In Deep Waters. Process Theory Between Scylla and Charybdis

In this paper, I propose a middle way between current process and substance theorising as I argue that both "pure" views are fraught with theoretical problems. I base my proposal on the ontologies of Aristotle and A.N. Whitehead, who both maintain that being and becoming are equally important for a comprehensive analysis of change processes. Drawing on their insights, I develop a conceptual frame that distinguishes between change and becoming, and proposes to use the pairs of potentiality-actuality and activity-relationality as notions that are less fraught with conceptual baggage and more relevant empirically than the distinction between substance and process.

Word count: 10497

As we all know, the ancient Greeks had a really good time. They were unbothered by disciplinary power, iron cages (except the obvious sort), or high reflexivity. To compensate for that, their cruises were sometimes cut short – often terminally so - by two horrible monsters called Scylla and Charybdis. This bad luck also befell Odysseus on his extended cruise:

> "Scylla was a supernatural creature, with twelve feet and six heads on long, snaky necks, each head having a triple row of sharklike teeth, while her loins were girt with the heads of baying dogs. From her lair in a cave she devoured whatever ventured within reach, including six of Odysseus' companions. […] Charybdis, who lurked under a fig tree a bowshot away on the opposite shore, drank down and belched forth the waters thrice a day and was fatal to shipping. […] The shipwrecked Odysseus barely escaped her clutches by clinging to a tree…" ("Scylla and Charybdis" 1993)

More prosaically inclined fellows say that Scylla was a rock and Charybdis a maelstrom in the Western Mediterranean Sea. Whatever the case, let us remember that Odysseus clings to a tree…

The Odyssey: Analysing Organizational Change

It is probably fair to say that, in terms of quantity, the literature on organizational change has exploded since the 1980s. For these last three decades, change has been the most pervasive subject in organization studies, sociology, and social theory. However, this interest is not restricted to academia as most of the major public discourses (e.g. globalisation, breakdown of post-war order, cloning and genetics) relate to change as well. This conceptual move is so overpowering that terms like "static", "stable", "fixed" or "eternal" have even gained a

2

pejorative status. For a company to be pronounced static in this world of hyper-competition seems to constitute a near death sentence. Employees deemed resistant to change and learning are treated as either dumb or obstinate and in sore need of re-education. Academics are expected to publish new insights quickly and copiously – and the best way to do this is by researching into change because change, by definition, is new every day. Thus, a search for the subject of "organizational change" in the EBSCO Business Source Complete database renders over 16,000 articles, while its counterpart "organizational stability" is not even listed. In contrast to this rather overwhelming verdict on the importance of change versus stability, the present paper seeks to rehabilitate stability as a realist, ontologically founded concept of equal importance as change. It does so by connecting to current discussions on change and process which have been given a new twist by the emergence of approaches based on process philosophies within the last decade (see, for example, the special issues of "Organization" 1/2002 and "Organization Studies" 6/2002, the 1st Organization Studies Summer Workshop in 2005 and the annual International Symposia on Process Organization Studies since 2009).

The field of organizational change has indeed become so vast that meta-analyses are needed to structure it. The meta-analyses on change published in the last decade (van de Ven and Poole, 1995; van de Ven and Poole, 2005; Weick and Quinn, 1999) all point to a similar distinction. This distinction - although I do not approve of it for reasons given later in the paper – thematises the opposition of stability versus change, or substance versus process. Thus, Weick and Quinn (1999) talk about episodic versus continuous change, van de Ven and Poole (1995) distinguish between a prescribed and a constructive mode of change, and ten years later van de Ven and Poole (2005) posit organizations as social entities against the view that organizations are composed solely of organizing processes. In these typologies, the respective first term portrays a form of change that is, one way or the other, embedded in stability: stable conditions, stable patterns, stable environments and/or stable substances. The

respective second term, on the other hand, gives priority to change itself and either negates stability or relegates it to the observer's mind. The distinction is taken up by process theorists[1], for instance Bakken and Hernes (2006), Chia and Tsoukas (2002) and Chia (1999).

In the paper at hand, I shall take a closer look at the two major camps and indicate some of their shortcomings. As so often with "versus"-classifications, the differentiation between the two camps is, first, far less clear cut than I give credit for below. I believe, however, that the critique presented applies to the authors quoted and to a number of authors arguing in the same vein. Second, the classification is proposed and upheld by one side only, viz. the process theorists. Apart from substantial concerns, one reason for this is certainly political, an attempt to legitimise a new field of study by attacking the reigning paradigm. Substance theorists, on the other hand, seem to be interested neither in the distinction nor in a critique of process theory as such. For that reason, most points of critique of the substance view are taken from process theorists, whereas most points of critique of the process view are mine. Although I consider myself a process theorist, I think organizational process theory in its present state would benefit from the more subtle conceptual distinctions I shall propose in the middle sections of this paper. Specifically, I should like to stop the field revolving around the substance/process or being/becoming distinction and move on to more fruitful conceptual tools. At the end of the paper, I will revisit the literature introduced at the beginning and compare it to my model of organizational change and process.

The Scylla of Substance: A Process Critique

Barnett and Carroll follow the classical substance view by defining: "Organizational change involves, by definition, a transformation of an organization between two points in time." (Barnett and Carroll, 1995:219). To them, an organization "changes when and how its

managers decide it will" (Barnett and Carroll, 1995:220), allowing for unexpected outcomes and, in some cases for change as an unintentional by-product of other decisions and actions. In line with their theoretical background, they consider change, especially "core" changes of an organization's mission, authority structure, technology, or marketing strategy, very risky and prone to result in the death of the organization, which is the central event to be captured empirically. On a more abstract level, the underlying model is relatively simple: the organization is a stable or inert, quite unproblematic "thing" that suddenly "jumps" (i.e. enters a change process), and may eventually be fatally damaged on landing[2]. The moments t_1 and t_2 (before and after the jump) are empirically relevant, and change is the difference between the two. However, the little analogy of the jump immediately shows the problem of the assumption: the essentials of a jump, i.e. a movement, cannot be captured by describing a person standing still in a place before and after. What can be measured is the length of the jump, but "three meters" is not a description of the unfolding of a jump, however useful the figure may be in certain contexts. This is largely why change, process theorists (for example, Chia, 1999; Chia and King, 1998) would argue, cannot be reduced to two static states linked by a formal operation, indeed, it loses its essential qualities in the process. Time series measurement in general does acknowledge this fact when it prefers short intervals between t_1, t_2,… (and thus more points in a given time span) over long intervals (and fewer points in a given time span), considering the former to be more precise. What actually happens is that the interval between t_1 and t_2, *which is change*, is more and more reduced, ideally approximating zero. Hence, the basic aim of the model is to reduce and ignore change rather than describe or explain it. A process view, on the other hand, brings the process "in between" the two states to the focus of attention to the extent that the two states appear only as outcomes or temporarily stabilized instances of it.

In my second example, Greenwood and Hinings also define organizations as substances in my sense portraying them as "heterogeneous entities composed of functionally differentiated groups" (Greenwood and Hinings, 1996:1024) that are embedded in an institutional context. These organizations normally reproduce themselves and their beliefs (convergent change), but sometimes also enter phases of radical change. The incidence and pace of radical changes varies across and within institutional sectors. The institutional context is crucial for these developments because ultimately "[t]o survive, organizations must accommodate institutional expectations…" (Greenwood and Hinings, 1996:1025). Change, again, is the exception to the rule, the enigma or explanandum leading to the basic question "…how does institutional change occur?" (Greenwood and Hinings, 1996:1028, quoting DiMaggio and Powell). This view also meets with some problems, perhaps most evident in the choice of language. Sandelands and Drazin (1989) have directed attention to the use of "achievement words" like "survive" and "adopt", which suggest agency where none can be found. The problem, to them, is that we take abstractions, for example organizations, to be real things or actors and employ our semantics accordingly. Analysing the language of exogenetic or evolutionary perspectives of organizational change, they conclude:

> "…the word organization is used in two ways; as a name for the fact that people or actions are related in a pattern, and as a name for a thing that is acted upon by the environment or by strategic decision-makers. This second use is a hypostasization; it involves treating an entity that cannot be denoted as though it could be denoted. This problem stems from the fact that language reifies; the act of naming produces entities that are easily mistaken as material and do-to-able things." (Sandelands and Drazin, 1989:464)

The two examples from the literature may serve as illustrations of the problems the substance view has with the notion of change; problems that have been noted by a number of

philosophers over the centuries, for example Locke, Leibniz and Hegel (for a brief overview, see Rescher, 1996). The problems are caused by the very definition of the term. Since antiquity, substances are defined as self-sufficient (i.e. not derived from or reducible to anything else) and as capable to affect other things (i.e. as agents). This goes back to the seminal definition by Aristotle, which is still used today (for example, Robinson, 2009):

> "Substance, in the truest and primary and most definite sense of the word, is that which is neither predicable of a subject nor present in a subject […] Thus everything except primary substances is either predicated of primary substances, or is present in them, and if these last did not exist, it would be impossible for anything else to exist." (1993a:6).

What Aristotle says here is that a substance is an individual "thing" like the ones we find as grammatical subjects in particular (i.e. non-general) statements. Thus, "Socrates" is a substance. What is predicable of a substance, for example attributes ("brown"), relations ("bigger than") or kinds ("man"), are not substances in the primary sense. (For a more detailed and subtle discussion of the various implications, see Robinson, 2009). The next idea is that substance is primary to what can be predicated of it and functions as a "carrier" of its predicates. Thus, we can "load" Socrates with many attributes: old, funny, wise, tall, etc., while the attributes, vice versa, could not in the same sense be "loaded" with: Socrates, Philippos, Menelaos etc. Hence, predicates need substances as carriers exist, while substances need nothing else to exist. Young Socrates existed, young as such does not exist in the same way. The Aristotelian definition then was taken up by medieval scholasticism (de Vries, 1983), for example in Thomas Aquinas' {, 1993 #2462:17} rendition "A substance is a being that subsists of itself", and has informed the debate ever since (for a history of the concept see Halfwassen et al., 1998). If substances are ontologically prior to everything else, they

cannot be caused by something because a cause precedes its effect. They are, hence, self-sufficient. If they cannot be effects, they can only be causes. Thus, they are natural agents. Hence attributing an organization the status of a substance almost unfailingly invites achievement words and hypostasization because it implies that the organization is an agent. Furthermore, because of the self-sufficiency, causality is a major problem for any substance view. Once entities are established as self-sufficient, it is difficult to explain how and by what they should be affected at all. Process theorists would criticise that any (temporal or causal) link to another substance has been severed the very moment an entity has been declared a substance. It now stands for itself, by itself, and has to be (causally) re-linked, which takes a major theoretical effort. Substance theories also tend to be prone to what Bhaskar (Bhaskar, 1991; Norrie, 2010) calls "ontological monovalence". This refers to the ontological position that negativity or absence is denied recognition as a category of being because being is solely defined in positive terms.

The Charybdis of Process: A Critique of Process

Having established why it is clever of the average sailor to steer clear of big, stable, cutting-edge rocks, let us now take a closer look at the second monster. In the subsequent sections, I will concentrate on three aspects of process theory as presented in organization theory that I deem problematic.

The swirl of language

Reviewing the organizational literature on process, especially the authors propagating a "strong view" (Chia, 1996; Chia, 1999; Chia and King, 1998; Clegg et al., 2005; Cooper, 2007; Drazin and Sandelands, 1992; Linstead and Thanem, 2007; Nayak, 2008; Shotter, 2006;

Tsoukas and Chia, 2002; Wood, 2002; Weick, 1969), the first problem continuously remarked upon is one of language and concepts. Chia and King (1998) state that "We are not good in thinking movement." Weick (1969) suggests talking in verbs rather than nouns to capture the nature of organizational reality. Tsoukas and Chia (2002:569) ask how "change [can] be thought of in its own terms". Their common concern is that academic and everyday language, due to the persistent influence of the substance view, relies on apparently stable concepts like things, persons, and organizations, and is thus ill-adapted to express a process view. There is, however, disagreement on whether the disease can be cured. Nayak (2008:178) talks about the "non-representational, hidden and latent nature of reality" that is, in a quote of Bergson "consequently inexpressible" (Nayak, 2008:179). This implies that language, to the extent that it operates with fixed and stable concepts, cannot capture fluid reality, marking the most radical, and ultimately pessimistic view on process. A more conciliatory approach starts from the same assumption, but adds that new methods can be devised, a new language invented in order to express processual reality. This is prominently Bergson's approach, echoed by Chia or Nayak. It entails the method of "intuition". Intuition, very briefly, is a kind of introspection focussing on inner "flows" and the inner experience of *durée*. This focus is then used to "get into" other phenomena and understand/empathise their flow and *durée* (for a detailed description see Nayak, 2008).

I believe both approaches have their problems. The first makes process unavailable, similar to Kant's *Ding-an-sich* (which, for all we know, may even be processual!). We cannot know it, we cannot speak about it, and perhaps we should heed Wittgenstein's advice at the end of his *Tractatus*: "Whereof one cannot speak, thereof one must be silent." As a theory, it is not refutable, but as it is incommunicable, it is quite useless for scientific analysis. The second approach is more viable as it suggests the possibility of accessing process after adjusting one's way of perception. The problem of communication, however, remains. This time, it is

not a general incommunicability of the phenomenon, but the inherent solipsism of the method. Intuition and introspection as experiences are incommunicable as they are always *my* intuition, which differs from *your* intuition. I may translate my experience into language after I have had it but translating it I already change it - and probably lose the important bits. This problem is not limited to intuition, but can be found in most methods that try to get "in sync" with reality in a pre-conceptual manner from Mediaeval mysticism to Husserl's *epoché*. While the experience in itself can surely be made, it cannot as such be communicated. Communication, however, is the coin of knowledge and of science.

On a more general plane, however, I should like to question the basic assumption that a change in our ontological perspective necessitates a change in language at all. The proposition becomes attractive if one, like Bergson (1993; 1911), dichotomises between matter on the one and lived experience on the other hand, and accordingly between traditional analysis on the one and intuition on the other hand. It is tempting to reason that as we have progressed too far towards the one pole of the continuum, we must now reverse, discard our tools and find new ones. This thinking in opposites, however, is not a necessary ingredient of process philosophy, as Whitehead (1985) shows. To him, language is always elliptical, never capable of rendering the whole of experience, always cutting out, abstracting something. He admits that traditional philosophy has led us to believe that, for instance, the subject-predicate pattern of our language represents an ontological fact about particular substances "doing" things. He maintains, however, that we are perfectly capable of "rethinking" this proposition and severing this relationship. Whitehead is a "natural realist" (Hoffmann et al., 1992) in that he holds, against Kant, that we can and do experience process immediately, and against critical realists[3] that we can do so without transcendental reflexion. His tenet is founded on the presupposition that human beings are in no way different from the entities that surround them. There is, in consequence, no ontological categorical difference between culture (noumena)

and nature (phenomena) or experiencing subject and experienced object. Every being experiences and is experienced by others. This experiencing is the integral part of an entity's becoming, crudely speaking, it *is* because it *experiences*. In such a scheme there is no place for transcendence as entities are always deeply embedded and immediately affected by what is going on around them[4]. Human perception can reflect and distance itself at later, more advanced stages of perception, then involving symbols and language, but its original input is the world as unmediated process. Thus, language is not in our way when we perceive process and communicate our perceptions. It is our interpretations of language that may get in the way, but interpretations can be changed.

The swirl of potentiality

Every new theory comes with a promise. In the case of organizational process theory, Tsoukas and Chia (Tsoukas & Chia, 2002:568) name even three: a more complete understanding of the micro-processes of change, learning how change is actually accomplished, and producing more successful change programmes. Of the three, I believe the second promise to be inherently problematic. Tsoukas and Chia (quoting James) criticise traditional explanations of change as "postmortem dissection" that only explain ex post facto why an organization has changed the way it did. They complain that "…we do not know enough about how change is actually *accomplished*. […] If organizational change is viewed as a *fait accompli*, its dynamic, unfolding, emergent qualities (in short: its potential) are devalued, even lost from view." (Tsoukas & Chia, 2002:568). While I agree that change can and should be attended to on the micro level, I do not think process theory can make good on the promise of potentiality. To be more precise, although process theory can raise the issue and sensitise readers to the existence of potentials, it is no better equipped to analyse them ex

ante than substance views. This is because this is not a matter of methods or methodology, but of logic. Let me explain this.

What is potential is, by definition, not actual. The difference between the two states lies in their determinacy, i.e. we can say about something actual that it is x or that it is not y. We cannot make a similar statement about something potential because it "is" not in the same way as something actual is. We cannot observe potentials, only surmise from prior experience, for example, that a piece of wood is a potential chair or a drunken driver a potential danger. Even the most elaborate technical simulations are based on functions and parameters that are derived from prior tests and observations. In consequence, their predictions are bound to be probabilistic. An engineer may predict that a particular aircraft will explode, but that is still a probabilistic statement, and any statistician will confirm that even a probability of 1 does not mean that the event is certain to happen. Or, to take an example from logic, the statement "It will rain tomorrow." is neither verifiable nor falsifiable. All we can do is wait until tomorrow and then verify or falsify the statement "It rains today." These examples show that potentiality cannot be empirically described or analysed in the same way as actuality can be. We can, of course, take the pragmatic view and say that a probability of 1 is good enough for our purposes, which means acting *as if* the prediction was a statement about an actual occurrence. In most real-life cases, that is what we do. In categorical terms, however, there is no way to bridge the gap between potentiality and actuality.

Back to Tsoukas and Chia, that means process theory is no better off than substance theory. No matter from which ontology you argue, the categorical difference between potentiality and actuality remains the same. No matter which (process) methods one adopts, one will not bridge the gap because it is not a matter of method but of category. We cannot grasp potentials empirically except as probabilistic predictions or after they have been realised (ex

post facto). And indeed process theory, in another context, states this need for ex post analysis when it talks about "heterogeneous becoming" (Chia, 1999:218), "difference in kind" (Nayak, 2008:179), or "concrescence" (Whitehead, 1985): All these processes have a unique and novel ingredient that is, by definition, unforeseeable. It is not only new in the sense that it is in the future, but in the sense that it is different from what came before. As such, it cannot be predicted or inferred but only observed after it has been realised (ex post facto). It is, consequently, only with regard to the conceptualisation of potentials, not the prediction, that a process view has an advantage over a substance view. Substance views have difficulties integrating potentiality because their primary entities (i.e. primary substances) are perfectly actualised entities that carry no potentials. Process, in contrast, always implies a movement towards something that is not yet actualised.

In any case, as I have stated at the beginning of this section, potentiality is an important feature, and process theory is right to sensitise readers to its significance. I will come back to a discussion of potentiality and actuality later on.

The swirl of history

Process theory draws much of its charm from the – correct - analysis of the errors of the substance view. Bergson (1911), for example, devotes far more space to the critique of the existing paradigm than to the discussion of his own view. In the same vein, most organization scholars derive the justification of their process view from the refutation of the substance view. While I have no objection to the procedure in general – after all, regicide is considered good practice in science – I am somewhat uneasy about this special application. Regicide only works if there is (exactly) one king. If there are more contenders, you would have to kill them all in order to gain the throne, which is far more messy and cumbersome.

The same is true for substance and process views. Establishing the process view through a critique of the substance view only works if there are no other contenders. Organizational process scholars sometimes create this illusion by going back to Parmenides and Heraclitus as the two most prominent proponents of the respective views. They then portray the whole history of Western philosophy as "little more than a continuing series of footnote attempts at synthesizing these two great but apparently irreconcilable intellectual traditions." (Chia, 1999:214) This view, I think, is misleading. Even in antiquity, Heraclitus and Parmenides were considered to be extreme in their views, and almost all authors, most notably and influentially Aristotle, posited themselves somewhere in the middle between the two. As I cannot enter into a full-blown philosophical discussion here, let me cut the argument short with an far more cautious assessment of the process philosopher Rescher:

"Though its antecedents reach back deep into classical antiquity, [the doctrine of process philosophy] as such is a creation of the twentieth century…" (Rescher, 1996:1)

And on the historical background:

"Heraclitus may accordingly be seen as the founding father of process philosophy […]. And the static system of Parmenides affords *its sharpest contrast amid the most radical opposition.*" (Rescher, 1996:9, my italics)

There is more – a lot more - to the history of Western philosophy than just "nothing but being" and "nothing but becoming".

To summarise, what I take from this critique to my own model is the conviction that no new or special language is needed to theorise process; that potentiality and actuality are important concepts, but in logical and ontological terms and not with regard to their empirical-predictive capacity; and that there are not just two ways of solving the substance-process problem. In the subsequent section, I shall discuss some authors trying to conceptualise a third (fourth and fifth) way. I will begin by introducing some conceptual distinctions that are important for my "being-becoming" model.

A Very Greek Concern: Conceptual Distinctions and Ontological Oppositions

The original philosophical problem concerning becoming is easy to state but difficult to solve[5]. When we say "Something becomes." we imply that there already *is* something that then *becomes*. However, if something already *is*, there is no need for it to *become*. On the other hand, if we suppose that there is nothing in the beginning, it is difficult to explain how the process of becoming should start at all. This is captured in the old formula of "ex nihilo nihil" (nothing springs from nothing), but as much present, for example, in the first law of thermodynamics, which states that the energy of a closed system is conserved and cannot be increased without input. In this section, I want to turn to solutions proposed by Aristotle, Thomas Aquinas, and A.N. Whitehead, who have tackled the problem in similar ways[6].

Aristotle (Brentano, 1975; Buchanan, 1962; Sachs, 2001; Aristotle, 1993c; Aristotle, 1993b) distinguishes between two meanings of the term "becoming", which coincide with two different grammatical forms. One takes "becoming" to be an intransitive verb ("Something becomes."), the other takes it to be transitive ("Something becomes something else."). In the first case, something new is established, while in the second something already existing

changes into something else. Aristotle reserves the term "becoming" in a narrow sense (*genesis*) for the first case, and refers to the second as "change" (*kinêsis*[7]). According to this definition, change presupposes a particular (i.e. a being), which then changes in some way. Becoming, on the other hand, is created from nothing, or more precisely, from non-being. Aristotle's idea here is that in the process of becoming a potential is realized. A potential, however, is by definition not actual because it lacks a number of attributes that define being (quality, quantity, time, location, number etc.). In this sense, it can be characterised as non-being. Hence, becoming characterises a transition from non-being to being, or from potentiality to actuality. This also marks the source of our problems to describe a process of becoming as we cannot apply the attributes of being to it. Change, on the other hand, does not face these difficulties as it takes place in the realm of being, with "beings" being changed into other "beings".

Moreover, change is in physical time in a way becoming is not. This is a very challenging distinction as it requires the conception of a process, i.e. a succession of before-after, that is not temporal. The idea is introduced, with many examples but still conceptually vague, by Aristotle in his "Metaphysics" (Book VII). He describes a number of processes in which an organism or a *gestalt* comes into being, for example a sculptor chipping off marble from a block to make a statue. The temporal problem with these processes is that although we can determine a moment in physical time where we add (or chip off) a part, we can not determine the moment in time when the *gestalt* or the whole-that-is-more-than-the-sum-of-its-parts appears. A modern echo of this may be the discussion at which point in time a lump of cells in a woman's womb becomes a human being (with the right to live). Whitehead (1985:68f and 283) takes Aristotle up on this[8] and uses the notion of "quantum" to refer to the fact that becoming is an extended process (i.e. has before and after), but cannot be divided like a temporal process. That is because "Each phase in the genetic process presupposes the entire

16

quantum" (Whitehead, 1985:283). This state of affairs is different from change in physical time, where we can divide and add at any point in time. If we look at, for example, a marathon runner, we can attribute a moment in physical time to each of the steps without having to take the whole of the run into account.

Thomas Aquinas (see Pöltner, 2001) makes a similar distinction (for a comparison see Table 1) between becoming as a process of production (*mutatio*) and becoming as an event (*creatio*). An example for the first process is a builder building a house. We can distinguish a phase of production in which the house becomes from a phase of being in which the finished house sits on the ground. In this case, being is the result of becoming, while becoming is a process of change from one being (bricks) to another (house). In Thomas's words, the cause of the becoming or building of the house (*causa fiendi*) is different from the cause of its continued being (*causa essendi*) as the builder is responsible for the former, but not for the latter. The second process, which Thomas refers to as *creatio*, on the contrary, finds being and becoming happening at the same time. An example for this would be an act of communication or any other event, which is (only) as long as it becomes. The reason is that its *causa fiendi* and *causa essendi* are identical. Moreover, as with Aristotle, we find the idea of indivisibility in this second process of becoming for people do not participate in a talk by claiming an individual part of it. Although a conversation normally takes turns, the process of communication itself cannot be divided.

In Whitehead's ontology, as already indicated, the distinction can be rendered as change in time versus timeless becoming. To him, change can only happen if there is a minimum of continuity to posit it against because change involves a comparison in time. We say, for example, that John has changed when we compare what we see of him today with our memory of him some time ago. For this reason, actual occasions (the ultimate building blocks

of Whitehead's cosmos) cannot change because they perish the moment they come into being. The only entities that can suffer change are enduring objects, which consist of "strings" or "webs" of actual occasions linked together in a certain way over time (for example, the identity of a person being made up of all her actions or decisions over time). As each of its actual occasions differs from all the others, but at the same time the whole complex retains some identifiable "gestalt", we can perceive the enduring object as changing. Timeless becoming (concrescence), on the other hand, describes the becoming of the actual occasions themselves. This process is a transition from indeterminateness to perfect determination, or in other words, from potentiality to actuality. As I have argued before, such a transition is not in time.

INSERT TABLE 1 ABOUT HERE

To sum up, it makes sense to distinguish between change on the one and becoming on the other hand. Change – Aristotle's *kinêsis*, Thomas's *mutatio,* Whitehead's *change* - would refer to an already existing entity that undergoes some modification but continues to be recognised as the same entity. Becoming (*genesis, creatio, concrescence*), on the other hand, would refer to the emergence of new entities. It is an event that perishes as soon as the process of becoming is finished and the activity maintaining the event ceases. It is important to note that in what follows I will use "becoming (*genesis*)" to refer to this latter concept, while I will use "becoming" alone to refer to the broader, non-terminological use.

The distinction may, at first glance, look like a repetition of the process-substance debate with change taking the substance part and becoming the process part. However, it is not, for none of the ontologies I present here – from Thomas's "substance philosophy" via Aristotle's in-between solution to Whitehead's "process philosophy" – forces the reader to choose between

the one or the other aspect. Both change and becoming are necessary to make sense of the empirical world around us. The next section will dwell a bit more on the ontological reasoning behind this proposition.

Ontological Oppositions

Having established the conceptual distinction between change and becoming, I now want to take a closer look at the apparent ontological opposition of being and becoming, which lies at the heart of the apparent incompatibility of the substance and the process view. Aristotle[9] himself is a good example for this struggle to mediate. Like every empirical scholar, he is baffled by the ubiquity of change going on in the world. As we can see from his cosmology, where love, not inertia, makes the heavens move, he is convinced that there has to be a power, an active force behind that change. He calls it the "cause" (*aitia*) of the becoming of things, and stipulates that the search for causes is what science should be about. Hence, the major question is: What makes a thing become a thing? Aristotle's answer to that – to make matters short – is: the essence[10] (*to ti ên einai*) of a thing. Now, we all know that essence is a four-letter word in poststructuralist times, but fortunately Aristotle understood essence in a different way than we do today. The Greek term is *to ti ên einai*, which translates as "what it always was to be"[11]. Essence, for Aristotle, is an active principle of the "being-in-becoming" of a thing. In later chapters of the "Metaphysics", he further characterises the essence as form (*eidos, morphê*), and again we must think of form as something active and creative. In Aristotle's view, what makes a statue is not the material or matter, but the artist's vision of it. This vision then shapes the material into a statue. What makes a house more than a heap of bricks – and more general, every whole more than the sum of its parts – is the plan, the organization of the material. The form is the soul of a thing, and indeed Aristotle uses the

same definition for both, viz. the "being-at-work-staying-the-same" of an organized body (Sachs, 2001).

In order to work change, however, form needs a continuum to work on. This continuum is provided by the notion of matter (*hylê*), and again for Aristotle *hylê* is not matter in the modern sense. *Hylê* is neither material in the technical sense nor any other stuff, but a principle, a two-term relation to be used as "x is the matter of y". The two-term or relational structure of matter is Aristotle's answer to one of the major problems in any theory of becoming: If water becomes ice or if a boy becomes a man, it does not make sense to say that at some moment the water resp. the boy perishes and the ice resp. the man is created ex nihilo. There is a continuity in becoming, and to express this continuity Aristotle conceived of matter as the substrate (*hypokeimenon*)[12] of becoming. The substrate is not an active being but a principle which, as relation, guarantees continuity between what was and what will become. As ultimate principle of becoming, however, it cannot be described under the categories which describe being and must thus remain undefined. It is just the potential or disposition of the entity waiting to be formed. An actual block of wood may contain the matter of a table, of a wardrobe, of a door, but it is not that matter. And the matter only starts to take on characteristics – become recognisable – when the process of forming starts (see my above remarks on analysing potentials *ex post facto*). This transition from potentiality to actuality is, for Aristotle, the most general definition of becoming. To sum, in order to describe the process of becoming, Aristotle introduces an active, forming principle (form or potential) to drive the process, and a relational principle (matter or substrate) to guarantee continuity.

In the 20th century, the Aristotelian solution is taken up by Whitehead (Leclerc, 1993). It is interesting to see that many scholars consider Aristotle a "substance theorist" and Whitehead a "process theorist", although Whitehead basically uses the same combination of elements and

explicitly refers to Aristotle when he introduces his concepts (e.g. Whitehead 1985:31). Watch closely how easy it is to turn a substance theory into a process theory (see also Table 2). Whitehead reshuffles the Aristotelian notions of form and matter in order to give them a stronger process twist and make room for his own concept of creativity. Hence Aristotle's "matter" becomes Whitehead's "creativity", the "ultimate notion of highest generality at the base of actuality" (Whitehead, 1985:31). Creativity, however, is not passive, but on the contrary a "pure notion of activity" (Whitehead, 1985:31). Vice versa, form, as the formerly active ingredient in Aristotelian thought, becomes passive and is now called "eternal object". It retains, however, its function of a potential determining actual states through its ingression in them. This conceptual reshuffle creates a new opposition "passive-potential versus active-actual", where Aristotle had conceptualised "active-potential versus passive-actual" as oppositions. As drab as it may seem, this is in fact where the difference between Aristotle the substance philosopher and Whitehead the process philosopher lies. For the unformed actuality – process - is now the creative and active part, while the individualising part – substance – is a passive potential for process to take on at will. The conceptual emphasis and ontological prerogative has shifted with the re-attribution of the active and passive role – not more. That is how close substance and process philosophies can become. Both need the notion of being, both the notion of becoming for their respective systems, and indeed in quite a similar way: "…it belongs to the nature of a 'being' that it is a potential for every 'becoming'." (Whitehead, 1985:23).

And like Aristotle, Whitehead immediately makes the link to relationality for in the very next sentence he states: "This is the 'principle of relativity'." Like Aristotelian matter, Whiteheadian creativity relates every actual occasion to every other actual occasion. This happens because every actual occasion that has finished its process of becoming immediately perishes and becomes a "datum", an unchangeable fact of the past. As a datum, it will then

enter every emerging actual occasion. Without this notion of ultimate connectedness (relationality, relativity) change, process or becoming cannot be conceptualised.

INSERT TABLE 2 ABOUT HERE

In his conceptualisation of the process of becoming, Whitehead maintains Aristotle's definition of a transition from potentiality to actuality. Thus, Whiteheadian becoming (concrescence) is characterised by an actual occasion acquiring perfect determinateness (Whitehead, 1985:29). It starts out, so to speak, with many potentials, but in the course of concrescence all these potentials are either actualised or not. At the end, there is no more room for indecision or open possibilities; the actual occasion has become a fully determined "fact" that is not open to change any more.

The transition from potentiality to actuality also plays a central role in the conceptualisation of Whiteheadian process as such. In fact, Christian (1959) claims that Whitehead sought to substitute the potentiality-actuality distinction for the being-becoming distinction as basis of his ontology. Thus, the two major elements he takes to be existing are actual occasions, which represent perfect actualisations, and eternal objects, which are pure potentials (1985:22). Together, these two elements "make" being and becoming. In the process of concrescence, the emerging actual occasion uses eternal objects to concretise itself. Once it is perfectly concretised, it perishes and becomes a datum. As a datum, it then enters the concrescence of other actual occasions – the being as a potential for becoming. Eternal objects, because they are timeless, can function as linking pins between the individual actual occasions, thus creating the "strings" and "webs" that make up enduring objects. Thus, to give a simple example, Whitehead would reconstruct a blue ball as a series of occasions or perceptions.

Each occasion perishes immediately, but they are linked to form an enduring object by a number of eternal objects, such as the colour blue or the ball shape.

In conclusion, two major ideas may be taken from the three philosophers. The first is the distinction between change and becoming. The second is to base the description of the process of becoming not on an opposition of substance/process or being/becoming, but on relationality, activity, and the transition from potentiality to actuality.

Organizational Process Theory

Having discussed some of the features of organizational process theory in the first part of the paper, I should now like to revisit one seminal paper (Tsoukas and Chia, 2002) in order to show how my approach differs from their perspective on becoming and change. Like me, the authors start from a critique of the Lewinian stage model of change to say that in models of that type change is never really analysed because "the stages into which you analyze a change are *states*; the change itself goes on between them" (Tsoukas and Chia, 2002:571, quoting William James). They argue that instead of viewing change as a property of organizations, we should take change to be ontologically prior to organization and view organization as emerging from change (Tsoukas and Chia, 2002:570). In order to reflect the ontological priority and pervasiveness of change, they suggest the notion of "organizational becoming", which is then elaborated in the main part of the paper. Organizing, to them, is the creation of something more durable – i.e. forms or patterns – from the continuous flux (Tsoukas and Chia, 2002:577), and this is mostly achieved through the creation of generalisations, types and categories (Tsoukas and Chia, 2002:573ff., following Weick in this). Every stable item, however, is not truly enduring, but the outcome of permanent reproductive activity and in that sense precarious (Tsoukas and Chia, 2002:573).

While I agree with a number of insights from the paper, my approach differs in two respects. The first is the assumption that change is not ontologically prior and "reflects becoming" (Tsoukas and Chia, 2002:580) but that change (*kinêsis*) and becoming (*genesis*) are different concepts, and that being and becoming are equiprimordial ontological concepts that are both needed to explain change. My quarrel with Tsoukas and Chia is that if I take change to be the first and only ontological principle, I do not see how they can then explain that organization is emerging from change (Tsoukas and Chia, 2002:570), organization here defined as the "making of form" (Tsoukas and Chia, 2002:577). If we assume a kind of "primordial soup" that is entirely made of continuous change, where does form come from? It seems to be a kind of deus ex machina. Even if we take a view of patterns "emerging" from chaos, we would have to assume some kind of memory or retention to be able to talk about "recurrent patterns" or "self-enforcing loops" – indeed to talk about "patterns" and "loops" at all. Tsoukas and Chia address the problem by explaining how cognitive categories (generalisations) emerge that have a relatively stable core and a fluctuating periphery of meaning. As long as patterns of actions relate to the core, they tend to be stable. The categories can change over time, however, to the extent that the periphery brings in new meanings that may modify the core meanings. While this idea in itself is absolutely comprehensible and descriptive of a number of empirical change processes, I have my doubts as to its ontological capacity. To start with, the fact that it is derived from a philosophy of language approach does not help given this school's reservations towards ontologies of the kind this paper is discussing (Wolf, 1984). Second, just as with forms and patterns above, it remains ontologically unclear where these generalisations come from. The authors, drawing on Weick as well as on Berger and Luckmann, describe organizing as "the process of generating *recurring* behaviors through institutionalized cognitive representations. For an activity to be said to be organized, it implies that *types* of behavior in *types* of situations are systematically connected to *types* of actors"

(Tsoukas and Chia, 2002:573; italics in the original). However, where do types come from in a continuously changing world? Would we not need some kind of repetition or resemblance to construct a type? And would that not presuppose some comparatively unchanging criterion of comparison?

My approach, in contrast, recognises the fact that something permanent – call it forms, eternal objects or whatever – is needed right from the start because it cannot be logically inferred from continuous change. In other words, organization cannot be conceptually developed from the sort of ontology that Tsoukas and Chia suggest. It does not emerge from change. Neither is it stability as opposed to change. In my view, both change and organization are explananda or objects of analysis containing both "fluid" and "fixed" aspects. Both can be analysed from different ontological perspectives: either from a substance view (with the problems discussed at the beginning), from a process view (with the problems discussed here and at the beginning) or from the being-becoming view that I propose in this paper.

Organizational Change as Relationality and Activity

This final section will discuss what a model of organizational change that is based on being and becoming as equiprimordial can look like. As I have argued in the preceding sections, my appeal is to avoid Scylla and Charybdis by discarding both the "nothing but being" and "nothing but becoming" view. Instead we should adopt a model that integrates being and becoming. In this model, becoming is the actualisation of potentialities that creates being from non-being. Change is the actualisation of potentialities that creates a modified being from a previously existing being. Change is ontologically characterised by two aspects that should shape the empirical research design on organizational change: relationality and activity.

Relationality refers to the retaining capacity in the process, the one that I have found lacking in the ontology of Tsoukas and Chia's account. Relationality links the different states in the process of change. It can do so in various ways. It can, first, link past, present and future states, or it can, second, link contemporary "neighbours" through similarity or interdependence. The former is something Chia and King (1998) have described as the "principle of immanence", and Heidegger (1977) has called the "ecstasies" (i.e. "reaching out") of temporality. The latter happens when, for example, an organizational field is constructed, in which contemporary organizations are related through contracts, common issues or competition. Organizational identity is another relational feature using both the synchronic and the diachronic aspect as it links the organization to its past and future but also links it to similar organizations by way of comparison. Relationality can, third, appear in different modes. Hernes and Weik (2007) as well as Hernes (2008) list a number of examples, such as connectivity, recursiveness or programmes, but more may be found.

Activity is the creative capacity responsible for the innovative part of change. It is a comparatively undetermined "force", a dispersed activity (e.g. Thompson, 1982), and not limited to human agency. It fosters – and on this I agree with Tsoukas and Chia – continuous change in the world. In their presentation of a dialectical perspective of strategic alliances, de Rond and Bouchikhi (2004:66) describe such forces when they talk about alliances as "heterogeneous phenomena that are continuously torn by multiple and contradictory forces […] The dialectical tensions that arise from the interplay of these forces are neither intrinsically functional nor dysfunctional (nor naturally geared towards stability or instability). They are not there to serve an explicit or unconscious purpose. They just are." The contradictory forces they refer to are, among others, competition vs. cooperation, vigilance vs. trust, autonomy vs. control (Bouchikhi, 1998) – an established catalogue from organization

studies, but one that is often referred to only in the context of strategic (human) action instead of marking permanent forces that the organization is subjected to.

As I have already exposed the differences of this model to Tsoukas and Chia's, let me go back to the two papers discussed at the very beginning and show how my model differs from their accounts of organizational change. As we have seen, Barnett and Carroll (1995) use a time series model where they look at the state of the organization in times t_1, t_2 and so on. Their notion of change is based on a model of inertia $\rightarrow$ jump $\rightarrow$ inertia, which is characteristic of all change models using a punctuated equilibrium or similar logic (Hargrave and van de Ven, 2006). My model, in contrast, would not see relationality and activity as alternating modes, but as modes that are always present at the same time. They, in fact, have to be present at the same time because the transition of potentiality to actuality needs both. (This is what Aristotle and Whitehead state with their form-matter argument, see table 2.) They are two sides of the same coin. In the second paper, Greenwood and Hinings (1996) argue in the tradition of evolutionary approaches that the organization must accommodate the environment in order to survive. As I have pointed out earlier, the problem here is that organizations are hypostasised into agents that do something in relation to the environment. In my model, in contrast, change can be explained without turning organization into quasi-human agents since activity does not presuppose human action or human intent. Even if all human agents stopped acting for a moment, the world – and organizations in it - would change in that moment. This does, of course, not mean that people cannot change organizations. They can, but their intentional change comes on top of the changes that are already under way. The second problem of the evolutionary approach is the use of words like "accommodate" or "survive" that, again, suggest human agency in organizations. My model, in contrast, can rephrase the phenomenon under the umbrella of relationality and thus avoids anthropomorphic language. What these words are supposed to describe is the relation, or change in relation, between the organization

and the environment. If we conceptualise the organization as a bundle of relationships, we might even get rid of the idea of it being "embedded" in "the environment", which is either a quasi-biological or residual and in any case not very illuminating concept, as, for example, Sandelands and Drazin (1989) have pointed out.

Summing up, an empirical research design on organizational change that follows my model would redirect the focus of the researcher from an inertia-jump model to parallel modes of innovation and retention. It would redirect attention from human agency to various and dispersed forces propelling change, and might ask how they interact and interfere with strategic human action. It would prevent the reification and anthropomorphization of the organization by viewing the organization as made up of relations and activity. Further research could and should then be done on different empirical forms of relationality and activity.

Odysseus' Tree

To summarise, when we analyse organizational processes and organizational change, I think it makes sense, first, to distinguish between becoming (*genesis*) and change. Second, it is ontologically sound to conceptualise being and becoming as equiprimordial, but it is, third and most importantly, even better to not use these terms at all and instead focus on potentiality, actuality, relationality and activity because these concepts can inform empirical work on change.

On broader canvas, my intention was to sensitise readers to terminological differences (see Table 3) and towards the different "sorts" of processes I have described in this paper. Due to the long and winding conceptual history of the terms "being", "becoming" and "substance",

my experience is that this sensitising is better achieved by focusing on more empirically relevant notions instead of on being/becoming and substance/process.

<center>INSERT TABLE 3 ABOUT HERE</center>

However, this is just one suggestion among others. As I pointed out in the section "The swirl of history", there are not only two possible views on process, and at the end of this paper I will not claim that there are only three. There is an indefinite number of solutions, but all should be aware of the terminological differences in table 3 and the necessity to steer a stringent course in order to avoid Scylla and Charybdis.

		Aristotle	**Whitehead**	**Thomas**
Pure becoming	Term	*Genesis*	*Concrescence*	*Creatio*
	Defined as	Potentiality → Actuality	Potentiality → Actuality	Being = becoming Causa essendi = causa fiendi
	Temporal status	Not in time	Not in time	In time, but not divisible
Change	Term	*Kinêsis*	*Change*	*Mutatio*
	Defined as	Being → Being	Enduring object → Enduring object	Being ≠ becoming Causa essendi ≠ causa fiendi
	Temporal status	In time	In time	In time, divisible

Table 1: Pure Becoming versus Change

	Aristotle	**Whitehead**
Active principle *That which pushed the process onwards*	Form	Creativity
Relational principle *That which guarantees continuity*	Matter	Eternal objects
Potentiality in	Form	Eternal objects
Actuality in	Matter	Actual occasions
Becoming (pot → act) produced through	Form shaping matter	Actual occasions taking on eternal objects
Continuity produced through	Matter linking different particulars	Eternal objects linking different actual occasions

Table 2: From Substance to Process Philosophy

Being		Substance
Being		Existence
Being	≠	Stability
Becoming		not-Being
Becoming		Change

Table 3: Mind the Gap

Notes

[1] In order to avoid confusion, I will refer to authors propagating a strong process view in organization studies as "process theorists". A strong process view takes process to be ontologically prior to substance, whereas weak process views analyse process without such an ontological assumption. Philosophers advocating a process metaphysics will be referred to as "process philosophers".

[2] Textual evidence for this position can be found, apart from the initial quote in the authors' citing Hannan and Freeman: "…although organizations sometimes manage to change positions on these [core] dimensions, such changes are rare and costly and seem to subject an organization to greatly increased risks of death." (Barnett and Carroll, 1995:224). Note the spatial expression "change positions".

[3] Critical realists of Whitehead's time were Santayana and Lovejoy, later Sellars. They agreed with Kant that our perceptions were mediated, but thought it nevertheless possible to infer real structures and qualities from them.

[4] Second, transcendence is not possible for Whitehead because, in contrast to Kant, the subject that constitutes the object is not the same as the subject that perceives this object (Ford, 1998). The subject (actual occasion) that constitutes the object by unifying multiple prehensions perishes the very moment this constitution is completed. The perception of the object thus constituted is left to the next actual occasion. There is, in effect, no continuing subject that could reflect on what it has done.

[5] Martin Heidegger (2004:283) once referred to it as "the most difficult thing that ever had to be thought in Western metaphysics."

[6] There are, of course, differences between them from a philosophical point of view. These are, however, not relevant for the problems discussed in this paper.

[7] *Kinêsis* literally translates as "movement", but Aristotle reserves the word not only for changes in location, but also for changes in quality or quantity.

[8] Whitehead also uses a logical-mathematical argument that I will not introduce. For a more detailed discussion see Hammerschmidt (1984)

[9] For a very accessible introduction to Aristotle's thoughts on this, see Meikle (1985). An in-depth discussion of the Aristotelian notion of matter as compared to modern notions see Suppes {, 1974 #2554}.

[10] "Essence" is the Latin translation of the Greek concept. Sachs (2001), however, echoes the concern of many Aristotelian scholars when he says that Latinizing translators have turned Aristotle's *Metaphysics* into "gibberish". See also the next footnote.

[11] The expression has puzzled many scholars, who prefer the more obvious *to ti esti* ("what it is") Aristotle also uses sometimes. However, I think that the first term brilliantly covers the temporal, i.e. non-static, effort of every stable thing to remain recognisable through all processes of change.

[12] In the subsequent history of philosophy, there have been a number of misinterpretations and errors in translation, which resulted in a confusion between „substance" and „substrate" (Halfwassen et al., 1998).

References

'Scylla and Charybdis'. The New Encyclopedia Britannica, p. 576 vol. 10 (1993)

Aquinas, T. 1993. 'Summa theologica.' In M. Adler (Ed.) *Great Books of the Western World*. Chicago: Encyclopedia Britannica.

Aristotle 1993a. 'Categories.' In M. Adler (Ed.) *Great Books of the Western World:* 5-21. Chicago: Encyclopedia Britannica.

Aristotle 1993b. 'Metaphysics.' In M. Adler (Ed.) *Great Books of the Western World:* 499-626. Chicago: Encyclopedia Britannica.

Aristotle 1993c. 'Physics.' In M. Adler (Ed.) *Great Books of the Western World:* 259-355. Chicago: Encyclopedia Britannica.

Bakken, T. & Hernes, T. 2006. 'Organizing is Both a Verb and a Noun: Weick meets Whitehead.' Organization Studies*,* 27:11, 1598-616.

Barnett, W. & Carroll, G. 1995. 'Modeling Internal Organizational Change.' Annual Review of Sociology*,* 21, 217-36.

Bergson, H. 1911. Creative Evolution. New York: Henry Holt.

Bergson, H. 1993. 'An Introduction to Metaphysics.' In M. Adler (Ed.) *Great Books of the Western World:* 71-89. Chicago: Encyclopedia Britannica.

Bhaskar, R. 1991. Philosophy and the Idea of Freedom. Oxford: Blackwell.

Bouchikhi, H. 1998. 'Living With and Building On Complexity: A Constructivist Perspective on Organizations.' Organization*,* 5, 217-32.

Brentano, F. 1975. On the Several Senses of Being in Aristotle. Berkeley: University of California Press.

Buchanan, E. 1962. Aristotle's Theory of Being. Cambridge (Mass.): University of Massachusetts Press.

Chia, R. 1996. Organizational Analysis as Deconstructive Practice. Berlin: de Gruyter.

Chia, R. 1999. 'A 'Rhizomic' Model of Organizational Change and Transformation: Perspective from a Metaphysics of Change.' British Journal of Management, 10, 209-27.

Chia, R. & King, I. 1998. 'The Organizational Structuring of Novelty.' Organization, 5:4, 461-78.

Christian, W. 1959. An Interpretation of Whitehead's Metaphysics. New Haven: Yale University Press.

Clegg, S., Kornberger, M. & Rhodes, C. 2005. 'Learning/Becoming/Organizing.' Organization, 12:2, 147-67.

Cooper, R. 2007. 'Organs of Process: Rethinking Human Organization.' Organization Studies, 28:10, 1547-73.

de Rond, M. & Bouchikhi, H. 2004. 'On the Dialectics of Strategic Alliances.' Organization Science, 15:1, 56-69.

de Vries, J. 1983. Grundbegriffe der Scholastik. Darmstadt: Wissenschaftliche Buchgesellschaft.

Drazin, R. & Sandelands, L. 1992. 'Autogenesis: A Perspective on the Process of Organizing.' Organization Science, 3:2, 230-49.

Ford, L. 1998. 'Structural Affinities between Kant and Whitehead.' International Philosophical Quarterly, 38:3, 233-44.

Greenwood, R. & Hinings, C. R. 1996. 'Understanding Radical Organizational Change: Bringing Together the Old and the New Institutionalism.' Academy of Management Review, 21:4, 1022-54.

Halfwassen, J., Wald, B., Arndt, H. W., Trappe, T. & Schantz, R. 1998. 'Substanz; Substanz/Akzidens.' In J. Ritter & K. Gründer (Eds.) Historisches Wörterbuch der Philosophie: 495-553. Darmstadt: Wissenschaftliche Buchgesellschaft.

Hammerschmidt, W. 1984. 'The Problem of Time.' In H. Holz & E. Wolf-Gazo (Eds.)
Whitehead und der Prozeßbegriff: 154-60. Freiburg/München: Karl Alber.

Hargrave, T. & van de Ven, A. 2006. 'A Collective Action Model of Institutional Innovation.'
Academy of Management Review*,* 31:4, 864-88.

Heidegger, M. 1977. Sein und Zeit*.* Frankfurt/Main: Vittorio Klostermann.

Heidegger, M. 2004. 'Vom Wesen und Begriff der 'physis'. Aristoteles, Physik B, 1.' In M.
Heidegger (Ed.) *Gesamtausgabe*. Frankfurt/Main: Vittorio Klostermann.

Hernes, T. 2008. Understanding Organization as Process. Theory for a Tangled World*.*
Abingdon: Routledge.

Hernes, T. & Weik, E. 2007. 'Organization as Process: Drawing the Line between
Endogeneous and Exogeneous Views.' Scandinavian Journal of Management*,* 23:3,
251-64.

Hoffmann, F., Trappe, T., Halbfass, W., Grünewald, M. & Abel, G. 1992. 'Realismus.' In J.
Ritter & K. Gründer (Eds.) *Historisches Wörterbuch der Philosophie:* 148-78.
Darmstadt: Wissenschaftliche Buchgesellschaft.

Leclerc, I. 1993. 'Form and Actuality.' In I. Leclerc (Ed.) *The Relevance of Whitehead:* 147-
89. Bristol: Free Press.

Linstead, S. & Thanem, T. 2007. 'Multiplicity, Virtuality and Organization: The Contribution
of Gilles Deleuze.' Organization Studies*,* 28:10, 1483-501.

Meikle, S. 1985. Essentialism in the Thought of Karl Marx. London: Duckworth.

Nayak, A. 2008. 'On the Way to Theory: A Processual Approach.' Organization Studies*,* 29:2,
173-90.

Norrie, A. 2010. Dialectic and Difference*.* Abingdon: Routledge.

Pöltner, G. 2001. 'Sein als Gewordensein - Sein als Ereignis.' In E. Jain & S. Grätzel (Eds.)
Sein und Werden im Lichte Platons. Freiburg: Karl Alber.

Rescher, N. 1996. Process Metaphysics*.* New York: State University of New York Press.

Robinson, H. 2009. 'Substance.' *Stanford Encyclopedia of Philosophy*.

Sachs, J. 2001. 'Aristotle: Metaphysics.' *The Internet Encyclopedia of Philosophy*.

Sandelands, L. & Drazin, R. 1989. 'On the Language of Organization Theory.' Organization
Studies*, 10:4, 457-78.

Shotter, J. 2006. 'Understanding Process From Within: An Argument fo 'Withness'-Thinking.'
Organization Studies*, 27:4, 585-604.

Suppes, P. 1974. 'Aristotle's Concept of Matter and its Relation to Modern Concepts of
Matter.' Synthese*, 28, 27-50.

Thompson, G. 1982. 'The Firm as 'Dispersed' Social Agency.' Economy & Society*, 11:3, 233-
50.

Tsoukas, H. & Chia, R. 2002. 'On Organizational Becoming: Rethinking Organizational
Change.' Organization Science*, 13:5, 567-82.

van de Ven, A. & Poole, M. 1995. 'Explaining Development and Change in Organizations.'
Academy of Management Review*, 20:3, 510-40.

van de Ven, A. & Poole, M. 2005. 'Alternative Approaches for Studying Organizational
Change.' Organization Studies*, 26:9, 1377-404.

Weick, K. 1969. The Social Psychology of Organizing*. Reading: Addison-Wesley.

Weick, K. & Quinn, R. 1999. 'Organizational Change and Development.' Annual Review of
Psychology*, 50, 361-86.

Whitehead, A. N. 1985. Process and Reality. New York: Free Press.

Wolf, U. 1984. 'Ontologie.' In J. Ritter & K. Gründer (Eds.) *Historisches Wörterbuch der
Philosophie:* 1199-200. Darmstadt: Wissenschaftliche Buchgesellschaft.

Wood, M. 2002. 'Mind the Gap? A Processual Reconsideration of Organizational
Knowledge.' Organization*, 9:1, 151-71.