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How employee behaviors effect organizational change and stability

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ABSTRACT

Researchers of organizational routines have begun to examine the “microfoundations” of routines, paying much closer attention to the role of individual participants in routines. These investigations have brought to light specific behaviors that introduce change or promote stability in routines, but because these behaviors are so specific to their context, it is difficult to find common threads between the papers. In this paper, we examine research focused on how employee behaviors bring about change and stability in routines and identify unifying characteristics. We find that, although the contexts of extant routines research vary wildly, employees in all of these settings enact “prescriber” or “performer” roles in the context of their focal routines and engage in proactive, adaptive, and proficient behaviors. By introducing a common language to describe employee behaviors in these various studies, we hope to build connections between them as a gateway to open new research opportunities.

1. Introduction

The behaviors of individual employees are the fundamental, pervasive acts of organizational life (Selznick, 1957). As Felin and Foss (2005) argue, “organizations are made up of individuals, and there is no organization without individuals.” Because of the importance of individuals in understanding organizational functioning, scholars examining organizational routines have increasingly focused on the role of employee behaviors in bringing change and stability to routines (Feldman, Pentland, D’Adderio, & Lazaric, 2016).

Organizational routines, those “repetitive, recognizable patterns of interdependent actions carried out by multiple actors” (Feldman & Pentland, 2003: 95), are ubiquitous in organizations (Becker, 2008). Scholars who adopt a practice perspective of routines, in which the internal workings of routines are of keen interest, have conducted a number of case studies that describe examples of employee behaviors leading to change and stability in routines, in specific contexts (Canales, 2014; Feldman, 2000; Hong, Stanley Snell, & Mak, 2016; Howard-Grenville, 2005; Pentland & Feldman, 2008; Sonenshein, 2016; Turner & Rindova, 2012). Studies like these have identified specific actions in specific contexts that affect the specific routine in which the actor was engaged.

Because these studies were conducted in such diverse contexts and the behaviors identified have been largely driven by the specific factors at play in each context, the findings may lack generalizability

(Parmigiani & Howard-Grenville, 2011). Thus, despite valuable insights drawn from this research, there remains a lack of a big picture understanding as to what these diverse and context-specific behaviors may have in common. Without pausing to discern the common threads among individuals’ behaviors, a broader understanding of how types of behaviors (as opposed to context-specific ones) foster stability and change within organizations may be lacking.

To help foster such broader understanding, we examined extant research and identified articles in which individual behaviors and outcomes are described in sufficient detail to enable identification and categorization in two ways. First, based on the descriptions of the employee roles in prior work, we identified studies that sufficiently described one or both key types of roles that individual employees play in the context of routines: the role of *prescribing* (e.g., telling others) how routines ought to be performed and the role of actually *performing* (e.g., executing) the routine.

Second, based on the descriptions of behaviors in the articles examined, we sought studies that described how work-role behaviors used by prescribers and performers brought about change and stability in organizational routines in their respective cases. This approach helps identify common threads among all the various context-specific studies and behaviors to depict the full range of intentional, constructive, routine-related employee behaviors. By focusing on common characteristics of the work-role behaviors among the diverse studies, we derive observations about these behaviors that may be useful to

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scholars seeking commonalities among the various behaviors displayed in different settings.

Based on the findings from the studies examined, we make several observations regarding how employee behaviors affect stability and change within routines. It is important to note that the observations are not intended to be testable propositions, but are rather summary statements from the literature regarding the effect of behaviors on routines. We sought to identify commonalities among the context-specific behaviors described in the situationally diverse case studies we examined to gain a better understanding of how these studies inform our understanding of employee behaviors and where future research may continue to develop it.

2. Categorizations

2.1. The dual nature of routines: Sources of stability and change

Introduced into mainstream research by Nelson and Winter (1982), the routines concept reflects how individuals within organizations go about getting things done (Becker, 2008). Routines are conceptualized as the repetitive, recognizable patterns of interdependent actions carried out by multiple actors (Feldman & Pentland, 2003) and generally include the procedures, rules, and frameworks by which organizations function (Levitt & March, 1988). We sought out research that described intentional, pro-organizational behaviors in which employees engage, as opposed to unintentional actions. In doing so, we identify examples of how work-role behaviors by prescribers and performers of routines brought about both stability and change to those organizational routines.

Many scholars adopt the position that this duality extends to the effects of routines, arguing that routines generate both stability and change within organizations (e.g., Feldman & Pentland, 2003; Pentland, Hærem, & Hillison, 2011; Sonenshein, 2016). On one hand, routines are sources of stability because they help to standardize behaviors and guide individuals towards desired behaviors, increasing the speed, reliability, and efficiency of the routines (Cohen & Bacdayan, 1994; Feldman & Pentland, 2003; Nelson & Winter, 1982). On the other hand, variations in the performance of routines also make it possible for routines to be sources of change (Feldman & Pentland, 2003; Pentland, Feldman, Becker, & Liu, 2012). This duality has its roots in work by Giddens (1984), who argues that tension exists within firms between the structure of the organization and the agency of those operating within that structure. Pentland and Rueter (1994) argue that “routines occupy the crucial nexus between structure and action” (484). Therefore, while organizational structure provides a source of stability for the actions of individuals, those same individuals actually engage in routines through their “effortful accomplishment” (Pentland & Rueter, 1994: 488) and either reaffirm or modify the routines in which they participate with every action they take. In so doing, the execution of routines influences individuals whose actions then re-shape the execution of those routines, which then influences individuals again, and so on in recursive fashion.

Before we offer our observations from these articles, it is important to define several key terms. To gain a better sense of how these actors and actions fit together, it may be helpful to review Fig. 1, which represents the dynamic actions, reactions, and interactions of multiple actors and their combined effects on routines. The Figure reflects our observations of how prior work describes numerous examples of employees acting in prescriber and performer roles and engaging in proactive, adaptive, and proficient behaviors, thereby prompting change and stability in routines through their effects on the ostensive and performative dimensions of routines.

We primarily developed the model by integrating theoretical insights from two established streams of research: work-role proficient, adaptive, and proactive behaviors (Griffin, Neal, & Parker, 2007) and the ostensive and performative dimensions of routines (Feldman &

Pentland, 2003), which are more fully discussed later. To these perspectives, we added observations from our review of routines field research that described, at the risk of over simplifying these complex relationships, how some employees executed routines (performers), while others guided their execution (prescribers). In bringing these three paradigms together, we depict how, through an on-going, iterative and dynamic process, prescribers and performers engage in proficient, proactive, and adaptive behaviors to effect stability and change on routines (in both the ostensive and performative dimensions).

To provide context for these many terms, it may be helpful to consider an application of these terms to a case analysis from Canato, Ravasi, and Phillips (2013) (with key terminology in parentheses). They describe how changes were introduced by a new CEO of 3M who required the adoption of Six Sigma principles throughout the organization, which necessitated changes by everyone. High level managers (prescribers) had to first modify (adaptive behavior) how project management routines were completed and then instruct their subordinates (performers) on how they should be done. As managers changed the understanding of how the routines ought to be done (ostensive dimension), subordinates modified (adaptive behavior) their execution of the routines (performative dimension) and became better (proficient behavior) at doing so and were able to suggest changes (proactive and adaptive behavior) to improve the routines. These behaviors affected the outcome of the routines (performative dimension), which reinforced how the routine ought to be done (ostensive dimension), in a self-reinforcing cycle. As changes were suggested by subordinates (either via adaptive or proactive behavior), managers could either accept the changes (prescriber adaptive behavior), or reject the changes in favor of reinforcing the existing routine (prescriber proficient behavior). In the end, the changes to the routines were eventually learned and, after a transition period, stability was brought back to the routines which generated the desired goals of the CEO (Canato et al., 2013).

As described in this example, the inherent duality of routines is reflected in work by several scholars who articulate the dual dynamic, complementary, and interconnected dimensions of routines: the understanding of a routine (its *ostensive* dimension) and the practice of a routine (its *performative* dimension) (Feldman & Pentland, 2003; Pentland & Feldman, 2005; 2008; Salvato & Rerup, 2011). Although there may be a general, collective understanding of a routine shared by employees, individual employees have their own unique understanding of each routine, which directly influences their performance.

According to this perspective on routines, employees collectively promote the stability of a routine when they perform the routine according to their understanding of how it ought to be performed. However, employees execute routines in specific circumstances (place, time, situation, etc.) and may intentionally introduce change (Feldman & Pentland, 2003). This demonstrates the interconnectedness of the ostensive and performative dimensions: performers’ understanding of how the routine ought to be performed (their particular interpretation of the *ostensive* dimension of the routine) affects their execution of it (reflected in the *performative* dimension of the routine), which then either stabilizes or modifies their previous understanding of the routine, and so on.

Additionally, just as there are two complimentary dimensions of routines (ostensive and performative), we see in prior work two previously unnamed, complimentary roles by which employees’ behavior affects these dimensions of routines. At times, individuals act in *prescriber* roles to influence how routines ought to be performed (the *ostensive* dimension), while at other times, they may act in *performer* roles to directly affect the performance of routines (the *performative* dimension) and also to indirectly affect the ostensive aspect of the routine *vis-à-vis* that performance.

The role of performer is the primary focus of most of the rich case studies in the routines literature (e.g., Bresman, 2013; Bucher & Langley, 2016; Leonardi, 2011; Turner & Rindova, 2012). When

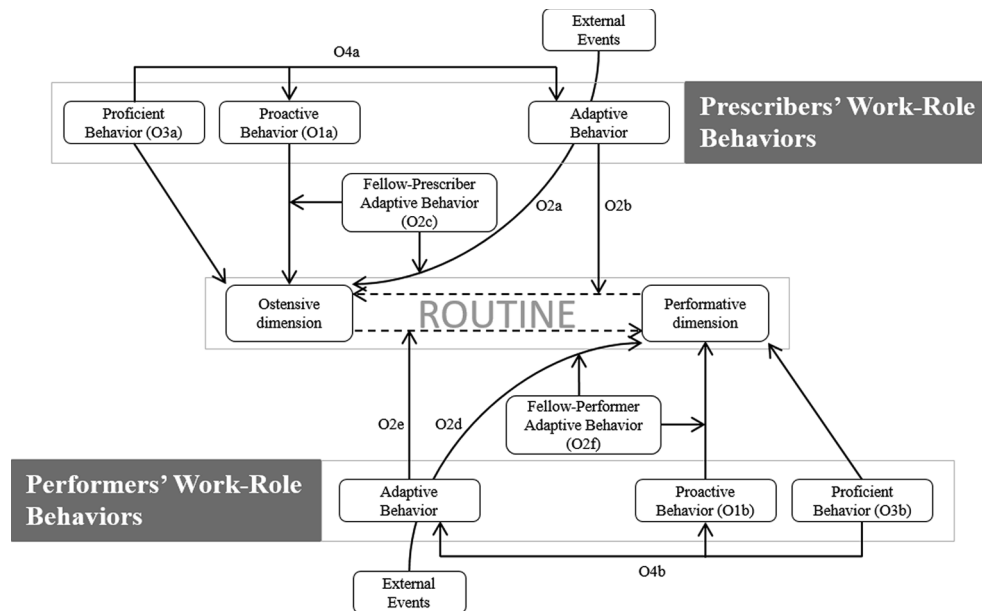


Fig. 1. Effects of prescribers' and performers' behaviors on routines.

performers execute the routine as prescribed, their actions reinforce stability in the routine, but when they do not perform the routine as prescribed, their actions serve to introduce change in the routine. Conversely, prescribers seek to influence performers' enactment of routines. They may do so via written or oral instruction or non-verbal demonstration. In these ways, the ostensive dimension of a routine is stabilized or changed. When prescribers advocate that a routine ought to be performed in the way it has previously been performed, their actions reinforce stability in the ostensive dimension of the routine, but when they indicate it should be done differently than in the past, their actions introduce change.

In our review of the literature, we searched for articles that described in granular detail the *specific*, individual behaviors that lead to stability or change in the routine. We searched in the ABI/INFORM and EBSCO databases for articles containing “routine*” or “routiniz*” in scholarly business journals published between January 2011 and June 2017 and identified 4216 academic articles printed in English. We then focused on articles published in (broadly defined) management journals, identifying 410 potentially relevant articles. After careful review of each article, we identified 35 that provided sufficiently detailed information about how specific employee behaviors stabilized or introduced change into specific routines. It is from these articles that we derive the following observations about how employee behaviors effect stability and change in routines.

2.2. Work-role behaviors

In examining the literature, we observed that all of the behaviors described in the case studies could be categorized into one of three types of behaviors: proactive, adaptive, and proficient (Griffin et al., 2007). As Griffin and colleagues outline in their work (2007: 328), there are other, less complete, models that could be used to reflect different types of individual behaviors (citizenship behaviors, contextual performance, etc.). However, in an effort to summarize the underlying work into a parsimonious framework, we adopt their model of work performance which encompasses the full range of workplace behaviors that promote effective performance (Griffin et al., 2007). The comprehensiveness of their framework allows every constructive, routine-related, employee behavior described in the examined articles to be appropriately categorized as proactive, adaptive, or proficient.

Proactive behaviors are self-initiated and future-oriented, intended

to transform one's environment (Bateman & Crant, 1993); adaptive behaviors are reactive, intended to respond to perceived changes in one's environment (Pulakos, Arad, Donovan, & Plamondon, 2000); and proficient behaviors are formalized behaviors, intended to competently and accurately perform the routine. Whereas proficient behaviors primarily contribute to the stability of routines and proactive behaviors seek to introduce change to routines, adaptive behaviors bring about either change or stability to routines, depending on the circumstances.

The proactive-adaptive-proficient behavioral framework is theoretically grounded in the concept of work roles (Biddle, 1986; Gross, Mason, & McEachern, 1958; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964) and explicitly recognizes that employees' work roles are enacted in complex social systems characterized by varying degrees of uncertainty and interdependence. Due to the uncertainty and complexity that characterize today's work environments (Howard, 1995; Ilgen & Hollenbeck, 1991), organizations increasingly rely on employees not to behave only in prescribed ways (i.e., proficient behavior) but also in non-prescribed ways (i.e., proactive and adaptive behavior) as they perform routines (Sonenshein, 2016). Therefore, in the context of routines, the prescribed routine is not always the same as the performed routine. In fact, as some studies show, there may be situations where routines are performed rather differently than prescribers had intended them to be executed (Bertels, Howard-Grenville, & Pek, 2016; Hong et al., 2016; Kristiansen, Obstfelder, & Lotherington, 2015).

3. Employee behaviors and their effect on organizational routines

In this article, we identify many of the diverse ways in which employees exercise individual agency in the context of routines, thereby promoting both change and stability in them. Those acting in prescriber roles seek primarily to shape the ostensive dimension by communicating what performers are to do, while those acting in performer roles primarily shape the performative dimension by showing prescribers (and other performers) what they have done. The interplay of these two dimensions constitutes an iterative cycle: changes are introduced, the changes introduced are evaluated by other prescribers and performers, and then the changes are accepted, rejected, or further modified. Note that the interaction between prescribers and performers takes place in the interplay between the ostensive and performative dimensions of routines. These interactions function as ongoing, iterative negotiations played out via the individuals shaping the dual

dimensions of a routine.

3.1. Proactive behaviors

An individual who exhibits *proactive* behavior “takes self-directed action to anticipate or initiate change” (Griffin et al., 2007: 329). Proactive behavior implies careful attention to one’s environment (Weick, Sutcliffe, & Obstfeld, 1999) and involves taking charge of one’s own work or that of a team of which one is a part (Grant & Ashford, 2008). Behaving in future-oriented ways to accomplish change also constitutes proactive behavior (Frese & Fay, 2001). More specific and routine-relevant examples of proactive behavior include showing initiative and taking charge (Frese & Fay, 2001; Morrison & Phelps, 1999; Roberson, 1990), expanding work roles (Parker, Wall, & Jackson, 1997), revising tasks and crafting jobs (Staw & Boettger, 1990; Wrzesniewski & Dutton, 2001), exhibiting assertiveness (Miner & Estler, 1985), and solving anticipated problems (Parker, Williams, & Turner, 2006). The commonality among these specific expressions of proactive behavior is that they actively challenge the status quo in a forward-looking way.

3.1.1. Prescribers

When employees exhibit proactive behaviors in a prescribing role, they introduce changes to routines based on their perceptions of what might be needed and how the routine might be improved. These changes are introduced because the employee anticipates how the routine ought to be modified based on perceptions of future circumstances. Because no routine can account for all potentialities that performers may encounter when executing it, organizations benefit when prescribers anticipate the need for change and take proactive action to introduce appropriate changes. When prescribers anticipate that an existing routine will become ineffective and take actions intended to result in changes, their efforts are an attempt to alter performers’ understanding of the routine (its ostensive dimension) with the intention that this altered understanding will affect how performers actually perform it.

Prior routines research provides examples of proactive behavior by a prescriber with formal authority. For example, in Howard-Grenville (2005) study of a high-tech manufacturing company, she identified and examined a “roadmapping” routine, which she described as a sequence of actions in which prescribers of the routine identified issues, considered various alternatives, and agreed upon future steps to be taken, i.e., actions to prescribe to performers of other routines based on the outcome of executing the “roadmapping” routine. She noted that, instead of using the routine in a way consistent with how it had previously been used, one of the prescribers “imagine[d] a new use for the routine” by applying it to a previously unconsidered context over a longer-than-planned period of time (624–25). Staff members who would actually be performing the routine immediately became involved in developing and executing the revised routine. Thus, when prescribers anticipate future needs and modify the routine to address those needs, they are exhibiting proactive behaviors.

Additionally, prescribers without formal authority may influence prescribers with formal authority to change a routine. For example, in an intensive care unit of a hospital, some performers were not performing a patient hand-off routine correctly, causing undesirable consequences. To address this, fellow performers stepped into a prescribing role and clarified to other performers through words and actions how the routine was supposed to be completed (Lebaron, Christianson, Garrett, & Ilan, 2016). In this way, prior work demonstrates that through direct instruction and indirect influence, prescribers without formal authority may use informal means to influence how a routine ought to be executed.

Observation 1a. Prescribers’ proactive behaviors are a source of change in the ostensive dimension of the routine.

3.1.2. Performers

Performers, like prescribers, may also introduce change to a routine through proactive behavior. However, rather than introducing changes to a routine’s ostensive aspect, performers introduce change to its performative aspect. To the extent that their alterations are incorporated into the routine by other performers (i.e., they respond to this proactive behavior with adaptive behavior), their performative changes alter the ostensive dimension of the routine not only for themselves, but also for others. This highlights the importance of proactive behavior for removing debilitating constraints that can result from blind adherence to a routine.

For example, D’Adderio (2003) noted that one potential, negative outcome of software-embedded routines is that such routines often become “invisible” and “unquestioned” (344). Performers who interact with such systems every day may be constrained by the system without their behavior necessarily being dictated by it. However, the performers in this study (engineers) were not limited merely to “exchanging files through wired connections” (344) imposed by the software; instead, they had “some degree of freedom in establishing when and how to follow a rule” (344). Although the software constrained behavior, conveying associated routines’ formal ostensive aspects, engineers who stepped outside the rigid description of the routine engaged in proactive behavior that changed the performance of the routine.

Another example involves a nursing manager who demonstrated proactive behavior in a nursing home setting (Kristiansen et al., 2015). In that situation, the nursing staff decided to provide a dance gala for the enjoyment of their elderly residents. Anticipating the need for more staff, a nurse manager deviated from normal staffing levels in order to have sufficient staff for the gala. When her supervisors later heard about it, they indicated disapproval for such an action. However, the nurse remarked in her interview that she felt she had “a responsibility as a professional” to take such actions, even though it was not part of the normal prescribed routine.

Observation 1b. Performers’ proactive behaviors are a source of change in the performative dimension of the routine.

3.2. Adaptive behaviors

Individuals who exhibit *adaptive* behavior “cope with, respond to, and/or support changes that affect their roles as individuals” (Griffin et al., 2007: 331). Such behavior reflects employees’ abilities to adjust to unexpected work situations and be flexible in interpersonal interactions (Pulakos et al., 2000). Employees who engage in adaptive behavior respond with composure and urgency to stressful situations, address problems creatively, alter plans in accordance with uncertain or unpredictable situations, adjust to technological change or physical work environments readily, and demonstrate open-mindedness and consideration in response to others’ ideas, values, and culture (Pulakos et al., 2000). Clearly, this sort of behavior is essential for cooperation and coordination of effort within the organizational social system (Kozłowski, Gully, Nason, & Smith, 1999).

Because routines consist of interdependent actions carried out by multiple actors (Feldman & Pentland, 2003: 95), all with slightly different ostensive understandings of how routines ought to be executed (Pentland & Feldman, 2008: 241), adaptive behaviors play an important role in their execution. Adaptive behavior involves reacting to current realities, responding to something that is happening or has already happened, and is a response to perceived changes to the status quo. However, just because changes are introduced into a routine does not mean that other employees will adopt them. Fellow prescribers and performers may accept, reject, or further alter any suggested changes depending on what they deem appropriate (Canales, 2014; Canato et al., 2013; D’Adderio, 2003; Feldman, 2003).

3.2.1. Prescribers

Based on the descriptions in the articles we examined, prescribers’

adaptive behaviors appear to affect routines in three ways. First, when prompted by events external to the routine in question (and often external to the organization), prescribers' adaptive behaviors introduce change in the ostensive dimension of that routine. Second, when prompted by changes introduced by performers, prescribers' adaptive behaviors moderate the effect of those changes on the ostensive dimension of the routine. Third, when prompted by changes introduced by fellow prescribers, the negotiation among prescribers affects what changes are ultimately made to the routine.

3.2.1.1. Adaptive behaviors of prescribers with respect to external events. When external forces change the environment in which a firm operates, prescribers may take note and determine if and how to alter routines in light of the new circumstances. Such changes could include implementing new regulations (Lazarić & Denis, 2005) or even eliminating jobs that were once previously an important part of a routine (Miner, 1987). The adaptive nature of prescribers' responses mediates the effect of the environmental change on how the routine ought to be performed, i.e., its ostensive dimension.

Consider, for example, the implementation of ISO standards discussed in the case study by Lazarić and Denis (2005). The focal organization was a meat processor that, along with other companies in that industry, experienced a food safety crisis. Prescribers engaged in adaptive behavior by adopting new ISO quality standards for the company's food-processing routines in response to this external circumstance. The intent was to alter the ostensive dimension of each affected routine (instituting the ISO quality standards) for the purpose of changing the performative dimension of the routine.

A case from the pharmaceutical industry found that managers solicited feedback from customers about how to modify packaging to better meet their needs (Lorenzini, Mostaghel, & Hellstrom, 2018). As they sought to build "long-term, trusting relationships with customers" they adapted to new ideas, which also helped to "reduce 'concerns of opportunistic exploitation'" by the company (Lorenzini et al., 2018: 368).

A third case describes how prescribers responded to internal cost management challenges (Aroles & McLean, 2016). In a newspaper printing factory, a manager observed that ink costs in one unit were higher than in other units. Responding to the need to cut costs, he carefully examined ink usage and developed new ink density standards that were to be integrated into the routine for setting ink levels on future printing runs.

Observation 2a. The effect of changes external on a routine depends on what, if any, adaptive behaviors are demonstrated by prescribers.

3.2.1.2. Adaptive behaviors of prescribers with respect to performers' behaviors. Prescribers' adaptive behavior sometimes occurs in response to changes performers inject into routines through their performance of such routines. Yakhlef and Essén (2013) provide an example of this type of intentional prescriber adaption by a performer. Home health nurses initially sought to follow basic routines for how to evaluate and provide care for seniors, but after they gained experience with routines with specific seniors, they adapted the routine to the specific needs of those seniors. In one particular case, a nurse (performer) who figured out a better way to accomplish a care routine reported that they convinced the group leader (prescriber) to change the routine after executing the altered routine with positive results. The prescriber adapted to such change and evidenced her adoption of such changes by requiring the routine be performed in the new way going forward by all performers.

Alternately, prescribers may engage in adaptive behavior by passively acquiescing to such changes, as in the case of Turner and Rindova (2012) study of multiple waste-management organizations. One interviewed prescriber in that case provided evidence of his tacit approval of changes by field operators to the standard trash collection routine by

noting a number of unanticipated events that could occur in the field that might require performers to modify the routine (2012: 30). That manager recognized that for the work to get done, performers needed flexibility to modify the routine as needed and that prescribers did not need to respond to every adaption by performers. Thus, by *not* discouraging performers' adaptive behavior, prescribers implicitly bless it, thereby signaling to performers that such behavior is acceptable, effectively altering the ostensive understanding of the routine.

Conversely, as changes introduced by performers become known, some prescribers have the authority to reject them from becoming part of the formally-sanctioned ostensive dimension (Berg, Wrzesniewski, & Dutton, 2010; Levinthal & Rerup, 2006). The study of a foreign subsidiary's manufacturing facility provides an example of this type of non-adaptation (Hong et al., 2016). In that setting, a Japanese company was attempting to implement its operational routines in a Chinese subsidiary's manufacturing facility. The Chinese performers did not want to perform certain routines according to the Japanese descriptions of how the routines ought to be performed. In some cases, they offered suggestions to the Japanese managers (prescribers) as to how they would like to change the routine. In many cases, prescribers rejected the suggested changes and reinforced the ostensive understanding of how the routine ought to be performed.

Through examples such as these, extant literature describes three types of responses to performers' suggested changes: they can explicitly accept the changes, passively acquiesce to them, or reject them outright. Therefore, the type of adaptive behavior prescribers exhibit influences the effect of performative changes on the ostensive dimension of a routine.

Observation 2b. The effect of performer-initiated changes on routines depends on the extent to which prescribers exhibit adaptive behaviors.

3.2.1.3. Adaptive behaviors of prescribers with respect to other prescribers' behaviors. Prescribers' adaptive behaviors may also occur in response to other prescribers' behaviors. In circumstances in which there are multiple prescribers for the same or similar routines, changes suggested or introduced by one prescriber often are discussed by, and negotiated with, other prescribers.

For example, in a start-up pharmaceutical company, researchers explored how the co-founders of the company handled challenges with their shipping routine (Dittrich, Guerard, & Seidl, 2016). In their description of a meeting among the co-founders, the authors describe how negotiation can happen among prescribers as they try to figure out the best way to modify a routine. Similar observations were made in the study of an LCD and plasma TV manufacturing facility in which prescribers negotiated with each other the best way to implement changes to a routine (Stiles et al., 2015).

In another article, Canales (2014) notes differences of opinions among the prescribers of those routines (managers, in this case). He describes how some managers favored more flexibility in loan-making decisions while others favored rigidly adhering to policy. Canales' research indicates that branches in which both preferences were represented outperformed branches in which there was a high concentration of managers of either type. His findings suggest that the prescribers had to negotiate the best way to modify routines to achieve the most desirable outcomes.

Prescribers can also agree *a priori* to accept changes made by fellow prescribers. In a study of a music recording studio, Siciliano (2016) observes that managers gave supervisors permission to change (and implement) routines as needed, giving off the impression that they did "not want to be bothered with the running of the business" (2016: 695). Thus, some prescribers simply agree to accept the adaptations of other prescribers rather than negotiate with them.

Observation 2c. The effect of prescriber-initiated changes on routines depends on the adaptive behavior demonstrated by fellow prescribers.

3.2.2. Performers

Detailed examples of change in routines from extant research focuses primarily on adaptive behavior by performers. In examining these case studies, it appears that performers' adaptive behaviors also affect routines in three ways, similar to that of prescribers: they engage in adaptive behavior in response to external changes, to changes implemented by prescribers, and to changes suggested by fellow performers.

3.2.2.1. Adaptive behaviors of performers with respect to external events. Just as prescribers observe and interpret the environment and the appropriateness of routines, so too may performers. An example of adaptive behavior in response to external changes is illustrated by Bigley and Roberts (2001) in their examination of the use and modification of routines by firefighters. They note that upon arriving at a fire, certain routines such as “firefighting” and “ventilating” prescribe generally what tasks should be accomplished; firefighters share a commonly held understanding of how they ought to perform these routines. However, it is incumbent upon those actually performing the tasks to adapt to rapidly changing conditions and modify the execution of those routines in ways that are often “radical departures” (1289) from the standard operating procedure. In these situations, there is no time to wait for prescribers to modify the routine; performers must act.

Similarly, Bechky and Okhuysen (2011) found that special weapons and tactical teams (SWAT) who also encounter highly volatile situations must assess situations and modify the performance of routines in as little as a “split second” (246). Their experiences together and understanding of a routine (such as breaking into a building to apprehend suspected criminals) allow them to quickly exhibit adaptive behaviors to perform the routine in an appropriate fashion.

Observation 2d. The effect of external forces on routines depends on the adaptive behaviors demonstrated by performers.

3.2.2.2. Adaptive behaviors of performers with respect to prescribers' behaviors. Performer behaviors also directly influences the potential effects of prescriber-initiated changes to routines. Prescriber-driven changes to the ostensive dimension of a routine serve to guide the actions of performers (Feldman & Pentland, 2003); whether those prescribed changes actually result in changed performance depends on the adaptive behavior of performers. Indeed, prior research clearly indicates that just because prescribers describe how a routine ought to be modified does not actually change the routine unless performers bring the changes to life through their performance. As such, prior work demonstrates that when faced with prescriber-initiated changes, performers can choose to *not* adapt, to adapt slowly, or to quickly and readily adopt the changes.

Outright rejection of prescriber-initiated changes is one way employees may react to prescriber-initiated changes to their routines. Pentland and Feldman (2008) found evidence that a new software implementation failed because users resisted some aspects of the patterns of behavior desired by the software's proponents (i.e., did not engage in adaptive behavior). Feldman (2003) found that although prescribers made changes to the ostensive aspect of the budget routine, performers demonstrated a lack of adaptive behavior by rejecting the changes, choosing instead to enact the routine according to their pre-existing understanding of it. Berente and colleagues also note that in the United States National Aeronautics and Space Administration (NASA), a highly bureaucratic organization, previous attempts to force changes to long-standing routines were not adopted by performers and, thus, such changes were not implemented (Berente, Lyytinen, Yoo, & Leslie King, 2016).

Rather than outright rejection of changes, extant research indicates it is more common for performers to initially reject changes but then to slowly accept changes and modify their performance. Lazaric and Denis (2005) describe this phenomenon in their study of quality-control

routines in a meat-processing plant. Employees initially resisted changes prescribed by management, and therefore the introduction of new ISO standards took even longer than usual. Nonetheless, prescribers persisted in requiring adherence to the quality-standards routines, resulting in the ultimate acceptance and adaptation by the performers of those routines.

Research also finds that in some instances performers quickly and readily adapt to changes initiated by prescribers, as in a university “moving in” routine studied by Feldman (2000). In that case, problems with the existing routine, such as traffic jams and upset families, were well known and housing directors and staff were eager to make changes. Thus, when a central administrator prescribed changes to the routine, those involved in performing the routines were eager to adapt their performance to reflect the prescribed changes.

In still other settings, performers can desire to learn new systems, but simply struggle to do so. This was the case for employees in an innovation lab (Fecher, Winding, Hutter, & Fuller, *In Press*). Team members noted initial challenges with learning what they were supposed to do and how they were supposed to do it. They initially depended on prescribers to guide them in their tasks, but then eventually were able to modify their behaviors to the new routines.

Observation 2e. The effect of prescriber-initiated changes on routines depends on the extent to which adaptive behaviors are demonstrated by performers.

3.2.2.3. Adaptive behaviors of performers with respect to other performers' behaviors. When a performer executes a routine differently than other performers, they initiate change to the performative dimension of the routine. Fellow performers' adaptive behavior in response to performatives change affects others' ostensive understanding of the routine. Widespread adoption of a performative change suggests performers' understanding of the routine has been altered. After all, if many performers do not alter their performances, the effects of one performer's variation from the routine will amount to nothing more than one (or a few) rogue operators doing their own thing while everyone else continues on as before. On the other hand, if many fellow performers adapt to performative changes initiated by others, the impact of those changes would be magnified, indicating that the ostensive dimension has changed. In this way, performer adaptive behavior functions as either a constraint or amplifier on performative changes initiated by others.

For example, Turner and Rindova (2012) observed this sort of peer-level adaptive behavior in their study of the trash collection in multiple waste-management organizations. They reported that a change introduced by one crew member could be either adopted or rejected by other crew members, the presence or absence of adaptive behavior determining whether or not the performative change became normative. Due to the collaborative nature of their work, crew members had to negotiate and “decide what is the best way of [performing their routine]” (30) (i.e., adapt) in order to execute the routine with some level of efficiency. Similarly, in the introduction of new learning routines, team members learned from fellow team members and exchanged ideas. One member noted that after the team completes a routine, they spend time “looking back to the [routine] and reflecting how to improve ourselves,” indicating that they work together to make changes (Annosi, Martini, Brunetta, & Marchegiani, *In Press*).

These examples demonstrate how adaptive behaviors not only introduce variations to routines but also may amplify the effect of the change. Non-adaptive behavior, on the other hand, rejects the suggested changes in favor of the existing execution of the routine. An example of this is described by Leonardi (2011) who examined an automobile manufacturer's safety testing facility. New testing technology and protocols were introduced from someone outside the department but were explicitly rejected by those in the department. The internal employees had a different understanding of how the routine ought to be performed than the external employee, so the changes were rejected in

favor of the existing protocols. In cases like these, non-adaptive behavior by fellow performers restricts the degree to which proposed changes are adopted.

Observation 2f. The effect of performer-initiated changes on routines depends on the extent to which adaptive behaviors are demonstrated by fellow performers.

3.3. Proficient behaviors

An individual who exhibits *proficient* behavior competently and accurately executes the tasks assigned to them in their work role (Griffin et al., 2007; Griffin, Parker, & Mason, 2010). This conceptualization of individual performance is most closely linked to task performance—how “job incumbents perform activities that are formally recognized as part of their jobs” (Borman & Motowidlo, 1993). This formalization provides a distinct standard to which individual behavior may be compared as a means of determining the competency with which an individual completes tasks.

3.3.1. Prescribers

Whereas performers demonstrate proficient behavior by engaging in the routine, prescribers demonstrate proficient behavior by competently reinforcing how the routine should be performed. That is, the prescriber’s job involves encouraging (or even demanding) that performers execute the routine according to specific standards. In doing so, prescribers shape the ostensive dimension of the routine.

For example, Obstfeld (2012) describes the role that a manager played in a prototype parts-purchasing routine for an automobile manufacturer. To increase adherence to the established routine, Obstfeld observed that the manager “imposed supplier requirements, rigorous reporting, and training—with punishments for noncompliance” (1580). Although the manager did permit small, inevitable variances to the routine, he intentionally required as much adherence as possible to how the routine should be performed. By engaging in proficient behavior, this prescriber executed his formally defined role. As a result, he reinforced the ostensive dimension of the routine, with the goal of increasing the reliability and stability in the performance of the routine.

The implementation of the Six Sigma process management methodology at 3M in the early 2000s, recounted by Canato et al. (2013), provides another example of prescribers’ proficient behaviors. 3M revised existing routines and designed new routines according to Six Sigma principles. This new approach did not fit 3M’s existing culture, though, and many employees opposed its use. Despite this opposition, however, Canato and colleagues describe how the prescribers (in this case, upper- and mid-level managers) executed their prescribing routines in which they required performers to adhere to Six Sigma-based principles in the execution of the routines. In this way, prescribers engaged in proficient behavior.

As exemplified in these studies, when prescribers engage in proficient behavior, their efforts shape the ostensive dimension of that routine. Their efforts call performers’ attention to the routine and reinforce how the routine ought to be performed. Repeated and consistent reinforcement clarifies the ostensive dimension of the routine, thereby bringing stability to it. However, as we discuss next, research shows that even if prescribers are proficient in articulating how a routine ought to be done, the best indication of performers’ understanding is seen through their actual performance of the routine (Pentland & Feldman, 2008).

Observation 3a. Prescribers’ proficient behaviors are a source of stability in routines.

3.3.2. Performers

When performers execute routines in the prescribed manner, they are exhibiting proficient behavior, which stabilizes routines in two ways. First, proficient behavior serves to bring stability to a recently changed routine. As employees re-learn a revised routine and begin to

exhibit proficient behavior in its execution, there will be less variance outside the guidelines of the routine and, therefore, more stability. Second, proficient behavior helps to maintain the stability of a routine. That is, any routine that reaches a stable state tends to remain in that state to the extent that proficient behavior dominates its execution.

It is important to note that research shows that prescribed guidelines for executing routines vary in specificity. Sometimes the guidelines are narrowly construed and performers are expected to execute routines in a highly similar manner from one performer to the next, with little flexibility in determining how the routine should be executed (Lazarcic & Denis, 2005). In contrast, broadly construed guidelines provide room for performers to execute the routine with greater flexibility and creativity (Sonenshein, 2016).

The meat-inspection routines described by Lazarcic and Denis (2005) required strict adherence to new ISO guidelines in order for the routine to be beneficial. In order to learn the new routines, performers engaged in adaptive behavior to “reconfigure their mental frames”, but once that happened, proficient behavior in applying the new ISO standards was required of employees in order to reap the benefits of producing safer meat (879). Thus, proficient behavior stabilized the recently changed routine.

In other settings, routines are more beneficial when prescribed less rigidly, allowing performers some flexibility to exercise creativity in their execution of the routine. This effect was evident in Sonenshein (2016) study of a merchandising routine in a boutique store. In this setting, performers learned the basics of a routine and then creatively executed it. Performers’ understanding of the routine was influenced by artifacts (744), feedback from prescribers and other performers (749–50), examples of merchandising layouts from fellow performers at their own store (746) and at other locations (746). From these inputs, performers developed their own unique proficiency in creatively setting up the merchandise displays; the better they understood the guiding principles, the better able they were to execute the routine creatively.

Conversely, some employees exhibit low levels of proficiency with routines, which not only reduces the benefits derived from the routines, but also increases costs and challenges for other employees. For example, in their study of the NASA purchase requisition routine, researchers found that some employees did not execute the routine properly, so they lost their “purchase card” privileges and also created more work for the monitors (Berente et al., 2016: 562). An analysis of “helping” routines showed that when one individual used a “sharp” tone with a colleague, the routine could not be completed and the other employee who needed help did not receive it (Grodal, Nelson, & Siino, 2015: 152). In Bucher and Langley (2016) description of a new patient treatment routine, they observe that due to a weak understanding of how the routine ought to be executed, performers exhibited low levels of proficiency in the revised routine. This slowed the execution of routines and increased uncertainty for multiple performers regarding the guidelines for how the routine should be executed. In another health-care setting, some employees displayed low levels of proficiency in a patient hand-off routine, causing other employees to step in and help fix the deficiencies (Lebaron et al., 2016).

In these examples, scholars identify contexts in which proficiency in the execution of routines affects the stability of those routines. When performers display high levels of proficiency, routines are stabilized and the desired, context-specific benefits are derived. In contrast, when performers display low levels of proficiency, routines break down, are de-stabilized, and the desired benefits do not materialize.

Observation 3b. Performers’ proficient behaviors are a source of stability in routines.

3.3.3. Further effects of proficient behavior

In addition to the stability they generate, prior work identifies how proficient behaviors also indirectly contribute to change in routines by way of enabling proactive and adaptive behaviors. The more proficient employees become in the performance of their routine, the more

resources (cognitive, human, or financial) may be freed up that may then be directed towards modifying the routine in some way. Prior research shows that proficiency in a repertoire of routines is thought to enable employees to interact with routines in a flexible manner, just as proficiency with the rules of grammar allows one to create new combinations of words or modify previous combinations in order to communicate any number of ideas (Pentland & Rueter, 1994). Sonenshein (2016) describes this phenomenon as familiar novelty – the ability of performers to consistently, yet creatively, execute routines accurately across a large retail chain. The competence that gives rise to adaptability and proactivity within routines is bred via proficient behaviors. When prescribers and performers have a strong grasp of what constitutes core task performance, they can ultimately behave in a more flexible manner.

3.3.3.1. Prescribers. Prescribers' level of expertise developed through proficient execution of their role in the routine enables them to engage in proactive and adaptive behaviors more appropriately because they understand the ramifications of changes introduced via these behaviors (Obstfeld, 2012). For example, in adopting the Six Sigma approach at 3M, Canato and colleagues (2013) described how all prescribers in the organization (except for the new CEO who was implementing the changes) had to re-learn how routines ought to be performed in the Six Sigma way. The ability of prescribers to articulate and reinforce how routines ought to be performed was weakened because they, themselves, were still developing an understanding for the changed routine. Only after they understood the routine were they able to proficiently prescribe to others how it ought to be done. However, as they grew in their prescribing proficiency, they were able to begin making appropriate modifications to the routine to better adapt them to the specific contexts in which they were being executed. In this way, increased prescriber proficiency can indirectly lead to adaptive or proactive behaviors.

Observation 4a. Prescribers' proficient behaviors can lead to proactive and adaptive behaviors.

3.3.3.2. Performers. There is evidence that performers' proficiency can also lead to proactive and adaptive behaviors. Performers in various life-and-death crises have shown abilities to exhibit proactive and adaptive behaviors because they have a strong proficiency in the underlying routines that govern emergency responses. For example, SWAT team members are able to adapt to situations such as finding a planned entry location blocked and or not having enough officers at a location (Bechky & Okhuysen, 2011: 245). Fire-fighters adapted to circumstances such as dealing with “an explosion of flammable materials that had not been previously identified” (Bigley & Roberts, 2001: 1288). Disaster relief crews describe their constant need for adaptation in that “each scenario is so different from the other, we have to adapt to the situation. Not any search and rescue operation would look the same” (Danner-Schroeder & Geiger, 2016: 651).

In a non-life threatening context, employees executing pricing routines did so by gathering as much information as possible from customers and competitors then using that information to extract the highest price from customers (Hallberg, 2017). The process was likened as being “more of an art” than rigid techniques of what they had to do (Hallberg, 2017: 183). Another setting found members of film production crews adapted to situations such as an actor coming down with the flu and a fire unexpectedly starting in a trash can near the set (Bechky & Okhuysen, 2011: 245).

Observation 4b. Performers' proficient behaviors can lead to proactive and adaptive behaviors.

4. Discussion

4.1. General insights

Our examination of the routines literature led us to identify some common elements identified in situationally diverse studies that focused on how individuals' behaviors shape routines. Summarily, we observed that prescribers and performers use proactive behaviors to inject change into routines (O1a, O1b). In contrast, individuals who engage in proficient behaviors bring stability to routines as they become more familiar with them (O3a, O3b). Moreover, individuals who engage in high levels of proficient behavior are actually better able to engage in proactive and adaptive behaviors as well (O4a, O4b). We also observed that most of the behaviors described in the literature are adaptive in nature and generated either stability or change. For prescribers, adaptive behaviors introduce changes in response to external events (O2a) and influence acceptance or rejection of changes suggested by performers (O2b) or other prescribers (O2c). Likewise, performers' adaptive behaviors introduce changes in response to external events (O2d) and influence acceptance or rejection of changes suggested by prescribers (O2e) or other performers (O2f).

Overall, we observed that prescribers' behaviors primarily affect the ostensive aspect of routines, while performers' behaviors primarily affect the performative aspect of routines. However, a core finding from our review is that these relationships are dynamic, iterative, and recursive. As prescribers and performers mutually act and react, their behaviors promote both change and stability in routines (Pentland et al., 2011).

Expounding upon our general observations, several specific insights emerge. To begin, the primary effect of proactive behavior is to promote change in routines (O1a, 1b) because of the nature of this behavior: it is inherently change-oriented. Those who exhibit proactive behavior, whether prescribers or performers, seek to challenge the status quo, envisioning a future reality and taking action consistent with that vision. Such behavior requires no specific situational cue.

In contrast, proficient behaviors are those which stabilize routines as prescribers and performers become familiar with the routine (O3a, 3b). This happens when prescribers reinforce the current understanding of how a routine ought to be done and when performers conform their actions to such prescriptions. Somewhat paradoxically, having a clear understanding of what the routine entails and executing one's part in it both directly promotes stability and indirectly promotes change. Those who clearly understand the purpose of the routine and their role in executing it are also in an excellent position to introduce change. This seeming paradox results because familiarity with the routine frees resources that would otherwise be devoted to understanding and executing the routine. Instead, familiarity makes change possible by re-directing those freed-up resources towards proactive or adaptive behaviors (O4a, 4b).

It is adaptive behaviors that tie proactive and proficient behaviors together and negotiate when change is adopted or rejected and when stability is continued or discontinued. For prescribers, adaptive behaviors introduce changes in response to external events (O2a), accept or reject changes suggested from performers (O2b), or from other prescribers (O2c). Likewise, performers may exhibit adaptive behaviors and introduce changes in response to external events (O2d), accept or reject changes suggested from prescribers (O2e), or from other performers (O2f).

In this way, adaptive behavior constrains or amplifies proactive behavior, resulting in continued disruption of a routine in which change has already been introduced, or in increasing stability following the introduction of change. Stated another way, aside from introducing change, adaptive behavior also reflects acceptance or rejection of changes introduced to the routine by others. To the extent that participants in the routine exhibit adaptive behavior in the face of changes, the routine will stabilize in its altered form. This redefines what

constitutes proficient behavior in the context of the routine, and as participants come to understand the altered routine, it becomes easier for them to execute it according to that understanding (i.e., engage in proficient behavior), increasing stability in the routine.

4.2. Theoretical implications

In recent years, researchers have begun to explore the role of individual agency in the context of organizational routines. Much of this exploration of the “microfoundations” (Felin & Foss, 2005) of routines has taken the form of qualitative studies that have focused on specific behaviors in specific circumstances. Those works have provided valuable insights about context-specific organizational routines, have advanced the field, and profoundly informed the model we introduced here. Yet we believe that future research on this topic would benefit from the use of the framework developed here that incorporates role-based behaviors to help generalize these many, varied findings.

Therefore, a key contribution of our work is the integration of a theoretically grounded set of work-role behaviors with an explanation of how these behaviors promote both change and stability of routines. More specifically, our model illustrates how prescribers and performers of routines interact via proactive, adaptive, and proficient behaviors. There are two essential elements of this model that have the potential to explain current findings in generalizable terms and inform future investigations as well.

First, the use of common language for behaviors would make findings easier to compare, whether the research design is qualitative or quantitative. One of the challenges facing anyone who studies the literature on organizational routines is to glean principles that can be applied in other settings. While such principles have been part and parcel of practice-perspective research about routines themselves, we know considerably less about behaviors that can transfer across contexts because the behaviors studied are so embedded in their research setting. Adopting the common language regarding behavior introduced here would prove useful in this endeavor. Moreover, the existence of validated measures of proactive, adaptive, and proficient behaviors enhances the value of incorporating these behaviors into routines research. From a theoretical point of view, linking routines research to these behaviors makes a vast amount of research into the antecedents of these behaviors more directly accessible to routines researchers.

Second, the identification of the two key roles that individual employees play in the context of routines—prescriber and performer—offers similar advantages. Any of the work-role behaviors may be exhibited by those who prescribe how the routines ought to be performed or by those who perform routines. By introducing this distinction, we explicitly recognize that prescribers and performers experience routines in different ways. We also argue that the roles are not mutually exclusive: a specific employee can act in both roles at different times in the context of a single routine. Adopting this perspective makes it possible to contemplate effects on routines of interacting participants whose relationships are not based solely on mere hierarchical status (Lewin, Massini, & Peeters, 2011).

4.3. Points of intrigue

Categorizing extant studies as we have done reveals several interesting observations which inspire several directions for future research. Most of the articles reviewed focus on the performance of routines. Regardless of the context of the routines, whether they are rapid responses by SWAT teams (Bechky & Okhuysen, 2011), comparatively mundane pricing routines (Zbaracki & Bergen, 2010), or anything in-between, it is the actual performance of routines that attracts the attention of most scholars. This is not surprising because it is in the performance of routines that the effects of change or stability are observed through the proactive, adaptive, or proficient behaviors of performers.

The identification of the two key roles that individual employees play in the context of routines—prescriber and performer—offers similar advantages. Any of the work-role behaviors may be exhibited by those who prescribe how the routines ought to be performed or by those who perform routines. By introducing this distinction, we explicitly recognize that prescribers and performers experience routines in different ways. We also argue that the roles are not mutually exclusive: a specific employee can act in both roles at different times in the context of a single routine. Adopting this perspective makes it possible to contemplate effects on routines of interacting participants whose relationships are not based solely on mere hierarchical status (Grant, Parker, & Collins, 2009; Lewin et al., 2011).

However, existing literature also recognizes the important role prescribers play in attempting to influence the ostensive understanding of performers' routine performance. Recognizing that performers will not change their performance until their understanding of routines changes, extant research identifies a number of ways in which prescribers affect such understanding. Articles range from complete rejection of performers' suggested changes (Busby & Iszatt-White, 2016), to outright adoption (Hong et al., 2016), to collaboration with performers to modify routines (Dittrich et al., 2016).

What is clear to see from the review is that routines develop in an iterative process wherein the behaviors of prescribers and performers together create the flow of events that make routines what they are. Prescribers provide information about a routine, perhaps in varying degrees of formality and explicitness, and performers execute their part in the routine as they understand it. Their understanding, as revealed in their behavior, is witnessed by other performers and (perhaps) prescribers, who may then alter their behavior as a result. Thus, one participant repeatedly plays off another, and the routine changes and stabilizes as this process plays out over and over again.

Yet, while this observation is clear from a high level overview, only some articles highlighted this iterative process, and very few fully explored it. Perhaps because of the nature of the case studies that focused on specific, individual actions, or because of the specific research questions under investigation, a broader view of how the dynamics affected the routine remained underdeveloped. Whatever the reason, additional work specifically focusing on the dynamic interplay of prescribers and performers would enrich the literature.

Another observation is that not all of the changes introduced by proactive and adaptive behaviors (by prescribers or performers) are beneficial. Individuals may act with the best of intentions, seeking to alter a routine in positive ways via their proactive and/or adaptive behaviors. Yet sometimes their actions result in detrimental outcomes. Nonetheless, their behavior changed the routine, and this is consistent with our arguments about these behaviors in this paper. For that matter, not all changes to routines are *intended* to be beneficial, although we have excluded forms of destructive deviance from our model for reasons addressed earlier in the paper. Nonetheless, the “dark side” effects of destructive deviance are worthy of future consideration. Following the example of related behavioral research that has explored the dark side of constructs such as impression management (Klotz et al., 2018) or leadership (Liu, Liao, & Loi, 2012) routines research would be enriched by likewise exploring the potential negative impacts of destructive deviance.

We have identified examples from existing research that focus on effects of behavior on routines; specifically, different types of behavior bring about both change and stability. Essentially, we have only dealt with efficiency, making implicit assumptions that stable routines are more efficient and that introduction of change disturbs stability. But what about effectiveness? After all, the primary reason researchers and practitioners alike are concerned with organizational routines is because they aid in the efficient *and* effective functioning of the organization (Pentland & Feldman, 2008). Although stable routines promote efficiency (Cohen & Bacdayan, 1994), stability is no guarantee of the effectiveness of routines.

With regard to effectiveness, then, a review of existing work suggests several possibilities. First, appropriateness matters. Proficient behavior is most beneficial to firms when the routines that are being executed are actually appropriate to the situation (Becker, 2008; March, 1994). But when routines are inappropriate to the situation, their competent execution would result in very effective and efficient destruction of the capabilities supported by those routines. As Peter Drucker phrased it, “there is surely nothing quite so useless as doing with great efficiency what should not be done at all” (1963). Thus, the appropriateness of the routines dictates whether or not the stabilizing attributes of proficient behaviors actually benefit the organization. Second, one view of routines is that change comes about through unintentional variations of performance. Yet existing literature is full of examples of how change comes about through intentional behaviors. Thus, a study of whether unintentional or intentional behaviors are more effective at creating change in routines may be appropriate. Finally, although we have only focused on examples of constructive deviance, destructive deviance may be a fruitful avenue of inquiry as well. It may be that these “bad” actions create so much disruption that new, beneficial (more effective) changes can be recognized and implemented.

4.4. On measurement and testing

Because of the robustness of related literatures that examines the important roles of both prescribers and performers, a number of potential directions for empirical examination emerge. First, one of the main theoretical components of our model was the work-role conceptualization developed by Griffin and colleagues (2007). We incorporated their definitions of proactive, adaptive, and proficient behaviors in identifying how employees engaged in routines, but their work extends beyond mere definitions. They developed and validated measures for each of the behaviors in their (2007) work, which has been cited over 1600 times according to Google Scholar. Moreover, whereas we focus on individual level behaviors, they also develop measures of employee proficiency, adaptivity, and proactivity at group and organization levels. These survey-based measures could be integrated as part of future routines research, providing routines researchers another source of insight into the functioning of organizational routines.

Research opportunities also exist for bringing richer, yet more broadly applicable, tools to how proactive, adaptive, and proficient behaviors play out in the field. In our study, we identified several examples from research of specific actions taken by prescribers and performers to introduce change or stability in routines; some of these actions could be considered organizational citizenship behaviors (OCBs). These behaviors, “that go beyond role requirements, that are not directly or explicitly recognized by the formal reward system, and that facilitate organizational functioning” (Bolino, Turnley, & Bloodgood, 2002: 505) have been well studied in the literature (Podsakoff, MacKenzie, Paine, & Bachrach, 2000). To integrate and extend understanding of routines research, scholars could examine OCBs such as “helping” (definition) or “voice” (definition) and investigate how, where, and to what effect these behaviors impact the effectiveness and efficiency of proactive, adaptive, and proficient behaviors. For example, it could be possible that voice OCBs are more effective in introducing change into routines via proactive behaviors, whereas helping OCBs are more efficient in increasing the proficiency of fellow performers’ behaviors.

Third, it would be beneficial for researchers to investigate the relative importance of each of the work-role behaviors, which may differ according to the external environment in which firms are located. Dealing with the external environment is a key element of strategy formulation and implementation. Strategic choices made based on the external environment affect all of an organization’s routines. Ultimately, then, the external environment affects individual behavior;

which, depending on the type of behavior, may have stronger effects on routines due to environmental differences such as munificence, complexity, and dynamism (Dess & Beard, 1984) and state, effect, and response uncertainty (Milliken, 1987).

Fourth, it is clear that not all changes introduced by performers are adopted by prescribers. It would be useful to investigate whether changes intentionally introduced through proactive or adaptive behaviors are more readily adopted by fellow performers and prescribers than those occurring unintentionally as performers execute routines (i.e., unintentional variations introduced through performance) (Feldman & Pentland, 2003). It would also be beneficial to examine how factors such as the degree of centralization within the organization (Van den Bosch, Volberda, & de Boer, 1999) and the power dynamics of prescribers and performers affect changes introduced by individual proactive and adaptive behaviors (Howard-Grenville, 2005).

Fifth, Becker (2004) argued that because routines are patterns of behavior involving collective interaction, they are processual in nature. This means that on one hand, routines serve as a snapshot of where organizations are today, as well as a map for where organizations may be headed (Pentland & Rueter, 1994). Becker (2004) identified several processual characteristics of routines found in the literature, including the speed of execution, change and switching between routines (Cohen & Bacdayan, 1994; Cohen, 1991), delays in implementing new routines (Lazarcic & Denis, 2005), repetition frequency (Weick, 1990), and the volatility of the decision environment (Hirschleifer & Welch, 2002). It may be fruitful to examine proactive, adaptive, and proficient behaviors in the more specific context of these processual characteristics of routines.

For example, it is likely that change introduced through proactive or adaptive behaviors into a smoothly operating routine would decrease the speed of its execution as performers adapt to the new routine. The question then becomes whether the potential future benefits of the revised routine are worth the present costs of change and immediate decreases in speed, reliability, and efficiency. Consider several other examples: how might the collective combinations of these behaviors affect the speed or frequency of switching between routines, how long might it take for changes introduced via proactive behavior to take effect relative to changes introduced via variations in proficient behavior, or how might the outcome of the collective mix of these behaviors be affected by the volatility of the decision environment? Clearly, there is ample room for more investigation of the effects of proactive, adaptive, and proficient behaviors on the ostensive and performative dimensions of routines, particularly related to the processual nature of routines.

5. Conclusion

Routines account for much of the activity that takes place within organizations. Yet, only recently have studies begun to focus on the role individual behavior plays in promoting change and stability in organizational routines. Although some routine-related behavior is relatively automatic, the articles reviewed here clearly show that employees also have the capacity to, and often do, exercise individual agency in the execution of routines. Through further research into the unique and intentional roles employees play in shaping routines in various contexts, our collective understanding of how organizational routines change and are stabilized will continue to advance.

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