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Bygballe, L. E., Swärd, A., & Vaagaasar, A. L. (2021). A routine dynamics lens on the stability-change dilemma in project-based organizations. *Project management journal*, 52(3), 278-286

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A Routine Dynamics Lens on the Stability-Change Dilemma in Project-Based Organizations

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Handelshøyskolen BI

Abstract

A central issue in project-based organizations (PBOs) is how to balance the need for flexibly responding to changing customer demands and creating consistent performance in the organization at large. This essay discusses the relevance of a routine dynamics lens for understanding this dilemma. We show how routine dynamics might help understanding how and under what conditions routines, with their dual capacity for stability and change, produce a variety of performances, some stable and some varying, in the PBO. As such, we contribute to the stream of research that seeks to explain how PBOs build capabilities and how they work.

Keywords: project-based organizations, routine dynamics, stability, change, capabilities

Introduction

A key challenge for project-based organizations (PBOs) whose core business involves delivering projects to external clients (Davies & Brady, 2016; Gann & Salter, 2000; Sydow, Lindkvist, & DeFillippi, 2004; Söderlund & Tell, 2011; Whitley, 2006) is to balance the need to flexibly address clients' changing demands in individual projects with the need to create consistent experiences and, thereby, economies of scale in the PBO overall (Hobday, 2000). This balancing act is central for any organization (March, 1991) and dominates analyses of organizational adaptation and learning, competitive advantage, and survival (Gupta, Smith, & Shalley, 2006). For a PBO such as a construction firm, this is particularly challenging due to the high degree of discretion and autonomy granted to project teams operating at the boundaries of firms (Gann & Salter, 2000). The PBO is not only decentralized but loosely coupled (Dubois & Gadde, 2002), a feature that also applies to the knowledge dimension in which knowledge is distributed and largely resides in individual (project) members (Lindkvist, 2004).

The integration and knowledge/learning dilemmas of PBOs have attracted project management researchers' interest (Sydow et al., 2004) and are fundamental to research on how PBOs build capabilities (Brady & Davies, 2004; Davies & Brady, 2000; Davies & Brady, 2016; Gann & Salter, 2000; Pemsel, Söderlund, & Wiewiora, 2018; Prencipe & Tell, 2001; Söderlund, Vaagaasar, & Andersen, 2008). These scholars have shown how PBOs build project capabilities through an interactive process of bottom-up (explorative) learning at the project level and top-down (exploitative) learning at the business level (Brady & Davies, 2004). This research also demonstrates that PBOs might learn to execute increasingly numerous similar bids and projects over time, and in doing so, develop repeatable solutions and achieve economies of repetition (Brady & Davies, 2004; Davies & Brady, 2000; Davies & Brady, 2016). Thus, while projects are

often seen as a means to perform unique tasks and grasp new business opportunities (Hobday, 2000), an important routine dimension to these perceived non-routine tasks nevertheless exists.

Against this backdrop, we believe that studying routines is a viable way to clarify how PBOs balance stability and consistency, on one hand, and change and flexibility, on the other, and thereby build capabilities. By examining the micro processes of routines, scholars have recently demonstrated routines' dual capacity for both stability and change (Feldman et al., 2016). As Turner and Rindova (2012, p. 26) argue, "routines are systems that have the capacity to produce a wide variety of performances—some stable, some varying—depending on the conditions." These scholars generally define routines as "generative systems that produce recognizable, repetitive patterns of interdependent actions, carried out by multiple actors" (Feldman & Pentland, 2003, p. 96), and acknowledge routines' inherent capacity to adapt and change from within (Feldman, 2000). This routine dynamics perspective has emerged as a critique of the traditional capabilities perspective on routines (Dosi, Faillo, & Marengo, 2008), arguing that it tends to treat routines as abstract entities and as a "black box" (Salvato & Rerup, 2011). The routine dynamics perspective seeks to unpack what really happens as routines emerge through the lived experience of people (Parmigiani & Howard-Grenville, 2011).

In the PBO literature, scholars have acknowledged that routines are important building blocks of capabilities (Davies & Brady, 2016). However, with a few exceptions (e.g., Biesenthal, Gudergan, & Ambrosini, 2019), this research largely reflects the capabilities perspective of routines. By applying a routine dynamics perspective, we seek to open the "black box" of routines in PBOs. Three key insights from this perspective are particularly valuable for our purposes and are vital for explaining how routines might lead to both stability and change. First, the role of agency and actions in routines; second, the relationship between routines and artifacts; and finally,

the relational and situated feature of routines, which involves the connections they make and their embedded nature. By addressing these insights and relating them to the specific context of PBOs, we advance understanding of how PBOs balance stability and change and how they build capabilities and cope with the integration and knowledge/learning dilemmas (Sydow et al., 2004).

The essay is structured as follows. In the next section, we present the routine dynamics perspective, focusing on the key insights outlined above. Then, we present how previous PBO research has considered routines, after which we discuss the relevance of a routine dynamics perspective for understanding the stability-change dilemma in PBOs. This discussion includes what we believe might be interesting research questions for future studies. We conclude by outlining important methodological implications of our discussion for understanding how PBOs can balance stability and change, and how they build capabilities.

Routines and Routine Dynamics

Routines and their importance for organizational problem-solving and performance have been addressed in organization studies since the seminal contributions of organizational economists (Cyert & March, 1963; March & Simon, 1958) and since the evolutionary economists Nelson and Winter (1982) emphasized routines. Routines are considered one of the most powerful mechanisms to accomplish organizational work and performance. However, they are also potential drivers of organizational inertia and competence traps, whereby organizations because of past success do not change their routines despite changing circumstances (Levinthal & March, 1993). This finding indicates that routines might be a two-edged sword, and it has intrigued organizational scholars for decades.

Research on routines has developed along two streams: the capabilities perspective and the practice perspective (Parmigiani & Howard-Grenville, 2011). The capability perspective, also

referred to as the macro perspective (Pentland et al., 2012), is concerned with the role of routines in firms' building of capabilities. By considering routines as the building blocks of capabilities (Dosi et al., 2008), this perspective focuses on the outcome of routines in terms of organizational performance. The practice perspective, also referred to as the routine dynamics perspective (Feldman et al., 2016), is a micro approach (Pentland et al., 2012) focused on the internal dynamics of routines.

The routine dynamics perspective has emerged as a critique of the capability perspective, claiming that the latter tends to treat routines as entities or "black boxes" of truncated knowledge (Salvato & Rerup, 2011). According to routine dynamics, the capability view treats routines as fairly static responses to defined stimuli (March & Simon, 1958), and this view hinders the understanding of how routines develop and how they are produced and reproduced through everyday action (Feldman, 2000; Jarzabkowski, Lê, & Feldman, 2012). The routine dynamics perspective investigates routines as effortful and emerging accomplishments that involve complex patterns of interpretation, learning, and connections among individuals (Pentland & Rueter, 1994). A process perspective underlining routines as continuous processes of becoming nurtures the routine dynamics research (Feldman, 2016). Action and agency are vital in this respect, in that individuals' enactments (Feldman, 2000, 2016) and everyday performance of routines (Feldman, 2003) may produce both change and stability in the actions that the routines seed (Howard-Grenville et al., 2016).

Agency helps to create variance in the enactment of a routine as actors approach the routine from different and sometimes conflicting perspectives, goals, and intentions (Salvato & Rerup, 2018). This is a central insight from routine dynamics research. For example, Feldman (2000) showed how individuals' learning and reflections on the relationship between a routine's

performance-related intentions and outcomes result in varied individual performances—and eventually changes in the overall routine. Similarly, Howard-Grenville (2005) demonstrated how individuals and groups approach routines with different intentions and temporal orientations that shape the performances of the routines. Actors oriented toward the past tend to seek stability, while those oriented toward the present and the future are more inclined toward change (Howard-Grenville, 2005). These studies show that while variations sometimes lead to changes in a routine, they might also lead to stabilizing the routine. For example, Essén (2008) showed how routine-endurance results from workers oscillating between departing from and returning to a routine. In other words, variations might, in fact, be necessary to accomplish a stabilizing pattern, like walking a tight rope: “what appears to be stable (e.g., a routine) is only stable for now, at best. Stability is an accomplishment” (Feldman et al., 2016, p. 506).

Routine dynamics research has shown that agency is also important for understanding the role of artifacts in driving stability and change in routine-performance. Routines are often embedded in artifacts, and as D'Adderio (2008) argued, neglecting to include tools and artifacts in the study of routine dynamics can provide only a partial picture at best. She showed in a later study that actors selectively perform contrasting goals of replication (i.e., stability) and innovation (i.e., change) through materially mediated performances (i.e., artifacts) (D'Adderio, 2014). Artifacts are also important because they connect various routines and sub-routines (Jarzabkowski, Bednarek, & Spee, 2016). These connections and the relational nature of routines sometimes lead to change and other times to stabilized patterns (Feldman & Rafaeli, 2002). For example, Turner and Rindova (2012) demonstrated how artifacts helped the actors both to standardize routine actions and reorganize routines under conditions of change in a way that preserved elements of standard action sequences while discretion was exercised. Connections helped to coalesce routines into well-

understood and agreed-upon patterns of interdependent actions, as actors leveraged social capital to reach new agreements about redesigned action sequences. These mechanisms were particularly important as new people and teams engaged in the routines (Turner & Rindova, 2012). Connections also relate to embeddedness that refers to the degree of a routine's connection to other organizational structures (Howard-Grenville, 2005). Such embeddedness shapes routine dynamics, while not necessarily restricting the flexible use of the routine but constraining its ongoing adaptation (Howard-Grenville & Rerup, 2016).

The discussion above shows how agency, artifacts, and the connections and relational feature of routines explain how routines sometimes lead to change and other times to more stable patterns. To capture this dual capacity, Feldman and Pentland (2003) provided an analytical lens in the form of a recursive cycle of performative aspects (specific performances in specific times and places) and ostensive aspects (enacted patterns) of routines (Feldman et al., 2016). Through everyday performances, “collective regular patterns of action” emerge that in turn produce shared understanding of what routine actions are relevant and how they relate to the organizational context. This ongoing action-meaning production process guides the evolving re-creation of action patterns that over time interlock stored actions and make them appear as a coherent, collective pattern (Dionysiou & Tsoukas, 2013, p. 183). Routine dynamics scholars (e.g., Feldman & Pentland, 2003; Feldman et al., 2016; Turner & Rindova, 2012) argue that this internal dynamics of routines explains their inherent capacity for both stability and change, and provides a rich lens for studying the (n)ever-changing world paradox in routine functioning (Birnholtz, Cohen, & Hoch, 2007).

Routines in Studies of Projects and Project-Based Organizations

Until recently, routines have rarely been subject to deeper investigation in project studies, beyond a recognition that they exist and have a function, and research on their internal dynamics is scarce

(Hedborg, Eriksson, & Gustavsson, 2020). Studies have traditionally associated routines with some sort of simplicity and standardization in project processes, such as routine vs. non-routine project tasks (Hobday, 2000) and equalizing routines to standard operating procedures (DeFillippi & Sydow, 2016) often connected to the use of information and communication technology (ICT) tools (Davies & Brady, 2000). Scholars have also used routines to explain persistence in PBOs' behavior and performance, such as referring to routines as quasi-genetic traits that can be transferred from project to project (Prencipe & Tell, 2001).

The project capabilities research stream assigns a more central role to routines. For example, in their studies of how organizations within the complex product systems (CoPS) sector build capabilities, Tim Brady and Andrew Davies have demonstrated how these organizations build routinized behavior patterns (Davies & Brady, 2000) through cycles of project-led (i.e., explorative) and business-led (i.e., exploitative) learning (Brady & Davies, 2004). The authors argue that the ability to balance routine and innovative capabilities is vital for these organizations' competitive advantage (Davies & Brady, 2016). However, they primarily emphasize the stability dimension of routines. For example, they acknowledge that routines might lead to defensive routines (Argyris, 1977). These are self-sealing and self-repeating behavior patterns that lead organizations to behave automatically and unreflectively (Brady & Davies, 2004).

The view of routines in much of the project capabilities research reflects the general capabilities perspective and does not examine the nature of the routines. An exception is Söderlund et al. (2008), who showed that project teams build competence and capabilities through processes of relating, reflecting, and routinizing. Their study demonstrated how project participants intentionally enacted a routine differently to adjust to the project's situational contingencies, and that their interactions and reflections led to changes in the routine and helped the project

participants to build competence. This perspective of routines resonates with the practice perspective rather than with the capabilities perspective.

More recently, project management scholars have attended to the nature of routines. These scholars more explicitly build on the practice and routine dynamics perspective to understand routines at different levels, including in individual projects (e.g., Addyman, 2019; Bygballe & Swärd, 2019; Eriksson, 2015; Levering et al., 2013), in project ecologies (e.g., Hedborg et al., 2020), and in PBOs (e.g., Biesenthal et al., 2019; Bresnen, Goussevskaia, & Swan, 2005; Bygballe, Swärd, & Vaagaasar, Forthcoming). In a study of how PBOs develop new practices and routines, Bresnen et al. (2005) demonstrated how the dynamic, collective, distributed, and embedded nature of routines in the PBOs strongly conditioned attempts to implement new practices. When the new practices challenged existing knowledge and power structures, they often triggered resistance and required specific change-management approaches. The authors claimed that examining the nature and dynamics of routines from a practice perspective was important for understanding the micro processes of the changes that occurred. In a more recent study of three PBOs, Biesenthal et al. (2019) combined the capabilities and practice perspectives and showed how the ostensive and performative aspects of routines at different levels influenced the link between dynamic and operational capabilities. Finally, Bygballe et al. (Forthcoming) addressed how temporality shapes routine patterning by drawing on an example of the development of a routine in a construction firm. The authors showed how multiple coexisting temporalities in the PBO led to variability in performances of the routine—seen as increasing deviations in the routine across time and space—but also strengthening the progress of the routine and emerging pattern.

The discussion above reflects development of a more dynamic approach to routines in the context of projects and PBOs. Notwithstanding the contribution of these studies, research on the

internal dynamics of routines in project settings is still scarce (Hedborg et al., 2020), and we lack a systematic discussion of the relevance of the routine dynamics perspective to understanding PBOs and the dilemmas they face. We believe that exploring questions concerning the routine dynamics perspective of agency; routines' relationship with artifacts, and the relational feature of routines, including both the connections they make and embeddedness can clarify the role of routines in PBOs.

A Routine Dynamics Lens on the Dilemmas of Project-Based Organizations

The focus on agency in the routine dynamics perspective highlights that what actors *do* explains why some routines change and others persist (D'Adderio, 2014; Feldman, 2000; Howard-Grenville, 2005; Turner & Rindova, 2012). Agency has also received increasing attention in the project management literature, thanks particularly to the Rethinking Project Management Network of scholars (Cicmil et al., 2006). As a result, project studies have begun to focus on micro-level analyses, acknowledging the role of individuals and their interactions (Geraldi & Söderlund, 2018). For example, studies have demonstrated that larger changes in project settings often result from actors' perceived misalignment between practices and environmental demands (Levering et al., 2013) and through project participants' social interactions (Windeler & Sydow, 2001). Similarly, project capabilities studies acknowledge that when project participants face new technologies, markets, or environments, they engage in double-loop learning that implies breaking the rules and inventing new routines and effective working (Brady & Davies, 2004). However, while agency is likely to drive variation and change, Bresnen, Goussevskaia, and Swan (2004) argued that agency might also lead to stability. Individuals at the project level are not necessarily prompted to explore new opportunities and thereby become a key source of change in a PBO. Rather, because of time pressures and incentives, they might decide to maintain existing routines, thus contributing to

stabilizing patterns of action (Bresnen et al., 2004). Defensive routines might be a result of this behavior.

Project studies recognize that project participants modify and adapt their routine-performances to the situation at hand (Biesenthal et al., 2019; Eriksson, 2015; Söderlund et al., 2008). While these contributions acknowledge the role of agency in creating change or stability in PBOs, taking a routine dynamics lens can develop this understanding by including how agency might simultaneously drive stability and change. Howard-Grenville (2005) demonstrated how actors' intentions and temporal orientations sometimes lead to stability and other times to change. D'Adderio (2014) showed that actors pursue competing goals of replicating and innovating simultaneously by establishing ostensive patterns and performances for each of the respective goals that they then enact in different proportions. As projects differ in numerous aspects, for example complexity, novelty, technological uncertainty, and pace (Shenhar & Dvir, 2007), project participants will likely try to adjust to these situational conditions (Essén, 2008; Howard-Grenville, 2005), and this variation sometimes leads to stability and sometimes to change (Turner & Rindova, 2012). Therefore, we believe this notion of agency is key. By delving deeper into the micro processes of agents and their patterned actions, we might unveil when, why, and how actors in PBOs simultaneously pursue stability and change; in doing so, we develop nuanced understanding of the types of processes that occur within and across PBOs' different levels (Brady & Davies, 2004). This leads us to suggest the following question to guide future research in the area: What is the role of agency in balancing the needs for both stability and change in different types of PBOs?

The second insight from the routine dynamics literature is the notion of artifacts and the relationship between a routine's formal design, which is often embedded technology, rules, and procedures (D'Adderio, 2008), and the routine that develops through people's everyday actions

and interactions, that is, the “live” routine (Pentland & Feldman, 2008). This is also related to the ostensive and performative aspects of the routine (Feldman & Pentland, 2003), even if the ostensive aspect is not the same as the artifact. Pentland and Feldman (2008) addressed this issue by warning about designing artifacts while hoping for patterns of action. They argued that artifact-centered assumptions about design run the risk of technological determinism.

Research shows that PBOs take top-down initiatives to stabilize and standardize project management by inscribing it into ideal representations, such as project management models (Räisänen & Linde, 2004), standard processes (Davies & Brady, 2000), operating procedures (DeFillippi & Sydow, 2016), and new digital technologies (Lobo & Whyte, 2017). However, as the routine dynamics research shows, we should be cautious about believing that designing artifacts such as checklists, diagrams, and procedures will result in the desired behavior. Moreover, using standard operating procedures as proxies for routines reveals only how routines are represented and espoused or the aspirations for their performance (Feldman, 2016). Thus, a key contribution of the routine dynamics view is that routines should be designed to be consistent with their nature as generative systems (Pentland & Feldman, 2008). It follows that the introduction of new technologies, procedures, and artifacts requires adjustments in cognitive, interpersonal, and organizational features (Edmondson, Bohmer, & Pisano, 2001). To understand this issue better, we suggest that future studies on PBOs address the following question: What is the relationship between routines and artifacts in PBOs, and how does this relationship influence the need to balance stability and change?

The role of artifacts also relates to the connections they establish between routines. That leads us to the third insight from the routine dynamics perspective, namely, the relational feature of routines, which refers to their ability to connect actors and the connections they make to one

another. For example, routines often comprise bundles of sub-routines (Jarzabkowski et al., 2016), often referred to as ecologies of routines (Sele & Grand, 2016; Turner & Rindova, 2012). These connections might lead to both stability and change, as Turner and Rindova (2012) illustrated. Tight connections between routines can lead to both complementarities, in which efficacy is achieved, and competitiveness among routines, in which negative systemic effects occur (Turner & Rindova, 2012). Furthermore, connections both produce and are produced through embeddedness. The embedded nature of routines means they are always enacted within a broader organizational context (Howard-Grenville, 2005), such as hierarchical and technological structures (Orlikowski, 2000). Even if these structures do not necessarily hinder flexibility in performances, they might constrain adaptation in the routines (Howard-Grenville, 2005).

Project studies have also demonstrated that connections and embeddedness highly influence the stability-and-change dilemma of organizations. Since Engwall (2003) seminal article, project studies have well acknowledged the embedded nature of projects, and we observe that contemporary studies tend to focus not only on micro processes but also on issues at the meso and macro levels, which capture the broader context of projects (Geraldi & Söderlund, 2018). Much of this research emphasizes how this embeddedness leads to stability and inflexibility. For example, Räsänen and Linde (2004) showed that project management models introduced by management might lead to formalization of a cultural practice that is hard to question and, thus, reduces the agency of project members. Other studies also show that project practices can be hard to change and tend to replicate across projects (Windeler & Sydow, 2001) because of path-dependence and self-reinforcing mechanisms (Levering et al., 2013), such as existing power and knowledge structures (Bresnen et al., 2005). The above discussion indicates the intricate role of embeddedness and connections that we might understand better by exploring routines as connectors. Thus, we

suggest that future studies address the interconnections between routines at a PBO's different levels and seek to answer the following research question: How does the relational feature of routines influence the need to balance stability and change in PBOs?

We also encourage scholars, in addition to addressing these three research questions, to acknowledge the interrelated nature of agency, artifacts, and the relational and situated features of routines. Jarzabkowski et al. (2016) illustrated this interrelatedness with an example of digging; it includes the digger, the shovel, and the act of digging, whereby these three aspects produce one another. In a PBO preparing a bid for a project, the planning of the bid involves managers at different levels, artifacts such as computer programs supporting the planning (e.g., Building Information Models), and the act of planning. When scholars study such planning routines in PBOs, exploring these three aspects simultaneously can advance understanding of how planning routines change or stabilize over time.

Concluding Remarks and Implications for Future Project Studies

This essay has aimed to shed light on the role of routines in PBOs, and specifically in relation to PBOs need to balance between flexibly responding to changing customer demands in individual projects and creating consistent performances in the organization at large. This balancing act, representing key dilemmas of PBOs (Sydow et al., 2004) has received much attention in project studies, particularly in studies of how PBOs balance between innovative and routine project capabilities (Brady & Davies, 2004; Davies & Brady, 2016; Pemsel et al., 2018).

The importance of routines as key building blocks in PBOs' capabilities building is well established in the literature, but we have argued that with a routine dynamics lens, one can extend the role of routines beyond being a means to an end. Delving into routines' dual capacity for stability and change, in which they sometimes produce stable, sometimes varying performances

(Turner & Rindova, 2012) can clarify the multifaceted and somehow contradictory findings related to the dilemmas that PBOs face. We observe an increasing interest in applying this lens in studies of single and multi-project settings. We have suggested that recent developments in routine dynamics research that consider routines as continuous processes of becoming (Feldman, 2016), are particularly interesting and can advance the stability-change debate in project studies. This approach allows scholars to examine the roles of action and agency in effecting stability and change and how artifacts and the relational and situated features of routines participate in this process. Our discussion incurs several implications for future project studies. In the previous section we derived some general research questions from our discussion. Below we highlight key methodological implications of this discussion in terms of perspective, ontology, and research design (including temporality and matters of context).

Perspective. As indicated, the project management literature often refers to routines as fairly stable phenomena, but stability in routines is a matter of perspective (Feldman et al., 2016). Taking a macro perspective, studying routines from a distance, or heavily emphasizing the ostensive aspect, tends to skew the conclusions toward routines as relatively stable entities (Feldman et al., 2016). This, in turn, may lead to misleading conclusions about routines as structures hindering flexible behavior and novel solutions. There is a risk of treating the stability-change dilemma in a dichotomous way, defining these two concepts, and the processes constituting them, as separate and mutually exclusive (Farjoun, 2010). Using the wisdom that Dewey developed approximately 100 years ago (Dewey, 1925, 1958), Pedersen (2016, p. 47) reminds us to embrace how “change gives meaning to permanence and recurrence makes novelty possible”. As Tsoukas (2017) notices, if you aim to capture and account for the stable and the predictable, this is what you will find – you will find that participants follow the routine’s rules in a relatively

automatic manner, and you will not empirically identify change as part of the routine. We advise against overemphasizing the ostensive aspect of routines and exploring mainly how members of PBOs follow the rules of routines, since individual actions (performative) and the sharing of schemata across the organization (ostensive) are mutually reinforcing processes (Dionysiou & Tsoukas, 2013). For this reason, future research on routines in PBOs should strive to include both the ostensive and the performative aspects of routines. For instance, a study of how a construction firm is able to maintain consistency in its quality performance across projects, should capture both the regular pattern and shared understanding of the PBO's quality routine(s) (i.e. ostensive aspect), which are often embedded in procedures and IT systems (i.e. artifacts), and the specific actions and performances producing and reproducing this pattern (i.e. performative). This might provide a broad understanding of how, when, and why the quality routine(s) produces varying and stable performances that, in turn, might help understanding how the PBO builds consistent quality capabilities.

Ontology. The routine dynamics lens also has ontological implications for studies of the PBO because it prompts the ontology of becoming. The focal question is then not how to change routines but how to stabilize them for a while in a PBO, through accomplishments. This view aligns with the recent interest in process research within project studies (Sergi, Crevani, & Aubry, 2020), and it is particularly relevant in studies of less singular PBOs (Whitley, 2006). Following the ontology of becoming, the object of study is the actions and the interlinking of actions in the formation of action patterns over time, in which actions are “simply the doings and sayings” (Feldman, 2016, p. 30). This means we must examine the emerging patterning of routines created by the flow of performances (Feldman, 2016). This approach can reveal that what appears to be a fairly stable, recurrent action pattern actually entails various enactments of the routine by disparate actors. Variations in

enactments can be incremental or radical, and they can happen more or less deliberately as adjustments to situational specificities (Feldman et al., 2016). In other words, by zooming in, we can see that both repetitive actions and variable actions can lead to changing or stabilizing the routine, and that in performing the routine, actors have possibilities for mindfully changing and innovating the process in which they participate. If we use the quality routine example above, a key implication of a becoming ontology will be to zoom in on the actions by people in the construction firm, for example how they deal with quality control on site, and how these actions help producing and reproducing the quality routine pattern over time. In accordance with process research (Langley et al., 2013), this entails a focus on identifying and scrutinizing the actions, events, and conditions that sometimes lead to stability in the quality routine performance and sometime to variety that, in turn, might help in both stabilizing the overall quality pattern (e.g. walking the tightrope) but also in changing it.

Research design. Related to the above, the routine dynamics lens poses implications related to research design. As Bakker et al. (2016) argued, project management research using a process view will benefit from the advice of Langley et al. (2013): aim for narrative, interpretive, and qualitative data collected through high-quality case studies. Studying such phenomena requires deep engagement with the field to capture the novel experience of the participants involved (Sergi et al., 2020). Furthermore, we suggest longitudinal case studies of the PBO because extending the study's time period can reveal nuances in the repetitive-variability aspect of action (Feldman et al., 2016). Studying a routine over time reduces the potential to mistake variability in the performance of the routine for change in the overall quality routine or to conclude that routine is stable. Routines are more likely to look stable when studied briefly (Feldman et al., 2016). Following routines in PBOs for longer periods also enables us to shift from a time view to a temporal view (Hernes, 2014) that

underscores how actors in PBOs subjectively experience being in the flow of time and how that shapes the unfolding of routines in which they take part. This means acknowledging time as an important variable for how phenomena unfold. While this temporal approach is quite new also to the routine dynamics field, we are witnessing growing interest in understanding the role of time and temporality in routine-development (Howard-Grenville & Rerup, 2016; Simpson & Lorino, 2016; Turner, 2014). This interest has led to fresh insights into how participants' time orientations influence stability and change in routines (Howard-Grenville, 2005), and how temporality shapes routine patterning (Bygballe et al., Forthcoming). Given this increasing interest in the temporality of routines, we urge future studies of routines and the dilemmas of balancing between stability and change in PBOs to consider time and temporality in the unfolding of routines. This might involve studying when (and where) there is need for a routine, such as a quality routine to produce stable performances (e.g. complying with general quality standards) and when flexible and varying performances are needed (e.g. complying with specific needs), and how this balancing act dynamically evolves over time.

As we guide scholars of this topic to engage in longitudinal case studies and to focus on micro aspects of unfolding routines, we also encourage studies to include the context of these micro processes. We have discussed the relational features of routines, including their connections and embeddedness. When scholars focus on the inner lives of routines, there is always the potential fallacy of focusing too narrowly by studying micro practices in isolation, referred to as the “burger-flipping paradox” (Smets, Aristidou, & Whittington, 2017). This means to recognize the limit to what can be learned about the strategies and performance of McDonald's by studying in detail how the employees flip burgers. We believe, along with Smets et al. (2017) that burger-flipping is better understood when contextualized in the larger practice or routine of McDonaldization. Similarly, we

believe that a quality routine in a PBO is better understood if we study the embedded nature of the routine. This entails considering the ecology of the quality routine (Sele & Grand, 2016) and how it consists of many sub-routines and connections with other routines (Jarzabkowski et al., 2016).

To conclude, we have in this essay discussed the relevance of a routine dynamics lens for understanding how PBOs achieve and balance between stability and change in performance. This knowledge adds to the stream of project studies that focus on understanding how PBOs build capabilities and what drives performance in this context, and basically how these organizations work. Along with Pentland et al. (2012), we believe that both the macro (i.e., capability) and micro (i.e., practice) perspectives of routines are needed, as it is the combined insight into the inner lives of routines and what drives performance that matters for understanding the complexities and dilemmas of PBOs.

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