

**Grasping the dynamics within paradox**  
**- comparing exogenous and endogenous approaches to paradox**  
**using social systems theory**

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**Abstract:** How can we grasp the dynamics of paradox? To address this question we elaborate on a strong process view of social systems theory following a distinction between endogenous and exogenous approaches to paradox. The former tends to treat paradox as a stable entity by locating paradox in the organizational structures and by inducing a managerial approach, based on paradoxical thinking. An endogenous approach like social systems theory situates paradox in the local interactions of present events, and thereby within. This endogenous approach highlights the dynamics within paradox by arguing that paradox emerges and subsides in events like moments of interactions, and that paradox develops and transforms over time. In comparison, an exogenous approach implies paradox to be stable so that it serves to explain the dynamics in organizing.

**Keywords:** paradox, process view, social systems theory

# 1 Introduction: Grasping the dynamics of paradox

Research on paradoxes became increasingly important to explain the dynamic nature of organizations and to explore responses for rationally unsolvable situations (Lewis, 2000; Poole & van de Ven, 1989; Putnam, Fairhurst, & Banghart, 2016; Raisch, Hargrave, & Van de Ven, 2018; Smith & Lewis, 2011). Research on “contradictory yet interrelated elements that exist simultaneously and persist over time” (Smith & Lewis, 2011: 382) identified varying types of paradoxes on different analytical levels (Smith & Lewis, 2011), their dynamic interacting (Jarzabkowski, Lê, & van de Ven, 2013) and numerous ways of responses (e.g. Luescher & Lewis, 2008). The paradox lens assumes that paradoxes are integral to organizations (Lewis, 2000; Putnam, 1986; Quinn & Cameron, 1988; Smith & Lewis, 2011), and surface when actors perceive tensions of plurality, change or resource restrictions and frame them as paradox (Knight & Paroutis, 2017). This explanation is an exogenous one (Hernes & Weik, 2007): it rests on conditions and paradoxical thinking (Westenholz, 1993) that are external to organizing and paradox while arguing for the paradoxical mindset as the micro-foundation of paradox (Miron-Spektor, Ingram, Keller, Smith, & Lewis, 2017).

Scholars recently note that this exogenous approach to paradox risks losing the dynamics within and of paradox (Fairhurst, 2018; Jay, 2013; Pina e Cunha & Putnam, 2017). They detect a tendency to “tame” paradox when identifying general types that dis-embed paradoxes from their specific spatial and temporal context and that treat them as stable entities (Clegg, Vieira da Cunha, & Pina e Cunha, 2002). The paradox lens then overlooks the dynamics within paradox (Pina e Cunha & Putnam, 2017), its transforming and shifting (Knudsen, 2005). Addressing this tendency, we pursue the research question of how to grasp the dynamics within paradox in organization studies, following the calls for a strong process and systemic view (Putnam et al., 2016: 73; Schad, Lewis, Raisch, & Smith, 2016: 35).

Using the distinction of exogenous and endogenous approaches to process (Hernes & Weik, 2007) as well as categories of change theories (Weick & Quinn, 1999), we elaborate an endogenous approach to paradox with a strong process view (see Feldman & Orlikowski, 2011; Zundel, 2012). It situates paradox in the processes of organizing (Jay, 2013) so that the micro-foundation of paradox are the moments of interaction (Putnam, 1986) between actors handling specific issues (Jarzabkowski & Lê, 2017). Paradoxes are thus assumed to be socially constructed in specific moments. In such moments tensions may surface (Jarzabkowski & Lê, 2017), subside (Tuckermann, 2018), or eventually dissolve (Abdallah, Denis, & Langley, 2011). Beyond a specific interaction, paradoxes can move in organizing and transform (Beech, Burns, Caestecker, MacIntosh, & MacLean, 2004), which is why some call to use organizing in order to explain paradox (Jay, 2013), or to elaborate explicitly on the relation between the poles, instead of the tensions which result from their interdependency (Clegg et al., 2002).

More specifically, we use social systems theory (SST) (Luhmann, 2000). This strong process theory (Hernes, 2008) argues that moments of interaction are the elements of organizing (Luhmann, 2005) which are paradoxical events – decision communications (Seidl & Becker, 2006). As organization endure over time (Nassehi, 2005), they actively accomplish their temporal social orders (Czarniawska, 2008; Hernes, 2014; Langley & Tsoukas, 2010; Tsoukas & Chia, 2002) which SST considers an ongoing process of responding to paradox (Andersen, 2003). Attending to the event of interactions in the moment, SST provides the background to explain paradox endogenously (Luhmann, 2000). Its explanation does not refer to individual actors, because these find themselves participating in interactions (Borch, 2011; Zundel, 2012), the dynamics of which depend on the mutually held expectations – the structures (Dionysiou & Tsoukas, 2013) – that are referenced during the interaction (Luhmann, 2000).

## 2 Exogenous and endogenous approaches process

In order to strengthen a dynamic view, we use the distinction of exogenous and endogenous process views (Hernes & Weik, 2007). From an exogenous view “[...] flows such as actions, communication, behavior and so on, are influenced by the external context of the process, [...]” (Hernes & Weick, 2007: 253). In this view, the dynamics of process are explained by aspects that tend to be treated as given or stable. Accordingly, some studies identify paradoxes and their enacted relations to explain organizational restructuring (Jarzabkowski et al., 2013), or use ambidexterity – exploration and exploitation – to explain an otherwise inconsistent decision-making (Smith, 2014) and to identify practices of differentiation and integration (Andriopoulos & Lewis, 2009). These studies illustrate paradox as an explanatory mechanism to understand the dynamics of organizing, and therefore treat paradox as if it were stable and given. This is why the dynamics of and within paradox are outside the scope of this approach.

An endogenous process view questions stability and argues that “[...] the stability of entities [e.g. organization] takes place as part of the process itself, as stable entities are both constituted by process and at the same time are constitutive of process.” (Hernes & Weik, 2007: 253). Such a process view uses the recursive relationship of events and the emerging structures of that very process as its explanatory approach: “[...] the process interacts with itself, with its own past, carried forward as a basis for further processes.” (ibid: 258). For example, the unfolding process of a TMT’s sensemaking both generates dynamically evolving organizational understandings that relates issues the involved actors observed as paradoxical (Jay, 2013). Other research studied moments of interaction. One of them shows how organizational members use humor to discern perceived contradictions associated with specific issues in order to generate responses (Jarzabkowski & Lê, 2017). Another shows, how and why contradictory issues become salient and latent within and because of the dynamics of an interaction (Tuckermann, 2018).

To further elaborate on an endogenous approach, we draw on and adapt the analytic categories of a comprehensive change theory (Weick & Quinn, 1999), because responding to paradox often associates with organizational change (Farjoun, 2017). We adapted these categories as in Table I (left column: the original: right column: adaptation for this paper):

|                    | Categories as used bei Weick & Quinn (1999: 365f.), based on Dunphy (1996) |                                                                                                                                                                                                                                                      | Endogenous and exogenous approach to paradox                                                                        |                        |
|--------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------|
|                    | Category                                                                   | Description                                                                                                                                                                                                                                          | Adaptation for paradox                                                                                              | Label                  |
| Analytic Framework | Metaphor of organization                                                   | Weick & Quinn (1999) depict the understanding of organizing with regards to change.                                                                                                                                                                  | Definition of paradox depicts the understanding of paradoxes in their relation to organizing.                       | Paradox and organizing |
|                    | Analytic framework                                                         | This category depicts when change occurs, the resulting observer's perspective on change, emphasis on a temporal scale, and key properties                                                                                                           | Properties of paradox, when and how they occur                                                                      | Properties of paradox  |
|                    | Ideal organization                                                         | ... describes the future direction that change aims to move towards: "an ideal model of an effectively functioning organization that specifies bot a direction for change and values to be used in assessing the success of the change intervention" | Ideal organization with regards to paradox including organizational capacities.                                     | ideal organization     |
|                    | Intervention theory                                                        | ... describes the understanding of change and the sequence of steps to move through changing an organization                                                                                                                                         | Describes what it takes to respond to paradoxes                                                                     | Responding to paradox  |
|                    | Role of change agent                                                       | ... concerns the role and tasks of the individual actors responsible for the change process                                                                                                                                                          | Depicts who these actors are, their responsibilities and tasks, as well as their capacities to fulfill these tasks. | Involved actors        |

Table I: analytic categories

“Paradox and organizing” concerns the definitions of paradox and their relation to organizing.

“Properties of paradox” includes their characteristics as well as how and when paradoxes occur.

The “ideal organization” highlights the future development of an organization with regards to paradox. “Responding to paradox” elaborates on unfolding paradoxes, whereas the “involved actors” emphasizes who these actors are, their tasks and the required capacities.

While these categories allow for a detailed distinction between exogenous and endogenous approaches, we do not provide a comprehensive literature review (Putnam et al., 2016; Schad et al., 2016). Also, we are aware that many of the analyzed papers do not consistently fit in either of these analytic categories. This boundary condition simultaneously highlights the reported conceptual imprecision within the paradox lens (Lewis & Smith, 2014; Pina e Cunha & Putnam, 2017; Schad et al., 2016). In addition, the following argument is restricted to organizations. It does not include societal phenomena of so-called “wicked problems” scholars argue to address using paradox (Schad & Bansal, 2018).

### **3 An exogenous approach to paradox**

Approaching paradox exogenously tends to treat paradox as stable and salient for two reasons: One is that paradox serves as an explanatory mechanism to explore dynamics of organizing. In addition, this explanation provides the basis for designed actions or programs to unfold paradox deliberately during which paradox is regarded stable and salient.

The following section elaborates on four aspects that substantiate the stability of paradox: First, paradoxes result from creating organizational subsystems, when conditions like change, resource restrictions or plurality position these subsystems in juxtaposition. Paradox are thus integral to the organization as they result from the distinction of creating subsystems. At the same time, paradox is located in this structure of created subsystems that patterns the flow of organizing, thus external to organizing. Likewise, the conditions through which paradox becomes salient are located outside the flow of organizing. Thereby, paradox is explained exogenously. Because paradox is located outside the dynamic organizing in the structures which are considered relatively stable, paradox turns into a relatively stable and structural component of an organization.

Second, focusing on the poles of the paradox, studies elaborate on types of different paradoxes that become increasingly differentiated and are said to be located on different levels – individual, group, and organization. Such differentiation of paradoxes helps to more specifically explain the dynamics of organizing, either by using a single paradox like ambidexterity (e.g. Smith, 2014) or by identifying different inter-related paradoxes to explain the dynamics of a change process (e.g. Jarzabkowski et al., 2013). At the same time, the identification of paradoxes as types implies that they remain stable.

Third, the exogenous approach tends to imply that a paradox requires deliberate responses. Such deliberate responses, or programs, require time, during which the paradox is both

assumed to remain stable and salient, while its latency is a condition to be overcome as actors detect or construct the particular paradox as an explanation of the tensions they perceived. Therefore, the implication of paradox requiring a deliberate response also implies that the paradox remains stable and salient during the response time. Also, and if successful, the responses reduce the perceived tensions by changing the organization, but not the paradox (Pina e Cunha & Putnam, 2017).

Fourth, the capable actors are central in the exogenous approach. Their paradoxical mindset allows them to overcome the latency of a paradox, make it salient also for others and to generate deliberate responses (Miron-Spektor et al., 2017). Through the focus on the individual capacities, these actors are implicitly positioned as if outside the organizing flow. Their mindset is located within the actors and not within the organizing they observe, the externalization of which allows them responses that are geared towards the organizing flow. In this respect, the focus on a paradoxical mindset or paradoxical thinking provides an exogenous explanation of paradox. The following figure provides a summary of the exogenous approach, elaborated below:

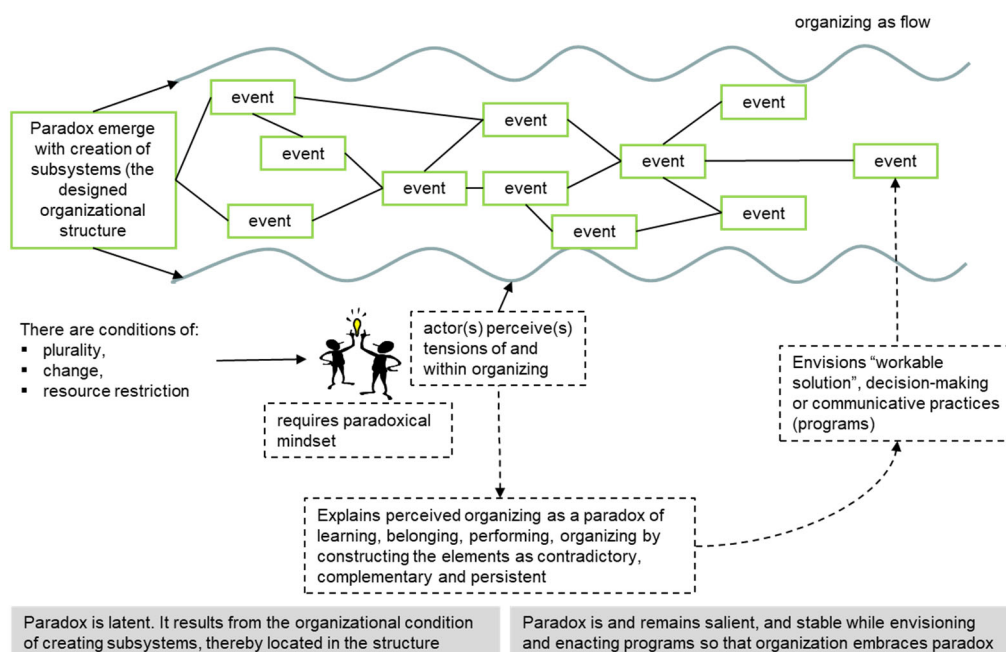


Figure 1: exogenous approach to explain organizational dynamics

### **3.1 Paradox and organizing**

Viewed exogenously, paradoxes emerge when organizations draw distinctions (Ford & Backoff, 1988), that create different subsystems (e.g., departments, divisions, or units). In order to achieve overall success, the subsystems are relatively independent and interdependent (Lewis & Smith, 2014). They seem coherently rational on their own, yet ‘absurd and irrational when appearing simultaneously’ (Lewis, 2000: 760). Different yet adjacent subsystems represent the organizing paradox (Ford & Backoff, 1988; Jarzabkowski et al., 2013; Lawrence & Lorsch, 1967). Paradox thus result from the decisions of creating subsystems which is why they are argued to be integral to organizations (Smith & Lewis, 2011). Accordingly, paradoxes are defined as “contradictory yet interrelated elements that exist simultaneously and persist over time” (Smith & Lewis, 2011: 382).

### **3.2 Organizing as flows - ideal organization embraces paradox**

In this view, organizations are dynamic, ambiguous and complex (Lewis & Smith, 2014: 6). The paradox lens thus departs from theoretical assumptions that highlight coherence over incoherence (Quinn & Cameron, 1988), linearity over interdependence (Ford & Backoff, 1988), and single over plural rationality in theorizing organizations (Lewis & Kelemen, 2002): “... paradoxes are at odds with the prevalent view of organizations as coherent entities.” (Jarzabkowski et al., 2013: 246).

Organizations are considered as flows of actions, and communications, consisting of “processes and practices” (Jarzabkowski et al., 2013: 246), in which “different organizational parts and tasks [create tensions] and the need for the organization to cohere as a collective system” (ibid: 247).



With regards to paradox, the ideal organization deliberately embraces salient opposites and continuously taps on the creative potential of paradox (Ford & Backoff, 1988). An organization strives for a “dynamic equilibrium” of sustainably balancing different types of paradoxes (Smith & Lewis, 2011). To this end, its senior leaders master the organization to follow their insights and responses to paradox that balance the different poles (Smith, 2014) and on the different levels (Jarzabkowski et al., 2013)

### **3.3 Stable paradoxes and individuals explain organizing**

Authors use paradoxes, their inter-relation and actors responses to explain the dynamic unfolding events of a studied restricting process: “it is not just the type of paradox but also the way in which actors respond to paradox that shape its impact on restructuring” (Jarzabkowski et al., 2013, 248). Paradox and responses are the explanatory mechanism for the organizational dynamics, and “the organizational paradox shapes the structural conditions through which actors experience paradoxes of belonging and performing.” (Jarzabkowski et al., 2013: 256). As the quote illustrates, the paradoxes are considered as a structural – and thereby relatively stable – component of the organization that patterns the dynamic flow of events (organizing) (Hernes & Weik, 2007).

In a similar way, the “dynamic equilibrium model” displays paradoxes as a stable set of different types. Ontologically the model provides the distinction of “paradoxical tensions either as an inherent feature of a system or as social constructions that emerge from actors’ cognition and rhetoric.” (Smith & Lewis, 2011: 385). The former implies that paradoxes are an objective and given phenomenon of an organization, and the latter situates its recognition in the individual capacity of organizational members, thereby explaining paradox exogenously and narrowing its foundation on the individual actor and his or her paradoxical mindset (Miron-Spektor et al., 2017).

Paradox emerges from the distinction of creating subsystems, their boundaries as well as that of an organization to its environment that “also binds and juxtaposes opposing elements and amplifies their paradoxical nature,...” (ibid: 386). Therefore, the dynamic equilibrium model argues that “opposing yet interrelated dualities [paradoxes] are embedded in the process of organizing and are brought into juxtaposition via environmental conditions” (ibid: 388). As such, the model illustrates an exogenous approach to paradox because it explains paradox in terms of external conditions and as a result of the initial leaders’ choices by which an organization’s setting with different subsystems came about: “Organizations emerge as leaders respond to foundational questions, constructing boundaries that foster distinctions and dichotomies” (ibid.).

### **3.4 Properties of paradox: poles, salience, types, and levels**

The understanding of paradox as stable follows from the definition highlighting the poles - the “contradictory yet interrelated elements” (Smith & Lewis, 2011: 382). This focus triggers research on different types of paradox and their placement in particular levels. Differentiating types of paradox and their locations substantiates them as stable. In addition, paradoxes also appear to remain salient once detected, which overcomes their initial latency.

The definition accentuates the “elements”, or poles of a paradox. It invites to further differentiate paradoxes by creating types, like the paradoxes of organizing, performing, belonging or learning (Lewis, 2000), which experienced a further differentiation through types that are said to occur at the intersections between the initial four types (Smith & Lewis, 2011).

These types of paradoxes are said to occur at different levels, of individuals, groups or the organization via contradictory messages (individual), self-reinforcing cycles (group), and system contradiction (organization) (Putnam, 1986). More recently, this distinction was

explicitly related to the types of paradoxes (Jarzabkowski et al., 2013; Smith & Lewis, 2011), i.e. when individuals struggle with competing demands (paradox of performing), with group identities (paradox of belonging), or with the boundaries between departments (paradox of organizing). The paradox of learning appears across these levels because the poles of “old” and “new” may associate with either level (Jarzabkowski et al., 2013).

Types and levels help to detect paradoxes, and studies of an exogenous approach studies are often concerned with salient paradoxes, while implying their latency as an initial condition: ‘contradictory tensions [...] [lie] dormant’ (Jarzabkowski & Lê, 2017: 5) or remain latent (Lewis & Smith, 2014; Smith, 2014; Smith & Lewis, 2011) as in models of paradoxical inquiry (Luescher & Lewis, 2008), sensemaking (Jay, 2013: 147), dynamic equilibrium (Smith & Lewis, 2011: 389), or mutually constituting paradoxes (Jarzabkowski et al., 2013: 255).

Paradoxes become salient through individual construction. Organizational actors perceive tensions, under the conditions of plurality, change, and resource restrictions (Smith & Lewis, 2011). These conditions are said to trigger organizational members to question commonalities and highlight differences regarding the organization, its chosen distinction into subsystems or its boundaries (Lewis & Smith, 2014: 7), frame the tensions as paradox (Bednarek, Paroutis, & Sillince, 2017) based on a paradoxical mindset (Miron-Spektor et al., 2017) and inform others (Knight & Paroutis, 2017).

### **3.5 Responding to paradox with programs**

Responding to paradox is said to be managerial. The detection of paradox triggers the need of a deliberate response in order to reduce the perceived tensions (Farjoun, 2017). Deliberate responses are similar to programs (Hernes & Weik, 2007: 256) which provide capable actors (senior or middle managers) with the tools to address and handle perceived opposites.

Numerous studies have identified a wide variety of possible responses (Jarzabkowski et al., 2013; Lewis, 2000; Poole & van de Ven, 1989; Schad et al., 2016; Smith & Lewis, 2011). These responses include, for example, ignoring the paradox, choosing either side over the other, confronting the tensions and learning to live with the perceived tensions, or transcending the paradox by reframing one's own understanding, for instance. These examples are so-called substantive programs (Hernes & Weik, 2007) that contain a specific content of how to unfold a paradox. Other programs are procedural ones, through which actors envision substantive responses, for example paradoxical inquiry (Luescher & Lewis, 2008).

Such standardization of responses provide a means – similar to creating types of paradox their locating levels - to decontextualize paradox and their response so that the responses become available for use in other settings (Hernes & Weik, 2007). Thereby, creating response types as well as those of paradoxes, provides inspirations for others to use while at the same time feeding into what Farjoun (2017) calls a managerial bias, and also into extracting paradox and its responses from the specific local setting (Pina e Cunha & Putnam, 2017).

In addition, authors note a bias towards certain responses over others (Abdallah et al., 2011; Fairhurst, 2018; Jarzabkowski & Lê, 2017; Pina e Cunha & Putnam, 2017), namely to favor programs that promote balancing the poles simultaneously (e.g. as in Andriopolous & Lewis, 2009) or through a continued oscillation between the poles (e.g. as in Smith, 2014).

However, and to serve as a program, the responses contain the pragmatic assumption that the organizing (and the paradox) remain stable during the time of developing and applying that program (Fuchs, 1999). It is particularly in the time of envisioning and enacting a program, the organization needs to be considered frozen (Weick & Quinn, 1999) because otherwise the response as a program might not fit anymore with the targeted tension. Such freezing of the organization also implies that the respective actors interfere with the organization as if positioned outside the organization (Fuchs, 1999). The very notion of program thereby

downplays that a program is designed and enacted within and as part of the organizing it aims to alter (Langley & Denis, 2006).

### **3.6 Role of leaders in detecting and responding to paradox**

In an exogenous approach to paradox, individual actors - senior leader (Smith, 2014) or middle managers (Luescher & Lewis, 2008) - are central to detecting and responding to paradox. “Organizations emerge as leaders respond to foundational questions, constructing boundaries that foster distinctions and dichotomies” (Smith & Lewis, 2011: 388). These actors either detect paradox or construct them through their cognition and rhetoric (ibid: 385).

Therefore, recent research focuses on a paradoxical mindset (Miron-Spektor et al., 2017) and on paradoxical thinking i.e., the ‘cognitive abilities to recognize opposites, question and reflect on them, and shift mental sets’ (Putnam et al., 2016: 60). These are the micro-foundation to paradox, because paradoxes are said to be “social constructions that emerge from actors’ cognition and rhetoric.” (Smith & Lewis, 2011: 385). Actors are said to perceive plurality, change or resource restrictions, highlight differences (Lewis & Smith, 2014: 7) and apply paradoxical thinking and language in order to frame tensions as paradox (Bednarek et al., 2017). Fostering paradox salience requires learning paradoxical thinking (Westenholz, 1993), developing a paradoxical mindset (Miron-Spektor et al., 2017), enhancing such cognition in teams (Smith & Tushman, 2005), and diffusing salient paradoxes (Knight & Paroutis, 2017; Smith, 2014).

With this focus on the individual capacity, paradox is explained exogenously. Handling paradoxes in terms of deliberate programs of individual actors also implies to position these actors outside paradox (and organizing). Assuming a position external to the organization is a pragmatic assumption (Fuchs, 1999) of a managerial approach (Farjoun, 2017) that helps to

interrupt the mutual constitutive relationship between the actions and communications of these actors and the organization, as well as the embeddedness of their actions and communications in organizing. In this respect, Smith (2014) for example argues that leaders shape the organization through their actions and decision-making, but without elaborating on the opposite direction, that organizations also shape the leaders' actions and communications.

### **3.7 Summary: an exogenous approach for stable paradoxes**

In summary, approaching paradox exogenously, tends to leave aside their own dynamic because paradox is used as an explanation for dynamics of organizing. The stability of paradox is substantiated by locating it in the initial distinction of created subsystems, the contradictory elements of which come to the fore under conditions that are external to the organizing process. This detection or construction of paradox is driven by individual actors who perceive tensions and have a paradoxical mindset, thereby substantiating an exogenous approach. At the same time, the cognitive focus of the micro-foundation implies to position the individuals outside the organizing they observe thus allowing them to treat a paradox as if “out there” (Knudsen, 2005: 111). Resulting from this exogenous explanation is that paradoxes tend to turn into “stable entities with certain attributes” (Hernes & Weik, 2007: 256) which occur in different types and on different levels. As entities, paradoxes can be detected and coped with while appearing remarkably stable (Pina e Cunha & Putnam, 2017) during the time of detecting paradox, as well as of envisioning and enacting responses to handle the perceived tensions.

## **4 An endogenous approach to paradox**

An endogenous approach assumes that paradoxes are socially constructed (Putnam et al., 2016) and the ‘[...] product of communicative relationship [...]’ (Putnam, 1986: 154). Paradox is (re-)produced locally in specific moments of interaction (Clegg et al., 2002; Jarzabkowski & Lê,

2017). One example is a TMT's collective sense-making to surface contradictory tensions of environmental cues and to frame them as paradox (Jay, 2013). More specifically, interaction patterns (Luescher et al., 2006: 498) like paradoxical inquiry (Luescher & Lewis, 2008) or humor (Jarzabkowski & Lê, 2017) have been found to promote the social construction of paradox during interactions on challenging issues.

## **4.1 Paradox and organizing**

Similar to an exogenous approach, paradoxes are also integral to organizing within an endogenous approach. But integral implies that organizations and organizing are paradoxical: paradoxes emerge when “the conditions for the possibility of an operation implicate the conditions for its impossibility” (Luhmann & Fuchs, 1989: 54; Ortmann, 2004: 21). The “operation” is at the core of this definition, and points to an understanding that organizations consist of moments or events: “they [organizations] exist only at the moment an operation is actually taking place” (Luhmann, 2005: 87). Thereby, an endogenous approach locates paradox within organizing (Jay, 2013), and specifically in moments of interaction (Putnam, 1986). Paradox therefore does not emerge from organizing as something separate. Rather, organizing is understood as a paradoxical process, because the events of which it consists are paradoxical. What an organization (ideal or not) achieves is to avoid blockage by paradox (Luhmann, 2000) or paralysis (Czarniawska, 2008), but endures over time.

## **4.2 Organizing as recursive reproduction of events**

An endogenous approach considers organizing as a recursive reproduction of events and structures that mutually constitute each other (Hernes & Weik, 2007). These events are the actual operations, so that organizations come into being in these moments. At the same time,

they reproduce structures through which an organizations endures over time (Nassehi, 2005).

The following figure illustrates the endogenous approach to organizing:

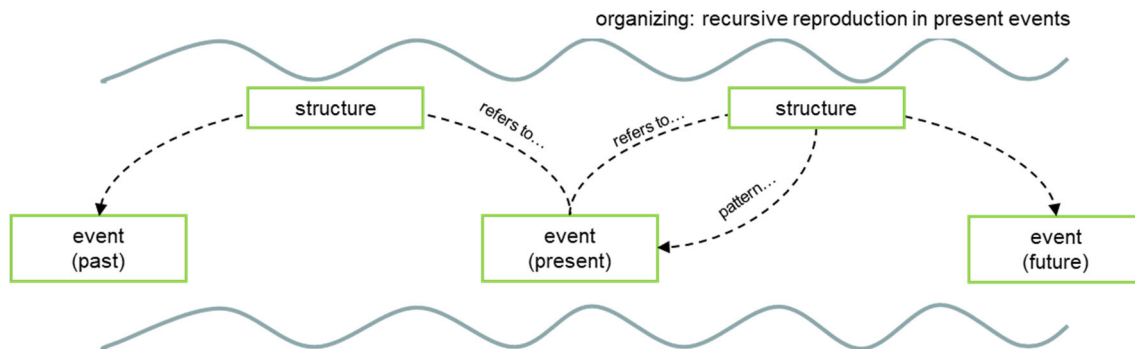


Figure 2: organizing as recursive reproduction in present events

The present event is the central element of organizing. For SST, such events are decisions communications which are themselves paradoxical (Luhmann, 2005). As decision, they contain both a chosen alternative, like a proposed distinction to create subsystems (see exogenous approach above), and other possible alternatives. Thus, decisions both contain a fixed choice and their own contingency (Nassehi, 2005). Otherwise they would not count as a decision. The operation of deciding implies the conditions of its possibility (a fixation on one alternative) and its impossibility (the contingency that other alternatives are possible). Therefore, SST considers the event that constitutes organizing a paradoxical one.

While consisting of events, organizations endure over time. An endogenous approach like SST locates this endurance in the structures (Hernes & Weik, 2007). Structures emerge from and within events when and as a means of connecting events. Connecting takes place within the present event by referring to previous and upcoming events. Connecting occurs in moments of interaction when actors draw on factual, social or temporal references in the present event (Andersen, 2003). Factual references point to ‘the nature of the case,’ e.g., environmental affordances or the market situation. Social references are about internal or external stakeholder demands, or communications that assign the issue in question to a certain decision-maker, like a person, or a department. Temporal references might bring in past events or refer to future



ones, e.g. by tightening or loosening deadlines. Regarding the issue in question of the present event, these references frame that issue as a decision, proposing different alternatives (factual), designating it to decision-makers present or absent in the event (social), or moving the issue into the future (temporal).

Accepted references serve as structures within the present event (Seidl & Becker, 2006). Structures are mutually held expectations (Dionysiou & Tsoukas, 2013) as to what is typically considered an issue, how it is framed, as well as who, when and how works through the issue (Luhmann, 2000). Such decision-premises pattern which factual, social or temporal references are acceptable so that the participating members know who typically decides on what, when and how. These structures enable the organization to endure beyond the present moment. Drawing on and referring to (previous or future) events reproduces the structures, which is why events and structures mutually constitute each other in the present event.

### **4.3 Properties of paradox: on types, levels, salience and latency**

With the focus on the event as a paradoxical operation of decision-making, an endogenous approach views types of paradoxes or their location onto levels not as given properties of paradox, but as communicative structures – mutually held expectations for example of framing perceived cues as a certain paradox – when socially constructing paradox (Andersen, 2003). Factual references may help to describe an issue as an expression of a paradox of organizing, belonging, performing, or learning, for example. Social references come into use to locate the issue and its ascribed paradox on levels of individuals, group or the organization. Like any other reference, these ascriptions can stabilize if accepted as mutual expectations, which is why socially constructed paradox appears as a stable entities that serves as a structure. As an example, the sensemaking process of evolving the organizational understanding in the study Jay (2013), repeatedly referred to the contradictory environmental cues of different stakeholder

demands and actions as a particular “service paradox”. With such a label, the organizational members accomplished to stabilize their understanding regarding the paradox, which in turn fostered to experiment with different organizational understandings to relate the contradictory cues.

Likewise, an endogenous approach does not consider the latency of paradox as an initial condition or the salience of paradox as solely resulting from individual thinking, under exogenous conditions. Rather, an endogenous approach directs the attention to explain the latency and salience of paradox as part of the communicative interaction, i.e. as integral to the occurring event. One recent study showed how humor provides a means to socially construct paradox in the moment, when actors observe specific issues in their daily work which associate with perceived tensions (Jarzabkowski & Lê, 2017). In our own research (Tuckermann, 2018) we could also show empirically, how an initially observed contradictory issues became latent throughout the same interaction. This process of visibilizing and invisibilizing made paradox salient and latent by using references through which the issue appeared undecidable inviting the participants to shift it outside their interaction into an unspecified future. Thus, an endogenous approach views latency and salience to result from engaging with paradox. These properties emerge from the interaction on contradictory tensions (Clegg et al., 2002: 488), for example, when managers promote unity within difference ‘so that contradictions or paradoxes [...] appear to be dissolved or overcome’ (Abdallah et al., 2011: 335).

#### **4.4 Responding to paradox means transforming paradox**

An endogenous approach like SST considers organizing as paradoxical. It thus opens up two paths of response: First, it acknowledges that actors can perceive tensions that can be socially constructed as paradoxes. Such a construction takes place in a specific interaction through the

use of references (Andersen, 2003), like the known conditions of plurality, change or resource restrictions (factual references), or the differing demands of others in the organization (social references). Depending on which references are acceptable – as mutually expected structures – the actors can construct paradoxes of organizing (tensions between subsystems and the organization), performing (differing demands of these subsystems), belonging (as membership between subsystems or the organization), or learning (enacted versus proposes ways of working). Such a construction in the interaction transforms the paradox of the event into one associated with organizational structures. Despite the similarities to an exogenous approach, an endogenous one does not assume that paradox is stable and remains salient. Rather, it assumes that paradox is a dynamic observation the stabilization of which results from the specific interaction of the present event. Therefore, constructing a stable paradox as in Jay's (2013) study, appears as an accomplishment to be explored, and not an (implicit) assumption.

Second, an endogenous approach opens up the possibility of exploring paradox without its explicit social construction by organizational members, or a deliberate program as a response. For a theory like SST organizing is an ongoing process of responding to paradox, or a so-called continued deparadoxification (Knudsen, 2005). Deparadoxification means that an interaction on an issue might trigger the construction of paradox by organizational members. Such an interaction can also trigger an immediate response without such a deliberate construction. Irrespective of the actual observation of contradictory tensions responses can supplement, replace or overlay the initially observed tensions with alternatives through the use of references (Andersen, 2003). These alternatives transform an initial contradictory tension, while triggering other issues that might surface with another paradox (Beech et al., 2004; Knudsen, 2005). Thus, SST argues that “deparadoxification happens through the development of paradoxes” (Andersen, 2003: 249). Thereby, an endogenous view argues that the dynamic of paradox, is in itself a way of responding to paradox. In our own research (Tuckermann, 2017),

for example, we traced issues over time during a change process in a hospital setting. At the initial stage, these issues could be ascribed to the paradox of learning, when aiming to introducing new nursing procedures which led to tensions with the enacted ones. This dynamic brought issues of leading the nursing unit to the attention of the actors, which we ascribed to the paradox of performing because of competing goals. While addressing these issues of leading, issues of collaborating with other departments took centers that we ascribed to the paradox of organizing because the issues concerned tensions involved when relating subsystems, or parts and whole. The studied unit thus moved forward over time by handling issues which brought forth further issues, a process we observed as transforming paradox.

Because of these two paths of responding to paradox – deliberate or undeliberate – an endogenous view does not argue for a preference on specific responses. The following table illustrates this take on responses (Ortmann, 2004: 25):

| <b>Responses</b> | <b>Label</b>     | <b>Description</b>                                                                                                             |
|------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------|
|                  | temporalization  | shifting the paradox into the future, deciding to postpone the respective issues                                               |
|                  | spatialization   | shifting the paradox or the issue to another subsystem, department, unit, location of the organization                         |
|                  | social shifting  | shifting the paradox to a decision-maker, possible through differentiation, and thereby out of a present event to other events |
|                  | invisibilization | diluting the issue without designating a social adress (like a decision-maker), or a time when to be handleled                 |
|                  | relativization   | changing the perspective so that the paradox does not appear paradoxical in that new perspective                               |
|                  | objectifying     | framing the issue as a matter of fact, sometimes substantiates with "neutral" experts                                          |
|                  | hypocrisy        | leaving the issue as it is without further exploring ist potential expression of a paradox                                     |
|                  | oscillating      | shifting back and forth between promoting either side of a paradox                                                             |
|                  | experimenting    | continuously experimenting with responses, and reflecting on their impact on the tensions of a                                 |

Table II: responses to paradox - endogenous approach (from Ortmann, 2004: 25)

All what counts in these responses is that they avoid blocking the organization. Otherwise, they do not favor in principle any response over another.

## **4.5 Actors are concerned with issues and find themselves in organizing**

In an endogenous perspective, the focus regarding the involved actors does not concern their cognitive-emotional mindset (Miron-Spektor et al., 2017) or their individual capacity of paradoxical thinking (Westenholz, 1993). Actors are rather considered to be concerned with particular issues and their handling in the moment (Jarzabkowski & Lê, 2017).

Because an approach like SST aims to explain paradox and responses by drawing on organizing, it distinguishes individuals, their thoughts, actions and communications on the one hand, and their social interactions on the other (Borch, 2011: 46). For SST, the former provide a relevant environment for the latter: thus, individuals contribute utterances (as actions or communications) and find themselves participating in interactions. Whether and how individual utterances are taken up in interaction depends on how they refer to previous utterances or evoke future ones during interaction (Nassehi, 2005; Hernes & Weik, 2007). By highlighting this recursive reproduction of process (Hernes & Bakken, 2003), SST explains an unfolding interaction endogenously through references, rather than by turning to the individual's mindset (Miron-Spektor et al., 2017) as a source of explanation.

## **4.6 Summary: endogenous approach with social systems theory**

In summary, an endogenous approach aims to explain the dynamics within paradox. It locates the paradox in the present event, which is a decision communication, and which constitutes organizing as a recursive reproduction of events and structure. Thus, organizing is observed as a paradox and a continued response to paradox (or deparadoxification) so that the organization continues operating.

As a social construction, the micro-foundation of paradox lies in the moments of interaction, in which individuals participate, and whose contributions might or might not be taken up during the interaction, depending on whether these contributions are acceptable during that interaction. These moments of interaction contain three systematic points for the dynamic of paradox, which means developing or transforming paradox: First, as an issue (of a previous event) becomes a topic of an interaction, its framing in a particular way (for example as paradoxical) results from that local interaction between the participants and the used references. Thus, framing the issue provides a first point of transforming paradox. A second transformation can occur with the response to the issue that is also a product of the local interaction with respect to future events the response might or might not evoke. In addition, and third, the very focus on the issue at hand, covers the contingency of the interaction itself, the dynamics of which are said to often escape the monitoring of the involved actors (Putnam, 1986). Thus, an endogenous approach explores the dynamic of paradox as a way of developing an initially perceived contradiction by framing the associated issue in a particular way which in turn gives rise to a particular, local response. In this view, achieving a stabilized framing of an issue as paradoxical is an accomplishment of the interactions, which – if taken up in subsequent events – turns into a structure, i.e. a mutually held expectation. Otherwise, a socially constructed paradox becomes latent again, either during the present interaction or in future events. Therefore, properties of paradox – latency, salience, types or levels are seen as resulting from the local interaction of socially constructing paradox, rather than entitative properties. In this respect, an endogenous approach of social systems theory highlights that paradoxes are “...a means of generating observations, rather than a description of reality “out there”” (Knudsen, 2005: 111). The following figure illustrates this summary of an endogenous view on paradox:

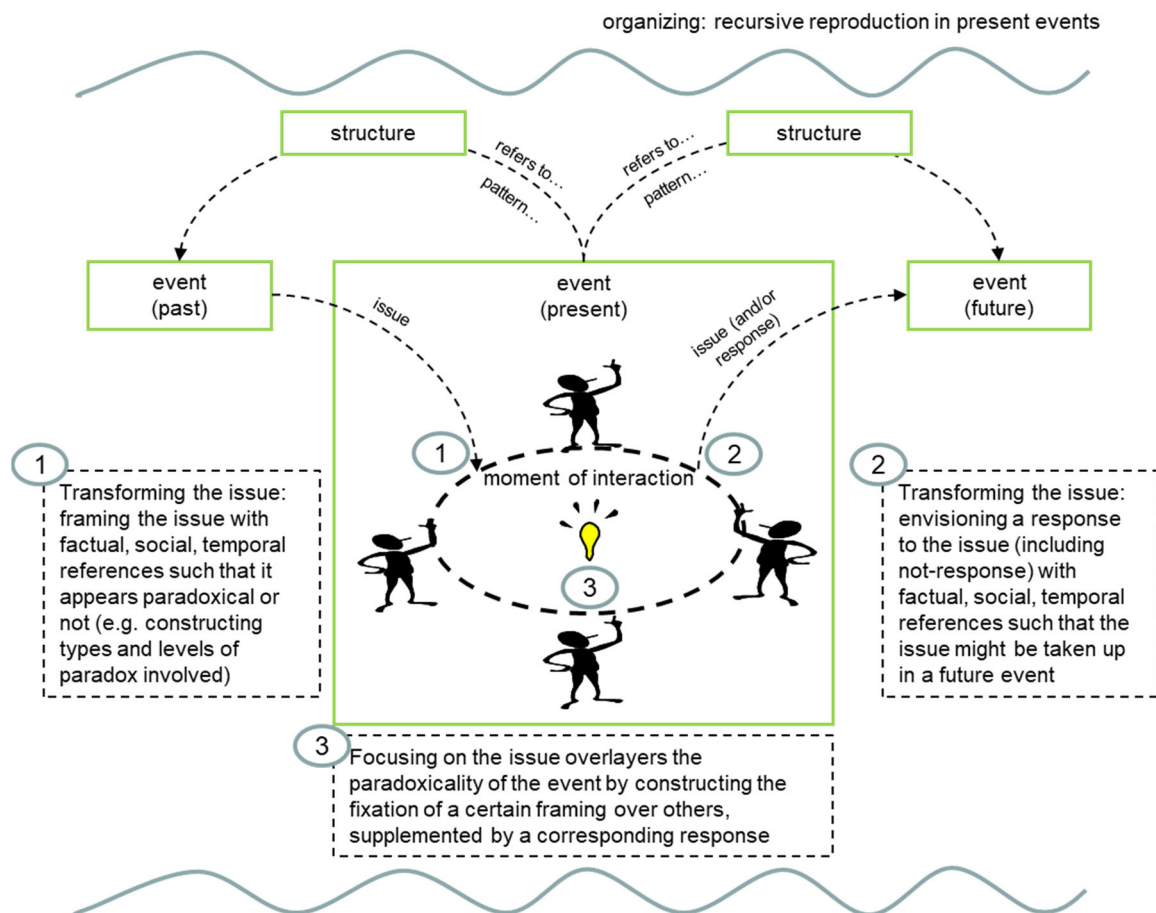


Figure 3: endogenous view on paradox

## 5 Comparing exogenous and endogenous approaches

Comparing the exogenous and the endogenous approach reveals their differences (table 3):

| Analytic Framework | Category               | Exogenous approach                                                                                                                                                                                                                   | Endogenous approach                                                                                                                                                                                                                                                            |
|--------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | Paradox and organizing | organizing is a flow that constitutes a complex, dynamic system<br>paradox emerges from the distinction that creates subsystems, and thereby remains stable<br>paradox consists of contradictory, complementary and persisting poles | organizing is a recursive reproduction of events and structures that mutually constitute each other<br>paradoxes emerge in the event of any (decision) communication<br>paradox is an operation (a decision communication) that implies the conditions of ist (im-)possibility |
|                    | Properties of paradox  | paradoxes can be differentiated in types and located on levels and thereby remains stable<br>salience emerges from individual construction, while latency is an initial condition, and paradox remains visible once detected         | paradoxes occur in events of decision communication<br>salience and latency of paradox are part of responding to paradox in events of decision communication                                                                                                                   |
|                    | ideal organization     | organization taps on the creative potential of paradox and works towards a dynamic equilibrium                                                                                                                                       | organizations do not get blocked or paralyzed by paradox                                                                                                                                                                                                                       |
|                    | Responding to paradox  | responses are explicit as programs that foster both-and approaches or transcendence of paradox as interventions as if from the outside of the organizing process                                                                     | organizing is a continuous process of responding to paradox (deparadoxification)<br>explicit programs foster reflection                                                                                                                                                        |
|                    | Involved actors        | senior leaders with a paradoxical mindset are essential to detect and respond to paradoxes to move the organization to continuously tap on the creative potential of paradox; their position is quasi-outside the organizations      | organizational actors participate and find themselves in the organizing                                                                                                                                                                                                        |

Table 3: overview result section

An exogenous approach uses paradox to explain organizational dynamics. Organizing is a flow of unfolding events, communications or actions that is patterned by certain conditions, like paradox. An endogenous approach aims to explain paradox, and assumes that organizing is paradoxical, because organizations occur in the moment but endure over time. Therefore, it turns to the interaction in specific events to explain the construction of paradox.

Thus, although both views share that paradoxes are integral to organizing, they follow a different approach of what “integral” means. An exogenous approach argues that paradoxes results from the distinction that creates subsystems which become juxtaposed by conditions exogenous to that distinction. In comparison, an endogenous approach situates paradox not in the distinction as a result, but in the operation of drawing that distinction. This operation is a decision communication, which is a paradoxical event that contains a fixation (like a proposed distinction) as well as its own contingency (other possible but unchosen distinctions).

Therefore, exogenous and endogenous approaches relate organizing and paradox in different ways. The latter regards organizing as a continuous responding to paradox, or deparadoxification, because organizing occurs in (paradoxical) events of decision communications. The former extracts paradox from the organizing and locates paradox in the structures of the organization in order to explain organizing as a dynamic flow. As an explanatory mechanism, paradox is taken as stable.

As a consequence of these differences, each approach characterizes paradox differently. On the one hand, these characteristics regard types of paradoxes and analytic levels. An exogenous approach enables to differentiate types of paradoxes by focusing on the contradictory poles and locates these paradoxes on analytic levels regarding individuals, groups or organizations. In this view, paradoxes can be extracted from the organizing. Responses are generated from and oriented to a paradox, while aiming to change organizing. Thus, paradox remains stable and visible. From an endogenous view, paradox is the operation of organizing itself, like decision



communications. Here, types and levels are observations by actors – like researchers or practitioners - within specific events that concerns paradoxical issues. Therefore types and levels are not regarded as characteristics of paradox, but as constructions used to respond to paradox, and a matter of empirical research in specific settings.

On the other hand, the characteristics concerns the latency or salience of paradox. From an exogenous perspective, latency is an initial condition, and a paradox appears to remain salient once detected. An exogenous approach explains the salience by conditions – plurality, change, resource restrictions – and through paradoxical thinking that are exogenous to the observed organizing. Viewed endogenously, latency and salience of paradox are not conditions. Paradoxes come to attention by questioning structures in a certain event but may also subside from attention as actors engage with specific issues in the same interaction. An explanation of latency and salience draws on the interaction within the events, thereby endogenously explaining both latency and salience as part of organizing.

Furthermore, exogenous and endogenous approaches contain different understanding of responding to paradox. An exogenous approach emphasizes so-called “managerial responses”, deliberate substantive or procedural programs. These programs aim to relieve the perceived tensions by changing the process of organizing, but leave an identified type of paradox untouched. In comparison, an endogenous approach regards organizing as a continuous response to paradox. In the moment of decision-making, actors handle specific issues by using factual, social or temporal references through which they transform the paradox of decision-making in interaction and in that moment. The paradox might then transform into a certain type of paradox and be associated to a particular analytic level, followed by subsequent moments that draw on the previous moment as if given.

These differences of responding to paradox also concern the actors. From an exogenous approach, actors are positioned as if outside the organizing process to which they apply their

envisioned responses. It thus regards the individual actor with his or her paradoxical mindset as the micro-foundation to paradox. In comparison, an endogenous approach argues that the local interactions (the present event) is the micro-foundation of paradox. Here, actors find themselves participating in events of organizing. Rather, whether an actor's communications or actions are taken forward is explained by whether and how other communications and thoughts refer to them. In this way the explanation remains endogenous to organizing.

## **6 Concluding remarks on future research avenues**

This paper elaborated on an endogenous approach to studying organizational paradox. Its main aim is to emphasize the dynamics within and of paradox itself. Using social systems theory, we elaborated a theoretical alternative to the prevalent (often exogenous) view. Drawing on the comparison between the two gives rise to future research using an endogenous approach:

First, and regarding the current concern with the micro-foundation of paradox, an endogenous view could contribute studies that attend to specific interactions in order to discern the social construction of paradox and respective responses. Despite recent works (Jarzabkowski & Lê, 2017; Tuckermann, 2018), we still know little on the situative dynamics, for example in “daily routines in which contradictions unfold” (Pinha & Putnam, 2018: 7). In addition, such a focus could relate these situative dynamic with the insights of paradoxical mindsets.

Second, and transcending single events of socially constructing paradox and their responses, an endogenous approach suggests to empirically explore the transformation of paradox over time. Besides an early study by Beech et al., (2004), there are hardly any works that explain how and why the observation of paradox shifts, for example by moving the actors' attention from one type of paradox to another, as well as how these shifts contribute to responding to paradox.

Third, and vice versa, we suggest to study the observed stability and salience of paradoxes as an empirical accomplishment (see Jay, 2013). If stabilized as a structures, organizations can use the observed paradox to tap on the creative potential paradox contains when viewed as a means of observing (Ford & Backoff, 1988; Knudsen, 2005).

Fourth, there is still little work that advances a relational approach to paradox (Clegg et al., 2002) more comprehensively. While studies often point out the tensions we often miss a conceptual description, like that of improvisation (ibid.), to also explain the enacted complementarity between the poles of a paradox. An endogenous approach, like that of SST placing “operation” at the center might provide a starting point towards this direction.

Fifth, and applying to both approaches, we need more conceptual clarifications within the paradox lens. In our own elaboration of an endogenous approach, we noted the difficulties of distinguishing for example the theoretical position of organizing as paradoxical from the empirical exploration when issues become ascribed to particular paradoxes. Another still unclear topic is that of whether the actors are part of the process (Zundel, 2012), or relevant environments that somehow participate (Borch, 2011).

These research avenues open up future possibilities for the paradox lens. As a lens, paradox generates observations (Knudsen, 2005) which are always dependent on the observer (Maturana & Varela, 1980). Thus, it is not only how we think of paradox that is the problem but on what we select to observe – as researchers or practitioners – which recursively infuses out thinking.

## 7 References

- Abdallah, C., Denis, J.-L., & Langley, A. 2011. Having your cake and eating it too. Discourses of transcendence in organizational change dynamics. *Journal of Organizational Change Management*, 24(3): 333-348.
- Andersen, N. 2003. The undecidability of decision. In T. Bakken, & T. Hernes (Eds.), *Autopoietic Organization Theory*, 1 ed.: 235-258. Copenhagen: Copenhagen Business School Press.
- Andriopoulos, C., & Lewis, M. W. 2009. Exploitation-exploration tensions and organizational ambidexterity: managing paradoxes of innovation. *Organization Science*, 20(July-August): 696-717.
- Bednarek, R., Paroutis, S., & Sillince, J. 2017. Transcendence through Rhetorical Practices: Responding to Paradox in the Science Sector. *Organization Studies*, 38(1): 77-101.
- Beech, N., Burns, H., Caestecker, L. d., MacIntosh, R., & MacLean, D. 2004. Paradox as invitation to act in problematic change situations. *Human Relations*, 57(10): 1313-1332.
- Borch, C. 2011. *Niklas Luhmann*. London: Routledge.
- Clegg, S., Vieira da Cunha, J., & Pina e Cunha, M. 2002. Management paradoxes: A relational view. *Human Relations*, 55(5): 483-505.
- Czarniawska, B. 2008. *A theory of organizing* (1 ed.). Cheltenham: Edward Elgar.
- Dionysiou, D. D., & Tsoukas, H. 2013. Understanding the (re)creation of routines from within: a symbolic interactionist perspective. *Academy of Management Review*, 38(2): 181-205.
- Fairhurst, G. T. 2018. Reflections: Return Paradox to the Wild? Paradox Interventions and Their Implications. *Journal of Change Management*, DOI: 10.1080/14697017.2018.1552505: 1-17.
- Farjoun, M. 2017. Contradictions, Dialectics, and Paradoxes. In A. Langley, & H. Tsoukas (Eds.), *The Sage Handbook of Process Organization Studies*, 1 ed.: 87-109. London: Sage.
- Feldman, S. M., & Orlikowski, W. J. 2011. Theorizing practice and practicing theory. *organization Science*, 22(5): 1240-1253.
- Ford, J., & Backoff, R. W. 1988. Organizational Change in and out of Dualities and Paradox. In J. B. Quinn, & K. S. Cameron (Eds.), *Paradoxes and Transformation. Towards a theory of change in organization and management*. Cambridge: Ballinger.
- Fuchs, P. 1999. *Intervention und Erfahrung*. Frankfurt am Main: Suhrkamp.
- Hernes, T. 2008. *Understanding Organization as Process. Theory for a tangled world* (1 ed.). London: Routledge.
- Hernes, T. 2014. *A process theory of organization* (1 ed.). Oxford: Oxford University Press.
- Hernes, T., & Bakken, T. 2003. Implications of self-reference: Niklas Luhmann's autopoiesis and organization theory. *Organization Studies*, 24(9): 1511-1535.
- Hernes, T., & Weik, E. 2007. Organization as process: Drawing a line between endogenous and exogenous views. *Scandinavian Journal of Management*, 23: 251-264.
- Jarzabkowski, P., & Lê, J. K. 2017. We have to do this *and* that? You must be joking: Constructing and responding to paradox through humor. *Organization Studies*, 38(3-4): 433-462.
- Jarzabkowski, P., Lê, J. K., & van de Ven, A. H. 2013. Responding to competing strategic demands: how organizing, belonging, and performing paradoxes coevolve. *Strategic Organization*, 11(3): 245-280.
- Jay, J. 2013. Navigating paradox as a mechanism of change and innovation in hybrid organizations. *Academy of Management Journal*, 56(1): 137-159.
- Knight, E., & Paroutis, S. 2017. Becoming Salient: The TMT Leader's Role in Shaping the Interpretive Context of Paradoxical Tensions. *Organization Studies*, 38(3-4): 403-432.
- Knudsen, M. 2005. Displacing the paradox of decision-making. In D. Seidl, & K. H. Becker (Eds.), *Niklas Luhmann and Organization Studies*, 1 ed.: 107-126. Kristianstad: Liber & Copenhagen Business School Press.
- Langley, A., & Denis, J.-L. 2006. Neglected Dimensions of Organizational Change: Towards a situated view. In R. Lines, I. G. Stensaker, & A. Langley (Eds.), *New Perspectives on Organizational Change and Learning*, 1 ed.: 136-159. Bergen, Norway: Fagbokforlaget Vigmostad & Bjorke AS.
- Langley, A., & Tsoukas, H. 2010. Introducing "Perspectives on Process Organization Studies". In T. Hernes, & S. Maitlis (Eds.), *Process, Sensemaking, and Organizing*: 1-26. Oxford: Oxford University Press.
- Lawrence, P. R., & Lorsch, J. W. 1967. *Organization and Environment. Managing Differentiation and Integration* (1 ed.). Boston: Harvard University Press.
- Lewis, M. 2000. Exploring Paradox: Toward a more Comprehensive Guide. *Academy of Management Review*, 25(4): 760-776.
- Lewis, M. W., & Kelemen, M. L. 2002. Multiparadigm inquiry: Exploring organizational pluralism and paradox. *Human Relations*, 55(2): 251-275.
- Lewis, M. W., & Smith, W. K. 2014. Paradox as a Metatheoretical Perspective: Sharpening the Focus and Widening the Scope. *Journal of Applied Behavioral Science*, 50(2): 127-149.

- Luescher, L. S., & Lewis, M. 2008. Organizational change and managerial sensemaking: Working through paradox. *Academy of Management Journal*, 51: 221-240.
- Luhmann, N. 2000. *Organisation und Entscheidung*. Wiesbaden: Opladen.
- Luhmann, N. 2005. The Paradox of Decision Making. In D. Seidl, & K. H. Becker (Eds.), *Niklas Luhmann and Organization Studies*: 85-106. Copenhagen: Copenhagen Business School Press.
- Luhmann, N., & Fuchs, P. 1989. *Reden und Schweigen*. Frankfurt am Main: Suhrkamp.
- Maturana, H., & Varela, F. 1980. *Autopoiesis and Cognition*. Dordrecht: Reidel.
- Miron-Spektor, E., Ingram, A., Keller, J., Smith, W. K., & Lewis, M. W. 2017. Microfoundations of organizational paradox: the problem is how we think about the problem. *Academy of Management Journal*, forthcoming: 1-50.
- Nassehi, A. 2005. Organization as decision machines: Niklas Luhmann's theory of organized social systems. *Sociological Review*, 53(s1): 178-191.
- Ortmann, G. 2004. Schmuddelkinder der Logik. *Berliner Debatte Initial*, 15(1): 18-27.
- Pina e Cunha, M., & Putnam, L. L. 2017. Paradox theory and the paradox of success. *Strategic Organization*: 1-12.
- Poole, M. S., & van de Ven, A. 1989. Using Paradox to Build Management and Organization Theories. *Academy of Management Review*, 14(4): 562-578.
- Putnam, L. 1986. Contradictions and paradoxes to build organization and management theory. In L. Thayer (Ed.), *Organization Communications: Emerging perspectives*, 1 ed.: 151-167. Norwood, NJ: Ablex Publishing.
- Putnam, L. L., Fairhurst, G. T., & Banghart, S. 2016. Contradictions, dialectics and paradoxes in organizations: a constitutive approach. *Academy of Management Annals*, 10(1): 1-107.
- Quinn, R. E., & Cameron, K. S. (Eds.). 1988. *Paradox and Transformation. Towards a Theory of Change in Organization and Management* (1 ed.). Cambridge: Ballinger.
- Raisch, S., Hargrave, T. J., & Van de Ven, A. H. 2018. The learning spiral: A process perspective on paradox. *Journal of Management Studies*, 55(8): 1507-1526.
- Schad, J., & Bansal, P. 2018. Seeing the forest and the trees: How a systems perspective informs paradox research. *Journal of Management Studies*, 55(8): 1490-1506.
- Schad, J., Lewis, M. W., Raisch, S., & Smith, W. K. 2016. Paradox Research in Management Science. *The Academy of Management Annals*, 10(1): 5-64.
- Seidl, D., & Becker, K. H. 2006. Organizations as Distinction Generating and Processing Systems: Niklas Luhmann's Contribution to Organization Studies. *Organization*, 13(1): 9-35.
- Smith, W. K. 2014. Dynamic Decision Making: a model of senior leaders managing strategic paradoxes. *Academy of Management Journal*, 57(6): 1592-1623.
- Smith, W. K., & Lewis, M. W. 2011. Towards a theory of paradox: a dynamic equilibrium model of organizing. *Academy of Management Review*, 36(2): 381-401.
- Tsoukas, H., & Chia, R. 2002. On Organizational Becoming: Rethinking Organizational Change. *Organization Science*, 13(5): 567-583.
- Tuckermann, H. 2017. *Paradox in the house - accomplishing plurality, stability and routinized reflection in a hospital*. University of St. Gallen, St. Gallen.
- Tuckermann, H. 2018. Visibilizing and Invisibilizing Paradox: A process study of interactions in a hospital executive board. *Organization Studies*: 1-22.
- Weick, K. E., & Quinn, R. E. 1999. Organizational Change and Development. *Annual Review of Psychology*, 50: 361-386.
- Westenholz, A. 1993. Paradoxical Thinking and Change in the Frames of Reference. *Organization Studies*, 14(1): 35-58.
- Zundel, M. 2012. Walking to learn: Rethinking reflection for management learning. *Management Learning*, 44(2): 109-126.