ROUTINE DYNAMICS IN ACTION

RESEARCH IN THE SOCIOLOGY OF ORGANIZATIONS

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ROUTINE DYNAMICS IN ACTION: REPLICATION AND TRANSFORMATION

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INTRODUCTION: ROUTINE DYNAMICS IN ACTION

Martha S. Feldman, Luciana D'Adderio, Katharina Dittrich and Paula Jarzabkowski*

INTRODUCTION

Organizational routines are fundamental building blocks of organizations and organizing (Cyert & March, 1963; Feldman & Pentland, 2003; March & Simon, 1958; Nelson & Winter, 1982). Commonly defined as repetitive, recognizable patterns of interdependent actions (Feldman & Pentland, 2003, p. 95), routines underpin everyday work in organizations, such as hiring and training (Feldman, 2000) or producing goods and services (Kremser & Schreyögg, 2016; Lazaric & Denis, 2005). Recent empirical research shows how the dynamics of routines contribute to organizational stability and change (e.g., Danner-Schröder & Geiger, 2016; Feldman, 2000; Pentland & Rueter, 1994; Turner & Rindova, 2012), to how organizational members solve organizational problems (e.g., Feldman, 2003; Rerup & Feldman, 2011), and to the processes of organizational replication (D'Adderio, 2014, 2017) and innovation (e.g., Sele & Grand, 2016; Sonenshein, 2016). Through these empirical studies the field of routine dynamics has emerged as a useful lens to analyze and explain themes and phenomena that researchers and practitioners alike care about (Feldman, Pentland, D'Adderio, & Lazaric, 2016; Parmigiani & Howard-Grenville, 2011). Routine dynamics offers methodological sensitivities (e.g., a focus on actions) and theoretical tools (e.g., practice theory) that prove useful in exploring a wide range of organizational phenomena.

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* All co-editors contributed equally.

The papers in this volume build on this tradition and show how routine dynamics can illuminate areas such as strategy (Grand & Bartel, this volume), entrepreneurship (Schmidt, Braun, & Sydow, this volume), human resources (van Mierlo, Bondarouk, & Loohuis, this volume), health care (Kho, Spee, & Gillespie, this volume; Kiwan & Lazaric, this volume), social policy (Eberhard, Frost, & Rerup, this volume), and the arts (Blanche & Cohendet, this volume).

This volume highlights four themes that are important in analyzing and theorizing routine dynamics and that help us think about the empirical phenomenon we care about. These themes are (1) replication and transfer, (2) ecologies and interdependence, (3) action and the generation of novelty, and (4) technology and sociomateriality. Researchers can use these themes as an entry point into exploring and theorizing particular phenomena.

REPLICATION AND TRANSFER

The first theme builds on the proposition that transfer and replication provide valuable opportunities to understand routines and routine dynamics (Feldman et al., 2016). Scholars in an earlier routines tradition (Nelson & Winter, 1982; Winter & Szulanski, 2001) have addressed replication as a key organizational strategy aimed at reaping the scale advantages of innovation through reproducing it at multiple organizational locations (Winter, 2010). This work has conceptualized organizational routines as the repositories of organizational knowledge and "best" practice as well as the building blocks underpinning organizational capabilities. More recent work in routine dynamics builds on this work and shifts the focus of inquiry to uncovering the dynamic and emergent nature of transfer and replication (Aroles & McLean, 2016; Cohendet & Simon, 2016; D'Adderio, 2014). This shift entails viewing routines as fundamentally performative processes which involve the effortful – and always challenged – recreation of origin routines at new locations (Bertels, Howard-Grenville, & Pek, 2016; D'Adderio, 2014, 2017). Several papers in this volume including Blanche and Cohendet (this volume), Boe-Lillegraven (this volume), and Schmidt et al. (this volume) extend the routine dynamics theorization of transfer and replication.

Blanche and Cohendet's (this volume) study of artistic teams addresses an interesting case of replication where the original intent of the creator is more important than exact reproduction. They explore how the replication of routines during the remounting of a ballet is made possible through sharing the routines' ostensive aspect which is retained in the form of a rich professional culture. They thus show how, in replicating the artistic performance, the team relies on artifactual representations of the original routines complemented by knowledge residing in the memory of artistic team members. This allows them to theorize how practitioners are able to replicate routines despite the differences imposed by the new context. Replication takes place by combining an understanding of the local material context with trade know-how, thus creating innovative solutions that respect the original intent of the routine while also being congruent with

interrelated routines. The replicator and replicatee teams are thus able to address the tensions between innovation and replication.

Schmidt, Braun, and Sydow (this volume) provide insights into the puzzle of how routine replication can support innovation and new venture creation. Their study of an incubator organization designed to support the development of new ventures shows how emergent routines within new organizations can then be replicated to support the rapid establishment of other new ventures. They distinguish between accelerating and innovating routines, where accelerating key actions involved in new venture creation can unburden the work involved in innovating, so enabling innovating routines to be developed and flourish. The dynamic interplay between routines within the incubating "replicator" organization and those in the new ventures demonstrates the dynamics of replication across entrepreneurial organizations.

Boe-Lillegraven (this volume) examines the case of a complex transfer of multiple interrelated routines from a European to an Asian company in which the source- and target context had only little in common. Even though the coordinating actors started out with a replication approach, attempting to copy exactly the origin routines, they quickly learned that this approach was not feasible. By engaging in a pragmatic and flexible approach, the coordinating actors conceived of new ideas of how to accomplish the transfer and to respond to the different interests of multiple stakeholders and they gradually shifted their conceptualization from transfer-as-replication to transfer-as-adaptation. The author's analysis reveals that transferring actors did not isolate and attend to whole routines as has been typically described by previous studies (e.g., D'Adderio, 2014; Gupta, Hoopes, & Knott, 2015) but instead focused on transferring "parts" (e.g., people, artifacts, or actions) associated with multiple interrelated routines. Overall, the paper points toward the importance of studying the different ways in which more flexible transfer processes, where exact replication is unwanted or unfeasible, may unfold over time.

INTERDEPENDENCE

The second theme addresses the fact that a routine is always related to other routines (Howard-Grenville, 2005), both inside and outside the organization. Recent research has thus explored how multiple routines interact in closely-knit clusters (Kremser & Schreyögg, 2016), loose bundles (Sele & Grand, 2016), and wider ecologies (Turner & Rindova, 2012). These studies show how routines intersect, interact, and become interdependent and embedded in many different ways. For example, routines are connected through the traveling of human and non-human actors (Sele & Grand, 2016), through iterative and ad hoc ways of connecting (Spee, Jarzabkowski, & Smets, 2016) and through recombining parts of different routines (Cohendet & Simon, 2016). Actors take into account the performances of other routines, both inside and outside an organization, and anticipate or respond to the consequences of these performances as they perform, adjust or

change a focal routine (Deken, Carlile, Berends, & Lauche, 2016). Rather than being fixed or automatic, the interdependence and embeddedness of routines is usefully understood as a situated and effortful accomplishment. Exploring how the connections between routines are accomplished has illuminated why routines are more or less innovative (Sele & Grand, 2016), how they balance customization and standardization (Spee et al., 2016), and how they enable or restrict flexibility and change in organizations (Kremser & Schreyögg, 2016; Turner & Rindova, 2012). In this volume interdependence is a primary theme for two chapters (Kremser, Pentland & Brunswicker, this volume; Eberhard, Frost & Rerup, this volume) and an important secondary theme for five other chapters (see Table 1).

Kremser, Pentland, and Brunswicker (this volume) explore interdependence within and between routines and introduce the concept of performative boundaries. Taking the example of the beverage service on a transatlantic flight they illustrate the multiplicity and fluidity of routine boundaries and show us why it is useful to theorize boundaries as a performative process rather than as fixed or given. They discuss the role of interdependence as fundamental to the process of creating and recreating patterns of action or what they and others call patterning.

Eberhard, Frost, and Rerup (this volume) provide a disturbing look at a different kind of interdependence and a different kind of dynamic. They show how a routine can develop between two actors (in their case between a pimp and a person who eventually becomes a sex worker) and how deceit can be used to entangle one person in the designs of the other. The chapter describes the dynamics of the roles as the routine is enacted by both the consciously deceitful pimp and the victim of the routine who is not conscious of the deceit and is fooled by it. They show how a relatively stable routine requires significant changes in the roles of both perpetrator and victim in order to produce the perpetrator's intended outcome.

ACTION AND THE GENERATION OF NOVELTY

Our third theme, examining the role of action in generating novelty, is informed by various social practice theories that explain the interaction between action and social structure (e.g., Bourdieu, 1990; Giddens, 1984; Schatzki, 2002). Such theories seek to explain the consequentiality of action both empirically in what people do – their actions – and theoretically in the premise that the patterning of collective practice that we label as "strategy," "organization," or "routine" is continuously produced within multiple people's actions distributed across time and space (Feldman, 2015, 2016; Feldman & Orlikowski, 2011; Feldman & Worline, 2016). Thus, people's actions cannot be separated from the continuous unfolding or becoming of social order – the patterning – that is brought about within those actions (Langley, Smallman, Tsoukas, & van de Ven, 2013; Tsoukas & Chia, 2002). There is a recursiveness to this mutual constitution of people's actions and the patterns that they generate that predisposes stability (Giddens, 1984;

Table 1. Overview of Papers and Themes in This Volume.

	Replication and Transfer	Ecologies and Interdependence	Action and the Generation of Novelty	Technology and Sociomateriality
Chapter 1: Blanche and Cohendet	X	(X)		(X)
Chapter 2: Boe-Lillegraven	X	(X)	(X)	(X)
Chapter 3: Schmidt, Braun, and Sydow	X		(X)	
Chapter 4: Kremser, Pentland, and Brunswicker		X		
Chapter 5: Eberhard, Frost, and Rerup		X		
Chapter 6: Grand and Bartel		(X)	X	
Chapter 7: van Mierlo, Loohuis, and Bondarouk		(X)	X	
Chapter 8: Kiwan and Lazaric	(X)	(X)		X
Chapter 9: Kho, Spee, and Gillespie	(X)			X

X, primary focus and (X), secondary focus.

Jarzabkowski, 2004) and can raise queries about how novelty arises (Bucher & Langley, 2016; Deken et al., 2016). Yet action is never so "over-socialized" that it conforms only to those patterns (Feldman & Orlikowski, 2011; Feldman & Pentland, 2003; Jarzabkowski, 2004). Rather, each action is an "effortful accomplishment" (Feldman, 2000; Pentland & Rueter, 1994) that contains within it the potential for variations by any individual actor in performing any particular task. This focus on action has been critical for understanding routines as a source of not only stability but also change (Bucher & Langley, 2016; Dittrich, Guérard, & Seidl, 2016; Feldman, 2000; Feldman et al., 2016; Feldman & Pentland, 2003; Howard-Grenville, 2005). For example, Feldman and Pentland (2003) show the routine dynamics through which hiring routines change within the specific actions of different actors. Hence, in order to study novelty in routines, we need to study the generative nature of actions in producing continuous modifications to their patterning that often appear in the first instance to be minor but frequently have considerable implications for the ways organizations operate and for what they produce (see, e.g., Bucher & Langley, 2016; D'Adderio, 2014; Deken et al., 2016;

Dittrich et al., 2016; Howard-Grenville, 2005; Jarzabkowski, Lê, & Balogun, 2018; Jarzabkowski, Lê, & Feldman, 2012; Rerup & Feldman, 2011).

The association between action and the generation of novelty is a primary theme for two papers in this volume (Grand & Bartel; Van Mierlo, Bondarouk & Looihui) and a secondary theme for two other chapters (see Table 1). Drawing on a routine dynamics approach to strategy-making in a German pharmaceutical firm, Hoechst, Grand and Bartel (this volume) show how the strategizing routines of senior managers enable the entrepreneurial agility of corporations. This has always been something of a puzzle, as the path dependencies and complex structural context of large corporations tends to stifle entrepreneurial agility. Yet, as the authors show, managerial enactment of four strategizing routines – distancing, evaluating, experimenting, and re-assembling – can enhance agility and enable new strategic moves for corporations. Their study is important in linking routine dynamics to the strategic actions of top managers, and demonstrating the novel strategic outcomes that can emerge from the dynamic nature of routine actions.

Van Mierlo, Bondarouk, and Loohuis (this volume) examine the generativity of actions in the context of a new human resource policy aimed at hiring disadvantaged workers. They show how in the absence of an envisioned pattern of action, the actions taken by different actors involved in hiring contribute in distinctive and complementary ways to bringing the new routine to life. Traditionally scholars often assumed that multiple points of view hinder routine performances because the resulting actions conflict. Van Mierlo and his co-authors (this volume), however, demonstrate that multiple points of view can be productive because each point of view can generate distinct actions that contribute to achieving the task of the routine. In their study, the cumulative generativity of these actions led to results that by far surpassed the goal that the company set itself for hiring disadvantaged workers.

TECHNOLOGY AND SOCIOMATERIALITY

As topics which have witnessed a considerable surge of interest over the past decade, technology and its effects (what we now refer to as sociomateriality) have been present in theorizing about routines right from the outset (March & Simon, 1958; Nelson & Winter, 1982). So much so that a major critique advanced through routine dynamics addressed the need for both scholars and practitioners to make a conceptual and empirical distinction between the routine itself and its artifact (formal practices and procedures) (D'Adderio, 2008; Pentland & Feldman, 2005). Building on and extending this approach, later contributions have advocated for the need to conceptualize artifacts as endogenous components of the routines' generative system (D'Adderio, 2011; Feldman, 2016). Bringing artifacts into routine dynamics theorizing shifted the attention away from fixed and objectified views of technology and their effects (in other words, their "materiality") to study the complex and situated ways in which these "perform" routines and are performed in turn (D'Adderio, 2014, 2017; Pentland & Feldman, 2008). Contributions to routine dynamics have thus addressed important topics such as

the influence of artifacts/technology on organizational goals (D'Adderio, 2014; Salvato & Rerup, 2017; Turner & Rindova, 2012), workarounds and adaptation (Bertels et al., 2016; D'Adderio, 2008), ecologies and clusters (Sele & Grand, 2016), creativity and innovation (Cohendet & Simon, 2016; D'Adderio, 2003, 2008; Salvato & Rerup, 2017), standardization and flexibility (Aroles & McLean, 2016; D'Adderio, 2003; Spee et al., 2016). Recent technological advances and greater recognition of their potential economic and societal effects are now providing fertile grounds for studying the role of artifacts and materiality for routines. Two papers in this volume contribute to extending and advancing this enquiry (Kiwan & Lazaric, this volume; Kho, Spee, & Gillespie, this volume).

Kiwan and Lazaric (this volume), for example, discuss how a new ecology of space, created by the introduction of bariatric robotic surgery, transforms the ostensive and performative aspects of laparoscopic routines. In so doing, they show how robotic technology, kept in a different setting and at a distance from the patient, creates new forms of interaction which are unfamiliar to the team, thus preventing the transfer of the surgeon's expertise to the team members. This, in turn, leads practitioners to experiment with new artifacts to try to integrate new actions and delineate the boundaries of interactions during the course of laparoscopic surgery. In developing the concept of "reflective space," Kiwan and Lazaric (this volume) show how this enables practitioners to highlight and discuss the new patterns of interdependent actions. Within this space, routine participants are able to explore the emergent tensions generated by the new artifacts, while also devising new ways to support experimental performances through integrating new actions and delineating new boundaries. Their findings thus shed new light on the role of reflective spaces in routine change, while also showing how sociomaterial ensembles may produce opportunities for reshaping routines.

Kho, Spee and Gillespie (this volume) illustrate how routine participants enact relational expertise through joint action in technology-mediated contexts. In so doing, they show how the introduction of telehealth creates a "relational bridge" which provides favorable conditions for interactions and collaboration among the various health professionals, thus facilitating the enactment of relational "selective" and "blending" forms of expertise. The authors show how, despite technology producing the blurring of professional boundaries and creating jurisdictional conflict among professionals, it also promotes over time the introduction of new ways of working (and new routines) which allowed professionals to overcome jurisdictional conflict. Telehealth thus facilitated the process through which relational expertise could become a new resource alongside professional expertise to solve complex problems, consequently producing enhanced outcomes.

THE WAY FORWARD

Taken together, the chapters in this volume demonstrate how important themes of routine dynamics play out in different empirical contexts. More importantly, they show how routine dynamics is a useful lens to increase our understanding of important real-world (sometimes counterintuitive) phenomena, such as why

innocent women may become sex workers (Eberhard et al., this volume), how bottom-up approaches to creating new routines can far surpass the initial goals of management (van Mierlo et al., this volume), or how replicating routines can promote and foster innovation in new venture creation (Schmidt et al., this volume). Many avenues remain for engaging routine dynamics in advancing our understanding of new and changing empirical phenomena. Recent research, for instance, has focused on new forms of organizing (Puranam, Alexy, & Reitzig, 2014), new technologies (e.g., George, Haas, & Pentland, 2014), and grand societal challenges (e.g., George, Howard-Grenville, Joshi, & Tihanyi, 2016). As scholars embark on studying empirical phenomena that spark their interest, they often encounter routine dynamics because patterns of action form the basis for social life and organizing in particular. Routine dynamics, as an approach to theorizing these phenomena, provides an entry point to uncovering how the phenomena that we study are enacted and constructed, how they emerge and unfold over time and allows us to explore how various aspects of these phenomena are connected in and through action. By insisting on the relevance of subtle dynamics, it allows us to access the roots of stability and change in organizations and beyond. Routine dynamics doesn't carve up the world in a pre-defined way and instead encourages openness and continuous evolution of the theoretical concepts that inform our understanding of the social world. It provides certain methodological tools (e.g., narrative networks, Pentland & Feldman, 2007) and sensitivities (e.g., practice theory, actor-network theory, process theory) that are aimed at opening up lines of inquiry rather than closing them down. We hope the papers in this volume provide some examples of how routine dynamics can be engaged to explore the underlying dynamics of a phenomenon and that they pave the way for further studies in this direction.

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