



Routine dynamics and paradox: A revised research agenda

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ABSTRACT

This comment reflects on the paper by Rosales et al. (2022) and discusses the role and contribution of paradox theory for our understanding of routine dynamics. Whilst the authors claim that routines serve as rubber bands that enable practitioners to manage the paradoxical relationship between stability and change, in this commentary I want to challenge some of the core assumptions around stability and change in this paper and propose a revised understanding. It is a central tenant of routine dynamics studies that stability and change are mutually enabling – a duality – and hence not contradictory categories. As I outline in this comment this has significant consequences for the way routine dynamics are studied. Furthermore, I propose some areas in which paradox theory and routine dynamics studies may fruitfully be combined to address novel research questions.

1. Introduction: the problematic assumption of stability and change as opposing categories

The thought-provoking paper by Rosales et al. (2022) addresses an important and very interesting question: how stability and change play out in the performance of organizational routines. More specifically, the authors ask “how organizational members deal with the paradoxical tension that emerges as they perform routines” (Rosales et al., 2022: 2). This is without doubt a challenging and interesting problem to be addressed and the study builds on a very rich empirical data set of routine performances in an emergency room (ER) in a university hospital. The ethnographic approach taken allows us to get a deep understanding how routines were performed. A close observation of the performance of actions is key for studies of routine dynamics since they allow us to understand who does what at what specific point in time (Feldman & Pentland, 2003). The study by Rosales et al. (2022) hence helps us to better understand how actors cope with stability and change and how they cope with unforeseen circumstances in the performance of organizational routines which is characteristic for an ER setting. The paper situates itself in two streams of literature the authors seek to fruitfully combine: studies on routine dynamics that point to the processual nature of organizational routines, and research on organizational paradox that is concerned with the question how interrelated tensions are handled.

And whilst this combination certainly has a lot of potential for both, routine dynamics studies and paradox research, the paper builds on an assumption that needs to be challenged from a routine dynamics perspective: The authors assume that there is a paradoxical tension

between stability and change in organizational routines. In the paper, they follow Feldman and Pentland's (2003) seminal work and define organizational routines as “recognizable patterns of action and relations associated with a routine and performative aspects, which are the situated performances of the routine” (Rosales et al., 2022: 2). Paradoxes are, following the widely used definition by Smith and Lewis (2011: 328), defined as elements that are contradictory yet at the same time interrelated and persistent. Organizations are hence understood as theatres of paradox in which contradictions like stability and change persist and become salient when there is a need to deal with them (Rosales et al., 2022: 3). Taken together, the authors assume that stability and change are in a contradictory, yet interrelated relationship and that the persistent tension between stability and change eventually becomes salient in the performance of organizational routines. Or, put differently: “it is necessary to understand under which conditions routines’ dualities (between stability and change) become salient in the form of paradoxical tensions.” (Rosales et al., 2022: 2).

In this commentary I will challenge some of these assumptions from a routine dynamics perspective. I outline why stability and change are rather a duality and not contradictory, interrelated and persistent elements. The root of the problem of identifying a paradox between stability and change might result, as I argue, from mistaking standard operating procedures (SOP) with routines in the empirical analysis of data. A possible tension between what is expected to be the routine (as codified in the SOP) and the actual performance might be observed by researchers (and routine participants alike), but it is not the tension between stability and change as conceptualized in routine dynamics research. Instead, I propose that paradox research might be fruitfully

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help us in better understanding the conflicts and tensions that emerge between routines rather than in studying the endogenous dynamics of routines.

2. Routines as processes, not as things

The assumption made in the paper that stability and change are in a contradictory, yet interrelated relationship is problematic from a routine dynamics perspective. One of the central tenants of routine dynamics research is that stability and change *are mutually enabling*, i.e. one cannot exist without the other, in the performance of organizational routines (Feldman, 2000; Feldman et al., 2016). Central for understanding routines from the perspective of routine dynamics is that routines are not conceptualized as ‘things’, but as a processes (Feldman et al., 2016). Even though the notion of ‘the organizational routine’ refers to a noun, routine dynamics scholars point to the importance of understanding them as a process of ongoing accomplishment, i.e. a particular sequence of actions (Pentland et al., 2011). In their earlier work on routine dynamics, Feldman and Pentland (2003) have introduced the distinction between ostensive and performative aspect of routines, a distinction Rosales et al. (2022) also build on. Whereas the ostensive aspect points to the particular pattern that emerges (the specific sequence of actions), the performative aspect points to the actual action taken by specific actors. Important for this discussion is that ostensive and performative aspects are again in a mutually enabling interrelationship, they form a duality. This means one cannot exist and be understood without the other. Hence, routines are always both at the same time: ostensive and performative (Feldman & Pentland, 2003) and if at all, one can only analytically separate these two aspects. Both aspects are distinct from standard operating procedures (SOP) which represent the formal representation of a routine (D’Adderio, 2008). It is a central insight of routine dynamics studies that routines are not to be equated with these formal prescriptions of how processes should be performed. Routines are the emergent patterns that form in the actual performance and which are distinct from the formal expectations (Pentland & Feldman, 2008). Hence, routines are also not ‘best practices’ that also infer to specific, formal expectations how specific outputs are to be accomplished. Routines as process point to the way how things are actually done. Seen this way the process of actual doing is at the heart of routine dynamics studies (Feldman, 2003).

3. The duality of stability and change in routine dynamics

In her later work, Feldman et al. (Feldman, 2016; Feldman et al., 2021) speak of patterning and performing instead of ostensive and performative aspects of routines to stress the emergent, processual nature of routines. More recent work in routine dynamics conceptualize routines as paths that emerge and form a pattern within a sphere of possibilities (Goh & Pentland, 2019). The trajectory of a path hence describes a routine as process, i.e. how it unfolds over time. And this path varies over time: it is both stable enough to be recognizable as a path (a pattern) and it changes due to novel circumstances (Goh & Pentland, 2019).

These central insights are important for understanding the relationship between stability and change as it is conceptualized in routine dynamics studies. Here, stability and change are not seen as contradictory elements that persist over time; quite the contrary, stability and change are mutually enabling, one cannot exist without the other. Or, as Feldman (2016: 34) has put it: “change is part of stability and stability is part of change”. Imagine steering a sailing vessel in windy conditions with frequent waves. For keeping the ship on a steady course, the helmswoman needs to constantly change and adjust the rudder to the varying conditions. Or envision a concrete bridge that crosses a river: for the bridge to remain stable, it still needs to be able to swing and vibrate; if it would be fixed, it would ultimately break. These examples illustrate that here stability and change are not opposing tensions that need to be

handled, but instead are mutually enabling. Routine dynamics studies have been out there to exemplify that: Take for example the study of first responders to an earthquake by Danner-Schröder and Geiger (2016). They have shown that in order to achieve a reliable and stable outcome of routines a high degree of variety and flexibility in the performance is needed to adjust to varying situations. Here, stability is an effortful accomplishment that requires change. And also the other way round: in order to achieve flexible performance, routine participants enacted standardized (stable) action steps that had been trained in advance. Hence, stability requires change.

Such a duality perspective is conceptualized in stark contrast to a dualism, where stability and change would be opposing categories. As Farjoun (2010: 202) has pointed out, stability and change can only be seen as paradoxical if they are defined as opposite and separate. As his classification of stability and change relationship shows (Farjoun, 2010: 206), changing mechanisms are sometimes need to achieve stable outcomes (the example of the steering a sailing vessel quote above), or achieving changing outcomes requires stable mechanisms. As this differentiation between outcome and process shows, stability and change are mutually enabling, and as a consequence, the seemingly paradoxical relationship dissolves. It is hence no coincidence that routine dynamics studies have so far not referred to paradoxes. It is a central insight that stability and change are mutually enabling in the process of routine performances.

4. SOPs are not the ostensive aspect of routines

This raises the question why Rosales et al. (2022) identified a paradox between stability and change in their study of routines in ER? Their study was initially motivated by the idea that disruptive effects and organizational conditions can render the integration of the stability-change duality problematic (Rosales et al., 2022: 1). Digging deeper into their findings reveals that the authors actually operationalized (probably guided by the answers of their interviewees) the ostensive aspect of routines (the emergent pattern) as the standard operating procedure or the established best practice. For example in the identified learning versus efficiency tension, interviewees point to the difficulty to meet the requisite performance standard whilst at the same time teaching newcomers (Rosales et al., 2022: 7). Seen through the lens of routine dynamics, the required performance standard refers to an SOP and is not the same as the ostensive aspect. Certainly, the SOP is a central element that informs the understanding of the ostensive aspect of the routine. In routine dynamics research it is sometimes referred to the multiplicity of ostensives to indicate that performing actors may have a different understanding of the routine (Pentland & Feldman, 2005: 798). The empirically interesting question then is, how, despite this variety, a joint performance emerges and how much shared understanding of the ostensive is actually necessary. From a routine dynamics perspective one would study, how and why, despite the multiple understandings by experts and newcomers, a pattern would emerge. Hence one would potentially see a changing (variable) pattern each time new trainees would enter the ER and would ask the question how this pattern was actually performed (which actions were taken). From such a perspective it would then be interesting to better understand how the pattern changes, why it changes and how it is recognized as a pattern despite variety in performance. A similar observation can for example be made with regards to the identified autonomy-control tension. Here the authors write: “Even when a routine is available, it is not obvious to determine what is the appropriate degree of autonomy that a relatively inexperienced actor should apply.” (Rosales et al., 2022: 7). The statement “even when a routine is available” again shows that here routines are understood as ‘things’ that exist as a kind of SOP within an organization. From a routine dynamics perspective, different questions would come to the fore: how is the control over the dynamics of processes enacted, how is the variety of the pattern standardized? How do routine participants enact autonomy (variety) and how is it constrained in

action? All these question point to the mutually enabling relation between stability and change (or autonomy and control) and would not treat them as opposing tension.

5. Studying routines: how to identify routines in data

Operationalizing standard operating procedures as the ostensive aspect of routines is a frequent problem in routine studies. A reason for this misunderstanding can be found in the way routines are identified in the field/in the data. Very often (and as it was done in the paper by Rosales et al., 2022 as well), practitioners are asked about routines and to identify routines for the researcher. Whilst this is not a problem per se, one needs to be mindful that practitioners often understand ‘the routines’ as the existing standard operating procedures that are codified and stored in binders or internal networks. When asked about routines, practitioners frequently refer to these artefacts and talk about them. In talking about these artefacts, they often raise the important issue that in their actual doing they have to divert from these prescriptions since they do not fit the circumstances, because situations are dynamic and disruptions occur. Practitioners hence point to tensions in their everyday work: they need to stick to SOPs whilst at the same time they need to be flexible in their doing. This issue has largely been addressed in routine dynamics studies of breakdowns (Feldman, 2000) or in emergency settings (Danner-Schröder & Geiger, 2016). Here, questions how routine participants manage to remain consistent with the SOP or how they achieve consistency in outputs are discussed.

It is hence no surprise that the majority of studies that use a routine dynamics lens put an emphasis on observation (Dittrich, 2021). Most importantly, the unit of analysis has to be the actions taken by practitioners at a specific point in time (who does what, when and where). Observing what practitioners do in specific circumstances allows identifying actions that eventually form a pattern and can hence be coded as a routine. Asking practitioners about routines bears the risk that they talk about SOPs and not routines. This does not mean that one cannot use interview data to study routines; quite the contrary. But it requires asking different questions: Instead of asking about ‘the routine’ one shall ask about what they do, the specific actions they take in specific circumstances (see the study of (Kremser & Schreyögg, 2016) as an example for such an approach). Irrespective if the identified actions stem from observation or from the verbal account of interviewees, it is important to understand that the identified patterns are the result of the analysis of the researcher. Hence, any study of routines first needs to start with the identification of routine processes within the data set. Routines as processes are therefore the reconstructions of researchers and not the straightforward account of interviewees. When clustering action steps into patterns it is important to be mindful of two things:

- (1) First, one needs to decide which action steps belong to the same routine and which not. Building on Kremser et al. (2019) and on Geiger et al. (2021), distinct action steps belong to the same routine if one action builds the immediate context for the following action (sequence). For example, when nailing a nail, putting the nail at the place where it should hit the wall is an action step, and taking the hammer and put the nail into the wall is the next action step. Putting the nail in position builds the immediate context to hammering and hence both can be seen as belonging to the same routine. The action of wiping the floor after the work has been done is a related action step, but hammering does not build the immediate context for floor wiping. Hence the floor wiping action step belongs to another routine (cleaning). Only such an approach allows for the identification of routines as processes that have particular boundaries. And these processes are conceptually and empirically distinct from SOPs as artefacts.
- (2) Second when collecting data it is important to keep the issue of granularity in mind. Action steps that are clustered into one routine should be based on similar levels of granularity. Coming

back to the example of hammering above: putting the nail in position and hammering with the hammer (hitting the nail) are similar with regards to granularity. They both refer to a single bodily activity. The action of placing a picture on a wall, however, refers to a different level of granularity. It involves getting the tools ready, putting the nail in place, hammering, adjusting the picture to the nail, ensure that it is levelled and so on. Hence it covers a lot more than just a single bodily activity and hence is a different level of granularity compared to hammering. These two steps can therefore not be clustered in one and the same routine; this would distort levels of granularity.

Identifying routines in a data set is hence not so straight forward as it seems. Understanding routines as a process has, as outlined, important methodological consequences that need to be taken into account to avoid misunderstandings and misrepresentations.

6. Paradoxes and routine dynamics

What do these considerations imply for connecting insights from routine dynamics studies with paradox research? First, it is important to note that it is not likely that a paradoxical tension between stability and change is necessarily and persistently part of the endogenous dynamics within routines. From this perspective it may be more interesting to ask for whom there is a paradox - addressing both the multiplicity of ostensives and the fact that a researcher might see different tensions than an actor performing the routine. The idea of the multiplicity of the ostensive allows addressing the possibility that also the dynamics within routines might, from time to time, be characterized as being driven by actors’ efforts to deal with what they perceive to be paradoxical tensions. So questions might center around issues how routine patterns emerge despite different actors might have conflicting, opposing understandings of the same routine. Or, how routine participants bridge tensions outsiders (researchers) might observe as being paradoxical, but which are not salient for routine participants.

Second, *persistent tensions* – the type of paradoxes the paradox literature is talking about – might more often be observed *among routines* rather than within routines. Organizations are characterized by multiple routines that co-exist and which need to be managed in an effort of coordination (Hoekzema, 2020; Kremser & Schreyögg, 2016). One could therefore ask the questions how routines which are interdependent but conflicting are handled and coordinated in organizations? How do routine participants in each of the involved routines deal with the problem of aligning their actions with those of the other routine that leads to conflicting outcomes? How is this tension handled and overcome? In addition, paradox research might help in explaining better how organizations deal with paradoxical tensions that emanate from conflicting routine processes that originate outside the organization but need to be taken into account in internal coordination processes. How are these tensions handled at the boundaries between routines, how do they influence the trajectory of the unfolding path? Seen this way paradox research could significantly help in exploring the relationship between routines. Questions around what happens at these boundaries, how are they bridged, how are routine participants coping with conflicts at these boundaries and so on might be fruitfully addressed. Shedding more light on what happens at the boundaries between routines would also be interesting and important for routine dynamics research. Whilst we know how stability and changed are intertwined in the performance of routines, we lack an understanding how such boundary actions take place and how boundaries between routines are constituted and bridged. Insights from paradox theory on how conflicting demands can be handled can certainly enrich these questions. Seen this way, paradoxes may become salient at the boundaries between routines. Future studies could fruitfully explore how paradoxes unfold at the boundaries and how routine participants cope with them. There is certainly interesting scope and potential to combine routine dynamics and paradox studies

which can lead to novel research questions.

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