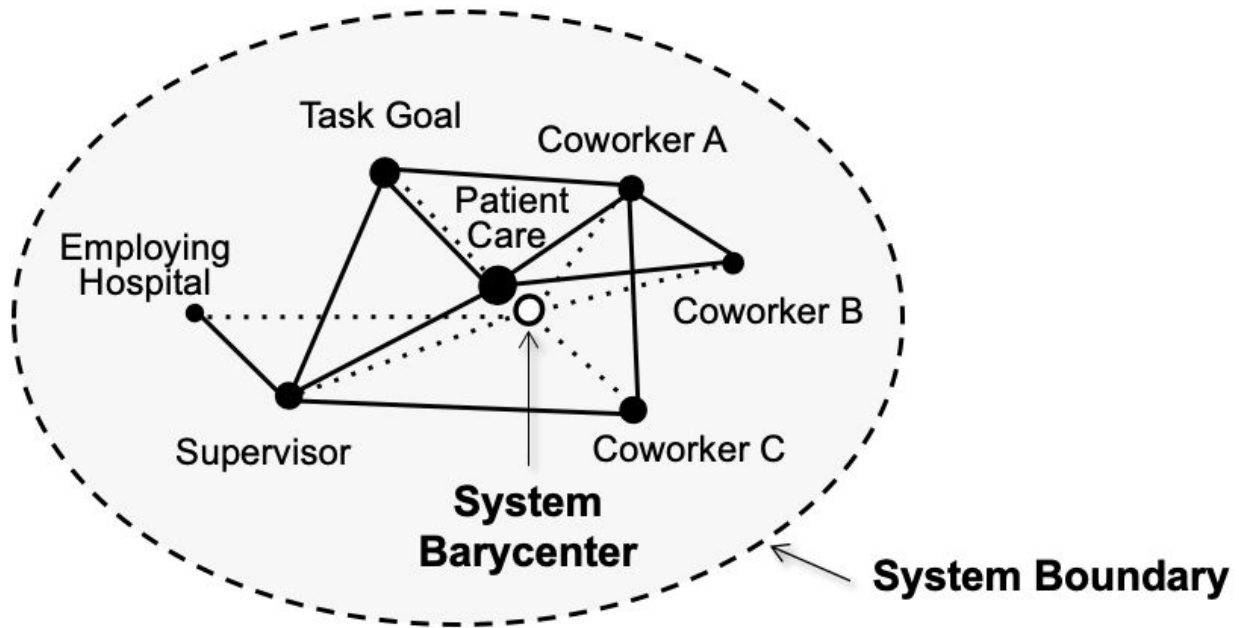
FIGURE 1**A Work Role System for a Nurse**

FIGURE 2

Two intersecting commitment subsystems for a nurse; one work role focused (left), the other profession focused (right), and an area of overlap (middle).

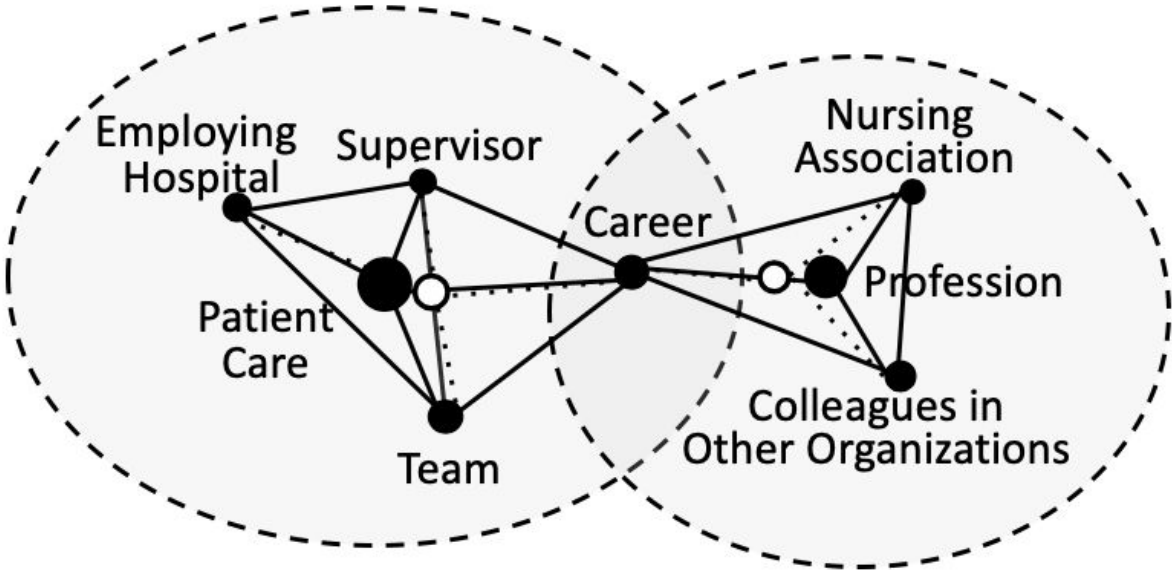


FIGURE 3

A new, work-focused commitment subsystems for a nurse; formed by the merger of the previously separate work role and profession focused subsystems.

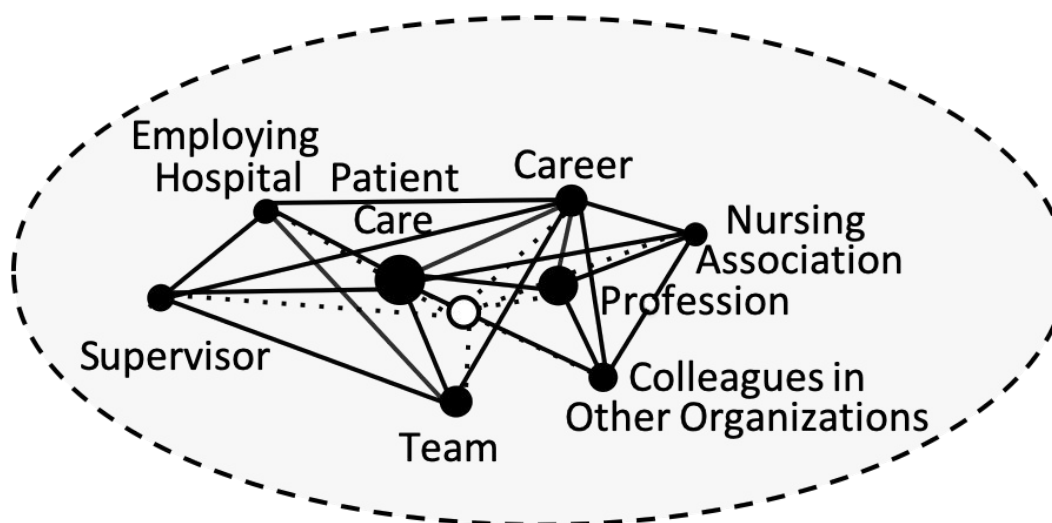


FIGURE 4

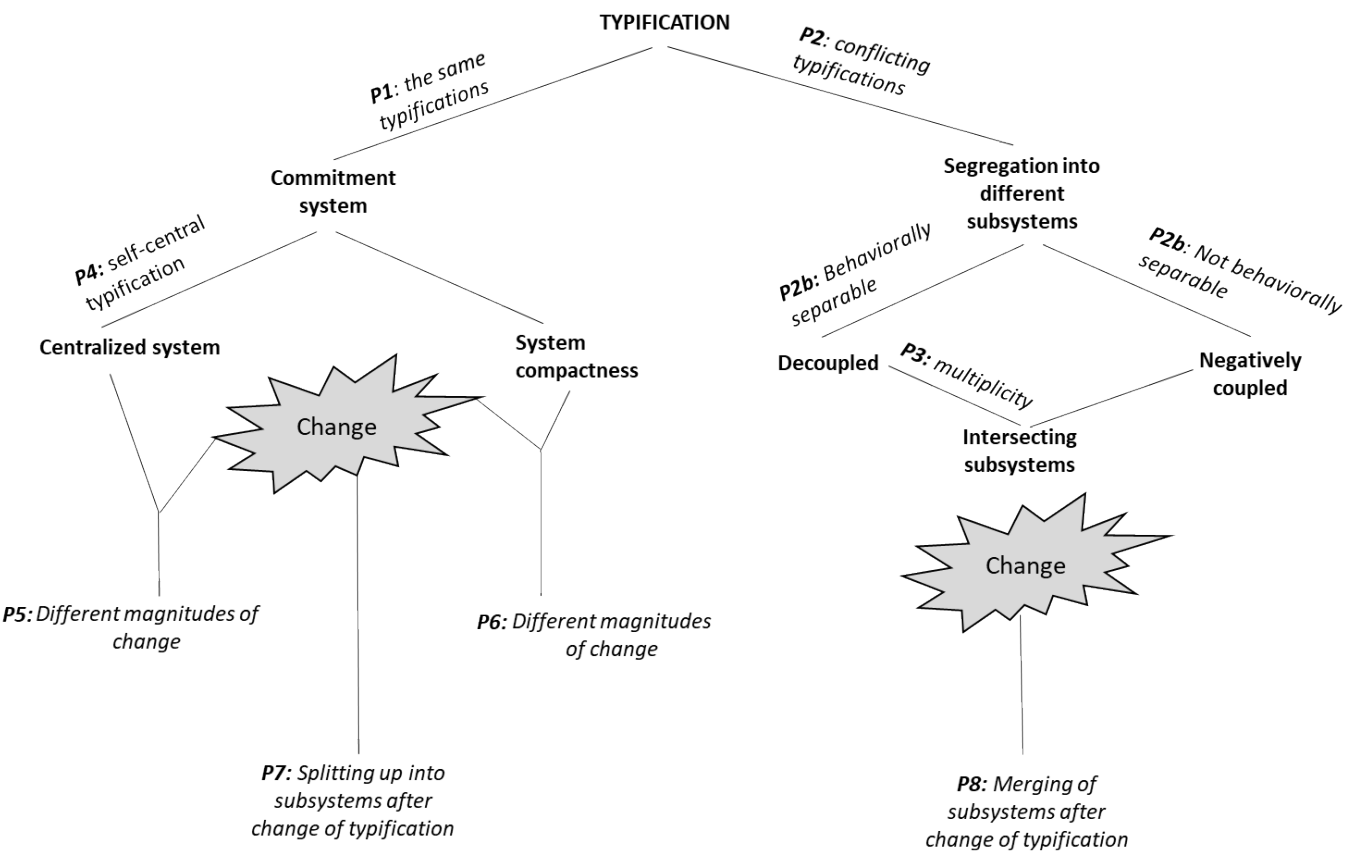
Schematic Overview of Commitment System Theory Propositions

Social construction in the local environment

Emergence of commitment systems

Commitment system structures

Commitment system dynamics



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