Virtualization as a Mode of Organizing: Ontology, Becoming, Modulation

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Abstract

In organizational theories inspired by process ontologies of Spinoza, Bergson, or Deleuze, an organization only seems to be the effect of ontological forces and therefore exist only retroactively and derivatively. Simply put, process ontologies tend to overemphasize the virtual, active ontological forces of becoming in organizations. These assumptions cause the negative and reactive understanding of organizational processes: organizations oppress, restrict, adjust, and regulate becoming. In this perspective, organizations are defective, inadequate, and politically reactionary. They are the negative antitype of the positive, productive, and creative ontological forces. In this article, I situate the problem of organizations and becoming using the concept of “virtualization.” For Deleuze, actualization is the expression of the virtual, resulting in the actual state of affairs, but once the state of affairs is actualized, there is a modulation or reciprocal folding, which affects the virtual; I suggest calling this “virtualization.” Thus, each actualization in the social dimension – each founding of an organization – modulates the ontological conditions of future organizational events. This means that Deleuze provides not only a theory of organizational becoming but also a theory of virtualization – or the modulation of becoming – of organizations. The concept of virtualization is illustrated by drawing on organizational case studies, which have implications for the understanding of virtualization. Virtualization is a process of patterning, a (de)potentialization, but also a de- and reterritorialization. Primarily understood as virtualization, organization is a meta-stable process.

Keywords

Process ontology, Gilles Deleuze, virtualization

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Introduction: Organizing Ontology

The process ontologies of Spinoza, Bergson, Whitehead, and Deleuze have become more and more established in social sciences and organizational studies. They are important resources in thinking about the social and about organizations from a new and different perspective, which sheds light on a huge variety of entities and all kinds of different forces. In this sense, process ontologies are “metaphysics of change, in which primacy is accorded to movement, change and transformation, against the still-dominant Parmenidean-inspired metaphysics of substance which elevates stability, permanence and order” (Chia, 1999, p. 210). Thus, process ontologies understand organizations as driven by ontological, pre-social, vital, non-human, and immanent forces like life itself, becoming, or affect. These forces have their own materiality, productivity, and creativity.

Organizations are greatly influenced by the above forces and their material expressions. From an ontological perspective, organizations are effects of these forces and therefore only exist retroactively and derivatively; that is, as “a secondary accomplishment” (Tsoukas & Chia, 2002, p. 570). These ontological forces are processes of change, emergences of the new, and differentiations that Deleuze calls “becoming” (Deleuze, 1994, p. 31). Organizations are not stable and closed entities anymore; they are fluid and permanently in movement. Therefore, especially Deleuze and his connections to organizational theory tend to emphasize the active, creative, and differentiating ontological forces of organizing and give them normative implications.

As I will explain below, these process ontological foundations of organizations engender a problematic understanding of social and organizational processes as negative and reactive. Organizations oppress, restrict, adjust, order, divide forces and bodies, and make them exploitable. In this perspective, organizations are defective, inadequate, and politically reactionary. They are the negative antitype of the positive, productive, and creative ontological forces. In Deleuze’s approach, these negative attributes result from the equation of organizational processes with actuality (classic empirical dimension), whereas ontological forces belong to the virtuality (a non-phenomenal, non-bodily, non-empirical dimension) of the social and organizations. Organizations acquire negative and defective attributes in contrast to the virtual.

Below, I will show that this is a general tendency in process ontological organization theories. At the same time, I will concentrate on Deleuzian process ontology not only because it represents a paradigmatic example but also because it exceeds this general tendency and offers a different understanding of organization, which is more than the expression of ontological forces. My intention is to outline an immanent critique of Deleuze’s ontology; in other words, I argue with Deleuze against a specific understanding of Deleuze. I follow here Chia’s idea of “an organizational analysis based on becoming (rather than being)” (Chia, 1992, p. 597), which is part of “a sociology of becoming or process” (Chia, 1992, p. 581). Following Deleuze, organization and organizational processes may also be understood as productive, active, and creative. I challenge

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3 For an introduction and overview of process ontologies in organizational studies, see the handbooks by Helin et al., 2014, and Langley & Tsukas, 2017.

4 Grey (2003) analyzes the “fetish of change” in organizational studies which depend on process ontologies. This is a general tendency in postmodernity, see Styhre, 2001.
the negative understanding of organizations by introducing and implementing the concept of virtualization which has hitherto remained hidden or implicit in Deleuze’s work. Deleuze’s ontology offers a perspective on virtualization as a mode of organizing the virtual and becoming. Thus, while Deleuze should indeed be viewed as a thinker of becoming and differentiation (actualization), he is misunderstood if we lose sight of his notion of the modulation or synchronization of these ontological forces that I call virtualization. In a nutshell, an organization has ontological effects itself. This insight has important consequences for understanding Deleuze’s ontology because it highlights that the ontological forces could be modulated by organizations. Furthermore, this insight enriches the field of organizational studies by demonstrating that Deleuze offers not only an organizational theory of becoming but also of virtualization.

Organizational studies help to improve process ontology and understand virtualization. Organizational studies elaborate the concept of virtualization and outline its productivity: first, they show how virtualization functions by implementing patterns; second, they function by potentializing and depotentializing the virtual; and third, they function by de- and reterritorializing the effects of actualizations in organizations.

Ontology after Deleuze: Virtuality, Potentiality, Actuality

I believe the problems with Deleuze’s process ontology and the negative understanding of organization, as I explain below, lie in his emphasis on the activity and productivity of ontological forces and a mono-dimensional or mono-directional understanding of the effect of ontological forces in organizations. These problems have their roots in the relationship between virtuality, actuality, and potentiality, the central concepts of Deleuze’s ontology that approaches the constitution of the world as such (and therefore organizations) through the connection and interplay of these three dimensions.

Ontological dimension is “virtual” for Deleuze (1994, pp. 182ff., 208ff.). It is the “realm of potential” (Massumi, 2002, p. 31) or an energy “reservoir” (Simondon, 2017, p. 61). Ontological dimension is where the capacity for change already exists. In other words, the virtual is the condition of productivity and creativity of ontological forces, of their capacity to open organizations for new and different dynamics and capacities. The virtual is a condition because of its ontological status, which is always more than and primary to the organization. However, the virtual is not unreal or a “virtual reality” in the sense of many media theories (e.g. Shield, 2003). On the contrary, it is because of its ontological status that the virtual must become actual to have concrete and empirical influences on organizations. The actual compared to the virtual is the empirical, phenomenal, observable dimension of organizations; that is, the materiality of an organization in a strict sense. Actuality is the dimension of reality that social sciences normally describe (see also DeLanda, 2010). Massumi uses the term “asocial” to understand the ontological status of the virtual: “Intensity [another term for the virtual] is asocial, but not presocial – it includes social elements [of the actual] but mixes them with elements belonging to other levels of functioning and combines them according to different logic” (Massumi, 2002, p. 30) of the virtual. Meanwhile, Thanem speaks of “nonorganizational forces” (Thanem, 2004, p. 207) of each organization.

To differentiate virtuality at a specific situation, Massumi (2002, p. 98, 136) adds the term “potential” or “potentiality” to Deleuze’s ontology. For Massumi, the virtual consists of all
potentiality. There is only one virtual register but many different potentialities. The potential is a specific energy reservoir of the virtual. With the term potentiality Massumi focuses on the virtual from the perspective of its current empirical effects on organizations. Each organization has a specific virtuality, this means a potentiality that could be actualized. Thus, the potential is the threshold or border between the virtual and the actual.

Deleuze understands organization from its ontological dimension and the ontological forces of the virtual; he calls this virtual dimension of organizations a “body without organs” (Deleuze & Guattari, 1987, pp. 149ff.). Therefore, he is primarily interested in processes when the virtual influences the actual. The term “actualization” (Deleuze, 1994, p. 183, italics added; see also p. 206ff.) is a name for processes when the virtuality or potentiality produces an actual state of affairs. For Deleuze (1988, p. 122ff.) and Massumi (2002, pp. 16ff., 34ff.), affect is such an ontological force. Actualization is an active, vital, and productive process of becoming, creation, and emerging of e.g. new organizations, organizational capacities, modes of relation, or intensities among bodies. The virtual is not only the “prior level” (Massumi, 2002, p. 152) compared to the actual; the virtual is “before, as ‘cause,’ lost in the gritty ‘depth’ of the genesis of matter, and it is after, as “effect” (Massumi,1992, p. 21) in the actual.

Organization in Process Ontology

In Deleuze's work, the overemphasis and concentration on actualization results in a monodirectional and monocausal understanding of the actual and organization. In this point, I follow the general critique by Hallward (2006). For instance, if we look at two paradigmatic social analyses of Massumi – Roland Reagan's speeches (Massumi, 2002, p. 39ff.) and the color-coded terror alert system (Massumi, 2015b, p. 171ff.) – we read about direct and productive effects of affects that hit the body directly and unfold new capacities and dynamics in the social. In this analysis, social forces and bodies are only the expression of affects with no active and productive role.\(^5\)

In process-ontological organizational theories that emphasize actualizations, organizations and their developments seem only to be the effect of ontological forces of creation. Allow me to quote same paradigmatic examples to underline my argument. At the beginning of their theoretical discussion of novelty, Chia and King characterize organizations as “a process involving the punctuating, arresting, simple locating and stabilizing of what is essentially an undifferentiated, fluxing and changeable reality, indifferent to our causes, into a more predictable and hence liveable human world” (Chia & King, 1998, p. 463). Organizations modulate the virtual and becoming: “Organization … is the initial, artificial stabilizing of the incessant and relentless change [becoming], which, itself, is not entity-like at all” (Chia & King, 1998, p. 465f.). Ontological forces of becoming receive order in organizations, thus organizing is an “inherently innovative social process of constructing order out of inherent flux [becoming]” (Chia & King, p. 475). When becoming is “the heterogenizing force[]” of nonorganizational embodiment,” organization is the “homogenizing force[]” (Thanem, 2004, p. 215). Organization is the constitutive other of becoming, “a concept of change … [needs] a differentiated concept of non-change or stability”\(^5\)

\(^5\) In his later works, Massumi (2015b) relativizes these problems. But the two examples remain influential and are his starting point to demonstrate the impact of affects in the social.
(Linstead, 2002, p. 105). Becoming and organization are in permanent tension. If organization is the regulation and suppression of ontological forces, becoming and organizations “must be construed ... as intrinsically opposing tendencies” (Chia, 1999, p. 210). “Change implicates its other. That other is organization ... [and organization] acts against the forces of change, not with them” (Chia, 1999, p. 224). Chia, Linstead, and Thanem indicate the consequence of such thinking: an organization is “a secondary and artificially-imposed attempt” (Chia, 1999, p. 226), a “reply” (Linstead, 2002, p. 95), or “reactive” (Thanem, 2004, p. 207) approach to the active and creative becoming.

This understanding of organizations leads to a negative and repressive concept of organizations. Process ontology after Deleuze has normative implications insofar as the virtual and its actualizations are the productive and progressive force of organizations (Patton, 2010, p. 207f.; Brandom, 2001). Hence why many affect theories after Deleuze do not elaborate on the actual conditions and circumstances of the emergence of affects; that is, they tend to ignore the organizational conditions of the ontological.

Žižek indicates this dualism between virtuality an actuality that flows through the entire work of Deleuze:

One should therefore problematize the very basic duality of Deleuze’s thought, that of Becoming versus Being, which appears in different versions (the Nomadic versus the State, the molecular versus the molar, the schizo versus the paranoiac, [de- versus reterritorialization, affect versus emotion,] etc.). This duality is ultimately overdetermined as “the Good versus the Bad”: the aim of Deleuze is to liberate the immanent force of Becoming from its self-enslavement to the order of Being (Žižek, 2012, p. 28).

Leys (2011) and Wetherell (2015) illustrate the consequences of the ontology of the virtual for Deleuze and Massumi’s idea of an “autonomy of affect.” Affect is an example of an ontological force of becoming. The autonomy of affect is a consequence of the connection between affect and the virtual. Leys and Wetherell criticize that Deleuze and Massumi understand affects as independent, immediate, and non-conscious bodily forces that could not be controlled by subjects or collectivities because affects undermine social practices, symbolic orders, and their power to control. Social processes do not have a relevant influence on affections when affects influence bodies directly in their physicality. Therefore, affect tends to become a naturalistic and biological, not a social phenomenon.

From the organizational theory viewpoint, such assumptions have three main consequences that originate in the abovementioned process ontological assumptions.

**A Dualistic Conception of the Virtual and the Actual**

First, the virtual and the actual are not analyzed in their reciprocal folding and unfolding. The theories only focus on and emphasize the processes of actualization and becoming of organizations. Different bodies, subjects, or different organizational logics do not make a difference to ontological forces. All organizations are affected equally on this ontological dimension, which they are unable to stop or reduce. Organizations here are described only as the effect of the virtual and actualizations, without a distinctively active and productive impact on these ontological processes.
Second, actualization and becoming are understood as autonomous forces of the virtual, which means that this connection gives them great organizational strength. Becoming is direct and immediate, functioning in a quasi-automatic and deterministic way that pushes organizations to differentiate and allow the emergence of the new. Becoming does not seem to be mediated or modulated by organizational forces. Generally speaking, organizations are conquered by ontological forces. Organizations react to ontological forces’ affections in a direct and monocausal way. As a result, it becomes almost impossible to resist these forces in theoretical and practical terms. Even if this is an unintentional consequence of these theoretical approaches, their understanding of becoming has much in common with stimulus-response models without deviations.

The Social as Negative and Repressive

Finally, these theories draw a negative and repressive image of organizations. Because they put organizations on the same level with the actual, ontologically speaking, organizations are always deficient compared to the virtual. The virtual is the realm of all potentiality, while the actual is only the inadequate but necessary expression of the virtual. By contrast, I want to emphasize that without the actual the virtual has no empirical effects in the social; furthermore, actualizations are not progressive per se. For example, Deleuze and Guattari (1987, p. 214ff.) understand fascist movements as a kind of actualization too. Actualization is a politically ambivalent process of becoming, a creation, an emergence of the genuine new, and a process of opening and differentiating in the actual. Affects are such a process. For instance, they increase the capacities of bodies and collectivities, they build new assemblages, and they further open the potentiality for actuality. Organization as actuality is the opposite: it is not an active and creative process. It is a passive and reactive process that reduces the effects of actualizations. Hence the actual is not that interesting for Deleuze and Massumi.

Virtualization and Modulation

I want to elaborate that this problem of actuality in Deleuzian process ontology is not necessary, so I propose a different understanding of Deleuze’s process ontology. The concept of modulation in Deleuze’s and Massumi’s work opens theoretical possibility to understand organizations in process ontology differently, also as a productive and active force that folds or unfolds the virtual. After Deleuze, the actual (social) conditions of ontological forces could and should become a major subject of organizational theory if we concentrate on the folding between the virtual/potential and the actual. We get a hint of how to do that if we retrace how Deleuze and Massumi think about the reciprocal and non-dichotomic connection between the virtual and the actual as “resonance,” (Deleuze, 1994, pp. 117ff., 199ff.), “communication” (Deleuze, 2006, pp. 3, 4, 111), or “modulation” (Massumi 2002, pp. 76ff., 86ff. 199, 204ff., 222ff., 235).6 To avoid conflicts with other

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6 See also Boundas, 2000, p. 163. Massumi (2015, pp. 3, 16) also uses the term “feedback loop” instead of modulation.
theories – like that of Harmut Rosa or Niklas Luhmann – I prefer the term “modulation” in order to understand the reciprocity between the potential and the actual. During a modulation, the virtual and the actual fold and unfold each other; they are not closed and separated from each other.

An organization is a modulation between the virtual and the actual. But Deleuze does not have an organizational theory of his own to understand the specific functioning of the modulation of the virtual through the actual. Therefore, I understand organizations within Deleuze's work not only as the actualization of ontological forces but also as the virtualization of their ontological conditions. This is a topological and not a dualistic conception of the social and organizations (e.g. Lury, Parisi, & Terranova, 2012). Following Massumi and Protevi, modulation is the reciprocal processing of the ontological difference between the virtual/potential and the actual, their unfolding (actualization) and folding (virtualization) in the same event. In analogy with “actualization,” I use the term “virtualization” (Guattari, 2013, p. 206, italics added; also see Terranova, 2004, p. 27; Lévy, 1998, pp. 15ff., 26ff.) for the modulation of the virtual and the potential through actual social processes. I prefer this term and not Protevi's term “counteractualization” (2013, p. 12; see also 2009, pp. 13, 15, 108) because it refers more explicitly to a process that moves “from” the actual “to” the virtual. A virtualization modulates the ontological conditions of the social, its potentiality. Organizing is always closing or limiting the virtual but can also increase actualizations. In this perspective, the social is not a problem or a repressive field of ontological forces but a necessary and ambivalent field of their expression. Understanding virtualization sheds light on the activity and productivity of organization.

Unlike many other ontologies, Deleuze's immanent ontology enables us to develop the concept of modulation between the virtual and the actual. Other ontologies conceive of the two dimensions of reality or the social as absolutely distinct, with no possible impact from the actual on the virtual. Admittedly, Deleuze (1991; 1994) himself mostly stresses actualizations and gives good reasons to concentrate on the activity and productivity of ontological forces. Nevertheless, in order to get rid of the emphasis and the mono-causal or mono-directional view of the social, we must distinguish Deleuze's ontology from the ontology and metaphysics of Heidegger or Bergson. Heidegger (2010) distinguishes between ontological “Sein,” being, the principle of life, and “Seiende” (“Ontische”), the empirical reality. For Heidegger, it is impossible for “Seiende” to influence the ontological principle of being. Even in the work of Bergson (1944), “life” is an ontological force of becoming which excludes the possibility to influencing “life” as such, only its actual expressions.

However, Deleuze introduces another perspective even though many thinkers do not mention it (e.g. Hallward, 2006; Grosz, 2005; Žižek, 2012). They only read Deleuze as a thinker of actualization and ignore the modulation of the virtual and the actual in his work. Even if Deleuze focuses on actualization, he demonstrates at least at three different points in his work the reciprocal connection and modulation of the virtual and the actual; therefore, the possibility of virtualizations. Because this point is very controversial in the understanding of Deleuze's ontology, as the three mentioned authors demonstrate, I want to discuss each of the cases briefly in order to foreground my specific understanding of Deleuze's ontology. Each of the cases opens a perspective on the reciprocal modulation of the virtual and the actual; that is, actualization and virtualization.
The Eternal Return and the Differentiation

In *Difference and Repetition*, Deleuze understands Nietzsche’s concept of “eternal return” as a “circle of difference and repetition” (Deleuze, 1994, p. 57) and not as a dichotomous or monocausal relationship between the virtual and the actual. The “will to power” is here another term for the forces of the virtual. All actuality only exists as expression of this will (Deleuze, 1994, p. 67). In the eternal return, only difference, the unequal, and the dissimilar return, while the negative, the identical, or the similar do not (Deleuze, 1994, pp. 66f., 242f.). The eternal return is a selection of the virtual because only active forces and differences can return. Deleuze underlines the modulation between the virtual and the actual also in his word-creation “differentiation” (Deleuze, 1994, p. 209). This term refers to the simultaneous processing of differentiation and differenciation. An actualization is a differentiation of the actual; differentiation is the process of pure and singular differences in the virtual itself (see also Protevi, 2009, p. 12). Because of their constitutive relationship, the ontological dimension of the virtuality is also constantly changing during an actualization.

The Crystal Image

More obvious is the idea of virtualization in Deleuze’s (1989) second book on cinema. As is the case with each entity, an image has two sides: “There is a formation of an image with two sides, actual and virtual” (Deleuze, 1989, p. 68). Especially in the crystal image “there is no virtual which does not become actual in relation to the actual, the latter becoming virtual through the same relation” (Deleuze, 1989, p. 69). Although the virtual and the actual are (ontologically) different, they are in a permanent “exchange” (Deleuze, 1989, p. 69), which becomes a circle. The crystal image is “the point of indiscernibility of the two distinct images, the actual and the virtual” (Deleuze, 1989, p. 82). Their exchange could be understood as modulation: if one side changes, the other does too. Their exchange relationship also changes if external circumstances change. Thus, the actual influences the virtual qua condition for future actualizations.

The House with the Two Floors

Another picture for the modulation between the virtual and actual is a house with two floors in Deleuze’s *The Fold* (2006, p. 114ff.). The house he describes has two floors. The lower floor stands for the actual and the upper floor represents the virtual. Characterizing the foundation as the actual, Deleuze stresses the importance of the material conditions of reality. Each floor is ontologically different and will remain different: “they are really distinct and yet inseparable by dint of a presence of the upper in the lower. The upper floor is folded over the lower floor. One is not acting upon the other, but one belongs to the other, in a sense of a double belonging.” (Deleuze, 2006, p. 136) The actual folds the virtual: “[i]t can be stated that what is folded is only virtual and currently exists only in an envelope, in something that envelops it” (Deleuze, 2006, p. 24). Deleuze describes the permanent process of folding and unfolding, a process from fold to fold between these two dimensions. The relationship and modulation between virtuality and actuality is not a contradiction, representation, or negotiation. Deleuze visualizes their relationship topologically, which means that both are situated next to each other and intertwined:
“Folding-unfolding no longer simply means tension-release, contraction-dilation, but enveloping-developing, involution-evolution.” (Deleuze, 2006, p. 9).

Organizing as Virtualization

There is a possibility of a different understanding of organizing in Deleuze's process ontology if we think of organizing as virtualization. Working with the concept of virtualization, we may theorize organizing by following Deleuze, Massumi, and other works on the abovementioned problems. Deleuze and Massumi provide ontological and theoretical concepts for a different understanding of organization, but they are too abstract, and their analyses of social processes are too narrow to think about the social only on the grounds of their approaches. To theorize organizing, we must elaborate the concept of virtualization by opening the discussion to social sciences; in this regard, organizational studies seem to be especially promising. They outline the active and productive effects of virtualization and show that organizing in process ontology is not only negative and repressive.

Organizational theories help to understand virtualization as modulation and – in a broader sense – as a mode of organizing virtuality. I will elaborate that not only there is a theoretical possibility of virtualization but also a way to show how virtualizing as organizing functions. My approach follows Bougen and Young (2000) to include case studies from organizational studies for a better understanding of Deleuze. There already are organizational studies and theories that work on virtualization but that not necessarily make it explicit. Nevertheless, these works provide new insights into the understanding and functioning of virtualization, as I outline in the following paragraphs, in which I will introduce three case studies that I read as studies on virtualization. Each of them opens new perspectives on the functioning of virtualization and gives the concept of virtualization new dimensions. The first study shows how virtualization function as emotions and pattern implementations; the second study analyzes the potentializing and depotentializing effects of economic modulations of miracles in circuses; the third study focuses on the de- and reterritorializing dynamics in social relations on the example of on credit cards and music. I chose studies on affects and economics because the ontological forces, especially affects, are often understood as non-economic or directed against economic value (e.g. Hardt & Negri, 2000).

Patterns and Emotions

It remains an open question how virtualizations exactly organize? How do they modulate the virtual? Case studies on emotions help to understand the functioning of virtualizations. I mentioned before that affect is a central force of actualizations, emotion is its counterpart (Massumi, 2002, p. 25ff.). Griffiths (1997) and Protevi (2009) – who follows Griffiths on that idea – understand “basic emotions” as a technique of the virtualization of affective relations. For them, “basic emotions” like fear and anger are “affect programs” (Griffiths, 1997, p. 77) or “modular agent[s]” (Protevi, 2009, p. 146):

7 There is already an increasing interest in Deleuze’s contribution to organizational studies, see e.g. Chia, 1999; Linstead, 2004; Lawley, 2005; Linstead & Thanem, 2007; Smith et al., 2018.
The central idea of affect program theory is that emotional responses are complex, coordinated, and automated. They are complex because they involve several elements. These are usually taken to include (a) expressive facial changes, (b) musculoskeletal responses such as flinching and orienting, (c) expressive vocal changes, (d) endocrine system changes and consequent changes in the level of hormones, and (e) autonomic nervous system changes. Emotion feelings and cognitive phenomena such as the directing of attention are obvious candidates to be added to this list. The affect program responses are coordinated because the various elements occur together in recognizable patterns or sequences. They are automated because they unfold in this coordinated fashion without the need for conscious direction (Griffiths, 1997, p. 77).

Emotions as a mode of virtualizations are an active and autonomous force that modulates affective relations by implementing patterns. Instead of a pattern, we may also use the terms “modules” or “programs.” Virtualization through patterns modulates bodily expressions, hormones, nerves, perceptions, and movements. Hence, virtualization synchronizes the intensity of affects, bodily feelings, reactions, and in the end, the rhythms and interactions among bodies: the “affect program is the coordinated set of changes that constitutes the emotional response” (Griffiths, 1997, p. 77). A virtualization through emotions is a trigger that takes control of the body or bodies. For instance, a “rage agent” (Protevi, 2013, p. 63) is such a pattern that has an incorporated action program with certain bodily reactions, intensities, and feelings who are typical for rage. Protevi (2017) uses the example of the so-called “berserker rage” in which a soldier in a specific zone will shoot at all moving things in order to kill immediately without thinking and reflection. In such moments, the body is the “hardware” (Protevi, 2009, p. 152) of the implanted pattern. Thus, on the one hand, virtualization is a mode of de-subjectification (Protevi, 2013, p. 75, 109). But on the other hand, virtualization is also a subjectification and simultaneously a collectivization because it synchronizes bodies. Virtualizations collectivize and therefore organize bodies through shared emotions and patterns: “collective political emotions as provoked via a process of entrainment – groups share emotions by getting on the same ‘wavelength’” (Protevi, 2014, p. 328). Synchronizations constitute and form relations through shared feelings, intensities, actions, or experiences (Protevi, 2014, p. 328ff.).

Through patterns, virtualization organizes and “directs the construction of assemblages” (Protevi, 2013, p. 73) in virtuality itself. Patterns are “defined by a layout of singularities in a manifold should be called virtual [better: potential] multiplicities, because they structure many spatio-temporally distinct intensive morphogenetic processes that result in widely different actual products” (Protevi, 2006, p. 27). A pattern is a specific multiplicity with a set of actualizations (Protevi, 2009, p. 17). Therefore, a pattern modulates and constitutes a concrete potentiality for social relations at a certain time and place by modulating the probability for further actualizations. Not every actualization is equally probable at every time and place and only specific forces with specific power and intensity will emerge in an actualization.

These case studies on affect modulation and emotions imply that virtualizations are autonomous, active, and productive organizing processes. In process ontologies, they are often only effects

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8 Ekmann's and Friesen's (1975) arguments are interesting for this discussion. They differentiate six typical affect programs by means of facial expressions. Moreover, Damasio (2004) differentiates between “basic emotions” and “cognitive emotions.” Basic emotions are automatic and precognitive emotion patterns, while cognitive emotions involve conscious reflections and control over the body.
of actualization with no own agency. Virtualizations are also immanent flat micro-modes of organizing and not emergent macro-structures that work from the outside on social relations. A virtualization can not only modulate and organize the actual expression of the virtual but also the virtual itself. Therefore, virtualizations implement patterns that organize the ontological conditions of social relations and their actual expressions. Patterns synchronize actual social relations by organizing e.g. bodily expressions and movements, feelings, interactions, and experiences. Patterns also synchronize the virtual by organizing the probability of actualizations and their specific forces, intensities, and directions. Organizing and synchronizations are not standardizations or forms of total control. They increase the probability of repetitions with few differences, but differences in social processes will nevertheless remain.

De-Potentialization in the Circus

According to Chia, every organization works like a virtualization – even if he does not use the term – and mainly reproduce the negative image of organizations. Chia gives a good definition of the first of two effects of virtualizations: “Each organizational effect … both limits and enables the possibilities for future potential configurations to emerge. … [O]rganizational acts create ripple effects which reach out far beyond their spatial and temporal scene of initiation” (Chia, 1999, p. 222). Virtualization modulates the conditions of future actualizations. Modulating virtuality both “opens” it – so that more and stronger actualizations are possible – and can also “reduce” the power and effects of future actualizations. To differentiate between these two fundamental modes of virtualization, I call the first effect on the virtual/potential “potentialization” and the other one “depotentialization” because they modulate the specific potentiality of the virtual. Below, I will present a case study on circuses that implicitly outlines virtualization as de- and potentialization. In the next part, the two other fundamental modes of virtualization will complement the one below.

In his study on the circus, Parker (2011) indicates how miracles and myths are organized for profit. The circus, he says, “is a place where miracles are engineered for money” (Parker, 2011, p. 566) – the emphasis is placed here on engineering. The circus is a complex economic organization that depends on a variety of patterns. The circus includes a variety of different jobs and labor division, including actors and animals. Interactions among humans and between humans and animals are hierarchically organized, and there is a competition between them. Furthermore, the circus depends on several infrastructures for transport, accommodation, meals, shows, and management, to mention only a few parts of this complex organization (see also Beadle and Könyöt, 2006). All parts, relations, and interactions are organized around the show in order for the show to become an economic and artistic success, a singular experience. Economic and artistic processes and imperatives are fundamentally intertwined here: in the circus, “magic and miracles are produced through economic and institutional mechanisms – that disorganization requires organization and vice versa” (Parker, 2011, p. 556).

Looking at Parker’s study from a Deleuzian angle, we may think about the emergence of the genuine new in circuses as a form of actualization. The specific nature of the circus is the production of miracles. For Deleuze, a “miracle” (Deleuze, 1994, p. 2) is another word for the actualization of the virtual. An actualization is a miracle because it is the emergence of the genuinely
Instead of actualization, Deleuze uses the term “becoming” as a creative process to stress the emergence of the new, for example new body capacities, interactions, relations, stunts, or collectivities. In a circus, subjects should experience the singularity of actualizations; they should experience events and things they have never seen before. They want to and they will see – if the circus fulfills its purpose – never seen before foreign and strange animals, very risky stunts, “monstrous” and “anormal” subjects, super funny clowns and jokes, and a variety of subjects with skills to do gymnastics or tricks no one else can. The show demonstrates and increases the emergence of genuine new capacities of bodies and interactions between actors, animals, things, and the audience.

Following Deleuze, it is also important that the emergence of the genuinely new is not a product of a single autonomous subject which is often called a “star” or “genius.” The genuinely new is the effect of an actualization, an ontological, active, autonomous force of the virtual: “innovations and creativity cannot be traced back to individuals (human beings or organizations). Instead, they emerge from preindividual … forces.” (Speolestra, 2010, p. 94) Only in assemblages of different entities does the genuinely new emerge.

The circus is an organization of virtualizations; without any virtualization and patterning, a circus would be an uneconomic and unartistic chaos or disorganization. An organization of the circus is necessary for an economically and artistically successful show. To increase its profit, a circus must increase specific moments of miracles and creativity, so it needs to increase the intensity and frequency of actualizations. This process of modulating the virtual may be understood as potentialization. A circus potentializes ontological forces of the virtual while repressing or reducing others that could not be integrated in organizational processes (that easily) to generate miracles that gain value and money. Non-exploitable processes of actualizations are disturbances of economic processes. Because of their relation to the virtual, they could never be completely modulated and adapted.

What follows is that ontological forces of becoming and actualizations in Deleuze’s ontology – and, in the end, the virtual – are not revolutionary and anticapitalistic concepts per se. The example of the circus demonstrates that these ontological forces can be integrated in economic processes. In modulations they are depotentialized or potentialized. The case study shows that the virtual/potential and actualizations are ambivalent in their effects because the virtual can generate value and money. Economic value and ontological forces are not necessarily contradictory, they can also support and reciprocally increase each other. In economic processes, actualizations assume the form of miracles, creativity, or potentiality for organizational management. As part of economic processes, the productivity and creativity of ontological forces are rationalized and directed. Economic modulations only increase exploitable effects of an actualization, other non-exploitable processes are minimized, along with their future actualizing. Especially neoliberal regimes of work and management use these ontological forces for generating profit and value. The virtual/potential and ontological forces themselves may become a commodity that can be produced, exchanged, or sold.

Speolstra (2010) overviews different forms of miracles in management. She differentiates between “transcendent,” “human,” and “immanent miracles.” Deleuzian miracles are immanent ones “that come from within rather than from without, are produced by nature [the virtual] itself” (Speolstra, 2010, p. 92).
De- and Reterritorialization with the Credit Card

In his case study on credit cards, Deville (2015) elaborates the agency of objects that virtualize in assemblages, and he hints at two other modes of virtualization. Social relations depend on the “stickiness” (Deville, 2015, p. 64) of objects. Credit cards have forces that can capture ontological forces like affects and constitute collectivities of different bodies, technologies, and subjects. For me, it is interesting that credit cards organize the actual effects of affects and collectivities by connecting them to an object. Credit cards implement “modes of ordering” (Mol, 2002, pp. 61–71) and therefore synchronize bodies and ontological forces. The economy itself is for Deville a process of capturing, a mode of modulation:

Moments of affective capture are those in which the diverse and often unnoticed relations that are constantly composing and recomposing the affective are pulled into the more readily accessible domain of perception (although affect is never fully captured; there is always something that escapes). Emotions, which have been the object of much affect theory, are one expression of this process of capture …. However, there are other possible expressions. As we will see, forms of economic calculation may too merge through the capture of affect. (Deville, 2015, p. 12).

Deville (2015, p. 171f.) focuses in his case study on affects, emotions, and economic interests and calculations. They are inseparably assembled around the credit card. Credit cards create and organize a variety of new and non-intended relations among them:

- to other household members, to specific points of domestic architecture – the letter box, the phone, folders and storage boxes, to name but a few – to particular emotional states, to particular spaces, futurities, pasts, spaces of anticipation, feelings of shame and regret, to ill health, to job loss, to a lack of calculative know-how/desire, or to a sheer over-optimistic assessment of future earnings prospects (Deville, 2015, p. 41).

Deville deconstructs the idea of a rational and autonomous homo economicus and analyzes how credit cards constitute a different economic subject: the consumer, the subject of debt. During subjectivations, consumers personalize ontological forces and reduce their autonomy.

Credit cards have “lures of feeling” (Deville, 2015, p. 35ff.) that are strategically used to organize the interactions of subjects to maximize profit. These lures capture affects, and in doing so, they trigger both negative and positive emotions. Positive emotions emerge when consumers buy goods that they normally could not afford when they would consider the matter thoroughly. With credit cards, consumers may buy goods and forget about consequences (Deville, 2015, p. 26ff.). Negative emotions arise from fear of borrowing and the negative consequences if they are unable to pay their debt (Deville, 2015, pp. 44ff., 118f.). From the subjects’ viewpoint, the negative and positive effects of credit cards may be understood as modulations, folds – or opennings and closings – that submit the subjects’ life to a certain rhythm (Deville, 2015, p. 57ff.).

The STS-perspectives of Deville and Gomart and Hennion (1999) focus on the agency of objects, but also on the performativity of social relations that create a consumer or a passionate subject. Subjectivation personalizes ontological forces and reduces their autonomy. Modulations are integrated in constant and permanent processes. They must be repeated to successfully organize.
Performative processes are part of assemblages with techniques. The “social-technical ‘dispos-itive’ of passion” (Gomart & Hennion, 1999, p. 221) consists of subjective attitudes, rituals, and group processes. On the one hand, these organizing processes bind bodies together and synchronize them, therefore reducing the dynamics among bodies. On the other hand, organizing is not only stabilizing, but it also intensifies and expands bodily capacities and relations among bodies. Such a performative process of virtualization exceeds the dichotomies of passive/active, on/off, free/determined, and repressing/dominant. In modulations, some relations and capacities are increased, some relations change, and some new ones emerge.

The case study on credit cards has some major consequences for understanding virtualization. The credit card organizes social relations but could never capture and modulate all ontological forces like affects. Social relations that consist of bodies and forces are centered around the credit card. These processes of centering could be called “reterritorialization,” after Deleuze and Guattari (1987, p. 501ff.). Reterritorialization is a synchronization of bodies, relations, and forces. But there are always forces that counter credit cards’ reterritorializations. These forces are called “determinizations” (Deleuze and Guattari, 1987, 501ff.). Bodies, subjects, technologies, and social forces could never be completely synchronized. A deterritorialization is an opening and becoming of collectivities. Deterritorializations in the case studies are e.g. political organizations against economic demands, individual margins, information centers, or chats that could be used to organize protests against credit card companies (Deville, 2015, p. 176ff.). Reterritorialization and deterritorialization are in an indissoluble tension. Economic forces and antagonist counter-forces are built around the credit card. They are constitutively related. Each reterritorialization follows a deterritorialization and vice versa. Consequently, the social and organizational processes are not constituted by dichotomies or the question of neither/nor. Organizing is a continuity, threshold, oscillation, and variation between re- and deterritorialization but no stable structure.

Organizing the Virtual

These case studies help to understand organizing as virtualization in Deleuze’s process ontology. Virtualization organizes the potentiality and dynamics of the social and collectivities; it is a creative process, too (Levy, 1998, p. 17). Moreover, virtualization is an ambivalent process because its modulations oscillate between forms of control and openings of the virtual/potential. It is not repressive or negative, nor is it an opposite and contradictory force against the virtual and actualization. Virtualization is – like actualization – a productive and active process of modulation but in “another direction.” Actualization is the expression of the virtual in the actual, while virtualization is the folding back of the actual in the virtual. Such an understanding of organizing has several consequences, especially for the understanding of causality, emergence, and different forces of the social.

Quasi-Causality and Meta-Stability

Virtualization does not determine, it modulates. Modulation only influences the probabilities of the virtual, its potentiality, or reserve. The organizing of the virtual is the organization of becoming and creativity. However, modulating the probability only changes the probabilities of further
actualizations, which means that modulation never completely organizes the virtual and future actualizations. Ontological forces remain undetermined and unforeseeable until the end. They are events, they can “ignore” or “jump over” their actual conditions, and they could never be fully part of linear action-reaction circuits. There is always a chance of an "overflow," (Czarniawska-Joerges, 2012), an “excess,” (Löfgren, 2007), or a “surprise” (Chia, 1999, p. 223) of the virtual in the actual that could never be fully controlled. Massumi understands affects as “autonomous” and “asocial” to underline this argument. The virtual is always more than actualized even if it is always organized like my article try to explain. Again, Massumi employs the term “quasi-causal” (Massumi, 2002, pp. 227, 238; 2015b, p. 175) to describe this specific causality of ontological forces like affects.\footnote{Process ontologies problematize the common understanding of emergence and causality. To clarify, Protevi analytically differentiates between three forms of emergence: the “diachronic emergence (order)” of an actualization, the “synchronic emergence (novelty)” (Protevi, 2006: 20) of a virtualization, and the “transverse emergence” (Protevi, 2009: 10), which is what I would call the modulation between virtuality and actuality (see also Protevi, 2009: 8ff.).}

If the social is a process of modulation and influenced by ontological forces, the conditions of organizing engender social change. Organizing processes cannot constitute fixed, closed, stable, and constant assemblages, forces, or interactions in the social. The social must be understood as “metastable” (Simondon, 2017, p. 177) or “quasi-stable structures” (Tsoukas & Chia, 2002, p. 580) or “nomadic organizations” (Styre, 2001, p. 5ff.). Modulations can temporally stabilize the social as not everything in the social is changing all the time. Even so, there are always ontological forces that escape their modulation and contaminate organizations with new potentials. Through modulations between the virtual and the actual the social is permanently changing and expressing new potentials in bodies, collectivities, or relations among different entities. The social permanently changes its intensities, relations, and forces; it is constitutively loose, open, and not closed or fixed.

Different Modes of Virtualization: Emotions and other Modes

To look only at ontological forces in general is too abstract and not very fruitful if we want to understand what difference different forces make in organizations. Not only are there different ontological forces, there also are different forces of organizing and virtualization. In this article, I chose affect as an example of an ontological force. Affects are the most important forces with the strongest impact in the social for Deleuze and Massumi. I did not differentiate between different kinds of virtualizations. A closer look at affect and affect modulation can give first hints how such a systematization could look like.

If we look at affects, Massumi (2002, p. 23ff.) develops this term in opposition to emotions. Affects are ontological, intensive, autonomous, and preindividual forces of the virtual; they are actualizations that express new potentialities; meanwhile, emotions are qualifications and significations of the intensity of affects. Affects change their ontological status and lose their power when they became emotions. Emotions cannot be reduced to passive expressions of affects and their opposite; they also are productive virtualizations and therefore permanently and reciprocally folded with affects. As such, they actively modulate the actual expressions of affects and their virtual conditions. Massumi does not have a proper term for emotions. Following Griffiths (1997) and Protevi’s (2009) case studies, we may understand emotions as modes of affect virtuali-
zation. Emotions work through rhythmic patterning or implementing modules in dynamics of bodies and collectivities.

Emotions are only one mode of virtualization among many. Further research is required to understand different modes of virtualization and organizing the virtual/potential. There is no reason why should every social relation or force not be queried about their specific effects as virtualizations. From the process ontological perspective, the whole reality is influenced by the virtual and therefore all actual forces are its specific modulations. It would be very interesting to inquire into the capacities of different forces so as to modulate the virtual/potential like suggestion, contagion, communication, interaction, need, reflection, or agreement.

Conclusion

Organizations in process ontology work as virtualizations. Virtualization is a mode of organizing the virtual. Organizing processes not only influences the actual but also the ontological dimension of reality: the virtual. From this perspective, organizations are an active and productive process, and not a repressive system or structure. Ontological forces modulate social conditions and vice versa. Thus, an organization is not stable but “meta-stable.” It is permanently processing modulation and changing its virtual/potential and actual conditions. If the actual always modulates the virtual, this should not be seen as analytically or politically problematic at all. Modulation can reduce or enhance the virtual/potential of ontological forces in a specific situation, collective, or body by changing the actual. Moreover, what modulation can do is increase or decrease the intensities of ontological forces. But these ontological forces could never be completely determined. The modulation of ontological forces is never fully successful; it is not possible to control the virtual completely because the virtual is the ontological dimension of all coming changes and always more than the actual dimension of reality and its modulations.

For organizational theories, especially those inspired by postmodern philosophy, it is promising to consider in future research the modulation of the virtual, along with the conceptualization and understanding of the actual in process ontology. The potential for sociological approaches lies in research on the actual dimension of the social in its relation to ontological conditions. Social sciences could help to fix the blind spot of the social in process ontologies after Deleuze. Because of this specific relationship between the virtual/potential and the actual, we should analyze their relations more topologically in their tensions, interactions, and even ambivalences. We should focus neither on clear binary conceptualization nor on explicit contrasts like virtuality/actuality, actualization/virtualization, active/passive, positive/negative, presence/absence, non-modulation/modulation, or relating/unrelating. Modulations change the relations between the virtual and the actual. The intensity of ontological forces is in permanent variation but always modulated.

References


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