MANUSCRITO
International Journal of Philosophy

Article submitted to the similarity system

turnitin

Original Articles

ENCOUNTERING GENUINE CHANGE. REFLECTIONS ON SPEAKING ABOUT WHAT IS IN MOVEMENT

TINA RÖCK
https://orcid.org/0000-0003-4909-1559
University of Dundee
School of Humanities Social Sciences and Law
United Kingdom of Great Britain and Northern Ireland
t.rock@dundee.ac.uk

Article info
CDD: 501
Received: 20.08.2024; Revised: 28.10.2024; Accepted: 28.10.2024
https://doi.org/10.1590/0100-6045.2024.V47N1.TR

Keywords
Process Philosophy
Tode ti
Whitehead
Genuine Change
Movement

Abstract: From the outset of Western philosophy most occidental philosophers held that both existence and knowledge depended on stability – what is genuinely changing does not have a clear essence or identity and is thus not an object for knowledge, nor can it be expressed in language. This is the case even though change touches all areas of life, shaping both the self and world, in subjective experience as well as scientific discoveries.
In this contribution I will consider why precisely change is seen as such a vexing problem for knowledge and I will look at what that means for our ability to know a world that is fundamentally characterised by change. In part 1, I discuss how the assumption that change can neither be known nor put into words, led to the development of epistemologies and ontologies that bypass the problem of change by understanding it in terms of its opposite. I will show how this strategy limits our ability to come to terms with concrete reality. In part 2, I point towards possible ways out of this predicament. I will use the Aristotelian tode ti to propose a novel way to encounter change on its own terms.

From the outset of Western philosophy most occidental philosophers (with some notable exceptions) held that both existence and knowledge depended on stability – what is genuinely changing does not have a clear essence or identity and is thus not an object for knowledge, nor can it be expressed in predicative or propositional language. This means that genuine change is neither an adequate object of philosophical or scientific study, nor is there a conceptual language able to express it.

I will begin this investigation by showing why precisely change is seen as such a vexing problem for knowledge. I will point towards the internal limits of any approach that considers change to be secondary, accidental, or mere appearance, by looking at what consequences this view of change has for our ability to come to know a world that is fundamentally characterised by change.

In part 1, which sets the stage, I discuss how the assumption that change can neither be known nor put into words led to the development of epistemologies and ontologies that bypass the problem of change by understanding it in terms of its opposite – i.e. to the development of various substantial positions. I will show

how this strategy limits our ability to come to terms with concrete reality – the changing world we live in. In part 2 I point towards ways out of this predicament. I will use the Aristotelian *tode ti* as one way to encounter change on its own terms, which, being an Aristotelian concept, allows for an integration and division of labour between substance ontology and the kinds of processual positions that take genuine change seriously: an investigation of concepts, ideas or essences is better served by a substance approach, while an attempt to understand concrete reality benefits from a processual stance. I will end by highlighting that taking change seriously does not necessarily lead to an inability to speak, an inability to point out phenomena, or to relativism. I do so by introducing a way to understand and use language, that is inspired by Buddhist practice, and allows us to take change seriously as a sui generis phenomenon. This is a way to use language that can be employed to tell the story of change.

The problem of change and how to avoid it

πεπαιδευμένου γάρ ἐστιν ἐπὶ τοσοῦτον τὰκριβὲς ἐπιζητεῖν καθ᾽ ἕκαστον.[1]
Aristotle, Nicomachean Ethics 1094b

The problem of change is as old as Western philosophy. Parmenides already argued that change cannot be real, as change would combine both being and non-being (Fragment 8) and would thus mix what is not (non-being) with what is (being), in impossibility. Aristotle's logical writings further explore this problem to tease out a more precise contradiction. If *something* changes, he argues, there is a difference, but since we can (re-)identify what has changed as the same *something* that was present before the change,

[1] It shows an educated mind, when one limits oneself to the degree of precision allowed by the nature of things, not looking for exactness where only approximation is possible.

there is also a lack of change – something remains. Change thus conceived is contradictory because it combines sameness and difference, or as Kant put it, it is "a combination of contradictorily opposed predicates in one and the same object (for instance, the existence and non-existence of one and the same thing in and one and the same place)". (Kant, KPR, B48). Therefore, genuine or substantial change (thus conceived), so the resounding verdict from Parmenides until Kant, cannot characterise reality or what is.

Some of the main strategies to address the perplexing nature of change are to consider it *secondary, a mere appearance*, or to *reduce it to and explain it in terms* of something stable or static. While Aristotle suggested an unchanging essence to ground change, Plato argued that it is merely the world of the senses, the world of materiality that changes, while true reality – i.e. the ideas, universals or laws which determine or govern the changes we experience - itself is not subject to change. This stance shaped many rationalist and idealist approaches:

> Experience is in mutation, and our psychological ascertainments of truth are in mutation - so much rationalism will allow; but never that either reality itself or truth itself is mutable. Reality stands complete and ready-made from all eternity, rationalism insists, and the agreement of our ideas with it is that unique and timeless virtue in them […]. (James, 1907, p. 86)

This distinction of the complete and ready-made a-temporal reality (that cannot be experienced via the senses) which governs, grounds or determines the temporal (apparently changing) worldly processes, fundamentally shapes most western modes of thinking until today.

The fact that all such strategies that avoid or minimise the role of change, devalue, ignore and often even contradict the datum of the senses, is generally not considered problematic, as much of western thought is characterised by a fundamental distrust of 'mere' appearance. The twentieth-

century Chinese philosopher Tang Junyi describes the tendency of the Western mind to distrust appearances and to ground all experiential phenomena (including change) in something not given to experience (but conceptualised as certain, stable and a-temporal or unchangeable) in the following words: "Starting with pursuing substance beyond phenomena, the Western mind regards all phenomena as attributes of things instead of reality itself. Consequently, it always attempts to put aside phenomena in order to explore the real and unchanging substance underlying the cosmos." (Tang, 1988, pp. 9-10)

Further complicating the problem of change are arguments to the effect that there is no truth or knowledge in a world of genuine change, which can already be found in both Plato and Aristotle. Aristotle simply states throughout the *Metaphysics* that what is knowable is what is unchanging, i.e. what is "independent of generation and destruction". (Aristotle, 1039b26) While Plato argues in the *Cratylus* that there can be no true account of the sensible world precisely because it is in flux (Cratylus, 439d-e), and in the Theaetetus he adds that we cannot even speak about a world in motion (let alone know it), as there are no expressions or words available to us that are able to harmonize with a world of movement. (Theat. 183B)

These logical, ontological and epistemological presuppositions in conjunction have led most Western philosophers to conclude that genuine change or process simply cannot be fundamental or real.[2] Thinkers like Johanna Seibt, who argue that the contemporary discussions of the problem of change have reached a deadlock, still point to those same preconceptions as a reason for our continued

[2] I have foregrounded the ontological and the logical dimensions of this issue in earlier works, consider (Röck, 2022) and (Röck, 2016). In what follows I will foreground epistemic issues. But I do want to acknowledge here that all three of these dimensions are fundamentally intertwined and always need to be addressed in their interconnection, but this does not preclude the foregrounding of just one of them.

inability to come to terms with genuine change. These preconceptions make "it particularly difficult to devise a coherent ontological interpretation of persistence and change while taking the 'logic' (inferential role) of our statements about persistence and change at face value." Because such "presuppositions are hidden axioms of inquiry that in most cases cannot be shown to be false in any straightforward sense. At best one can show that certain theoretical set-ups in ontology are not well suited to fulfilling their explanatory tasks." (Seibt, 2008, pp. 133-134)

In part 1 I will show how the substance set-up is not well suited to understand the dynamic world we live in and experience, and which modern science is describing, while part 2 will provide some suggestions for a more adequate ontological-conceptual set-up to come to terms with genuine change. I begin part 1 by looking at Plato, Aristotle and Newtonian science, i.e. investigating change from 'within' substance philosophy so to speak. But I do so with one twist. I do not simply unquestioningly presuppose change to be the change of properties of an underlying substrate, nor do I presuppose that change is necessarily secondary, mere appearance or ephemeral. This leads me to two fundamental claims. 1. To take the term 'change' seriously is to include all forms of change: for example, qualitative and quantitative changes, change of location (i.e. movement), mutation, evolution, transformation, corruption and becoming. 'Change' thus merely expresses that there is a difference, what kind of difference that is, is irrelevant for the characterisation of this difference as change. 2. Furthermore, to take the phenomenon of change seriously also implies, that ontological change in the material world is genuine change. When change is present there is a difference not merely in appearance or in a secondary sense, but, and this is the central claim, *it is the case* that *every change is a difference that actually makes an irreducible difference* in the concrete world that we live in. There might be changes that make no difference to our designating something as something, to our concept or idea of something. But every change makes an irreducible difference *in concrete reality, every change makes a difference in the world that we live in*.

The claim is that if any physical object is considered in enough detail (possibly in microscopic detail or on a quantum level) and over sufficient periods of time (be it hundreds, thousands or billions of years) all that remains is change. There is nothing given in sense experience that ultimately resists this way of the world, the way of the universe.

In contrast, substance philosophers (and scientists) often use the term 'change' to exclusively refer to accidental change, i.e. the change *of something* (continuous or unchanging), or as a mere manifestation or expression of an unchanging power, disposition, or force, without providing convincing arguments for this claim[3]. In these ways, change is and remains tied to stability, which makes it impossible to encounter and deal with change as a sui generis phenomenon.

This contribution aims to persuade the reader that process ontology is the more adequate framework for describing concrete reality, if we are investigating our concrete, material world as it is. Substance thought relies on concepts, categories or ideas in its accounts of what is; if those are unavailable, i.e. when we are investigating direct concrete givenness in lived experience, when we focus on the phenomena that the natural sciences study, as we encounter them, then substance thought becomes inadequate. The final part of this contribution shows that such a processual stance does not make science and philosophy impossible, that is does not necessarily lead to silence or relativism – both criticisms that have been levelled against Heraclitus and process thinkers since him.

[3] Beyond the Aristotelian slogan, change is always and necessarily a change of something, there seems to be little in terms of arguments for the accidental nature of change.

PART 1 – WAYS OF AVOIDING GENUINE CHANGE

> Die Natur ist nur einmal da. Nur unser schematisches Nachbilden erzeugt gleiche Fälle.
>
> Ernst Mach (1910, 230)[4]

Before I engage with genuine change as a sui generis phenomenon in the second half of this paper, in what follows I will first provide some examples of the ways genuine change is avoided in in philosophy, both ancient and contemporary, as well as mathematical sciences, using the example of physics. This is important not only to highlight various strategies of avoidance, but also to show how these distort our ability to understand the world we live in. The problem is that, in employing these strategies of evasion, we simply lose sight of our actual object of investigation: the complex, interrelated, and changing world of our experience and replace it with an idealised replica – an ordered world of repeatability and thus stability. Fundamentally, what all these strategies of avoidance boil down to is a substitution or reduction: an inquiry into real change is substituted by or reduced to an investigation of what doesn't change, rendering genuine change a 'natural mystery' in the process. (McGinn, 2012, p. 108)

1. Aristotelian approaches to minimising the problem of change

No investigation into the concept of change and its role in Western thought can avoid engaging with Aristotle, who, in defining change as the alteration of properties of an unchanging object over time, provided the conceptual foil for understanding change in the Western philosophical and

[4] From the 1882 lecture, "The Economical Nature of Physical Enquiry": "Nature is but once there. Only our reflexion produces equal cases."

theological tradition.[5] As a result, genuine change is often not investigated as ongoing or temporally extended transformation (as it is experienced), but as an ideal 'swapping' of one accidental property at t_1 with another accidental property at t_2. This way of avoiding the problem of change fabulates an ontology of stability and stable identities into being.

Consider, for example, the following identity claim that results from distinction between unchanging substance and accidental changes: "The acorn and the oak tree are two very different objects. Nevertheless, they may be just different stages of what is essentially one and the same thing." (Ellis, 2002, p. 10) Only a philosopher highly skilled in Aristotelian essentialism could even suggest that an acorn and an oak tree might be essentially the same thing. Phenomenologically and pragmatically speaking, these phenomena are in no way similar, as Ellis acknowledges, only to then promptly ignore this fact. It is the little addition 'at different stages', that invites us to fabulate: we can imagine an imperceptible something (called essence) tying the acorn to the oak tree. In the past we have observed, or we were taught that acorns can grow into trees, so we conclude this acorn would this acorn, given the right circumstances. This potential/possibility, however, does not provide sufficient grounds for the conclusion that they are 'essentially one and the same thing' *here and now*. To ground the conclusion of essential identity only in possibility (that might never realise or occur) is to commit what Alfred North Whitehead refers to as the *fallacy of misplaced concreteness*. There "is an error; but it is merely the accidental error of mistaking the abstract for the concrete" (Whitehead, 1948, p. 52), or to be more precise, in this case, it is the error of treating a likely outcome (i.e. a rational projection about future states that is based on past experience, concepts and deductions) as if it were actually *present now*.

[5] There is an argument to be made that *De generatione et corruptione* as well as the first of the *Physics* paint a different picture of change (Röck, 2016), but these views of change did not have the kind of influence that the view of change as accidental had.

Even more fatally, in (neo)aristotelian frameworks changes do not seem to actually make a difference to what something is essentially. It looks like nothing 'really' changes at all – there is mere appearance of change, but we are always dealing with the same thing 'essentially'. Let me elaborate on our implicit sense that changes often do not really make a difference, by considering the issue of vagueness. Many examples in vagueness debates concern the question of whether small ontological changes actually make a difference, be it on a conceptual or an ontological level. Unsurprisingly, the answer is mostly no. Consider the following example:

> The dropping of one grain of sand could not make the difference between what was not and what was a heap, not just because we have not chosen to draw a sharp line between what is and what is not a heap, but because there would be no difference which could be discerned by observation (but only by actually counting the grains). What happens between one heartbeat and the next could not change a child into an adult not merely because we have no sharp definition of "adult", but because human beings do not change so quickly. (Dummett, 1996, p. 111)

It is not that such minute changes make no difference at all, they simply do not *always* make a difference that *is relevant* to the question at stake – these are not what we would consider substantial or essential differences in general. One grain of sand may not make a difference in what we can observe (with the naked eye), but whether one grain of sand is added or not makes a difference when measured in hyper-precise experimental environments with finely attuned scales. And while what happens between one heartbeat and another might not matter regarding ageing, a great many things can happen between two heart beats that might change a child's life. In actual fact, these minute changes make a difference, however, it is a difference that Dummett does not consider relevant for this argument, and rightly so.

For his argument they do not make a difference. But they make a difference in the real world.

What I am pointing to here is that the kinds of problems surrounding vagueness simply reflect a fact that also shapes most accounts of change in the Aristotelian tradition. We tend to disregard changes *if they are deemed irrelevant* for the concept, purpose or question at hand. But as a matter of fact, *change always makes a difference – per definitionem – thus every change is a genuine change that cannot be reduced without loss of detail, complexity, and information.* It is just the case that the vast majority of changes don't make a difference we care about. They don't impact the 'true nature of things' as defined by the investigator and can thus be disregarded 'safely'.

2. Physics and the natural mystery of movement

Whatever scientists study – from tectonic plates to the brain or the genome, phenomena of change, like becoming, expanding, and transforming fundamentally shape empirical reality are everywhere - if we look closely enough or consider our object of study over sufficiently long periods of time. This is especially true in the context of physics. Not only have physicists discovered that the natural world, that mountains, continents, planets, and galaxies, that the whole universe is in movement, but it also seems to be the case that apparently stable matter is, at bottom, movement, oscillation, and spin. The physical world is constantly changing. Thus, it is not surprising that the importance of change for physics, usually treated as motion, cannot be overstated:

> Firstly physics "concerns itself narrowly with the laws of motion, omitting all the rest. Second, physics, in its theoretical core, deals with several kinds of force — […] radiation in one, gravity in the other. Yet all this variety comes out in the wash as motion: all the forces express themselves as motion, and motion is what is common to the quantum and classical worlds." (McGinn, 2012, p. 96)

For physicists change is an all-pervasive phenomenon and yet it remains conceptually mysterious. "We can measure change, and provide laws for it, but we can't elucidate its intrinsic character. […] We don't, that is, know what change *consists in*. That is quite a big lacuna." (McGinn, 2012, p. 109) There is currently no physical theory of change, nor is there much (or any) literature available that explains ontological change as a sui generis phenomenon using the tools of physics[6]. To emphasise how perplexing this lacuna is, let me again highlight how central motion is to all areas of physics:

> The predominant role of the concept of motion in physical science poses a problem of great importance […]. Why is it that all processes, laws, and formulas of physics—and modern physics is no exception—ultimately refer to motion, and why is it that even problems in statics, the science of equilibrium and absence of motion, are solved in terms of fictitious motions and virtual velocities? (Jammer, 1967, p. 399)

If the phenomenon is so central to physics, why do we not actually know what movement (or change in location) is? A closer look reveals that this situation is quite unsurprising, considering that most investigations do not actually concern

[6] There are many interesting, related discussions concerning the impact of theory change on scientific progress in physics. But to my knowledge there are no mathematical-conceptual accounts either by scientists or philosophers of science of genuine (ontological) change, even beyond physics. One of the few areas of research where this tendency is clearly shifting is the philosophy of biology. Many biological and environmental sciences (i.e. sciences that study self-maintaining, interrelated, complex and evolving systems) are beginning to incorporate processual approaches. Here John Dupré and his team at EGENIS have provided a host of works to show that biologists would be well served in using process approaches. But these attempts tend to be more focused on the applicability of a process perspective, in Dupré's case on biological sciences, than on with developing an understanding of genuine change, as is the case here.

themselves with concrete, manifest changes or motions as phenomena to be studied; instead, the focus of investigations tend, to be the laws governing these changes and/or the forces causing them. Change is not studied on its own terms; instead, it is considered a secondary, rule-governed process that (classically speaking) happens to or impacts what is more fundamental or actually real. Newton already argued that in order to know our physical universe and its movements, all we needed was knowledge of the forces and laws that govern the processes of change, as well as the locations and mass of the things we want to study. Motion could be explained in terms of these elements. In the 4th Scholium, for example, Newton discusses how both true and relative motions of objects can be understood without presupposing that things actually change (i.e. without presupposing an internal principle of motion):

> The causes by which true and relative motions are distinguished, one from the other, are the forces impressed upon bodies to generate motion. True motion is neither generated nor altered, but by some force impressed upon the body moved: but relative motion may be generated or altered without any force impressed upon the body. (Newton, 1803)

Change is external to what is. Things are not moving by themselves; they are being moved by forces external to what is moving in the case of true motion, or, in the case of relative motion, they merely appear to be moving in relation to other things that are being moved. In this vision of the universe, all change can be reduced to or explained in terms of forces and locations of physical entities. In such a universe, there is no need to study change as a sui generis phenomenon. However, physics has advanced greatly since Newton and many discoveries suggest that our physical reality does not resemble this picture. To the contrary, more and more discoveries point towards the need for framing what is in terms of evolutionary, complexity, systems, and chaos theories. Studies employing such frameworks reveal a

reality that is much more adaptive, non-linear, interrelated (i.e. not simply located) and dynamic than Netwtons' image allows. They reveal a world of interrelated processes.

Still, the immense success of modern and contemporary physics partially still *rests* on its ability to substitute any investigation of motion (and with it change in general) with an investigation of the laws that govern these motions (or the forces that cause and impact them):

> The epistemological projects of modern, exact science, no less than those of the Platonic philosophy, need fixed targets. Mathematical physics (not coincidentally a discipline that originated in astronomy) sets itself against the changeableness of worldly events through the inscription of eternal laws that predict those occurrences. The reality claimed to be discovered by means of such inquiries is knowable by virtue of its stability. (Chirimuuta, 2024, pp. 183-4)

Change must be substituted by stability, as there is no knowledge of that which genuinely changes, but how is this stability created? There are a variety of statistical and mathematical methods that can aid modern science in this creation of apparent stability, but in empirical experiments stabilisation is fundamentally grounded in a second substitution, namely *repeatability and reproducibility of results*.[7] The focus of empirical experiments is not the concrete single event of change, instead the event of change/the individual experiment is merely considered under the frame of repeatability and reproducibility. Physics shares this approach with all mathematicised science, which "has this drive toward the framing of events as repeatable, and hence as the reflection of objects of knowledge that are essentially stable." (Chirimuuta, 2024, p. 184)

[7] Consider (Galinson, 1987, p. 260ff) who observed the use of experiments in creating such stability.

This is because many scientific practices rest on the assumption that changes as such are neither a proper nor a necessary object of investigation: "For example, throughout mathematics, in one sense, transition does not enter. The interconnections are displayed in their timeless eternity. It is true that the notions of time, and of approach, and of approximation, occur in mathematical discourse. But as used in the science, the timefulness of time and the motion of approach are abstracted from." (Whitehead, 1966, p. 46) This allows scientists to generate powerful answers to specific questions, but it also limits their its usefulness in the context of other areas of study. While the methods employed by physicists work well to answer to the problems of physics, these methods can do simply not work as well when applied to understand the dynamicity of reality.[8]

Methods are not indiscriminately generalisable, an adequate fit between the method, the object investigated and type of investigation it is applied to is necessary:

> But we have to discriminate between the weight to be given to scientific opinion in the selection of its methods, and its trustworthiness in formulating judgments of the understanding. The slightest scrutiny of the history of natural science shows that current scientific opinion is nearly infallible in the former case, and is invariably wrong in the latter case. The man with a method good for purposes of his dominant interests, is a pathological case in respect to his wider judgment on the coordination of this method with a more complete experience. Priests and scientists, statesmen and men of business, philosophers and mathematicians, are all alike in this respect.

[8] If one is not a physicalist, thus evading the problem by turning everything into a problem that can be treated with the methods of physics.

> We all start by being empiricists. But our empiricism is confined within our immediate interests. (Whitehead, 1971, p. 11)

So, to understand change as a concrete phenomenon, we might be best served to not look at scientific methods and its results as a guideline. Just like we are not best served in applying philosophical methodology to physics indiscriminately.

3. Continuants, time slices and occurrents

In my third example of how change is avoided/engaged will look at contemporary analytic ontology/philosophy of time.

While change is a central concept in many discussions around the reality of time, reflections focused on continuants tend to provide detailed accounts of different ways in which things remain untouched by change. In these discussions change is generally presupposed as a brute fact (without accounting for it) and the task of the philosopher is to provide the best account of how persistence or endurance is possible given that there is change. This approach remains fundamentally Aristotelian by considering 'change' a phenomenon of secondary interest, with the difference that we can now discuss how exactly continuants are able to remain fundamentally untouched by change, namely by enduring, perduring or exduring.

One interesting strategy to actually explain the nature of change, sometimes proposed in these contexts, is to 'build' or 'construct' change out of identities in sequence (for example time slices of a continuant, or a sequence of states). This, however, cannot capture the phenomenon of change either and leaves us with the problem of abutment:

> For suppose that during a certain time a system, s, changes discretely from state s0 to states s1. Then there must be two abutting intervals, X and Y, X wholly preceding Y, […]. Now, given that there is no instant dividing X and Y, we

> cannot ask what states s is in at it. However, just because there is no such instant, there is no time at which the system is changing. X is before the change. Y is after it. Thus, in a sense, there is no change in the world at all, just a series of states patched together. The universe would appear to be more like a sequence of photographic stills, shown consecutively, than something in a genuine state of flux or change. We might call this the cinematic account of change." (Priest, 2006, p. 162)

This is again an attempt to explain change by eliminating change. Bergson summarised the absurdity of such approaches in general well, when he argues that here "[t]he movement slips through the interval" since, in this vision of the world, again nothing really moves. He dismisses every such "attempt to reconstitute change out of states" because it "implies the absurd proposition, that movement is made of immobilities." (Bergson, 1911, p. 63)

If thinkers do take a deeper interest in how *change actually happens*, they often analyse changes in terms of occurrents. Occurrents are generally taken to be fundamentally temporal entities that do not only have different properties at different times, but that also unfold over a period of time, i.e. entities that go on. The problem of change seems to be addressed in virtue of this quality of 'going on' alone. However, an event or process thus understood does not necessarily capture the phenomenon of genuine change. Events are generally defined as temporally extended *entities* that are *complete,* and while they might *contain changes* (Simons, 2003, p. 371) *or processes* (Galton, 2018, p. 41)*,* but they are not *currently unfolding or actually changing*. In contrast to genuine change which is per definitionem ongoing and thus not fully determined, these occurrents are bound, i.e. they possess a clear beginning and end, which means that they are better described as intervals or process-entities than genuine processes. In considering an occurrent, nothing happens now – all the change happened in the past. What is available

to us now is merely the trace of past movement, that is captured in such process-entities. Thus, these events are ontologically much closer to substances in their characterisations, then to genuine processes or change. Process-entities called occurrents are particular, individual, 'countable entities' that 'include' a temporal dimension, while genuine changes or genuine processes cannot be captured or characterised in this way (Röck, 2017). Crowther summarises this fundamental difference between occurrents and the progressive, ongoing nature of genuine change quite well:

> Nouns such as 'the battle' appear to single out temporal entities which are complete or whole. […] [In contrast the term] 'battling' occurs with progressive or imperfective verb aspect, the whole predication serving to focus attention not just on the whole battle that occurred, but on the battle as it unfolded or went on over a period of time, that is, from temporally 'inside' or 'within' the occurrence, as we might put it. (Crowther, 2018, p. 59)

Occurrents are generally not considered to be ongoing now and thus they are not open towards the future. Occurrents capture a completed temporal trace of a past genuine change that, after its completion, can be treated like an object and thus used to evade the problem of genuine change. So, occurrents, even though they might 'contain' (past) change, still conceptualise change in a way that abstracts from the actual phenomenon of change – the fact that it is unfolding now and that what is unfolding now has some (albeit limited) degrees of freedom and unpredictability. During the batteling, the outcome often remains unclear (and the outcome could still always shift) until the battle is over, while a completed battle usually allows one to determine the winner quite easily.

This openness is why genuine changes or processes are better picked out by progressive verb forms than nouns, and it is the reason process metaphysics tends to be structured quite differently from traditional metaphysics: genuinely dynamic thought works within a changing, creative and open

framework that describes the world in terms of becoming, difference, multiplicity, novelty and surprise. Only to focus on this element of creative becoming would, however, be as one-sided as many substance approaches are. Only in combination do both the stability of the past, guaranteeing continuity and a degree of stability, and the creative unfolding of the present, allowing for creative evolution and novelty, give rise to our world. Whitehead, for example, argues that both the creative *becoming now,* and the *objective immortality of past processes* constitute the "creative advance of the world" and that they only "jointly constitute stubborn fact." (Whitehead, 1978, p. xiv)

It is past changes that can easily and adequately be analysed either as substances, occurrents or continuants (depending on one's ontological preferences and the aim of the investigation).[9] In fact, the present investigation with its aim to understand genuine change might prove quite useless in understanding, conceptualising and categorising past changes. Here traditional approaches are much more effective and economical. But if our interest is aimed at understanding the world as it is now, namely in its present unfolding, if we want to truly understand how the world is now instead of understanding the past and projecting it onto the future, then genuine change cannot be ignored.

PART 2 – TELLING ONTOLOGY

So far, I have only presented some of the ontological and epistemic difficulties involved in engaging genuine change and different ways to avoid genuine accounts of the phenomenon. Employing these approaches and methods change remained, as McGinn put it, "a natural mystery". I have furthermore (implicitly) hinted towards the fact that change remains a mystery *precisely because* "we have no positive conception of its intrinsic (nonabstract) nature".

[9] For a more detailed discussion of the idea that 'events' and 'processes' thus understood merely grasp past unfoldings consider (Röck, 2025)(forthcoming).

(McGinn, 2012, p. 108) In what follows I will argue that the phenomenon of change resists precisely such conceptualisation within the framework of scientific and philosophical (propositional) language. The only way out, the only way to gain an intrinsic (nonabstract) insight into the nature of change is, so I will argue, to take the phenomenon seriously while employing language in novel and creative ways to learn how to tell the story of change. To answer this question as to how to go about telling the story of genuine change, I will go back to Aristotle and take a closer look at the usually overlooked candidate for be*ing*, namely *tode ti*. This shift opens the possibility of reinterpreting Aristotle's ontology in its relation to concrete, genuine change and thus a large part of the Western ontological tradition.

1. **Re-reading Aristotle on being – *tode ti* pointing to *being change***

My starting point in the attempt to discover a way to talk about genuine change in Aristotle is *book Z* of the *Metaphysics,* where Aristotle discusses what it means for us to say that something is. The investigation begins with the statement that 'to be' (to on) can be spoken of in various ways, as i) ti esti (*what it* is) and as ii) *tode ti* (this here), or iii) as quality and quantity and the other categories. (Met. 1028a11-15) We can disregard the last candidate for present purposes, as categories are only determinations of what is; they name predicates, while the 'what is it?' *(ti esti)* picks out precisely what remains identical through change and is therefore out of contention as well. The only candidate remaining is *tode ti* (this here).

But why do I think that the *tode ti* is a good pointer to lead us to an ontology of genuine change? Aristotle argues in various places that *tode ti* is most real because it is necessary for something to be *tode ti* to even be a candidate for substance,[10] but he emphasises time and again that being *tode*

[10] Categories (3b10) – here Aristotle states that a primary substance is a *this here* (*tode ti*), that is indivisible and numerically one;

ti alone is not enough to characterise substance. For something to be a substance, it needs to be both tode ti *and* separable (choriston) (l029a28). In this context, to be separable means to be definable, to possess a conceptually expressible, ontologically separable identity. This means firstly, that while *tode ti* is concrete and exists, it is not necessarily a substance. A substance needs to be *tode ti and* separable, which secondly means that, by implication, *tode ti* is not necessarily separable. Since *tode ti* is not separable, it cannot be an object of definition, of scientific study, and thus of knowledge – but it is the most real. This means that there is a fundamental "discrepancy between the real and the intelligible". (Cherniss, 1944, p. 340)

So, Aristotle tells us that something is a substance if it is both *tode ti and separable*. But what *is tode ti*? Generally, '*tode ti'* is taken to name *concrete particularity* or (depending on the interpretation) *individuality*. This interpretation leads to translations of '*tode ti*' as 'some this', 'a this' or 'thisness'.[11] In these translations the *tode ti* is taken to reference the abstract characteristic of *particularity and/or individuality* in general (Yu, 2003, pp. 122-132). This reading completely loses sight of the ostensive nature of the expression '*tode ti'*, its ability to point toward some concrete, individual *this here,* in contrast to *toinde*, which has more general connotations. '*Toinde'* is often translated as 'suchness', 'a such', but it could be just as easily translated as 'a this'.[12] Furthermore, the traditional translation of *tode ti* overlooks the fact that what is named by *tode ti* is decidedly concrete, given to sense experience and not separable, while either 'particularity' or 'individuality' are clearly both general and separable.[13]

Metaphysics 1029a28: if something is not *tode ti*, it cannot be an ousia.

[11] Yu argues convincingly that this role might be better played by *toinde*. (Yu, 2003)

[12] Compare (Corkum, 2019).

[13] The translation 'this' in a general sense, could possibly fit 'toinde' better than it does '*tode ti*': "*tode* seems to be a simple demonstrative pronoun and can denote anything that can be pointed to. Both

The issue at stake in this translation is the following. I cannot provide an ostensive definition of what is changing now using the expression 'a this' or 'thisness', because these expressions do not point to anything given in direct experience; instead, they reveal the idea of particularity (or possibly individuality), turning the *tode ti* from an indexical into a mass or sortal term.[14] Translations like 'a this' or 'thisness' suggest a less contextual, less experiential embodied connotation than *tode ti* seems to carry. This dimension is present in other traditions of translation. For example, the standard German translation of the term is indexical, 'dies da' ('this here'), which is the translation that I have adopted in this paper. I can easily use 'this here' to point to a specific change going on now, without necessarily implying or presupposing stability or separability, because the expression '*tode ti*' taken as indexical merely points towards some unfolding given in experience. It does not necessarily reify or clearly separate out what it is pointing to.

So, what does *tode ti* point to? I think it points to the becoming and perishing 'ousia' which can be seen/perceived τῶν οὐσιῶν τῶν αἰσθητῶν, (1039b 27[15]), but not be separated

---

form and matter are said to be *tode."* (Yu, 2003, p. 140) Furthermore, a translation like 'thisness', seems closer to what the term *toinde* (suchness) reveals. Both terms indicate particularity, but *tode ti* indicates the particularity of the sensible given in direct experience by pointing it out, while *toinde* indicates particularity as such: "Whereas *toinde* clearly means universal [individuality, given the context of 1003a 5-17], *tode ti* appears to mean particular, as substance as *tode ti* is supposed to be particular." (Yu, 2003, p. 116). While this is sometimes acknowledged (as in this quote), the ostensive nature of *tode ti* that I will point out in what follows, is generally not acknowledged.

[14] For more detail about the difficulties of understanding the *tode ti* consider (Corkum, 2019) and (Yu, 2003, p. Ch. 5)

[15] "διὰ τοῦτο δὲ καὶ τῶν οὐσιῶν τῶν αἰσθητῶν τῶν καθ᾽ ἕκαστα οὔτε ὁρισμὸς οὔτε ἀπόδειξις ἔστιν, ὅτι ἔχουσιν ὕλην ἧς ἡ φύσις τοιαύτη ὥστ᾽ ἐνδέχεσθαι" - For this reason also there is no definition or demonstration of particular sensible substances (ton ousion ton aistheton), because they contain matter whose nature is such that it can both exist and not exist.

or be the subject of science. In this it is somewhat similar to the *prote ousia* in the Categories,[16] in both we encounter the "discrepancy between the real and the intelligible" (Cherniss, 1944, p. 340), that shapes much of Aristotle's metaphysics. While *tode ti* cannot be defined and thus is not intelligible in the sense of being conceptually graspable, *tode ti (this here)* can point toward what is concrete, sensuous and unfolding and can thus orient the investigation in its direction.

One could now speculate that *tode ti* picks out and thus guarantees reality, while the answer to *ti esti* (what is it) contributes definition/separability and thus intelligibility. Which means that *tode ti* can only be rendered intelligible by categorising it, i.e. by placing it under the one or the other, or even multiple conceptual limitations or categories that seem relevant for any given investigation. *Tode ti* alone does not delimit or determine what is pointed to beyond this pointing, only the addition of a *ti esti* (what is it/essence) renders it a specific substance. If we give what is pointed out by *tode ti* a conceptual form for example by referring to it, we present it as if it were a (separable), stable, self-identical entity, 'a this'. As soon as we judge or predicate of *tode ti*, due to the nature of concept formation and linguistic limitations, there appears *in language* a stable subject of which change (or anything else) can be predicated – there appears '*the tode ti*', an entity that can undergo change.

If we take this linguistic artefact, the subject of our predicative sentence, to be real, to correspond to the real or to represent the real, then we confuse the unfolding that is merely pointed out by the expression '*tode ti*' with the subject of a sentence. In doing so we fall again prey to the *fallacy of misplaced concreteness*, which in this case points to the mistake of considering our linguistic symbols (i.e. concepts) to be more reliable indicators of what is fundamental than our experience of the reality these concepts point to and always only partially illuminate. This is why, especially when it

[16] Since ousiai are per definitionem definable and not given to the senses, this phrase is likely to pick out what in the *Categories* is referred to as *prote ousia* and to what I take to be pointed out by the *tode ti*.

comes to phenomena like genuine change, conceptual approaches alone are not sufficient to come to terms with what is, because concepts always "simultaneously distort and disclose." They do reveal something, but always in a limiting (choriston) way. "In other words, concepts disclose a window through which to see the world precisely by limiting possibilities (by delimiting boundaries). Yet the presumed boundaries – such as those between existence and nonexistence, self and other – are not natural categories, but are contingent, conceptual constructions." (Duckworth, 2022, p. 12) It is important to highlight that this stance that concepts do not fully grasp or fully express what is, does not necessarily lead to relativism or idealism; instead, "the view that ultimate reality is beyond conceptualisation is itself a variety of realism." (Siderits, 2004, p. 414) It is also important to mention that concepts are neither illusory nor simply made up; they *do* grasp *aspects* of what is, but in doing so they distort the true nature of what is, namely by separating and limiting it. Concepts are symbols, and symbol-mediated inquiries can be 'true enough' for many purposes, but they are true (enough) only in an operational sense. Depending on our ends, these symbols might function well or poorly; depending on the context, they might shift from 'true enough' to 'too general to reveal truth'.

If instead we follow the invitation of *tode ti* and engage change directly as it is given, the continuity present in most experiences ultimately reveals itself as empty, i.e. there is no remaining or ultimate unchanging element present in experience – if the process of change is observed closely enough - be that on a macro, micro or quantum level; and over a sufficient period of time - be that hundreds, thousands or millions of years. Stability merely appears to be present on human scales of time and size, but if we look deeply enough and long enough there is at best recognisable continuity for some time. There is no perceptible identity or intrinsic nature now. Genuine stability is a concept that has to be added to experience, it cannot be found in direct experience.

These insights are central to the understanding of reality in Buddhism: The Buddha taught that reality is impermanent

and that it lacks intrinsic identity/nature (svabhāva) (Duckworth, 2022, p. 11), a state of affairs often discussed in terms of emptiness (śūnyatā). The Buddha thought that impermanence (anicca) and lack of self-existence (anattā) are two of the three marks of reality (with the third one either being suffering, *dukkha,* or liberation from suffering, *nirvana*[17]). In contrast to many Asian philosophers who embraced impermanence as a 'seal' of the world that had to be acknowledged, understood and accounted for,[18] most Western thinkers in general, and Aristotelians in particular, over-stepped the phenomenon of impermanence and stepped toward a fabulated solidity, using language and thought to constitute a world of permanence: Guided by the aim to find a reality that could provide safety and stability, we constituted (conceptual/linguistic) identities, projected them onto the world and lent more credence to the ideas of permanence and substance than to the data of our senses.

2. A way forward: A language that reveals

Seduced by language and guided by a striving for objective knowledge the directly experienced *undivided tode ti* is generally *overlooked* in Western approaches. This led many Western thinkers to mis-understand *true being* as *divisible tode ti*, i.e. as form, substance or essence – be it embodied form (as part of the synholon) or ideal form. What can merely be pointed to was equated with conceptually limited accounts of being (i.e. the *divisible tode ti*). Thus 'being', whether it is defined as 'concrete sensible particular', 'idea', 'ousia' or 'essence', is thus *always already* shaped by a (minimal) conceptual abstraction, by *division* to use Aristotle's

[17] Sometimes both are considered marks of reality, which means that in these traditions there are 4 seals of Buddhism.

[18] This applies to both schools that held that there were ultimate dharmas possessing svabhāva (essence/nature) like the Sarvāstivādins and schools that held that reality was ultimately empty.

terminology. All these forms of *divisible tode ti* I will call concept-being in contrast to what is (isness or *tode ti*).

Many of our ideas as to what change is - accidental, mere appearance, composed of unchanging elements, are not rooted in direct experience, but in such a divisible *tode ti* and thus they are rooted (at least partially) in language, logic and grammar. As soon as we speak about *tode ti*, an entity appears, it becomes a subject in our sentence representing or referring to an 'object' in the world. But this way of using and understanding language rests on a specific concept-being, namely one that identifies or otherwise aligns the linguistic subject with the ontological substance: subject=substance. This is a concept-being that presupposes self-existence (identity) and thus some form of permanence (in the form of essence or similar). It solidifies whatever it speaks of. This strife for stabilisation is not a mere accident of conceptualisation or language, it is ultimately rooted in a larger human tendency to search for what is safe, what we can hold on to. A striving that is in turn expressed in our language structure and our concepts. Stable concepts are part of our attempt to hold suffering, the third Buddhist seal of reality, at bay, by creating stabilities and essences that can be relied on. Subject=substance is thus an interpretation of being (i.e. a concept-being) that is aligned with the human desire for stability, safety and certainty and works within both Aristotelian (substance=ousia) and Platonic (substance=eidos/idea) frameworks.

It is also a concept-being that rests on a distinction between the stable, self-identical subject=substance and its changing predicates or expressions - a distinction between 'pure being' and the way it exists/what happens to it, between what is and the appearances it causes or changes it undergoes. This separation leads to our difficulties in coming to terms with genuine change (i.e. process), as was pointed out in the beginning. The subject-predicate structure of propositions is just as much an obstacle to engaging with genuine change as is the ontology of substances with which it is intimately connected:

> The divergencies, such as they are, in these lectures [i.e. Process and Reality, TR] from

> other philosophical doctrines mostly depend upon the fact that many philosophers, who in their explicit statements criticize the Aristotelian notion of 'substance,' yet implicitly throughout their discussions presuppose that the 'subject-predicate' form of proposition embodies the finally adequate mode of statement about the actual world. (Whitehead, 1978, p. 30)

As long as we reduce language to its representative dimension (with the subject representing, grasping or otherwise capturing what is) and its propositional dimension (that divides being from its appearance/predicates) our expression will remain tied to subjects, substances or things as the objects of reference/predication, so long will it continue to be difficult or even impossible to see, recognise and account for change as a sui generis phenomenon.

> Because philosophers are those who produce thoughts when they structure the world with their mind's categories, language with all of its appurtenances and rules becomes the motor through which they communicate their thoughts. Now, whether these thoughts are intelligible or not, it is language that tells us so. Even the philosopher in his private ruminations uses language to make sense of his reflections. Indeed, every philosopher thinks in a language. There is nothing like non-language form of thinking. Thinking is linguistic; for the mind of the philosopher or whatever faculty that does the thinking speaks the language of the philosopher. (Chimakonam, 2019, p. 15)

So, what to do? One way out of this predicament is to reconsider the nature and power of language for certain philosophical investigations. It is undeniable that words and grammatical structures shape how we think. They help us interpret experience in useful ways and, at the same time,

train us to 'see' the structures suggested by language. However, these kinds of interpretations are so ingrained that they are generally not seen as an interpretative step that could be bracketed or phenomenologically reduced – they are so ingrained that we confuse them with what is given in experience. This 'seduction of language', as Nietzsche called it, is why we tend to recreate certain philosophical stances, like the idea that genuine change is contradictory and therefore problematic, over and over:

> People say again and again that philosophy doesn't really progress, that we are still occupied with the same philosophical problems as were the Greeks. But the people who say this don't understand why it has to be so. It is because our language has remained the same and keeps seducing us into asking the same questions. (Wittgenstein, 1980, pp. n43, 15e)

We 'see' the structures our language suggests, but as phenomenologists repeatedly point out, a close description and focus on actual experience can reveal a picture different than from the one painted in and through language. However, while phenomena can inform thinking, while experiences can push us to reshape concepts, to reframe ways of thought, ultimately, they become effective for thought only as they are poured into language. But the language these phenomena and experiences are expressed in tends to force these expressions in a certain direction, thus repeating and continuing problems of the past. It seems that there is no way out. Language is the medium of the philosopher and what is created in that medium is shaped by the medium itself.

So, the question is, what would happen, if we understood and used language in different, non-predicative and non-propositional ways? And this is possible, even in the context of philosophy. Bergson, for example, states "[m]y initiation into the true philosophical method began the moment I threw overboard verbal solutions, […]." (Bergson, 2002, p. 89)

In *Modes of Thought*, Whitehead states that the "aim of philosophy is sheer disclosure", while "[t]he great difficulty of philosophy is the failure of language." But why is that the case? Because "(l)anguage halts behind intuition. The difficulty of philosophy is the expression of what is self-evident. Our understanding outruns the ordinary usages of words. Philosophy is akin to poetry." (Whitehead, 1966, p. 49) Martin Heidegger defends a similar stance on the role and power of predication when he argues that our conceptual understanding and propositional use of language actually conceals both the essence of language and the truth of being. For Heidegger the essence of language lies in its ability to 'disclose' (zum-Erscheinen-bringen) or to 'unconceal' (entbergen) what is. Language, properly understood, is fundamentally revealing, it simply lets something be seen, either by partially capturing it via a concept or a propositional judgement, or by pointing toward it, as is the case with the '*tode ti*'. The essence of (philosophical) language is to reveal "the advent of the truth of what is" (Heidegger, 1971, p. 72), i.e. to reveal presencing.[19] Our task in using language this way is to "stop, listen, hear, remember and respond to the call that comes from Being". (Hofstadter in: (Heidegger, 1971, p. xvi) Language is here thought of as a medium that is responsive to what is, it merely reveals by directing the mind to whatever is to be revealed or disclosed. This use of language is not (re)presentative or definitory, but denotative – it is a pointing to what is:[20] "Philosophy is the attempt to make manifest the

[19] Anwesen – Heidegger's proposal for concept-being that I consider more adequate to come to terms with genuine change than substance, essence or ousia.

[20] Johanna Seibt is one of the preeminent scholars engaged in showing how a close investigation of language use, if not filtered through a subject=substance lens, does allow for more processual or dynamic uses even of familiar Western languages like English. (Seibt, 2010) She does so by focusing on verbs and verbal constructions, whose processual nature is often overlooked. (Seibt, 2004) (Seibt, 2015, p. a) (Seibt, 2015, p. b) And while I think that

fundamental evidence as to the nature of things. […] A correctly verbalized philosophy mobilizes this basic experience which all premises presuppose." (Whitehead, 1966, p. 48)

The ways of telling developed by both Heidegger and Whitehead reorient the reader through unfamiliar words/concepts that point or highlight, instead of containing, meaning or referring. This strategy is in line with and, in my case, inspired by Buddhist approaches, that propose a stance akin to a (phenomenological) focus on experience and a descriptive or ostensive use of language to point to what is (in translation often referred to as 'isness'), which I describe as 'telling' (in contrast to saying, referring or judging). Consider, for example, the Lankavatara Sutra:

> Like fools who see me point to the moon / look at my finger and not at the moon / those who cling to names / don't see this truth of mine (2013, p. LXXXII)

In other words, someone who is too attached to the words that merely point, does not see what is pointed towards through these words. In this Wittgensteinian use of language words are not intended to 'contain' or represent the real, but merely point to it.[21] To experience the moon (or genuine change) in this way, we do however need to orient ourselves differently, away from the finger and toward what it is pointing to, away from conceptual constructions towards a direct encounter. Analysing the finger itself in detail will not help much in our quest to understand the moon. That means that what is implied by this way of using language is not a meaning or reference, it is not intended as a representation of "an object, but a *way* an object is to be encountered – a mode of subjectivity or receptivity – that is evoked by words or signs." (Duckworth, 2022, p. 23) Language that points does not exclude the subject, to the

this project might yield fruits for specific uses, I do not think it can replace the strategies proposed here entirely.

[21] For more detail consider (Ho, 2008)

contrary it re-orients the reader/listener to allow an encounter with isness/*tode ti*. This way of encountering then allows us to see some aspect of what is given that was hidden by the old way of engaging with it. Used this way language becomes active and performative, it does something to shift our perspective, which allows phenomena to appear differently. This language dis-closes just like metaphors do:

> In a significant way, metaphors do not simply re-present; they dis-close. They do not only work within the closures of presumptions; they also function to disrupt and transcend them. Thereby, they can transform and disclose not only *objects* of reference but *ways* of relating to the world. (Duckworth, 2022, p. 21)

Even if we do not want to take advantage of this metaphorical potential, telling the story of change implies a move from conceiving what is in terms of objects, entities, essences and causes to thinking in various modes of temporal unfolding. In this move from the thing (what and why it is) to its way of being (how it unfolds), the focus is taken off the *eventum*, and shifted towards the *evenire*, the temporal act of becoming, unfolding, persisting. (Raffoul, 2020, p. 10)

Disclosing language does not fit within the confines of traditional referential and propositional accounts and can thus not be examined by its tools of propositional or logical analysis. Similarly, genuine change or process cannot be conceptualised fully or adequately (i.e. without reducing or reifying these unfoldings) because the *unfolding now* does not fit neatly into the traditional structures of subject=substance use of language, as the ancient Greeks already knew. But – and this is important – such a fit is not necessary, there is no competition. Both modes of understanding and using language have different advantages and disadvantages. There is no need to abolish one in favour of the other. The claim I am defending in this contribution is that representing language use, in combination with a propositional structure

(which is connected to the concept-being of subject=substance) is unable to come to terms with or express genuine change and is structurally unable to do so. Within such a framework genuine change can only ever appear as either contradictory or ingenuine – it is this framework that forces us to keep silent about the changes we experience on a daily basis.

Author contributions: All authors contributed to the discussion and writing of the manuscript.

Funding: No Funding agency.

Disclosure Statement: No potential conflict of interest was reported by the author.

References

Aristotle, 1984. Revised Oxford Translation (ROT) of the complete works of Aristotle. In: B. J., ed. *Aristotelis Opera.* Princeton: Princeton UP.

Bergson, H., 1911. The Cinematographic View of Becoming.. In: W. C. Salmon, ed. *Zeno's Paradoxes* . s.l.:Bobbs-Merrill, pp. 59-66.

Bergson, H., 2002. *The Creative Mind. An Introduction to Metaphysics.* New York: Kensington Books.

Buddha, 2013. *Lankavatara Sutra.* Berkeley: Counterpoint.

Cherniss, H. F., 1944. *Aristotle's Criticism of Plato and Academy..* Baltimore. : Johns Hopkins Press.

Chimakonam, J. O., 2019. *Ezumezu. A system of Logic for African Philosophy and Studies.* s.l.:Springer.

Chirimuuta, M., 2024. *The Brain abstracted.* Cambridge: MIT.

Corkum, P., 2019. This. *Ancient Philosophy Today ,* pp. 38-63.

Crowther, T., 2018. Processes as Continuants and Process as Stuff.. In: R. Stout, ed. *Process, Action, and Experience*. Oxford: Oxford University Press, pp. 120-149.

Duckworth, D. S., 2022. *Tibetan Buddhist Philosophy of Mind and Nature*. Oxford: Oxford University Press.

Dummett, M., 1996. Wang's Paradox. In: R. Keefe & P. Smith, eds. *Vagueness: A Reader*. MIT Press: Cambridge, Mass, pp. 99-118.

Ellis, B., 2002. *THe Philosophy of Nature. A guide to the New Essentialism*.. Chesham: Acumen.

Galinson, P., 1987. *How Experiments end*. Chicago: University of Chicago Press.

Galton, A., 2018. Processes as Patterns of Occurrence. . In: R. Stout, ed. *Process, Action, and Experience* . Oxford: Oxford University Press, pp. 41-58.

Heidegger, M., 1971. *Poetry, Language, Thought*. New York: Harper & Row.

Ho, C.-H., 2008. The finger pointing toward the moon: A philosophical analysis of the of the Chinese Buddhist thought of reference. *Journal of Chinese Philosophy,* pp. 159-177.

James, W., 1907. Pragmatism's Conception of Truth. . In: *Pragmatism: A new name for some old ways of thinking*. New York: Longman Green and Co, pp. 76-91.

Jammer, M., 1967. Motion. In: Paul Edwards, ed. *Encyclopedia of Philosophy*. London: MacMillan, p. 399.

Mach, E., 1910. *Populär-wissenschaftliche Vorlesungen*. Leipzig: Johann Barth.

McGinn, C., 2012. Motion, Change and Physics. In: *Basic Structures of Reality: Essays in Meta-Physics*. Oxford: Oxford University Press, pp. 96-109.

Netwon, I., 1803. Scholium. In: *The mathematical principles of natural philosophy*.. London: Benjamin Motte, pp. 378-393.

Priest, G., 2006. *In Contradiction.* Expanded edition ed. Oxford: Clarendon Press.

Röck, T., 2016. *Physis als bewegte Existenz. Eine Ontologie des Konkreten.*. Berlin: Duncker&Humblodt.

Röck, T., 2017. Time for ontology? The role of ontological time in anticipation. *Axiomathes,* pp. 33-47.

Röck, T., 2022. *Dynamic Realism. Uncovering the Reality of Becoming.* Edinburgh: Edinburgh University Press.

Röck, T., 2025. The event(s) of Process. In: J. Bahoh, M. Cassina & S. Genovesi, eds. *21st Century Philosophy of Events: Beyond the Analytic-Continental Divide.* Edinburgh: Edinburgh University Press.

Raffoul, F., 2020. *Thinking the Event.* Bloomington: Indiana University Press.

Seibt, J., 2004. Free process theory: Towards a typology of occurrences.. *Axiomathes,* Volume 14, pp. 23-55.

Seibt, J., 2008. Beyond endurance and perdurance: Recurrent dynamics.. In: C. Kanzian, ed. *Persistence.* Fankfurt a/M: Ontos, pp. 133-165.

Seibt, J., 2010. Particulars. In: J. S. Roberto Poli, ed. *Theory and Applications of Ontology: Philosophical Perspectives.* New York : Springer.

Seibt, J., 2015. Aristotle's 'completeness test' as Heuristics for an Account of Dynamicity. In: *Dynamic Being: Essays in Process-Relational Ontology.* Newcastle upon Tyne: Cambridge Scholars Press, pp. 2-27.

Seibt, J., 2015. Ontological Scope and Linguistic Diversity: Are there Universal Categories? In:. *The Monist,* Volume 98, pp. 318-343.

Siderits, M., 2004. Causation and Emptiness in Early Madhyamaka. *Journal of Indian Philosophy,* pp. 393-419.

Simons, P. M., 2003. Events. In: *The Oxford Handbook of Metaphysics.* Oxford: Oxford University Press, p. pp. 358–385.

Tang, J., 1988. *Essays on Chinese Philosophy and Culture = Ying Wen Lun Zhu Hui Bian.*. Taibei: Xuesheng Shuju.

Whitehead, A. N., 1948. *Science and the modern world.* New York: Macmillan.

Whitehead, A. N., 1966. *Modes of Thought.* New York: The Free Press.

Whitehead, A. N., 1971. *The function of reason.* Boston: Becon Press.

Whitehead, A. N., 1978. *Process and Reality.* Corrected Edition ed. New York: MacMillan & Co.

Wittgenstein, L., 1980. *Culture and Value.* Chicago: Chicago University Press.

Yu, J., 2003. *The Structure of Being in Aristotle's Metaphysics.* Amsterdam: Springer .