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How does the bond between the newcomer and the organization develop over time? Process research on temporal patterns of newcomer's early commitment formation has been very scarce because theory and appropriate longitudinal research designs in this area are lacking. From extant research we extract three process-theoretical accounts regarding how the newcomer adjustment process evolves over time: (1) Learning to Love; (2) Honeymoon Hangover; and (3) High Match, Moderate Match, or Low Match. From these scenarios we develop a taxonomy of newcomer adjustment scenarios. Further, we empirically verify these different scenarios by examining naturally occurring "trajectory classes," which are found to display strengthening, weakening, or stabilizing of the employee–organization linkage. For this, we use a sample of 72 Ph.D. graduates whose organizational commitment history was recorded in their first 25 consecutive weeks of new employment. In closing, we discuss the theoretical and practical implications of the scenario-based approach.

Key words: scenario; process; socialization; latent class; person-centered; organizational commitment
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Introduction

Socialization is the process whereby an initial "outsider" is transformed into an organizational "insider" (Feldman 1981). It is commonly defined as "a process by which an individual acquires the social knowledge and skills necessary to assume an organizational role" (Van Maanen and Schein 1979, p. 211). Successful early socialization of newcomers has shown great value for organizations because it reduces ambiguity and stress during the early stages of employment, it enhances performance by allowing newcomers (and their supervisors) to focus on task performance sooner, and it reduces voluntary turnover (Angle and Perry 1981, Katz 1980, Kramer 2010, Nelson 1987, Ostroff and Kozlowski 1992, Reichers 1987). From a broader perspective, the socialization of newcomers is crucial to institutional persistence, organizational solidarity, and the reenactment of organizational values and culture (Parsons 1951, Selznick 1957). Considering its function of securing organizational reenactment and persistence, *organizational commitment* (henceforth, OC) has been widely utilized as a particular manifestation or outcome of (un)successful socialization (e.g., Baker and Feldman 1990, Bauer et al. 2007,

Buchanan 1974, Morrison 2002, Lance et al. 2000, Ostroff and Kozlowski 1992, Parsons 1951, Vandenberg and Seo 1992, Van Maanen 1975) because it expresses a concurrently evolving *bond* between a newcomer and the organization (Klein et al. 2012, Mowday et al. 1982, Solinger et al. 2008).

Although we know a great deal about which general socialization inputs (e.g., socialization tactics) covary with distal socialization outputs (e.g., organizational commitment), we know very little about how manifestations of socialization such as commitment evolve over time. That is, no studies to date have examined the specific form of commitment trajectories empirically. In other words, although we know "what causes what," we still know little about "what happens" in real time (see Langley 1999, Roe 2008, Tsoukas and Chia 2002). Not knowing and not capturing what happens seriously constrains temporal prediction of socialization outcomes. From a conceptual point of view, this omission in the literature is at odds with the very definition of socialization, which is consistently defined as a *process* (Van Maanen and Schein 1979, Feldman 1981). More consistent with the idea of process, theorists have recently temporally reconceptualized socialization and its manifestations as a dynamic and adaptive

phenomenon (Ashforth 2012, Dutton et al. 2010, Ibarra and Barbulescu 2010, Lance et al. 2000, Shipp and Jansen 2011, Vandenberg and Seo 1992)—as something that "happens" rather than an attribute that "is" (Roe 2008, Thompson 2011, Tsoukas and Chia 2002). This reconceptualization hints at the introduction of process epistemology in the study of socialization (Chia 2007, Langley 1999, Roe 2008, Thompson 2011, Tsoukas and Chia 2002, Van de Ven 2007). With the introduction of process theorizing, the phenomenon of socialization—seen from the perspective of the newcomer—is understood as a process of becoming an organizational insider (Feldman 1981) rather than a timeless state. In the process approach, manifestations of becoming an insider, such as growing OC, are to be seen as codeveloping trajectories that unfold in response to socialization experiences and that reflect within-subject processes of strengthening, weakening, or maintaining the bond with the organization (Lance et al. 2000).

So far, two problems have complicated the study of becoming an insider as manifested in a process of becoming committed to a new organization. First, capturing such an unfolding process requires an intensive longitudinal design (Ashforth 2012, Beal and Weiss 2003, Bolger et al. 2003, Collins 2006, Csikszentmihalyi and Reed 1987, Monge 1990)—implying sufficient measurement "density" and a sufficiently long time frame (thus, easily resulting in more than 20 time moments)—such that temporal contrasts can manifest themselves as they unfold. If designs do not allow us to observe how phenomena change and unfold over time in the form of trajectories, we cannot know their temporal character or their reactions to events, and thus they preclude the possibility of temporal explanation and prediction. Unfortunately, intensive longitudinal designs are extremely rare (Morrow 2011). This omission is understandable considering the practical obstacles (e.g., high costs involved, lack of time in doctoral research programs in combination with "fast publication incentives" in tenure track systems) and motivational challenges in obtaining that many recordings from the same subjects over time (Avital 2000). But the problem is not only of practical nature: even if multiple waves of measurement are used, the data are still typically analyzed as separate "repeated measures" instead of connected points forming meaningful trajectories in time (see McGrath and Tschan 2004, Roe 2008). And even if temporal data are analyzed as trajectories—in the literature on organizational commitment/socialization, such studies are rather frequent (e.g., Bentein et al. 2005, Chan and Schmitt 2000, Lance et al. 2000, Schmitt et al. 2008)—the analysis of these patterns is commonly performed via latent growth modeling methods that force all data onto a common trajectory. This obscures meaningful differences in developmental histories. As a result, process insights,

in the sense of describing and explaining what happens in real time, remain elusive.

Second, we lack good process theory that is capable of explaining and predicting what happens in real time. Researchers have documented several process theories in the form of phase models that identify a predictable progression through a number of successive events (e.g., Ashforth 2001, Boswell et al. 2005, Buchanan 1974, Feldman 1981, Kramer 2010). Although phase models are good starting points for process theorizing in uncharted domains, they are only a first step toward temporal explanation. This is because phase models are implicitly universal, claiming that newcomers generally experience the same sequence of events and react to their experiences in similar ways. Although scholars adopting phase theories have all acknowledged the truism that "individuals differ" in the way newcomers progress through successive phases (e.g., Feldman 1981, Kramer 2010), research to date has not systematically charted and theorized on these interindividual differences in temporal progressions. Thus, although we intuitively understand that multiple developmental histories are possible, current theorizing is not capable of representing these differences in a single framework.

To start theorizing on such temporal differences, it is useful to develop taxonomies and/or typologies that acknowledge general relationships and complementarities between multiple characteristics (Fiss 2011, Siggelkow 2002, Sokal 1974). Thus, in the domain of socialization, process theory might profit from a taxonomy that categorizes all possible histories of becoming an insider into a limited number of underlying "classes." These classes, in turn, correspond with different generic theoretical scenarios that exist a priori and are likely to become manifest in a set of "trajectory families": typical developmental pathways newcomers might follow as they react to different socialization conditions. As such, our taxonomy is an "integrative theory" (McKinney 1969) that simplifies complex temporal histories into a few gestalten serving as heuristic models for scholars and practitioners (Fiss 2011, McKinney 1969).

This paper makes two important contributions. First, at a substantive level, we aim to advance process knowledge on newcomer socialization by advancing a taxonomy that consists of an a priori configurative set of theoretical scenarios and verifying its correspondence with different empirical OC "trajectory groups"—that is, with groups of individual trajectories that share a particular temporal pathway. Specifically, we aim to provide configurative theory as to (1) which a priori theoretical scenarios exist to date, (2) how many scenarios are to be expected, and (3) how likely each scenario is. Our deliberate focus on the process of (rather than entities in) socialization answers repeated scholarly calls for more descriptive research (Hambrick 2007, Kozlowski 2009, Miller 2007, Sandberg and Tsoukas 2011). Our approach

helps us understand what a trajectory up to a particular moment tells us because it resembles a familiar scenario. Based on this information, one could even formulate person-specific prognoses for future development (where the particular scenario tends to move to or end up) and intervene if necessary. For example, with a low commitment score upon the moment of entry, multiple scenarios of future development might still be possible (e.g., growing commitment ending in high or medium levels or maintaining low commitment). With a low commitment score three to six months after arrival, however, the chances of entering a growing commitment scenario may become increasingly slim. Scenario prognoses of this kind are of high theoretical and practical value (e.g., *when* to intervene) and can only be addressed with temporal theorizing. Our taxonomy of onboarding scenarios is intended to provide just that.

Second, this study also makes a substantive methodological contribution by demonstrating how techniques such as high-density repeated measurement and latent class growth models can be used to address practical issues concerning commitment trajectories. As such, this paper responds to the call for substantive-methodological synergy research that shows how new methodological developments enable researchers to address important substantive questions (Borsboom 2006, Marsh and Hau 2007, Marsh et al. 2013).

We start out with a short introduction that traces the socialization literature for hints toward existing theoretical scenarios, which leads to the identification of a configurative set of onboarding scenarios. From this, we develop a taxonomy of theoretical scenarios. Finally, we report the results of an empirical study among 72 entrants in their first 25 consecutive weeks of employment to verify whether our taxonomy of theoretical scenarios matches with observed pattern families of becoming (un)committed. In closing, we explore the boundary conditions for this taxonomy and expand on the value of scenario-based thinking for management research and practice.

Identifying Theoretical Onboarding Scenarios

The Role of Scenarios in Process Research
Variance and process theories make fundamentally different ontological and epistemological assumptions (Abbott 1990, Langley 1999, Mohr 1982, Roe 2008, Thompson 2011, Tsoukas and Chia 2002, Van de Ven 2007). A process theory may take the form of a historical frame such as a phase model (a scripted progression through a series of events that condition individual development; see Piaget 1985). It may also take the form of a scenario (i.e., a postulated sequence or development of events[1]) or a configuration of scenarios. Both forms can serve as legitimate theoretical starting points

as long as these historical frames can be verified or falsified against a corresponding "true" historical pattern in the data. It so happens that the extant literature on socialization suggests a limited set of possible a priori scenarios. In our study, we verify their correspondence with empirically observed trajectory groups of newcomers' commitment to the organization.

Becoming (Un)Committed as a Manifestation of an Onboarding Scenario
We study socialization histories from the perspective of the entrant or newcomer to the organization. As previousy mentioned, recent advances in socialization theory have temporally reconceptualized socialization as a two-way dynamic and adaptive phenomenon. The historical unfolding of onboarding (i.e., becoming an insider) manifests itself in a wide range of concurrent temporal phenomena, such as a decline in cognitive uncertainty (Bauer et al. 2007, Kramer 2010, Michel 2007), an increase in social integration (Bauer et al. 2007, Morrison 2002), transformations of identity and of person–organization fit narratives (Gioia et al. 2010, Ibarra and Barbulescu 2010, Shipp and Jansen 2011), a decrease in job satisfaction (Boswell et al. 2009, 2005; Jokisaari and Nurmi 2009), and declining organizational commitment (Bentein et al. 2005, Kammeyer-Mueller et al. 2005, Vandenberg and Seo 1992). In our own study, we will follow these last authors cited and focus on organizational commitment trajectories. We chose OC because it has traditionally been conceptualized precisely as the degree of strength of the bond between a person and the organization[2] (Klein et al. 2012, Mowday et al. 1982, Solinger et al. 2008). Indeed, OC has been found to correlate highly with other manifestations of newcomer adjustment in cross-sectional studies, as mentioned above (Baker and Feldman 1990, Bauer et al. 2007, Buchanan 1974, Morrison 2002, Ostroff and Kozlowski 1992, Van Maanen 1975). Moreover, OC has strong historical roots in the socialization and institutional literature. Early institutional theorists such as Selznick (1957) and Parsons (1951) already discussed values, norms, and attitudes (among which commitment featured prominently) as the building blocks of cultural and institutional behavior. In their view, institutional behavior is enforced and maintained through socialization (see Powell and DiMaggio 1991).

In finding scenarios of becoming (un)committed to a new employer, it is neither plausible that "anything goes" nor plausible that all scenarios are equally likely. Compare this to mapping individual progress in a pupil's reading proficiency in a heterogeneous sample of children from schools applying different teaching methods. Clearly, proficiency curves over time will vary by pupil and by school, but certain prototypical "pattern families" are likely to be discernible, where some are much more likely and others are virtually impossible. Hence, the

theoretical maximum number of patterns will be limited and may be predictable by insights from educational and developmental psychology. Similarly, the extant literature on newcomer socialization—which we will consider in more detail below—reveals arguments and theoretical conjectures converging on three particularly dominant scenarios predicting the development of commitment. Plausible as they may all sound, these accounts have never been empirically verified as a configurative whole. Below we describe the theories and narratives behind the three dominant scenarios.

Onboarding Scenario 1: Learning to Love
Most studies dealing with the process of newcomer adjustment have conceptualized newcomer adjustment as a learning process unfolding across a chronological sequence of stages that are marked by a prescribed course of events (Ashforth 2001, Buchanan 1974, Feldman 1981, Kramer 2010, Nicholson 1984, Wanous et al. 1992). Common in these phase theories is that adjustment is interpreted, implicitly, as a gradual strengthening of the person–organization bond over time, occurring typically in three stages. In the first stage (anticipatory socialization), the individual has not entered the organization but already starts imagining him- or herself as a member of the new organization. The challenge in this stage is to formulate realistic expectations regarding the future role. In the second stage (encounter), the newcomer has just entered the organization and needs to quickly adjust to new role expectations and functional requirements. The foremost challenge in this phase is to find the right information on the group, task, role, and organization (Ostroff and Kozlowski 1992). Finally, there is a stage of transformation (or adjustment), where the newcomer is believed to acquire a set of desired behaviors, attitudes, and values expected of him or her in the new organization or subunit (Schein 2004, Weiss 1978). More specifically, individuals' identities are presumed to partly transform toward the organizational identity (Ashforth 2001, Caplow 1964, Reichers 1987) as organizational routines, goals, rules, and culture are internalized (Ostroff and Kozlowski 1992, Schein 2004). This is fully consistent with the progressive social identity development perspective of Dutton et al. (2010) in which identity development (i.e., change in self-definition over time) happens through a predictable succession of stages or "seasons" following a pattern of improvement, growth, or progress in one way or another. That is, the content of the social identity is assumed to progress toward some "ideal," which in the case of organizational socialization is the kind of identity most favorable to the new organization.

Metaphorically speaking, this type of scenario makes the person gradually "warm up" toward the organization, similar to romantic partners who gradually "learn to love" each other. Therefore, the steadily increasing pattern of commitment that can be inferred from this scenario—note that, to our knowledge, it has never been empirically established for OC—will henceforth be named *Learning to Love*. Learning to Love happens through the social learning processes of accommodation, inclusion, and internalization,[3] which all make the newcomer more "fit" to the organizational environment. *Accommodation* refers to a process where a newcomer's knowledge of experienced reality is altered to adapt to circumstantial events, mediated by the organization's sensegiving input (Piaget 1985). Thus, accommodation is an absorptive response to sensegiving input whereby preexisting attitudes, values, and behaviors of newcomers are to be divested and transformed into more organizationally appropriate (i.e., beneficial) attitudes, values, and behaviors. The various ways in which organizations attempt to achieve this transformation of newcomer attitudes are known as socialization tactics (e.g., Baker and Feldman 1990, Van Maanen and Schein 1979). *Inclusion* (Abrams et al. 2005) is the acquisition of new self-images and involvements through local interactions (Caplow 1964, Reichers 1987, Weick 1995); mimetic learning of organizational goals, rules, and culture through interactions with incumbents (Ostroff and Kozlowski 1992, Schein 2004, Weiss 1978); and the acquisition of a sufficient level of social integration through informational and friendship networks (Morrison 2002). Finally, *internalization*—which is one of the best-documented processes in socialization literature, dating back to Freudian ego psychology and Vygotsky's (1978) perspective on social and cultural learning—refers to initially external properties (such as company goals and values, desired attitudes, routines, culture) that become increasingly seen as part of the self.

Onboarding Scenario 2: Honeymoon Hangover
Other studies of socialization, focusing on trajectories of development during times of job change, have argued that the formation of a new employment relationship is best characterized as a paradoxical blend of exuberance and vulnerability. Once the decision to join a particular organization is made and previous employment bonds are broken, expectations regarding the new job and the new organizational context are generally high (Griffeth and Hom 2001, Lance et al. 2000). The initial exuberance in newcomers entering organizations is often described as a "honeymoon period" where "initial assets" such as goodwill, enthusiasm, commitment, and investments protect the new employment relationship from setbacks and conflicts (Boswell et al. 2005, Chang and Choi 2007, Fichman and Levinthal 1991, Jokisaari and Nurmi 2009). From the perspectives of Fichman and Levinthal (1991) and Burt (2000, 2001, 2002), this honeymoon period functions as a protective

"shield" to counteract the vulnerability of the relationship to early dissolution, which typically characterizes newly formed relationships.

Honeymoons, however, do not last forever. Some authors argue that—based on research on job turnover—the honeymoon period generally lasts about three to six months (Jokisaari and Nurmi 2009). Newcomers are supposed to undergo a series of stages: a phase where unrealistically high expectations are built up, a honeymoon stage, and a hangover stage. So in contrast to the Learning to Love scenario, in this scenario the process of newcomer adjustment is thought to take the form of an initially high but subsequent weakening of the employee–organization bond over time (e.g., a decline in organizational commitment).

Theoretical accounts that share this expectation of decline can be summarized as dispositional and situational approaches. In the dispositional discourse, Boswell et al. (2005) argued that—after the honeymoon is over—attitudinal levels generally taper off to the levels the individual held in previous organizations, assuming that individuals have a certain natural, preferred level of commitment. This level of attachment is an "affective set point" to which temporary fluctuations tend to gravitate in the longer term (Diener and Diener 1996, Fraley and Roberts 2005, Heady and Wearing 1992, Staw and Ross 1985) and can be understood as a person-specific "commitment style."

Situational explanations for declining levels of well-being and commitment include mainly social exchange processes. Social exchange theory accounts for declining OC by detrimental disturbances in the give-and-take balance, calling for a reassessment of the relationship and a downward adjustment of contributions. For example, most scholars point to eventual feelings of disappointment and alienation resulting from unmet expectations and unfulfilled promises (Boswell et al. 2005, Irving and Meyer 1994) as well as critical events (Bentein et al. 2005), adverse work experiences (Irving and Meyer 1994, Lee et al. 1992, Meyer et al. 1998), fading supervisor support (Jokisaari and Nurmi 2009), and the inability to attain personal goals (Maier and Brunstein 2001) as causes of why the general direction of bond strength slopes downward over time.

In sum, both dispositional and situational approaches have sketched theoretical expectations for a scenario in which commitment after entry starts off higher than one is used to, followed by a decline. We will call this scenario the *Honeymoon Hangover*, as previously described in the socialization literature (Boswell et al. 2005, Chang and Choi 2007, Fichman and Levinthal 1991, Jokisaari and Nurmi 2009).

Onboarding Scenario 3: High Match, Low Match, or Moderate Match

A central theme in the socialization literature is the matching of individual properties (e.g., aptitude, values,

character, abilities, identity) to organizational properties (e.g., organizational values, identity, culture, job demands, career opportunities, security). Matching is a common thread running through classic adjustment theories, such as work adjustment theory (e.g., Davis and Lofquist 1984), vocational choice theory (Holland 1973), attraction–selection–attrition theory (Schneider et al. 1995), "selection as socialization" (Anderson and Ostroff 1997), and other person–environment fit perspectives (Chatman 1991, Kristof-Brown et al. 2005). In these views, newcomer adjustment takes place through processes of attraction (i.e., newcomers are attracted to organizations that match their properties and requirements) and selection (i.e., organizations select only those recruits who match their properties and requirements). For the most part, this happens before newcomers enter the organization, though it also takes place after their entry, when they find out they are out of place (i.e., adjustment through turnover attrition; see Schneider et al. 1995). Thus, in this view, once newcomers have entered an organization, most of the adjustment has already taken place and they are likely to retain more or less the level of bonding that was established in the entry phase. The degree of match has consistently been found to associate positively with organizational commitment levels in cross-sectional studies (Kristof-Brown et al. 2005): the higher the match, the stronger the bond. Although matching theorists have never explicitly tested for the presence of different trajectories of adjustment, their theories do make such conjectures implicitly. In particular, if matching is the dominant mechanism, one can deduce that there are likely to be newcomers experiencing different degrees of match; there could be low-match and high-match newcomers, and there is probably a third matching class lingering somewhere in the middle range, where there is only moderate match. In all cases, however, these scenarios imply a settling of commitment at the matching level manifested in small bandwidth trajectories lingering at the low, medium, and high levels of the commitment scale. Below we will explore the literature on this issue, trying to identify which levels of match are likely to occur.

The Low-Match Scenario. Morin et al. (2011a) adopted a person-centered approach as they searched for classes of individuals in terms of their commitment profiles and found a considerable proportion (19%) of "uncommitted" employees with commitment levels far below the average. In a similar study among Finish permanent contract employees, Cooper et al. (2012) confirmed the presence of an uncommitted group of about 9% of the sample. Indeed, one would expect the number of people with this sustained low profile to be small because most would leave the organization sooner or later (e.g., Bentein et al. 2005, Farkas and Tetrick 1989, Kammeyer-Mueller et al. 2005, Lee et al. 1992, Porter

et al. 1976, Schneider et al. 1995). Thus, we can reasonably expect that in most populations of newcomers there will be a number of individuals with low commitment. These may be people who had few opportunities and knew they were making a poor choice or people who afterward realized that they have made a wrong choice and who waited for an opportunity to leave the organization. Of these lingerers, some may find the costs of leaving the organization too high (e.g., those showing "continuance commitment"); others may lack alternatives because of unfavorable labor market conditions.

The High-Match Scenario. Many studies have assumed that the tendency of both organizations and individuals to look for the best possible fit will lead to what might be called a high match. Several studies have provided theoretical suggestions toward a consistently high-level commitment trajectory. Such trajectories can be inferred from theoretical accounts in studies among newcomers with high task competence (Adkins 1995) and those with a "high commitment propensity" as a result of relevant previous experience, affinity with the organization's goals and products, and highly positive attitudes toward work in general (Cohen 2007, Lee et al. 1992, Meyer and Allen 1988). In a recent person-centered study, Morin et al. (2011a) found that there is a significant proportion (25%) of committed employees with high commitment not only to their organizations but also to their supervisors, group, job, career, work, and customers. This finding was confirmed by Cooper et al. (2012), who detected a large group (37%) of Finish permanent contract employees with high commitment to several targets simultaneously (i.e., their organization, supervisor, job, career). Such supposedly robust and "naturally" high levels of the commitment attitude suggest that there could be a robust or fixed portion in every attitude that is person-specific rather than situation-specific (Staw and Ross 1985, Tisak and Tisak 2000). Another theoretical account from which a high-match trajectory can be inferred comes from the leader–member exchange literature, where scholars have found evidence of favoritism for a small but significant proportion of employees. Because of this exclusive treatment, these "preferred" employees can generally be expected to display sustained higher levels of commitment than do "normal" employees (Gerstner and Day 1997).

The Moderate-Match Scenario. Finally, from some theoretical accounts and research findings, a trajectory of newcomer commitment can be inferred that lingers around the middle regions of the scale. One possible mechanism explaining middle-range commitment is the presence of multiple foci of commitment (e.g., organization, colleagues, supervisor, job, career) that compete for the individual's attention and energy (Cooper et al. 2012, Klein et al. 2012, Morin et al. 2011a). Person-centered studies (Cooper et al. 2012, Morin et al. 2011a) indicate

a consistent and distinguishable proportion of employees (13% in Cooper et al. 2012, 17% in Morin et al. 2011a) with "global," boundaryless career orientations who have weak linkages with particular organizations (i.e., lower OC) but higher-than-average career commitments. A more "locally" oriented group, consisting of approximately 31% of the employees, showed similar middle-range levels of OC but higher-than-average levels of commitment to their supervisors and direct colleagues (Morin et al. 2011a). Cooper et al. (2012) did not find evidence of locally oriented employees but did find a large and distinguishable group (34%) of moderately committed permanent contract employees. In terms of the matching perspective, we suspect that for these middle-range groups, person–organization differences are only partially solvable such that commitment foci partially shift from the organization to more global or local targets that provide better fit. Hence, the odds of observing a strengthening bond (i.e., growing OC) are limited. Individuals in this scenario settle for a bond that is satisficing or good enough for a considerable length of time.

Toward a Taxonomy

Given the existence of a limited number of scenarios in the literature, a taxonomy can be developed that categorizes individuals on the basis of their likely commitment trajectories. We expect that in large heterogeneous samples of newcomers, all a priori defined scenarios will show up as pattern families. Note that the scenarios in our taxonomy are to be seen as ideal types derived from the literature review discussed previously. Hence, not all newcomer commitment trajectories will fit these ideal types exactly. One may be able to predict only the *kinds* of patterns that occur but never the actual instantiations of them. As an analogy, one can predict the general patterns formed in the whorls of windswept sand dunes but never their precise shapes in particular instantiations and repetitions (Gleick 1987). In heterogeneous samples different socialization realities exist, so different theoretical scenarios (see Table 1) are likely to be operative. This will give rise to a configuration of multiple observed patterns of adjustment. Specifically, the Learning to Love and Honeymoon Hangover scenarios imply differences in OC dynamics (e.g., positive versus negative rates of change) but not necessarily in levels. Also, these two scenarios differ from the matching scenarios in the *bandwidth* within which change is expected to occur: the Learning to Love and Honeymoon Hangover scenarios have large bandwidths, whereas the matching scenarios have small bandwidths of change. The matching perspective seems to make contrary claims regarding the nature of adjustment compared with the more dynamic types of adjustments discussed above. These perspectives need not be irreconcilable, however. For

Table 1   A Taxonomy of the Three Onboarding Scenarios

Process-theoretical scenario	Theoretical implication	Relative levels of commitment	Relative likelihood	Key processes driving the scenario
1 Learning to Love	Strengthening bond over time	A priori unspecified	High	Accommodation, inclusion, internalization
2 Honeymoon Hangover	Weakening bond over time	A priori unspecified	High	Shifting social exchange balance, dispositional set points
3a Low Match	Maintaining bond over time	Low	Low	Lock-in, resignation, complacency
3b High Match	Maintaining bond over time	High	Low	Attraction–selection–attrition, in-group favoritism, positive disposition
3c Moderate Match	Maintaining bond over time	Average	Low	Competing foci of commitment

example, Learning to Love patterns occur as a result of different mechanisms (accommodation, inclusion, and internalization versus attraction–selection–attrition), and adjustment occurs at different times (after or before organizational entry; see Anderson and Ostroff 1997). Thus, these dynamic forms can coexist in a heterogeneous model as different aspects vary in salience in different socialization realities. The complete taxonomy is outlined in Table 1.

From this taxonomy a first general hypothesis can be derived.

HYPOTHESIS 1. *The observed trajectories will reflect Learning to Love, Honeymoon Hangover, and matching scenarios.*

As indicated before, our taxonomy was developed based on a review of prevailing theoretical accounts and partly empirical insights on biographical scenarios in adjustment. Although we feel we have covered the main themes that exist at the moment, a large and broad sample of trajectories from actual socialization environments is very likely to contain a proportion of as yet unclassified patterns. The process we go through is akin to a botanist pushing deep into new territory and finding his present tree of life map is actually missing a branch here and there by the wealth of unknown vegetation he encounters. Still, we think our a priori classification will (at least up until this moment) cover the most frequently occurring main types of adjustment in existence compared with a minor final category of "exotic" patterns.

HYPOTHESIS 2. *Learning to Love, Honeymoon Hangover, and matching scenarios will collectively account for the large majority of all existing pattern types.*

Socialization is typically described as taking place in a stressful time window of organizational entry, where uncertainty and ambiguity abound. It is often a transition in which the individual is letting go of the old stable situation and moving toward the next (Ashforth 2001, Lewin 1936, Nicholson 1984). Transitions generally incite dynamics where old forms of temporal order

are replaced by new ones (Gleick 1987, Lewin 1951, Prigogine and Stengers 1984). In this line of reasoning, one would a priori expect dynamic scenarios (i.e., Learning to Love and Honeymoon Hangover) to occur with *higher proportions* than the relatively stable matching scenario. Hence, dynamic scenarios are core, whereas stable matching scenarios are peripheral, to the taxonomy (see Fiss 2011).

HYPOTHESIS 3. *The proportion of Learning to Love and Honeymoon Hangover scenarios will be higher than the proportion of matching scenarios.*

Methods
To test our taxonomy of newcomer onboarding scenarios, we studied the organizational commitment of employees during the first six months after they started at new organizations. This commitment was measured weekly with an experience sampling instrument that was especially designed for repeated, high-frequency measurement of work-related states. Below we describe the design of the study, the technique used for data gathering, sampling, the measures, and the method of analysis.

Temporal Research Design Challenges
Rigorous temporal research demands the valid and reliable capturing of unfolding histories. This focus implies making different methodological choices compared with those one would normally make in cross-sectional studies. Logically consistent with process thinking, methodological rigor should concern the developmental path (instead of the score) because the explicit aim is to capture a *pattern*, not a point. Figure 1 shows how the choice of time intervals in the longitudinal design has a dramatic impact on the measurement of change from a hypothetical, underlying function reflecting trends that could be expected in, for instance, studies of circadian, weekly, or seasonal trends (see also Cole and Maxwell 2003). A gradual increase, stability, a rapid decline, or a dip-shaped variation can all be observed from a single

Figure 1   The Impact of Longitudinal Designs on the Measurement of Temporal Phenomena
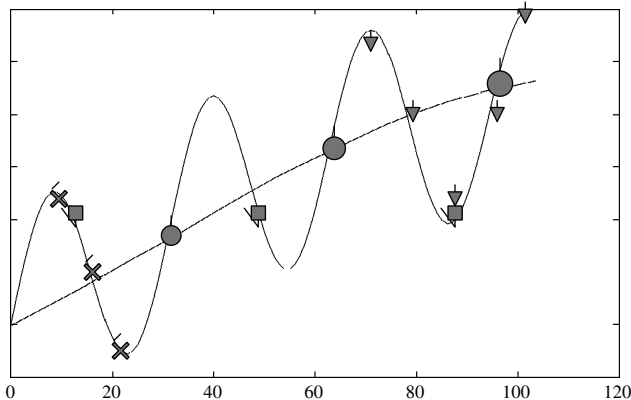
Note. Circles indicate gradual increases, squares indicate periods of stability, crosses indicate rapid declines, and arrows indicate U-shaped variations.

underlying "true" function depending on the longitudinal design.

It follows that in the measurement of trajectory, the timing of measurement occasions is by no means obvious; it has direct effects on the results (Bolger et al. 2003, Collins 2006, Roe 2008, Zaheer et al. 1999). The lower the number of measurement waves, the higher the chance of making erroneous conclusions vis-à-vis *real* change. If multiple different pattern shapes are to be expected and their actual pattern shapes are unknown a priori, the highest possible temporal validity (and reliability) is reached with an intensive longitudinal design (Collins 2006)—that is, with longitudinal measurements that follow up quickly after one another over a relatively long time frame. We call this *high-density repeated measurement* (HDRM), a design belonging to the experience sampling tradition (Beal and Weiss 2003, Bolger et al. 2003). In such designs, more than 20 measurement occasions are not exceptional (Collins 2006). In the study of OC, however, such designs have never been applied yet.

Planning a sufficiently large temporal study within relatively long time frames, however, comes with considerable technical and motivational challenges. In terms of motivation, the challenge is to engage a large enough group of individuals ready to engage in serious, repeated, and frequent participation over a longer period of time. The odds of sample attrition are potentially huge. In all subsequent research design choices regarding data collection, instrument design, and respondent selection, these concerns call for trade-offs with other desiderata of design. For instance, HDRM designs require easy and fast measures, unlike conventional multi-item questionnaires. We think this methodological balancing act is the true challenge in designing rigorous HDRM research.

Collection of Onboarding History Data. Dutch and Flemish Ph.D. candidates in the process of finishing

their dissertations were chosen as the participants of this study. We chose this group because, after leaving the alma mater where they were formally employed as teaching and research assistants that shared the same language (Dutch) and academic culture, these graduates would be joining a wide array of new organizations. Participants were invited by an email message explaining the nature of the study. They were offered an incentive for continued participation and would receive 1 euro payment for every completed session if they filled out at least 80% of all required sessions (i.e., 20 or more). The email included a link to a project website with a video preview of the repeated online data collection procedure.

Six months was chosen as the time frame for data collection so as to maximize the chances of picking up meaningful variation, as the first six months have been shown to be typically the most turbulent for newcomers (Jokisaari and Nurmi 2009). Weekly prompts for participation were determined to be the optimal measurement frequency because they seemed to be the most manageable for potential participants, which would minimize sample attrition. Because we were also interested in how commitment develops prior to entering an organization (i.e., anticipatory socialization), we started measuring OC four weeks prior to participants entering the new organization.

Our weekly email prompts contained a hyperlink that referred participants to an online work experience monitor called LOCUST (Longitudinal Occupational Status Tracker), a Web-based console running on a server that was especially built for this research project. This monitor collected participants' responses to fast and easy questions about their commitment. The questions were asked in a way that honors the temporal nature of the underlying phenomenon. That is, instead of presenting multi-item questionnaires that are time consuming and prone to measurement inequivalence, LOCUST uses graphic trajectory registering. This means that it records and displays—on screen—the time pattern of participants' previous scores on organizational commitment. Thus respondents see the commitment pattern—a so-called *attitudogram*—they are creating over time as they are adding points to their score at each prompting occasion. Every time they add a new point, they are aware of its place in the history of responses; thereby *they are effectively subscribing to a pattern, not a point*. This, in turn, is more congruent with the tenets of the process epistemology. The introduction of the attitudogram feature was inspired by growing awareness of the beneficial effects of self-anchored scaling (see Cantrill 1965, Hofmans et al. 2009). In this type of scaling, subjects are allowed to choose their own anchors and indicate contrasts relative to themselves in at least one subsequent time moment. In psychometric analyses it was found that self-anchored scales measured their latent constructs

with the same degree of measurement error and reliabilities as fixed anchored scales, and both scales led to the same conclusions regarding mean differences between two time moments (see Hofmans et al. 2009 for a test and a review of earlier work). Based on this reassuring evidence, self-anchoring is not expected to bias our results. Rather, it is a tool that can be used to increase reliability of the temporal measurement of a historical unfolding.

The importance of this feature for temporal measurement can hardly be overstated because it ensures measuring "patterns-as-response" rather than separate points. To increase precision, respondents score their commitment by moving an on-screen tracking bar showing an integer value varying between 0 and 100. If they wish, respondents can enter exactly the same value, but if they *do* move the bar, it is immediately evident that they *intend* to score differently. It also rules out temporal measurement error as a result of erroneous recall of the individual's previous responses. In this way, all observed change—even very small adjustments—becomes more meaningful, resulting in increased reliability of the trajectory *as a whole*. Also, as a result of this response format, every recorded pattern point must necessarily be meaningful and cannot be attributed to measurement error.

Sample

In fall of 2007, a total of 369 Ph.D. students responded to our initial email. To check for subject selection bias, the initial recruitment email to participants contained two hyperlinks to a sign-up questionnaire. The first hyperlink stated, "Yes, I belong to the target population, and I want to participate"; the second stated, "Yes, I belong to the target population, but I do *not* want to participate." The sample of subjects who did not wish to cooperate amounted to 92. The hyperlink directed these "nonparticipants" to a short five-item survey measuring organizational commitment to their employing university, satisfaction with the supervisor, and general job satisfaction. We added this "nonresponse" hyperlink to control for selection bias on our focal phenomenon (i.e., organizational commitment). An independent sample *t*-test showed that there was no significant difference between nonresponders ($N = 92$) and initial participants ($N = 277$) on organizational commitment ($t = 0.65$; n.s.), supervisor satisfaction ($t = -1.5$; n.s.), or overall satisfaction ($t = 0.26$; n.s.). Given these results, we feel confident that participants in our study did not systematically differ from nonparticipants regarding the main study variables.

Because we were interested in onboarding histories, we selected only new organizational entrants for this study from the initial pool of participants. To qualify as entrants, participants from the initial sample of 277 individuals must have entered a new organization within a time frame of 12 months. In total, 72 rendered usable data; they constitute our final sample for the current study. Sampled entrants originated from a wide range of scientific disciplines (32% from behavior and society, 22% from natural sciences, 15% from health, 13% from economics, 13% from technology, 3% from language and culture, 1% from agriculture, and 1% from law) from all 17 universities in the Netherlands (74%) and Flanders (26%). Female (54%) and male (46%) participants were all between 26 and 35 years old. There was no significant effect of scientific discipline on the within-subject mean level of commitment to their new organizations ($F = 0.22$; n.s.). Likewise, the university of origin did not have a significant effect on the mean level of OC ($F = 1.5$; n.s.).

All in all, the sample seems to provide a heterogeneous selection of the target population, as required to verify our taxonomy of onboarding histories. Participants received weekly email prompts from the LOCUST Web console. Recorded commitment histories had an average of 14 measurement occasions (SD = 7.7); 36% of the respondents yielded attitudograms with more than 20 completed measurement occasions. We have a total number of 994 observations.

To check for systematic incomplete compliance effects on the OC phenomenon, we correlated participants' mean organizational commitment score with their degree of compliance (i.e., the number of completed sessions). There was no significant correlation ($r = -0.01$, n.s). Thus, with respect to our focal variable, we can reasonably assume that noncompliance was unrelated to the individual's average OC.

Measurement

Organizational Commitment. For the HDRM context, we created a "fast capture" measure of OC. The choice for OC measurement was a methodological choice with practical and substantive considerations. As for the substantive considerations, we have followed the suggestions by Solinger et al. (2008) and adopted a strictly attitudinal conceptualization of OC, which means that positive commitment to the organization consists of a triplet of positive affect, favorable cognitions, and a readiness to take action on behalf of the organization. Thus, the affective component was measured by "What I feel about my organization: I am proud," the cognitive component was measured by "What I think about my organization: I belong to it," and the action readiness component was measured by "What I do for my organization: I engage."[4] Both Flemish and Dutch participants speak Dutch as their native language, so the commitment items were administered in Dutch.

As for practical considerations, we expected that with conventional multi-item scales, the level of intrusion for participants is simply too great in HDRM designs with

more than 20 weekly measures. Fine-grained longitudinal measurement therefore calls for pragmatic methodological trade-offs. To avoid massive attrition in the sample over time, we chose to apply the three fast-capture items above for each attitudinal component of OC. Note that this has been done before in experience sampling settings (e.g., Fuller et al. 2003).

The scale response ranged from 0 to 100 to increase temporal sensitivity of the measure by giving respondents more latitude to indicate nuances in temporal contrasts. The total score of the three elements was taken as a measure of OC, which is the average of affect, cognition, and action readiness. The reliability statistic for the overall measure of OC was satisfactory because Cronbach's α ranges between 0.70 and 0.80 across 25 waves of measurement. Dynamic factor analyses show high factor loadings (higher than 0.80) and good fit indices when indicators are set to load on a dynamic underlying latent factor (Solinger et al. 2012).

PO-Fit, Met Expectations, and Psychological Contract Breach. To validate our taxonomy and explore possibilities for future research, we used an additional end-of-study questionnaire to collect three extra variables from the nomological net of organizational commitment at the end of the measurement time window. We opted for a classic socialization outcome variable in the form of person–organization fit (e.g., Saks and Ashforth 2002) and two variables that have been found to explain change in organizational commitment: (un)met expectations (Boswell et al. 2005, Irving and Meyer 1994, Wanous et al. 1992) and psychological contract breach (Meyer et al. 2002, Robinson and Rousseau 1994, Zhao et al. 2007). *Person–organization fit* (PO-fit) perceptions were measured by the subjective four-item, seven-point Likert scale as reported by Saks and Ashforth (2002). Sample items are "To what extent does your personality match the personality or image of the organization?" and "The organization fulfills my needs" (Cronbach $\alpha = 0.93$). Participants' *met expectations* regarding their new job were measured by asking to what extent the following 10 job characteristics lived up to their initial expectations: autonomy, job security, opportunities to learn, interesting work, new challenges, promotional opportunities, time for leisure activities, usefulness to the community, social status, and possibility to combine work and family (Cronbach $\alpha = 0.81$). These items were obtained from ROA, a renowned Dutch labor market research center at Maastricht University. All questions were answered on a seven-point Likert scale. Answers to these questions were averaged to create a met expectations scale. *Psychological contract breach* was measured by a five-item questionnaire taken from Robinson and Rousseau (1994) on a seven-point Likert scale. Sample items are "So far my employer has done an excellent job in fulfilling its promises to me" (reverse coded)

and "I have not received everything promised to me in exchange for my contributions." The internal consistency reliability coefficient of this scale was excellent (Cronbach $\alpha = 0.92$). To avoid complications resulting from translation of established scale items, we administered this end-of-study questionnaire in English. This is permissible in our sample, given that Dutch and Flemish Ph.D. graduates are highly proficient in English.

Analysis

The individual time-series data were analyzed using *latent class growth modeling* (LCGM; see Andruff et al. 2009, Nagin 2005). LCGM is a statistical technique specifically aimed at identifying groups that follow qualitatively different development trajectories (these groups are called latent classes). In doing so, LCGM assumes that all individuals belonging to the same group follow the same developmental trajectory or that there is no within-group variability. Whereas this constraint may seem overly restrictive, more complex general growth mixture models, which do not assume zero within-group variability, could not be estimated because of the relatively limited sample size. At this point, it is important to note that our sample size is relatively small compared with other LCGM studies and falls below the suggested minimum of 100 respondents (Nagin 2005). However, because the quality of estimation and the statistical power of the latent class growth model depend not only on the sample size but also on the number of measurements, we compensate for this limitation to some extent because we have a large number of measurements per person. Moreover, in anticipation of the lower statistical power, we followed the recommendation of Andruff et al. (2009) to adopt a more liberal significance criterion of $p < 0.10$. Because an in-depth technical presentation of LCGM and general growth mixture modeling (GGMM) is beyond the scope of the present paper, we refer the interested reader to Nagin (1999, 2005) for a presentation of LCGM and Morin et al. (2011b) for a presentation of GGMM. To perform the LCGM analyses, we used version 6 of the Mplus software package (Muthén and Muthén 2010). The implementation of these models in Mplus is nicely described in Jung and Wickrama (2008).

Class Enumeration and Inspection of the Solution. An LCGM analysis requires the researcher to specify the order of the polynomial as well as the number of latent classes to be estimated. Regarding the former, we estimated a cubic polynomial function, which is permissible given our high-resolution temporal data and is consistent with our hypotheses. As is conventional in LCGM, we tested the relative performance of the one- to seven-group solution. Because latent class growth models are highly prone to converge on local, suboptimal solutions, in line with the recommendation of Jung and

Wickrama (2008), each model was estimated 100 times using different random starting values. From these 100 solutions, the most robust one was retained for further analysis. We subsequently evaluated the relative performance of the models using three information criteria: the consistent Akaike information criterion (CAIC; see Bozdogan 1987), the Bayesian information criterion (BIC; see Schwartz 1978), and the bootstrap likelihood ratio test (BLRT; see McLachlan and Peel 2000). These information criteria were chosen on the basis of the simulation study of Nylund et al. (2007), which showed that CAIC, BIC, and BLRT work reasonably well in a latent class growth model with many indicators (i.e., 15) and a small number of individuals ($N = 200$). In general, lower values of the CAIC and BIC suggest better-fitting models. The BLRT, in turn, compares a k-class model with a $k-1$-class model using a resampling-based likelihood ratio test (100 bootstrap samples were drawn for each model). When the BLRT is statistically significant, the model with k classes should be preferred.

Along with information criteria, we also used other criteria: (1) substantive interpretation of the development trajectories, (2) nonredundancy of the trajectories, and (3) the absence of small latent classes (i.e., ≤ 5 individuals per group). Such a balancing of criteria (beyond mere statistical ones) is common practice in latent class model selection (Morin et al. 2011b, Nagin 2005, Querishi and Fang 2011, Wang and Hanges 2011).

To examine the quality of the final solution (classification accuracy), we inspected the time-specific residual variances; low residual variances are supportive of a more accurate model. Moreover, we relied on the entropy, a measure that reflects the accuracy with which the subjects are classified into the latent classes. Entropy values range from 0 to 1, with 0 corresponding to random classification and 1 corresponding to a perfect classification (Celeux and Soromenho 1996). Finally, we computed the percentage of variance that is explained by the model to inspect its explanatory power.

Inclusion of Covariates. To further validate our taxonomy, we tested whether PO-fit, met expectations, and psychological contract breach as experienced by the end of the six-month time frame differed across the latent classes. This was done using the AUXILIARY (e) function of Mplus, which, instead of assigning each individual to his or her most likely class membership, sets each individual as having the same probability of belonging to each of the classes (Morin et al. 2011b).

Results

Model Choice

As a first step, we determined the number of latent classes. When applying the above-mentioned information criteria to our data, CAIC and BIC keep improving when more latent classes were added. Likewise,

Figure 2 Elbow Plot of the BIC and CAIC for the One- to Seven-Group Latent Classes
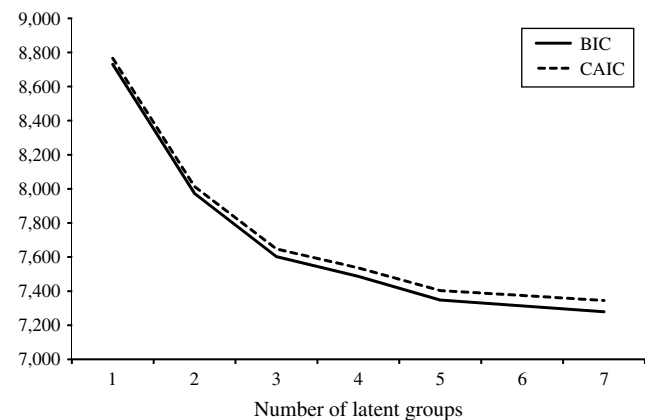
for all models, the BLRT consistently indicates that the more complex model fits significantly better ($p < 0.001$). Because of this phenomenon, which is often observed with mixture models, we followed the suggestions of Petras and Masyn (2010) and Morin et al. (2011b) to rely on elbow plots. An elbow plot clearly suggests a five-class solution for both the CAIC and the BIC (see Figure 2). Moreover, adding a sixth group yielded *redundant patterns* (i.e., several Honeymoon Hangover or Learning to Love patterns at different starting levels) and a group with very few participants ($n = 5$). For these reasons, the five-group solution was selected for further analyses.

Selected Model Performance. The classification accuracy of the final five-group model is good, which can be seen from an entropy value of 0.89. Moreover, the time-specific residual variances decrease substantially when going from a four- to a five-group model (i.e., the average difference between the four- and five-class model is 29.48), and then this decrease flattens when additional latent classes are added (an average difference of 9.29 between the five- and six-class model). Regarding the explained variances, the five-group model explains 83.33% of all the observed trajectories in the data, which is 4.84% more than a four-class model and only 1.53% less than a six-class model. In sum, the entropy, the time-specific residual variances, and the R^2 values all suggest that the five-group classification model is accurate (see Table 2 for the time-specific variances).

Explication of Latent Classes

The patterns and shapes of these five latent classes are depicted in Figure 3. The latent class percentages are the posterior probabilities, which can be interpreted as the proportion of participants that most closely correspond to the commitment trajectory estimated in one specific latent class versus the others. One family of patterns (25%) shows a clear sign of an initial rise, followed by

Table 2   Time-Specific Residual Variances for the One- to Seven-Group Models

	Number of latent classes						
	1	2	3	4	5	6	7
$t = -4$	317.46	292.86	356.11	285.87	201.70	359.47	293.00
$t = -3$	617.89	526.18	345.77	377.53	237.79	224.85	153.74
$t = -2$	670.65	560.94	474.89	538.62	443.35	318.82	212.53
$t = -1$	342.13	225.90	227.91	226.39	196.18	119.84	89.74
$t = 0$	422.83	324.80	226.02	235.42	152.27	129.46	86.15
$t = 1$	366.34	231.03	159.14	161.73	143.70	108.03	86.48
$t = 2$	288.28	151.39	81.36	85.84	85.58	77.48	66.00
$t = 3$	342.65	209.56	147.44	140.11	145.28	123.54	116.76
$t = 4$	248.08	180.32	124.64	129.59	117.97	112.47	107.27
$t = 5$	397.70	138.46	60.95	70.21	50.48	41.08	38.88
$t = 6$	273.11	114.79	45.92	43.37	39.68	35.02	31.32
$t = 7$	224.75	116.69	61.75	52.06	57.25	50.76	48.38
$t = 8$	325.36	135.73	59.04	48.17	42.38	38.65	36.81
$t = 9$	312.51	150.72	96.16	80.62	90.52	84.25	77.80
$t = 10$	361.70	105.93	45.68	25.94	31.80	29.48	28.59
$t = 11$	423.71	78.42	53.24	30.32	42.03	38.40	37.78
$t = 12$	425.02	121.72	64.72	40.49	38.64	35.87	35.35
$t = 13$	429.51	109.37	59.63	40.00	39.86	52.33	51.07
$t = 14$	278.51	102.86	51.57	33.25	29.75	32.60	30.03
$t = 15$	439.99	197.35	106.38	82.48	48.06	65.45	63.38
$t = 16$	554.34	161.70	88.28	69.29	42.48	41.88	41.01
$t = 17$	559.86	242.91	182.45	162.81	91.66	104.57	104.06
$t = 18$	714.55	162.31	109.90	69.47	49.83	50.07	49.94
$t = 19$	556.07	146.73	94.83	70.33	46.04	48.18	48.91
$t = 20$	575.82	208.97	150.31	110.15	93.21	72.72	69.81
$t = 21$	544.74	219.97	159.05	111.89	77.51	71.99	71.18
$t = 22$	624.76	301.88	272.92	248.23	128.16	114.29	113.20
$t = 23$	789.47	195.48	147.85	96.36	41.16	34.67	34.22
$t = 24$	692.04	217.25	149.08	107.64	61.83	33.46	32.34
$t = 25$	790.53	238.89	184.81	155.67	179.10	116.99	115.59
Average	463.68	205.70	146.26	130.99	101.51	92.22	79.04

a steady decline, as is implied by the Honeymoon Hangover scenario. Its interpretation as a Honeymoon Hangover pattern is strengthened by the timing of growth (before and during early onboarding) and decline (after two months on the job). Another family of patterns (16.5%) clearly shows signs of growth, starting rather low and increasing rapidly afterward. Around halfway into our time frame, this trajectory seems to plateau, but it then keeps on increasing and ends up having the second-highest level of organizational commitment of all. This pattern matches the Learning to Love scenario and includes a marginally significant third-order term (see Table 3). Finally, our taxonomy of onboarding scenarios would predict small-bandwidth high-level, mid-level, and low-level pattern families. The largest latent class in this sample (34.5%) can be interpreted as a High-Match class, starting relatively high, growing to even higher levels, and lingering at high levels until the end of the time frame. It is distinguishable from the Learning to Love pattern because the High-Match pattern starts high and grows to even higher levels, albeit within a relatively small bandwidth. Another latent class (12.5%) starts off relatively high but quickly settles at stable middle levels of organizational commitment.[5]

Change in this pattern remains within a relatively small bandwidth at average levels. As such, it can be characterized as a Moderate-Match class. The Low-Match class (11.5%) starts as low as the Learning to Love class, but (unlike the Learning to Love class) members of this class do not show rapid and steady increase, Instead, they remain in the low regions of the scale with many jolts and bumps in the trajectory (unlike the other latent trajectory classes). Also, the Low-Match class does not suggest the anticipated narrow-bandwidth change but rather a consistent drop-off to increasingly lower levels.

Latent Class Differences Checks. To check whether the different latent classes relate differently to covariates, we related latent class membership to PO-fit, the degree to which subjects considered their expectations for the job as having been met, and the degree of psychological contract breach they experienced during the preceding period. The expectation is that people high on commitment would report high PO-fit, high met expectations, and low contract breach. We find that the latent classes identified by the latent class growth model do indeed differ in terms of PO-fit ($F(4, 51) = 12.43$, $p < 0.001$), met expectations ($F(4, 51) = 7.63$; $p < 0.001$), and contract breach ($F(4, 51) = 3.08$; $p = 0.025$). Moreover,

Figure 3   Five Distinct Trajectory Types During the First Six Months of Work
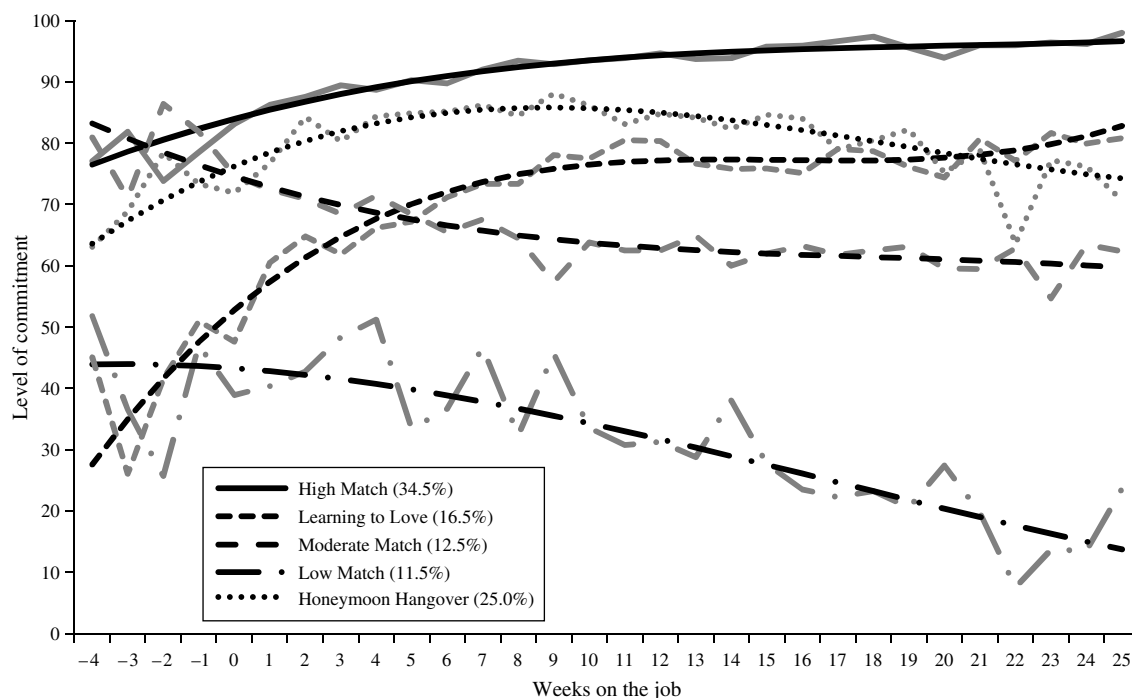
Note. The gray curves are the empirical curves; black lines are estimated curves.

as can be seen in Table 4, all significant between-class differences are broadly consistent with theoretical expectations. For instance, PO-fit scores obtained from individuals in the High-Match (M = 5.83; SD = 0.71), Moderate-Match (M = 3.94; SD = 1.36), and Low-Match (M = 2.20; SD = 1.05) classes differ significantly, as expected. This confirms the tenet that the difference between these latent classes has indeed much to do with differences in matching. Also, expectations were more often met for individuals in the High-Match (M = 4.21; SD = 0.38) and Learning to Love (M = 3.94; SD = 0.53) classes compared with the ones belonging to Moderate-Match (M = 3.11; SD = 0.65) and Low-Match (M = 3.22; SD = 0.68) classes. Thus, apart from matching (which explains differences in levels of commitment at the end of the trajectories), there are also other factors

at play that explain growth scenarios—namely, meeting a newcomer's expectations.

Collectively, the latent trajectory classes present in our data appear to be meaningfully interpretable in terms of our three typical onboarding scenarios. That these scenarios can all be observed in a single model is in line with Hypothesis 1. As a taxonomic description of different onboarding scenarios, these "pattern families" collectively explain 83.3% of the total variance, which also confirms Hypothesis 2. Finally, we expected that relatively more people would belong to the Learning to Love and Honeymoon Hangover scenarios than to any of the matching scenarios. This hypothesis was only partially supported because we observed the highest proportion (34.5%) of individuals belonging to the highly committed High-Match trajectory class. This high proportion

Table 3   Time Parameters of the Five Latent Classes

	Latent classes (N = 72)				
	Group 1: High Match (N = 25)	Group 2: Low Match (N = 8)	Group 3: Learning to Love (N = 12)	Group 4: Honeymoon Hangover (N = 18)	Group 5: Moderate Match (N = 9)
Intercept	83.98*** (2.47)	43.28*** (5.28)	52.78*** (4.80)	76.256*** (2.59)	74.54*** (7.45)
t	1.56* (0.73)	−0.42 (1.14)	4.90** (1.73)	2.41*** (0.51)	−1.80 (1.35)
t^2	−0.07 (0.06)	−0.06 (0.15)	−0.32* (−0.16)	−0.18*** (0.05)	0.09 (0.10)
t^3	0.001 (0.002)	0.001 (0.005)	0.007† (0.004)	0.003* (0.001)	−0.002 (0.003)

Note. Standard errors are in parentheses.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; †$p < 0.1$.

Table 4 How Covariates Relate to the Five-Pattern Profile

	PO-fit	Met expectations	Psych. contract breach
Group 1			
High Match	$5.72^{>2,3,5}$	$4.20^{>2,4,5}$	$2.38^{<2,5}$
($N = 25$)	(0.30)	(0.09)	(0.33)
Group 2			
Low Match	$2.20^{<1,3,4,5}$	$3.21^{<1,3}$	$4.46^{>1,3\dagger,4\dagger}$
($N = 8$)	(0.42)	(0.27)	(0.59)
Group 3			
Learning to Love	$3.91^{<1,>2}$	$4.16^{>2,5}$	$3.13^{<2\dagger}$
($N = 12$)	(0.68)	(0.30)	(0.48)
Group 4			
Honeymoon Hangover	$4.78^{<1,>2}$	$3.67^{<1,5\dagger}$	$3.18^{<2\dagger}$
($N = 18$)	(0.39)	(0.21)	(0.36)
Group 5			
Moderate Match	$3.92^{<1,>2}$	$3.13^{<1,3,4\dagger}$	$3.94^{>1}$
($N = 9$)	(0.46)	(0.21)	(0.50)

Notes. Standard errors are in parentheses. The numbers in superscript indicate for which between-group comparisons the means differ significantly ($p = 0.05$); when a number is followed by a dagger, the difference is significant at $p = 0.10$.

may have something to do with our sample, as will be discussed in the limitations section. Other proportions in our sample are as follows: Learning to Love was 16.5%, Honeymoon Hangover was 25%, Low Match was 11.5%, and Moderate Match was 12.5%.

Discussion

Our study shows that newcomers entering new organizational environments indeed do not uniformly display one particular history of onboarding. Histories of becoming (un)committed can best be qualified as heterogeneous. However, this heterogeneity is neither random nor limitless. Instead, our data confirm our expectations that newcomers follow a limited set of distinct trajectory types, generally consistent with the five-scenario taxonomy extracted from socialization literature. There are clear signs of Learning to Love and Honeymoon Hangover scenarios. We have also observed small-bandwidth patterns lingering at high and mid-levels of the spectrum, as implied by matching scenarios. The low-level matching pattern, however, failed to maintain a small bandwidth but rather showed a rapid drop-off.

Theoretical Implications

We think that our approach and our findings can aid future theory development on socialization processes in at least three ways. First, it appears that real stability in commitment trajectories (i.e., change lingering within a limited bandwidth) cannot be assumed a priori nor can it be precluded. This confirms the more general tenet that one should not think of dynamic adjustment patterns as being *either* stable *or* unstable: to do so would resemble an argument that a glass is either half

full or half empty (see Ashforth 2012). Instead, relative stability *and* instability can coexist in a taxonomy of newcomer adjustment trajectories. What we can be sure of is that—when measured in a high-density longitudinal design—trajectories displaying small-bandwidth change (e.g., High- and Moderate-Match patterns) can reasonably be expected as well as those displaying larger bandwidths of change (e.g., Honeymoon Hangover and Learning to Love patterns). Strict "flat lines" (i.e., no change over time whatsoever) are rather unlikely in socialization settings.

Second, given our finding that flat lines are unlikely, socialization theories that solely emphasize "levels" of adjustment obscure a large portion of reality. In particular, the ample presence of dynamic patterns in our findings seems to indicate that—even if a large portion of adjustment had taken place in the form of attraction and selection mechanisms prior to the moment of entry—there is typically some form of initial dynamic adjustment in the resulting adjustment pattern. For instance, individuals belonging to the High-Match trajectory class swiftly adjust upward and then settle at a high matching level, whereas Low-Match and Moderate-Match individuals quickly gravitate toward lower matching levels. Consequently, theoretical accounts of socialization that emphasize matching or fit (e.g., attraction–selection–attrition models) might be incomplete models of socialization unless they acknowledge what happens after an initial degree of match has been accomplished (see Schmitt et al. 2008, Shipp and Jansen 2011). This opens up a possibility for infusing even the matching perspective with more temporal theorizing. For example, from a temporal perspective, person–organization fit is not a static attribute but a dynamically evolving phenomenon, influenced by one's interpreted past ("from whence") and anticipated future ("where to") (Faulconer and Williams 1985, Shipp and Jansen 2011). Therefore, the High-Match trajectory class might connect to literature on swift socialization and "success spirals" (e.g., high expectations regarding future fit become self-fulfilling; see Ashforth 2012). Theorizing on the Moderate-Match scenario might benefit from finding evidence for dynamic shifts to and from competing commitment foci in the early stages of onboarding (e.g., when entrants gradually shift their commitment focus to their careers or to their immediate colleagues/customers/supervisor instead of the organization as a whole). Finally, the Low-Match scenario might be complemented by the concept of "failure spirals" (see Ashforth 2012) given our unanticipated finding of persistent decline rather than small-bandwidth change in the lower levels. This possible failure spiral in the Low-Match scenario shows interesting (and perhaps complementary) signs of a particularly brittle commitment with rather volatile trajectories. It is possible that these individuals are attempting to find ways out of the

current situation by searching for a better fit but ultimately fail to do so. Thus their commitment is gradually fading but shows signs of a death struggle—ergo, brittle commitment and volatility.

Third, as argued in the Introduction, the identification of multiple scenarios helps us understand what trajectories up until a particular moment tell us; this knowledge is relevant in light of their probabilities for future development. We suggest that socialization scholars might benefit from a scenario-based approach. In scenario-based forecasting, one tries to describe what happens in temporal data and to forecast future development from current states and past developments. Scenario-based prediction incorporates three process-theoretical notions: (1) path dependency, (2) equifinality, and (3) endogeneity of explanatory processes/mechanisms and changing conditions over time.[6] We discuss their relevance in scenario-based thinking in turn.

Path dependency refers to the imprinting, structural inertia, or lock-in effects of the past on current behavior (see Sydow et al. 2009). The Honeymoon Hangover scenario is a qualitatively different historical imprint compared with the Learning to Love scenario. In the former, elation and subsequent disappointment are the dominant emotions, whereas in the latter, newcomers are in a hopeful, winning mood. It stands to reason that people in these subpopulations will react differently to organizational interventions (e.g., socialization tactics) even though they may have very similar levels of organizational commitment at some fixed point in time. Future process theories of socialization, especially those wishing to explain the effects of socialization tactics or other type of interventions, should acknowledge that newcomer reactions can be partly explained by their path-dependent history. For example, not all newcomers would benefit equally from standard newcomer orientation programs. For those who already have high anticipatory commitment, such programs are of little use, whereas for others who still need to warm up affectively to the organization, orientation programs might be very useful.

Equifinality is a common systems theory principle, stating that similar end states can be achieved with different initial conditions and in many different ways. Our data, for instance, have revealed that the Learning to Love and High-Match scenarios might converge on a common high level of OC. Likewise, Moderate-Match and Honeymoon Hangover scenarios might converge around the middle range of OC. A theoretical scenario gives different theoretical accounts for how people *arrive* at a certain state. For example, we found that meeting newcomers' expectations associates equally with high commitment after six months for those with high initial levels of commitment belonging to a Honeymoon Hangover scenario and for those with low initial levels belonging to a Learning to Love scenario.

The *endogeneity of explanatory mechanisms* means that underlying processes do not operate in isolation, nor can they be seen as strictly separate from the commitment pattern itself. For example, the Learning to Love scenario is driven by a combination of accommodation, inclusion, and internalization processes. Temporal growth in these three endogenous processes develops concurrently with growth in OC. This also provides theoretical explanation for path dependency effect—that it is relatively unlikely that, once accommodation, social integration, and internalization processes have gradually elevated the level of OC that this level would suddenly plummet. For example, the endogeneity principle would dictate that enduring high and relatively stable commitment is the *most likely* form of future commitment development for an entrant who has gradually adopted the sensemaking practices of incumbent organizational members; who has become embedded in social and professional networks; and who has gradually internalized the organization's culture, desired attitudes, and routines.

Implications for Practice

Commitment scenarios have predictive value for future development and may give early warning signals for managers and/or the agents themselves. Regarding prediction, commitment scenarios can give tentative prognoses on how commitment in certain trajectory classes may evolve beyond the first 25 weeks.[7] Prognoses can be made at the scenario level or at the individual level. At the scenario level, one tries to forecast how commitment would develop beyond the time frame of the study. In our case, for employees belonging to the Low-Match pattern, after 25 weeks the chances of achieving even a moderate level of commitment (say, score 50) are almost zero because for none of them the average commitment of the last 10 weeks exceeded 45 (the average commitment of the last 10 weeks across all Low-Match employees equals 26). In contrast, for the other four patterns, commitment tends to settle in the higher commitment regions. Indeed, the average commitment of the last 10 weeks never drops below 87, 69, 40, and 51 for the High-Match, Learning to Love, Honeymoon Hangover, and Moderate-Match employees, respectively. By looking at observed average (and/or minimum) values for the different scenarios, one could formulate prognoses for future development. Such information can subsequently be used in targeted personnel policies (e.g., different socialization tactics for these different classes).

The scenario-based approach may also provide a systematic method for applying person-specific interventions (i.e., interventions based on individual scenario prognoses). However, forecasting the commitment trajectory for a *single* employee based on his or her initial commitment level is problematic. Such a prediction requires information on the initial commitment level(s) and on latent class membership. Whereas the former can

be easily measured by asking the employee to rate his or her commitment level at the start, the latter is derived only from the evolution of commitment itself—that is, after the fact. What can be done, however, is monitoring the individual over time to determine to which of our empirical scenarios he or she is likely to belong and act or intervene on that expectation. For instance, according to our data, the Learning to Love pattern and the Low-Match pattern start at exactly the same levels upon arrival. However, whereas the Learning to Love pattern increases rapidly right away, the Low-Match pattern lingers in the low levels. Hence, if for any given individual commitment is low upon arrival, and it does not show signs of improvement in the next month (which is indicative of a Low-Match pattern), an early intervention may be warranted to prevent this employee from following the Low-Match scenario. From a practitioner's point of view, these are the times and places where interventions aimed at strengthening the bond between the newcomer and the organization might have the most beneficial impact. Without a profound knowledge of onboarding scenarios and a close monitoring system, such management interventions would not be possible.

Does History Matter in the End?

In this paper we are primarily interested in retrospectively studying variation in scenarios of onboarding and in showing that people can reach the same apparent end state in different ways. Of course, one may question what difference past trajectories makes if similar end states are reached. Does knowledge of the past have any added value over knowledge of the present state? We have three general thoughts on this issue. First, trajectories can be expected to have a larger predictive or explanatory power than their end points simply because the former contain more information. However, whether that potential will become manifest also depends on the proper measurement of the explained criterion variables. For instance, for the Honeymoon Hangover and Learning to Love scenarios, a commitment trajectory did not show additional explanatory power over and above that of a stabilized (end) level of commitment for generalized states in concurrent criteria such as PO-fit, met expectations, and psychological contract breach observed after six months. We suspect that the main reason for these nonfindings is that they are general states measured at a single moment in time; a greater impact of preceding trajectories is to be expected with dynamic rather than with static criteria. Interesting cases would be turnover intention, job search, and discretionary work behaviors, which vary considerably over time and are dynamically reactive to changes in commitment (e.g., Bentein et al. 2005, Cohen and Freund 2005, Dalal et al. 2009, Kammeyer-Mueller et al. 2005).

Second, from a psychological point of view, one would also expect trajectories to have additional diagnostic value because they are able to capture part of a person's personal history. Trajectory measures have the capacity to represent the learning or adaptation processes that people have gone through up to a certain point in time. Such historic information may become relevant when explaining or predicting people's reactions when faced with new events, such as downsizing or organizational change, at a later point in time, after the end state has been reached.

Third—and the crux of the matter discussed here—the "trajectory versus level" issue is closely related to the classic distinction between the process and variance epistemologies (e.g., Thompson 2011, Roe 2008, Roe et al. 2012, Van de Ven 2007, Van de Ven and Poole 2005). It should be underlined here that if we are unaware which epistemology is adopted while judging "what matters more," we run the risk of dismissing the value of history or development based on criteria that are essentially alien to them. In particular, the variance paradigm, with its focus on stable individual differences, is not suited to judge the value of time-based constructs; this would imply committing the fallacy of reification (i.e., assigning thing-like qualities to processes; see Thompson 2011). Something we treated as a process (i.e., history, development) would be judged as a timeless state.[8] Nor is the process paradigm with its focus on intrapersonal variation suited to judge the merits of individual difference constructs; this would imply committing the fallacy of processification (i.e., assigning process-like qualities to fixed entities; see Thompson 2011). Thus, the added value of the dynamic trajectories as proposed in our study can only be demonstrated by adopting a temporal research design. The latter implies that one should be open to use dynamic dependent constructs, to employ multiple time frames, and to broaden the question "what matters more" to "what matters more for what and when?" We hope that future research will look into this question and provide empirical answers to fill the current gap in our knowledge.

Boundary Conditions of the Taxonomy

Finding a set of five typical patterns begs the question as to how generalizable our taxonomy will be to other settings. Which scenarios are "core" to the taxonomy (most likely observed in any sample), and which are perhaps more peripheral or exotic (Fiss 2011)? We propose that the empirical observation of any temporal taxonomy in toto depends on populational and sampling considerations. On the one hand, the organizational setting is likely to put restrictions on the variety of patterns that could exist. On the other hand, methodological sampling choices will also determine the empirical variation in patterns. Because both issues are important to take into account for future temporal research, we will delve more deeply into them.

The Theoretical Upper Bounds of Pattern Variety. The organizational setting is likely to put restrictions on the variety of patterns that are possible to exist. Following the logic of dynamic systems theory (Gleick 1987; Prigogine and Stengers 1984; Thelen and Smith 1994; Van Geert 1994, 1998), variety is limited by the degree of variation in the relevant sources of variety (factors) influencing the phenomenon. Analogously, the total number of paths through a forest (totality of possible variety) depends on the main roads (factors), the deviations that each main road allows (variety), and the degree to which these main roads are connected with each other through cross junctions. If one of these sources has a restricted range (e.g., a path through the forest allows no deviation), the maximum possible variety of temporal patterns observed is reduced as well. At the most abstract level of reasoning, there are two possible factors: the subject and the environment. Taking the socialization example, some settings do not allow for the occurrence of heterogeneity at all. In these *fully constrained* cases, environmental circumstances are completely shared (i.e., identical) for all, and therefore all subjects are more or less similar. This may occur in strong situations with very stringent and fixed individual entry selection criteria aimed at producing single-minded clones in unitary cultures (see Meyer et al. 2010). Examples include missionary organizations with extremely unitary doctrines (e.g., sects). In these settings the variety in socialization experience as reflected in attitudograms will be extremely low. In the limiting case, a single unique pattern exists.

Yet in other socialization settings, the environmental circumstances might be fully shared (zero variation in the situation factor), although there is still a high degree of variety in the "person" factor (e.g., large differences in personality, demographics, history, and attitudinal makeup of selected newcomers). Such socialization settings are relatively constrained because of the limited variation in the situation factor. Such a constraint would limit the potential heterogeneity in observed onboarding scenarios to that of individual differences. Examples are laboratory settings, "boot camps" carefully sealed off from the environment, or other rather artificial environments. If one is looking—as we were for the present study—for a setting in which the most prominent theoretical pattern families should materialize, it follows that a setting needs to be chosen where there is true variance in both circumstances and subjects. We call these contexts (and the samples drawn from them) *relatively unconstrained.*

The Role of Sampling. A great deal of the potential confirmations of our model by future researchers will depend on sampling. If future researchers are interested in confirming the presence of a (low likelihood) low-match scenario (e.g., those interested in finding a low-match pattern for its social and economic importance),

this pattern is more likely to show up if they choose to work with finer-grained longitudinal designs and larger sample sizes. This idea is based on two general principles: the first is the principle of *chance* (e.g., low probability trajectory types have higher a chance of occurring in large samples), and the other is the principle of *distinctiveness* (more distinct trajectory shapes are more likely to occur as separate latent classes). The grid of longitudinal design serves to increase the distinctiveness of each trajectory as each is more reliably observed. For example, the Moderate-Match trajectory class is more similar to the Honeymoon Hangover class than to the Low-Match class. As a result, the Low-Match class is more likely to appear as a separate, distinct trajectory type when compared with the Moderate-Match class, yet they only do so when sample resolution is increased. In practice, the combination of chance and distinctiveness will determine which patterns appear in analyses. For instance, because Learning to Love and Honeymoon Hangover scenarios have relatively strong roots in theory, apply to a large part of our sample (16.5% and 25% respectively), and are highly distinct in their dynamic forms, we expect that these two trajectories will likely show up even if sampling is disadvantageous (i.e., through low sample size and large time intervals).

Limitations and Future Research
Our sample consisted of young academics who recently earned their Ph.D. degrees. This talented pool of workers is highly sought after and, at times, even indulged. Our choice for these knowledge workers may have influenced the number of people belonging to each of the trajectory classes. The generalizability of these empirical proportions is therefore limited to highly valued workers in the labor market. For example, the large relative likelihood ratio of the High-Match scenario (34.5%) may be attributed to the rather privileged status of this group in the labor market, which grants them ample opportunity for selecting optimal working environments. Such a high proportion of High-Match trajectories may not be encountered in other settings and occupations. For example, one could get the reverse in likelihood proportions for workers in high-turnover industries such as retail, telemarketing, or fast-food restaurants (i.e., more Low-Match likelihoods). An interesting endeavor for future research would be to find out how and where transitions in scenario likelihoods would take place as one moves up in labor market status.

Despite the high (temporal) resolution of our data, the number of employees in our sample is rather limited. Because this affects the possibility to detect small subgroups of participants, it is conceivable that with more participants, we would have detected additional trajectories (e.g., Learning to Love at multiple starting points). For this reason, conclusions concerning the proportions of employees in each trajectory should be interpreted

with caution. Note that we compensate for the small sample size (in terms of the number of participants) to some extent by having 25 waves of measurement. Moreover, because most of our hypotheses were confirmed with a rather small sample, the trajectories found are assumed to be salient and therefore of high theoretical importance.

Third, the small number of employees not only limited the number of trajectories that could be found but constrained the complexity of the models that could be estimated. In particular, we have chosen to implement the LCGM method, which assumes no within-profile variability (see Morin et al. 2011b for an extended discussion and illustration of the limitations of this approach). With more participants, we would likely have been able to estimate more realistic and, hence, more complex models (i.e., models including within-class variability, such as general growth mixture models).

We have provided preliminary signs that the trajectory classes relate differently to covariates (i.e., PO-fit, met expectations, and psychological contract breach at the end of the time frame) and that they do so in the theoretically expected directions. Note that we only showed relationships between these covariates and latent class membership at the end of the time frame. Whether the degree of PO-fit, met expectations, and contract breach can also be considered as antecedents (or causes) of commitment trajectories remains to be established in future research. To this purpose one would need to relate the score of a given covariate at $t - 1$ to a commitment score at t (Monge 1990) and/or relate (ideally dynamic) covariates to class membership probabilities (Jones and Nagin 2007). Although it was beyond the scope of this particular study, future studies could examine *dynamic* causal relationships with unfolding scenarios (e.g., dynamic measures of accommodation, inclusion, and internalization processes for Learning to Love scenarios) and include more covariates to substantiate them. This shows vast possibilities for the theorizing and testing of all kinds of new temporal hypotheses.

As a final note, we have studied heterogeneity in onboarding scenarios in socialization settings, where individual employees adjust to a social unit, the organization. These scenarios possibly generalize to other types of adjustment in relational settings, such as dyadic relationships in the interpersonal spheres (e.g., mentor–apprentice, supervisor–subordinate), in professional cooperation (e.g., teams, committees), and in the interorganizational spheres (e.g., partnerships, joint ventures, contractual relationships). However, such generalizations are not clear-cut because they may evoke different kinds of identities (relational versus social identities; see Dutton et al. 2010) and different kinds of social interactions. On the other hand, we think that the scenarios we have pointed out may have sufficient generic quality

to also be observed as trajectory types in dyadic relationships, even romantic ones. We leave the confirmation of this tenet to further research.

Conclusion

In this study we aimed to provide a process-theoretical rationale for understanding heterogeneity in temporal histories of onboarding. We presented a configurational view of newcomer adjustment dynamics by forwarding a taxonomy of multiple scenarios as temporally distinct modes of onboarding. We found footholds for the presence of heterogeneous theoretical scenarios in extant socialization literature. When combining these literatures, we found that theory predicts neither random nor limitless heterogeneity in adjustment patterns but rather a "scripted" operating space and a limited set of dominant trajectory types. We conclude that the intuitive notion of random heterogeneity is untenable for two reasons: (1) Heterogeneity is constrained by the degrees of freedom of parameters in a particular operating system. We have argued that some socialization settings do not allow for the occurrence of heterogeneity at all, but these are cases where circumstances are shared and subjects are similar. (2) Some patterns are a priori more likely to exist than others. Next to two dynamic scenarios (which were labeled Honeymoon Hangover and Learning to Love), we found three matching scenarios: High Match, Low Match, and Moderate Match. In our empirical application, these five patterns were all confirmed. Different empirical variations on these scenarios may be expected to show up as larger and more heterogeneous (process) data sets are studied with methods that provide greater resolution (e.g., through the use of finer-grained temporal measures).

In future process theorizing, we advocate the use of scenario-based thinking because it is easily combined with notions of path dependency, endogeneity, and equifinality; these notions are incommensurable with theorizing in the variance epistemology. As such, a scenario-based approach might achieve more in making sense of complex process data (i.e., describing what happens) and in forecasting future development from current states/events and developmental histories. Unlike other approaches, early prognoses of scenario membership might provide warning signals that facilitate timely managerial interventions.

Endnotes

[1] *Concise Oxford Dictionary of English for iPhone*, s.v. "scenario." Accessed May 29, 2012, http://www.penreader.com/iphone-software/Oxford/Oxford_English_dictionary.html.

[2] When talking about organizational commitment, we mean the attitudinal phenomenon that is known by most as "affective organizational commitment" (Allen and Meyer 1996, Meyer et al. 2002). We do *not* refer to other types of involvement related to the employee–organization bond (which are known as "continuance" and "normative commitment"). In doing so, we comply with recent fundamental conceptual critiques of the three-component model of organizational commitment (Klein et al. 2012, Solinger et al. 2008).

[3] Mind the difference between phases and processes. Social learning processes are continuous phenomena that vary in intensity across the entire time frame of socialization. Phases, in contrast, refer to specific parts of the time frame. The process of accommodation, for instance, is ongoing and operative on all phases. It is most prevalent, however, in the earlier phases.

[4] The Dutch expression used here may also be translated as "I participate" or "I join in to act."

[5] Note that the apparent (though nonsignificant) decline is convex and already sets in before entering the organization, ruling out a possible Honeymoon Hangover interpretation.

[6] Whereas these notions are incommensurable with the variance epistemology (see Van de Ven 2007), they are easily incorporated in process epistemology because they reflect basic notions of dynamic systems theory (see Gleick 1987, Prigogine and Stengers 1984, Thelen and Smith 1994, Van Geert 1998).

[7] We explicitly stress the word "tentative" because prediction becomes uncertain when predicting points that go beyond what is measured in the original data. So in a strict sense, additional data on a larger time frame should be collected for prediction beyond the first 25 weeks. However, because of the smoothness of the trajectories, we believe that similar patterns will be observed after the first 25 weeks.

[8] One should not assign thing-like qualities to developmental histories and their end states. For example, regarding the notion of end state, we should remind ourselves that retrospective analyses may be done repeatedly over different time spans and that what appeared to be a fixed end state at one moment may turn out to be a state of temporary stability when looked upon in a longer time frame (Chia 2007). Also, at any point in time, given the circumstances people find themselves in or the ways in which interactions with their employers unfold, a commitment trajectory can take another course and fail to reach what might seem to be a likely end state.

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