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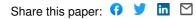Johann Fortwengel, Elke Schüßler, Jörg Sydow

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STUDYING ORGANIZATIONAL CREATIVTY AS PROCESS: FLUIDITY OR DUALITY?

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Abstract

This paper contributes to process studies on organizational creativity by developing two competing research agendas. The first perspective, the 'becoming' view, depicts creativity as a constant flow of activity that crystalizes every once in a while in unpredictable moments of creativity. The second perspective, the 'practice' view, understands creativity as a practiced social process, in which structures play the important role of both enabling and constraining individual agents in pursuing creativity as a collective phenomenon. We compare and contrast these two theoretical perspectives, which are based on different process ontologies, and discuss their methodological implications. We argue that the practice perspective offers particular promise, because it allows us to address the important yet paradoxical question of how creativity may be organized and managed.

Introduction

Process theories offer the unique promise to help us better understand and explain behavior in and of organizations over time (Hernes & Weik, 2007; Langley & Tsoukas, 2010). Unlike variance-based research, which examines the effect of independent variables on dependent variables, process theories view organizational behavior as not only varying over and with time, but as indecomposable into variables (Van de Ven & Poole, 2005). In recent years, we have seen process theories applied to an increasing number of organizational phenomena (Langley, Smallman, Tsoukas, & Van de Ven, 2013), including issues such as identity formation (Howard-Greenville, Metzger, & Meyer, 2013; Schulz & Hernes, 2013), legitimacy-building (David, Sine, & Haveman, 2013), or micro politics (Pettigrew, 1985). Because of these efforts, our collective knowledge of theoretical foundations and methodological approaches to studying organizational process phenomena is rather impressive (Langley, 1999; Pettigrew, 1997; Pettigrew, Woodman, & Cameron, 2001; Van De Ven & Poole, 1995, 2005).

Surprisingly, process studies of creativity as an organizational phenomenon are still scarce. In particular, we continue to have an underdeveloped understanding of how organizations can be creative over time. This constitutes a relevant research gap, because "scholars emphasize explaining *creative outcomes* while largely ignoring *creative processes*" (Sonenshein, 2016: 2; emphases added). Meanwhile, process studies of organizational creativity seem particularly warranted today, as management scholars and practitioners alike appreciate that envisioning, producing, distributing, and marketing products or services involves creativity within and across organizations.

This paper aims to contribute to developing process studies of creativity as an organizational phenomenon. It does so by, first, revisiting selected seminal texts in creativity research in order to examine their understanding of creativity as an organizational process. Building on and extending existing research, we develop in a second step two distinct research agendas for process studies of organizational creativity: one based on a 'strong' process ontology, which depicts creativity as 'becoming', and an alternative agenda grounded in a 'moderate' process ontology, which depicts creativity as 'practice'.

A strong view on process suggests that the world is "composed of events and experiences rather than substantial entities" (Langley et al., 2013: 5). Correspondingly, strong process scholars

highlight the fluidity of organizations and organizing as composed of processes, a kind of thinking "that reflects an understanding of the world as in flux, in perpetual motion, as continually in the process of becoming" (Langley & Tsoukas, 2010: 1). From this perspective, the puzzling question is not how organizations change and evolve, but rather how stability of processes can ever be achieved. Rather than the *being*, research in this tradition examines the *becoming* of organizations as the ever-evolving reification of processes (cf. Tsoukas & Chia, 2002).

Scholars may be inclined to apply such a strong process perspective to the empirical phenomenon of organizational creativity, defined as the generation of novel and useful ideas (Amabile, 1983). Not only are creative acts often associated with 'being in a flow', typically understood as a psychological state of intense concentration and continuous activity (Sosik, Kahai, & Avolio, 1999); going beyond the flow metaphor, creativity is also a process phenomenon *sui generis*, because it typically involves agency and unfolds from an idea to an innovation over time (Anderson, Potočnik, & Zhou, 2014; George, 2007). While a strong process perspective allows us to address a number of relevant research questions and, hence, promises to enrich the emerging field of process studies of organizational creativity, we will argue that it is perhaps too blind to the stabilizing elements of organizations which, in our view, provide necessary enabling and constraining structures for creativity (cf. Lampel, Honig, & Drori, 2014).

A moderate view on process, in contrast, pays attention to both agency and structure, i.e. to dynamics of change as well as the stabilization of processes within and across organizations. Such a perspective is in line with structuration theory (Giddens, 1984), but also with other theories that pay attention to the ways in which contextual conditions are created, enacted, and instantiated through social *practices* (Nicolini, 2012; Reckwitz, 2002). Practices are typically understood as recurring patterns of behavior through which actors enact, reproduce, but also change structures. Like other process theories, a practice perspective goes beyond classic variance approaches, which try to unearth favorable or unfavorable contextual conditions for creativity in organizations (conceived as outcome variable). Instead, it highlights that such conditions are not external to potentially creative (individual or collective) agents and is sensitive to the tensions and contradictions that arise from these conditions (Farjoun, 2010).

In sum, we examine two alternative process perspectives on organizational creativity, which differ markedly from earlier understandings of creativity as a variance phenomenon and which have unique implications in terms of research questions, methods, and units of analysis. As we will discuss towards the end of the paper, these two perspectives are nonetheless complementary for the field of creativity research as a whole, as each promises to answer questions to which the other perspective is blind. What is more, both perspectives would advance the field of creativity research in terms of 'process pluralism'. Meanwhile, from an organization theory and management standpoint, the practice perspective is particularly promising, because it enables us to inquire into the possibilities and limitations to purposefully organize (for) creativity.

In developing these arguments, the paper is structured as follows. In the next section, we revisit selected seminal works in organizational creativity research and discuss to what extent they contribute towards a process rather than a variance perspective. We then argue that creativity as a process phenomenon can be studied by using either a strong or a moderate process ontology: *creativity as becoming* and *creativity as practice*. We conclude by mapping out two research agendas for future process-based research in our field.

From Variance-Based to Process-Based Creativity Research

Research on creativity has a long tradition of studying processes of creativity in individuals and groups (Rhodes, 1961) and how these are influenced by organizational context factors (Amabile, 1996). Our knowledge about the organizational processes of creativity is, however, surprisingly limited (Sonenshein, 2014, 2016). In organization studies, one important debate has revolved around whether organizations should be studied as nouns (organizations) or as verbs (organizing) (Weick, 1979). The former perspective perceives organizations as consisting of stable things, such as fixed structures or identities, implying that organizations are described in terms of states or variables (Van de Ven & Poole, 2005). Scholars from this perspective acknowledge that organizational change occurs, but they understand it as involving variations in states or variables over time—change thus happens *to* organizations. In contrast, the organizing perspective perceives organizations as consisting of processes produced by "varied and fluctuating activities" (Van de Ven & Poole, 2005: 1378). Here, change is *endemic*.

Variance and process theories are built on radically different ontologies and have different epistemological implications. Variance is typically measured by assuming a causal relationship

between a particular set of independent and dependent variables. Such variance can be examined over time, so variance approaches can without doubt also analyze processes. However, a process ontology suggests that organizations cannot be reduced to measurable variance. Instead, process methodologies are used to understand sequences of events in a given period of time and the complex patterns of causation underlying these sequences and their potential effects.

We will now highlight important milestones in the development of our collective thinking about creativity in organizations and demonstrate that although a focus on organizational processes has always been immanent, it tended to be grounded in variance-based thinking. While individual studies have indeed promoted a process perspective on organizational creativity, this has not yet developed into a larger research agenda. First, we look at Teresa M. Amabile's (Amabile, 1988, 1996; Hennessey & Amabile, 2010) research on creativity, as her work is conceived widely as groundbreaking and has helped define the field. Second, we examine Woodman, Sawyer, and Griffin (1993), as this is the first text we are aware of that tries to develop a theory of *organizational* creativity, meaning that it reflects an understanding of organizations as being creative, as opposed to functioning as a more or less favorable environment for individual or group-level creativity. Third, we consider Drazin, Glynn, and Kazanjian (1999) as a convincing attempt to conceptualize creativity in organizations as a multi-level phenomenon and as an important step away from variance towards process studies. Finally, we include Hargadon and Bechky (2006), who move towards a strong process ontology by conceptualizing creativity as fleeting moments of genius, which tend to emerge by accident and in a rather uncontrollable fashion during interaction.

Amabile (1983, 1988) was amongst the first to do organizational research on creativity, defining it famously as the "production of novel and useful ideas by an individual or small group of individuals working together" (Amabile, 1988: 126). As such, her focus is on the individual and how she or he interacts with other members in a group. The organizational context plays a role in so far as it offers an environment with particular qualities, which can be creativity-enhancing and creativity-reducing (Amabile, 1996; Amabile, Conti, Coon, Lazenby, & Herron, 1996; Hennessey & Amabile, 2010). For example, while freedom and sufficient resources were found to promote creativity, constraint and insufficient resources seem to inhibit it (cf. Amabile, 1988; see also Sonenshein, 2014). Accordingly, Amabile's research continues to be mostly variance-based, looking at the relationships between individuals and their various surrounding contexts, such as

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their organizational environments, to explain creativity as a dependent outcome variable. Furthermore, while organizations serve as a context of and for creativity, creative ideas are still largely perceived as an individual-level outcome. For example, in a recent review article, Amabile and her co-author state that "[w]e strive to understand the experiences of Picasso, da Vinci, Einstein, and the like, and we question what, if anything, we ourselves have in common with these amazing individuals" (Hennessey & Amabile, 2010: 570). In fact, the organizational level seems detached and viewed separately when Amabile argues that "[o]rganizational innovation is the successful implementation of creative ideas within an organization" (1988: 126). Thus, her factors-based approach does not account for creativity as an *organizational* process, although Amabile considers processes on the individual and group levels and argues that "we must arrive at a far more detailed understanding of the creative process, its antecedents, and its inhibitors" (Hennessey & Amabile, 2010: 570).

Similarly, Woodman and colleagues (1993), in another groundbreaking piece on creativity, take a rather static and variance-based approach. The authors define organizational creativity as "the creation of a valuable, useful new product, service, idea, procedure, or process by individuals working together in a complex social system" (Woodman et al., 1993: 293). In line with a variance-based ontology, they conceptualize organizational creativity as the outcome of a set of individual, group, and, importantly, organizational characteristics. For example, in this line of research an organizational culture or climate supporting risk-taking behavior is assumed to be positively related to creative performance. The authors postulate that "[a]n understanding of organizational creativity will necessarily involve understanding (a) the creative process, (b) the creative product, (c) the creative person, (d) the creative situation, and (e) the way in which each of these components interacts with the others" (Woodman et al., 1993: 294). While their interactionist model accounts for creativity as a multi-level phenomenon, creativity itself is perceived as a static outcome variable.

In contrast, Drazin and colleagues define creativity "as the *process* of engagement in creative acts" (1999: 287; emphasis in original). As such, they move away from a variance-based ontology and instead take a process perspective, whereby the outcome, organizational creativity, can be explained by a particular sequence of events and decisions at critical points in time. As such, creativity is not merely the outcome of a set of independent variables, but rather evolves over time through a range of interdependent actions. More specifically, the authors propose a

sensemaking perspective involving multiple levels—intrasubjective, intersubjective, and collective. They thus build on Woodman et al. (1993) in the sense of conceptualizing creativity as a multi-level phenomenon. Importantly, they highlight the role of crisis situations in creating new negotiated orders, thus spurring organizational creativity in the process (see also Cohendet & Simon, 2016). Focusing on moments of crisis is an important methodological tool to bracket (cf. Langley, 1999) and to make sense of time in processes. From Drazin et al.'s (1999) perspective, creativity unfolds as actors must make sense of several complex and oftentimes ambiguous situations to which they need to develop an apt and creative response through processes of negotiating and sensemaking. Organizations are hereby conceptualized as inhabited by different occupational subcultures or epistemic communities possessing distinct resources, interests, and goals.

Hargadon and Bechky (2006) build on and extend this sense of temporality in creative endeavors by conceptualizing creativity as a momentary and collective phenomenon. More specifically, they recognize the "fleeting coincidence of behaviors that triggers *moments* when creative insights emerge" (Hargadon & Bechky, 2006: 484; emphasis in original). As such, they understand creativity as a transient rather than an ongoing phenomenon. Importantly, creativity is said to unfold in particular moments of action and interaction between various individuals. They identify four interrelated activities that help to trigger moments of collective creativity: help-seeking, help-giving, reflective reframing, and reinforcing. The occurrence of these activities is rather accidental and the outcome of serendipitous interactions. Notably, Hargadon and Bechky claim that "while the interactions of collective creativity may be momentary, the support structure that firms create for such moments cannot be ephemeral" (2006: 497). In consequence, these authors develop a processual but contextually embedded understanding of organizational creativity.

Both Drazin and colleagues (1999) as well as Hargadon and Bechky (2006) highlight the temporary nature of creativity in that they show that creative insights emerge in particular situations when individuals meet and exchange ideas, for example in crisis situations or as a result of mere coincidence. They have moved away from variance-based thinking about creativity and instead consider creativity to be the outcome of both structures and agency, varying and interacting in complex ways over time and across levels. In order to pave the way for future studies on organizational creativity as a process phenomenon, however, we suggest that the existence of different process ontologies in the field of organization studies needs to be

acknowledged more explicitly. Moving in this direction, we will discuss two alternative perspectives, one rooted in a strong process ontology, considering organizational creativity as a process of becoming, and one rooted in a moderate process ontology, considering organizational creativity as a practice.

Conceptualizing Creativity as an Organizational Process: Two Different Ontologies

Process perspectives in organization studies, in contrast to variance approaches, agree that time and temporality matter *all the time*, as opposed to at certain points *in time*. However, different understandings of organizations and the role of organizing as an ongoing activity prevail, which are based on different ontologies. The becoming perspective depicts entities, such as organizations, as constituted by and through processes, and hence would conceive being creative as "no more than temporary instantiations of ongoing processes, continually in a state of becoming" (Langley et al., 2013: 5). Such a strong process ontology, building heavily on Whitehead's (1929) process metaphysics, claims that processes themselves generate "unexpected and largely uncontrollable chains of activity and events" (Langley et al., 2013: 5).

In contrast, practice theories follow a more moderate process ontology, meaning that while entities do not exist independently from processes, these two spheres can still be distinguished analytically, even though they are highly interdependent. In other words, being and becoming are mutually constitutive. Building on classic Wittgensteinian philosophy on language games (Schatzki, 1996; Wittgenstein, 1953), practices are understood as recurrent, possibly routinized patterns of social behavior in and through which actors reproduce but occasionally also transform structure. As has been observed by Reckwitz (2002: 255), "the idea of routines necessarily implies the idea of a temporality of structure: routinized social practices occur in the sequence of time, in repetition; social order is thus basically social reproduction." Notably, unlike the becoming perspective, this perspective acknowledges the relevance of multiple levels in organizational processes, and as such corresponds to so-called 'tall' ontologies, where micro-level activities and practices depend "hierarchically on larger macro structures or systems", as compared to 'flat' ontologies, where "the large is what stretches out sideways in a network of relationships" (Seidl & Whittington, 2014: 2). As we outline below, these different ontologies have important implications for how creative processes are conceptualized and can be studied in organizations.

Fluidity: Creativity as Organizational Becoming

Organizational becoming is argued to be the appropriate perspective in a world where change is not the exception but rather the norm and in fact inevitable (Langley & Tsoukas, 2010). Building on the early philosophy of Heraclitus ("all things flow") and later process philosophers such as not only Whitehead but also James, Bergson, Dewey or Deleuze (Helin, Hernes, Hjorth, & Holt, 2014), movement and change are considered as ubiquitous in and, indeed, constitutive of organizations. Studying organizations from a becoming view means that "organizations are viewed not as 'things made' but as processes 'in the making'" (Langley & Tsoukas, 2010: 1; emphases in original). Accordingly, Hernes talks about "the perishability of any perceived stable arrangement in the flow of time" (2014: 189). Organization and organizing occur in the form of articulation, understood as temporally stabilizing structures of meaning by making sense of events in the flow of time. Hernes claims that "[i]n its pure form process represents evanescence and the impossibility of repetition" (2014: 68), because processes themselves reify any kind of organizational structure or behavior.

Methodologically, a strong process ontology suggests that "phenomena are studied in their openness and indeterminacy" (Hernes, 2014: 3). In a recent study on LEGO, for example, Schultz and Hernes (2013) propose a becoming perspective on organizational identity construction, thereby going beyond most previous conceptualizations of identity as either enduring or undergoing change. Based on their empirical case material, they argue that organizations have three types of memory forms available to them in order to make sense of the past and envision the future: textual, material, and oral memory forms. These memory forms are applied in an ongoing way in identity construction, so that identity is neither stable nor in a phase of change, but continuously forged.

Creativity lends itself to such a process ontology, as creative acts tend to be associated with 'being in a flow' as a particular state of mind and activity, often defined as "a condition of high challenges and skills" (Csikszentmihalyi & LeFevre, 1989: 815). Correspondingly, existing research has found a positive relationship between being in a state of flow and the quality and creativity of a musical composition (MacDonald, Byrne, & Carlton, 2006). While the flow concepts differ markedly between creativity research and process theory, Langley and Tsoukas leverage the metaphor and claim that creativity is one of the "main themes of a process

worldview" (2010: 2). This is perhaps not surprising, given that a world on the move, which seems to be in a constant state of becoming, demands ever-new solutions to novel and unforeseen problems.

As outlined above with reference to Drazin et al. (1999) and, especially, Hargadon and Bechky (2006), existing research on creativity has moved towards conceptualizing time as 'moments' when creativity emerges, which corresponds to the notion of 'event' in Hernes' process theory. For Hernes, events are temporal concepts that help actors make sense of and ascribe meaning to time by providing "provisional closure" (2014: 189). Through events, time acquires meaning in the eyes of actors inhabiting a world of flow, much as creativity is said to take place in certain moments or during crisis situations.

From a creativity as becoming perspective, however, creativity would be viewed mainly as *ongoing* creative agency, close to Joas' (1996) understanding of all agency as creative and his emphasis on the individual innovator who constantly develops creative responses to experienced gridlocks and challenges. Such a perspective is quite ignorant of the possibility of steering and promoting creativity organizationally, because creativity is here viewed largely as accidental, and as a response to unforeseen and surprising crisis situations. Thus, whereas in their identity study Schultz and Hernes (2013) emphasize the continuous flow of identity construction, an alternative viewpoint would highlight how actors intentionally draw on these temporal resources not only to create, reinterpret, or envision their organizational identity, but also to promote their interests, for example in the production and evaluation of what is to be considered as creative. This alternative viewpoint suggests a perspective informed by practice theory.

Duality: Creativity as Organizational Practice

In addition to process, a practice perspective takes the stabilizing role of organizational routines and practices into account, thereby accentuating both the being and the becoming. However, there are different theoretical perspectives associated with the broader 'practice turn' in organization and management studies (Whittington, 2006). For example, structuration theory as developed by Giddens (1984) has been used effectively to understand and explain a broad set of phenomena in organizational settings (Jarzabkowski, 2008; Pozzebon, 2004; Staber & Sydow, 2002). These studies not only point to both rules and resources as aspects of structure, but also highlight the duality of structure and action as conceptualized by Giddens (1984). Duality (of

structure and agency) describes the important phenomenon that social structures are constituted by action while at the same time serving as a medium of action. Correspondingly, the concept of structuration highlights the process through which creative actors produce, reproduce, and in the process sometimes incrementally or radically transform social practices. Through this equal focus on structure, practice theory, building on Wittgensteinian philosophy and his contextualized notion of knowledge (Wittgenstein, 1969), offers a moderate rather than a strong process perspective on creativity by highlighting the role of stability while at the same time paying attention to the possibility of agency and change—over time and across space. Practice theory differs significantly from variance-based approaches in that it considers structures not as fixed, but as *enacted*, i.e. coming to life only through the way in which actors draw on them in their agency or their memory.

Social practices, according to Giddens (1984), are recurrent activities shared among actors and ordered across time and space. Practices are inherently collective and embedded in social systems where they are both enabled and constrained by structures (Chia & Holt, 2009). Therefore, practice theory also differs markedly from previous research on creativity as an individual or group phenomenon. Practice theory is particularly sensitive to tensions and contradictions in organizational life, not least those arising in the context of organizing for creativity (DeFillippi, Grabher, & Jones, 2007). Existing creativity research has already started to make use of some of the key ideas and concepts of practice theory, particularly Giddens' structuration theory (Carlsen, Clegg, & Gjersvik, 2012; Drazin et al., 1999). In a similar vein, Pina e Cunha, Rego, Clegg, and Lindsay (2015), examine Honda's market entry into the United States to illustrate how serendipity is a practical accomplishment, as opposed to a mystery, in the sense that it rests on doubt, preparation, and openness. Similarly, Garud, Gehman, and Kumaraswamy (2011) adopt a practice perspective to highlight the complex relational and temporal dynamics underlying the sustained innovations at the 3M Corporation. 3M uses practices such as inducing slack and waste to ensure that 'useless' ideas are not lost in the transition from conceptualization to the commercialization process, but are stored and potentially re-used in the context of other innovation processes.

A practice perspective highlights the role of structures as both constraints on and enablers of action. This makes it particularly suitable in the context of creativity research, where recent research has emphasized the role of constraints (Caniëls & Rietzschel, 2015; Goncalo, Chatman,

Duguid, & Kennedy, 2015) that may trigger creative responses, such as organizational ingenuity (Lampel et al., 2014). Notably, the relationship between available resources and creative processes seems rather complex and may change over time (Sonenshein, 2014), which further stresses the role of organizing creativity. Organizing for creativity may thus involve not only providing freedom, but also artificially constraining resources (cf. Bicen & Johnson, 2015)—financial, time, or otherwise—as well as formulating and implementing rules; where rules and resources, including their recursive interplay, make up structures that actors need to enact, reproduce or transform with their practices (Giddens, 1984). Previous research has, for instance, discussed the creativity-enhancing role of structuring working days as involving both cognitively challenging work under pressure and periods of 'mindless' work, conceptualized as being low in cognitive demands and performance pressure (Elsbach & Hargadon, 2006). Along similar lines, existing research discusses the enabling role of routines in the context of creativity (Ohly, Sonnentag, & Pluntke, 2006); here, the main argument is that routines free up resources that may be used for novel purposes, amongst them the development of creative ideas, processes, and products. This argument relates to the important function of repeating behavioral patterns for organizational relief in an otherwise oftentimes turbulent environment. Beyond this relief effect, routines may also be a direct source of creativity and change (Feldman, 2000) and lead endogenously to creative outcomes (Sonenshein, 2016).

The broader argument from a practice perspective is that certain sets of organizational practices may foster organizational creativity. Notably, this refers to organizing practices understood here as the intentional though not entirely controllable, often more indirect than direct structuring of the practices of others.

In sum, while creativity has been studied increasingly as a process rather than a variance phenomenon (e.g., Caniëls, De Stobbeleir, & De Clippeleer, 2014), few studies have been sensitive to the specific ontology and epistemology of process-based research (see, for a rare example, Komporozos-Athanasiou & Fotaki, 2015). Building on current trends in organizational theorizing, we have outlined a strong and a moderate process ontology, each of which entails distinct assumptions, research interests, and methodological implications. In the next section, we develop two distinct research agendas for studying organizational creativity as a process phenomenon, before linking this discussion back to the intriguing puzzle raised up front: how can organizations, as collective actors, be creative?

Two Research Agendas for Studying Creativity as Process

Both perspectives discussed in this paper imply different research problems and research questions. Research from a creativity as becoming perspective would primarily ask: *how is creativity made and recognized in the flow of time?* Empirical studies following this agenda would yield insights into the particular conditions under which creativity emerges, as a fleeting moment in time. While previous research has suggested interactionist models of creativity (Drazin et al., 1999; Hargadon & Bechky, 2006), a next step in this direction would be, for example, to examine how changing perceptions identify something as creative at one point in time, and less so at another. Here, imagination (Komporozos-Athanasiou & Fotaki, 2015) or narratives (Vaara, Sonenshein & Boje, 2016) may critical roles in these processes. In line with a strong process ontology, this would illustrate an understanding of the world where reality, in this context whether something is considered novel and valuable, is in the constant process of becoming. Given that each creative act may be disruptive, a crucial question is how actors make sense of creativity in the flow of time as they try to maintain a coherent sense of past as a basis for a different future (cf. Hernes, 2014). In stark contrast, a creativity as practice view suggests focusing on the role of organizational practices in the process of creativity. Here, an appropriate research question would be: *which social practices help to enhance and stabilize organizational creativity?* This latter perspective thus appreciates the potentially important role of stability—in the form of recurrent practices—in creative processes. Empirical applications of this research agenda would focus on the particular practices, conceptualized as routinized patterns of behavior, in and through which creativity is practiced over time. The process ontology underlying such an approach is moderate in so far as the organization, whether creative or not, is considered a separate entity, analytically distinguishable from the practices that constitute it.

Correspondingly, both perspectives suggest distinct units of analysis. For Hernes (2014), a proponent of a strong process view, events are the basic unit of analysis. A strong process view implies that things are continually in the making, but interconnected events—defined by Hernes as encounters between actors in the making—reproduce patterns that can be captured by analysis. However, a creative event can never be recognized as such as it happens; it can only be recognized as creative with the passage of time, through its effects on other events, or more broadly how it relates to preceding and subsequent events. A practice perspective, in contrast, would examine social practices as "interwoven activities in a given social domain" (Schatzki,

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1997: 285), i.e. in our context the activities through which creativity is enacted in the day-to-day behavior of and in organizations. These practices are more than momentary occurrences in the flow of time, because they draw on and enact rules and resources that structure organizational life. While a practice perspective is sensitive towards multiple levels of analysis that are linked through social practices, and thus even accounts for cross-level effects (Seidl & Whittington, 2014), these distinct levels more or less collapse from a becoming perspective, where the world is viewed as consisting of processes, and where concepts such as internal and external or higher and lower are largely meaningless.

Interestingly, both perspectives imply research agendas involving qualitative, case-based, and oftentimes comparative research designs (Eisenhardt, 1989), because process research often requires deep, thick, longitudinal, and contextualized data in order to examine how organizational phenomena evolve over time (Langley, 1999). Additionally, qualitative research designs are particularly suitable for developing or modifying theory, and as such seem appropriate for process studies on creativity because we still know relatively little about how exactly organizations as social systems are creative over time (Sonenshein, 2016). In terms of research methods, semi-structured interviews aiming to unearth retrospectively or in real time how a particular organizational phenomenon developed and took shape constitute an important tool for data collection, but probably are not sufficient to fully capture process phenomena. For research informed by the creativity as becoming perspective, a narrative approach in which researchers reconstruct a creative event based on individuals' narratives about that same event seems particularly promising (Hernes, 2014; Vaara et al., 2016). Narratives can be an important data source for practice studies as well, since recurrent activities can be derived and analyzed on the basis of narratives. For practice-based studies, organizational ethnography using participant or non-participant observation to observe directly how organizational actors enact being creative can be a particularly promising method. Unlike variance-based studies, which rely on a clear definition of relevant variables up-front, process-based studies, particularly in the strong process tradition, rely on emergence, openness, and the art of discovering serendipities in the research process (Hernes, 2014). To capture and to make sense of this openness, ethnography may provide unique insights for studies informed by a strong process ontology as well. Similarly, archival information and documents may be valuable data sources for both research agendas.

For practice-based studies, we see promise in mixed-method approaches combining qualitative and quantitative data. For example, information on social and inter-organizational relationships could be gathered using survey or social network tools and then compared with qualitative accounts of interaction practices (Berthod, Grothe-Hammer & Sydow, forthcoming). Similarly, social practices in the creative process could be linked empirically to creative outcomes, such as awards or critical acclaim, which could be measured leveraging quantitative means.

Each research perspective has a unique view on the question of how and to what extent organizations can manage creativity. Here, it is important to note that a creativity as becoming perspective can make an interesting and important, but—in a certain sense at least—only rather limited contribution. Because this perspective posits organizational creativity as a potentially accidental encounter of processes in time and space. It remains skeptical towards the effectiveness of intentional interventions, direct or indirect in nature. More broadly, the relationship between the organization and creativity here is that creativity is a resource for the organization, at least at (unpredictable) times. A creativity as becoming perspective suggests research problems and research questions that "take a researcher into a conceptual terrain of events, episodes, activity, temporal ordering, fluidity, and change" (Langley et al., 2013: 10). From this theoretical angle, cognitive and sensemaking processes constitute a main focus of analysis. Organizational forms, internal as much as external for an organization, matter less from this perspective, largely because it does not differentiate between levels of analysis.

In stark contrast, a practice view is interested in the particular formal and informal rules as well as material and immaterial resources that organizations may employ in order to be creative and sustain their creativity. This may involve sets of organizational practices, designing or 'organizing' them, but it can also involve organizational forms, such as spin-offs from a focal organization or interorganizational networks, as well as internal organizational structures. In order to sustain a promising idea, for instance, certain sets of organizational routines or organizational boundaries need to be in place, ensuring that this particular idea continues to be followed (Schreyögg & Sydow, 2010). An example of this can be internal budgeting and reporting rules, which need to be designed in such a way that they account for the possibility that creative ideas often have to overcome extended periods of uncertainty, in the sense that both their novelty and their usefulness may be largely unknown. Furthermore, from a practice perspective, creativity requires internal stability as well, as a creative idea develops over time and, in the

process, may encounter severe challenges, gridlocks, and opposition. These are not necessarily counterproductive but may well stimulate the generation of new ideas or the deeper exploration of ideas already at hand. Table 1 below compares and contrasts the two emerging perspectives and their distinct research agendas for studying organizational creativity as a process. Whereas the becoming view highlights the fluidity of time and processes, the practice view depicts the relationship as duality, where agency and structure are mutually constitutive over time.

Table 1: Two research agendas for studying organizational creativity as process: Becoming and practice.

	Becoming	Practice
Process view	Strong	Moderate
Ontology	Process metaphysics, which views the world as composed of processes. Flat ontology, where inside/outside, and higher/lower are meaningless concepts.	Substantive metaphysics, which views the world as composed of things. Tall ontology, where practices mediate and enact the higher/lower relationship.
Conceptual anchor	Fluidity and indeterminacy	Duality of structure and agency
Main philosophical influence	Whitehead	Wittgenstein
Research problem	Understand fleeting moments of creativity	Rules and resources for organizing creativity
Paradigmatic research question	How is creativity made and recognized in the flow of time?	Which social practices help to enhance and stabilize organizational creativity?
Unit of analysis	Event	Social practice
Research design	Qualitative, case-based, longitudinal	Qualitative, case-based, longitudinal; mixed-methods.
Research methods	Semi-structured interviews, narratives, ethnography, archival information	Semi-structured interviews, narratives, ethnography, archival information, quantifiable indicators
Relationship between organization and creativity	Creativity as resource	Resources for creativity
Analytical dimensions	Cognitive and sensemaking processes	Social practices, organizational forms, routines, and rules
Temporal orientation	Ex-post	Ex-ante

Source: Own overview.

Discussion and Conclusions

This paper contributes to the growing research stream of process studies of organizational creativity by developing and comparing two contrasting research agendas: creativity as becoming and creativity as practice. Each of the two research agendas developed in this paper promises to yield different but potentially complementary insights and bring 'process pluralism' to a field that has been dominated so far by variance approaches. For example, research informed by a creativity as becoming perspective can contribute to our understanding of how actors make sense of time by partitioning the world in flux into distinct temporal events, where fleeting moments of creativity occur. This may be important for a better understanding of how creative acts are identified as such ex-post, in a largely backward-looking manner. In contrast, studies following a creativity as practice agenda promise to help us understand through which practices and forms organizations try to instill the stability often necessary in creative processes, and thereby follow a forward-looking approach. As such, this agenda suggests an ex-ante perspective on organizational creativity as process, meaning that creativity can be actively pursued (see Table 1). While these are competing research agendas, we ultimately see them as complementary in terms of the insights they promise to provide for the field of creativity research.

Meanwhile, from an organization and management studies standpoint, the paradox of organizing creativity is particularly intriguing (DeFillippi et al., 2007). Like many organizational phenomena, creativity can be said to involve a fundamental paradox, whereby the creation of something novel requires stability. In line with practice-based approaches, Farjoun (2010) suggests to resolve this fundamental organizational paradox by understanding stability and change as a duality, i.e. as two interrelated elements, and not as a dualism, i.e. as two separate elements. This paradox may be relevant for organizational creativity in different ways. For instance, creative process within and among organizations may require sustaining structures that occasionally hinder, and thus channel—if not enable--creative endeavors (Goncalo et al., 2015; Lampel et al., 2014). Without such structures, rules, and resources, organizations may develop overly creative ideas, which might fail to resonate with the envisioned target audience, internally or externally, because they may be viewed as not particularly useful or valuable, possibly not even as novel. Or perhaps no creative ideas are developed at all because a deficit of structures implies a lack of frictions and tensions which may be important in creative processes. In order to prevent this from happening, organizing for creativity may also involve certain behavioral

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routines aimed at constraining, restricting, and occasionally even 'killing' creativity (cf. Amabile, 1998; Sonenshein, 2016). Examining practices of how creativity can be organized in the light of this paradox thus promises unique insights into the management of organizational creativity as a process.

While an immediate organizing of creative practices is certainly conceivable from structuration theory and similar practice theories, more indirect approaches that provide the rules and resources enhancing—and to some extent, stabilizing—creative processes are probably more likely to be effective. For such indirect approaches acknowledge not only the knowledgeability, but also creativity of individual and collective agency. The four activities enhancing creative processes identified by Hargadon and Bechky (2006) are a case in point. What is more, these authors observe that creative insights tend to emerge when a particular collective of actors is co-present—in time and space—, thereby enabling practices such as help-giving and help-seeking. These and other practices, however, would have to be analyzed first with respect to the structures, i.e. rules and resources, that enable and constrain them. Second, the methodological challenge of such process research informed by practice theory is to consider as well how individual or collective actors not only enact the structures in the process, but also reproduce or eventually transform them (Giddens, 1984).

We see particular promise in examining these practices and routinized behavioral patterns and their interplay with organizational structures in time and space, with a particular focus on practices that may enable and foster organizational creativity , in the process enabling a particular organization to be creative over time. Furthermore, this practice-based lens lends itself to inquiring about the particular relationships between various sets of practices and forms of organization and organizing. More broadly, this relates to the research problem of how different practices and organizational forms may be resources for creativity as a process, considering the tensions and contradictions characteristic of such social systems. Finally, a creativity as practice perspective, implying a taller rather than flatter ontology (Seidl & Whittington, 2014), helps to examine how creativity is actually achieved on a daily basis in an organizational setting—not as individual or group-level effort, but as an organizational process phenomenon that cuts across different levels of analysis both within organizations, such as departments, profit centers, or work groups, and across organizational boundaries, including interorganizational networks, epistemic communities, professional associations, and even users (Shah & Tripsas, 2007). Extending our

understanding of organizational creativity to span organizational boundaries as well as those of time and space will greatly advance theories of creativity as a social process occurring in and between organizations.

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