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WADING THROUGH THE HERACLITEAN WATERS OF EXPERIENCE

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ABSTRACT This piece contrasts two ontological views of perceptual experience: on the one hand, Experiential Heracliteanism, a view according to which the intuitively dynamic character of experience should be described—and probably accounted for—in irreducibly dynamic terms; and, on the other, Experiential non-Heracliteanism, a stance according to which perceptual experience may at least be described—if not explained—in terms of non-dynamic constituents. I specially strive (i) to frame both proposals against the backdrop of a venerable Heraclitean metaphor and (ii) to highlight the virtues of Experiential non-Heracliteanism against its currently sexier Heraclitean counterpart.

1. Of Experience and the River

Like many other philosophical stories, this one begins with a metaphor. Heraclitus is often held responsible for the thought that reality—or certain aspects of it, at any rate—persists and changes the way a river does.[i] Indeed, the image of a flowing stream evokes the subtle and puzzling ways in which persistence and change interact with each other: for, while there is a natural sense in which you may bathe in one and the same river at different times, there is another sense in which you cannot bathe in the very same river twice. The 'stream' metaphor and the Heraclitean thought that change is a fundamental element of reality, strongly resonate in current discussions about experience and time. The phenomenology of temporal passage, a prominent theme in contemporary philosophy of mind, refers to the apparent psychological fact that we seem to be aware of time's flow. Philosophical views about this phenomenological datum do not challenge the apparently dynamic structure of conscious experience: they disagree on whether the fundamental ingredients of such a structure are themselves dynamic. This debate in turn bears on discussions of objective time, for metaphysicians of time explore what our sense of temporal passage tells us about the question whether objective time is dynamic or static (cf. Dainton 2011; Skow 2011; Frischhut 2013). Once again, dynamic and static views of time do not argue whether the relevant explanandum is dynamic or not, but whether that feature is itself constituted by irreducibly dynamic ingredients. Neither stance in either debate is Parmenidian, then: they disagree on whether subjective or objective time is

fundamentally Heraclitean or not.

At a purely *descriptive* and *metaphorical* level, the idea of temporal passage points at the apparent progression of time: given a particular point or frame of reference, what may be identified as temporally present in the physical and the psychological world changes from instant to instant; with every present event becoming a past one, our past grows like a highway we leave behind; and again, whether determined by the past and the laws of nature or not, events in the more or less distant future come to happen now so as to recede into the depths of our past. Accordingly, the relevant phenomenological datum may be *metaphorically described* as follows: conscious experience not only makes us aware of spatially related items, but also of temporal passage. A bit more specifically, it highlights the intimate link between conscious experience and time. Building on Brian O'Shaughnessy's suggestion that 'the experiencing subject stands in a special relation to time not discoverable in those not experiencing' (O'Shaughnessy 2000: 50), Matt Soteriou poses the question: 'What is distinctive of the form of conscious contact with time that a conscious sensory experience with a temporal sensory field provides one with?' (Soteriou 2013: 135, and also cf. 136ff.)[ii] To which he answers: perceptual experience endows us with a sense of the passage of time. What sets a conscious subject apart from a temporarily or permanently unconscious one, is the former's distinctive awareness of temporal passage. Conscious sensory experience thus stands out for its ability to provide a special informational access to the flow of time, a distinctive trait that may also be expressed in terms of two conditions: on the one hand, a *presentness* condition, to the effect that conscious subjects are aware of sub-intervals within an experienced interval of time as temporally *present*; and, on the other, a *succession* condition, to the effect that the sub-intervals within an experienced interval of time, are experienced as *successively* present (cf. Soteriou 2013: 136-139, 141; and also Sattig 2019). Both conditions seem jointly necessary for describing the phenomenology of temporal passage: for, while *Succession* highlights the specific import of temporal passage, *Presentness* grounds it by establishing the basic link between experience and time. A conscious subject's special relation to time is partially spelt out by the thought that experience is bound to convey things to us as present. Indeed, we would not intuitively ascribe this trait to the dreamless sleeper's dispositional thoughts and beliefs. But this condition is not on its own sufficient: for, on the one hand, there could perhaps be atypical cases where unconscious subjects hold dispositional states the representational contents of which are indexed to the present moment (cf. Soteriou 2013: 136); and, on the other, awareness of several present instants—even if such instants happen to succeed each other—need not constitute a sense of passage for a conscious subject, since she could potentially represent a bundle of present yet unrelated moments of time (cf. Soteriou 2013: 138-139; Fine 2005: 287; for critical assessment of this condition, though, cf. Hoerl 2013). *Succession* comes into the

picture at this point: conscious subjects stand in a special relation to time not only because they experience sub-intervals of time as present, but also because they experience them as successively present.

That said, it is becoming increasingly clear that the phenomenology of temporal passage cannot be described purely in terms of experiential content or what experience consciously conveys to us (cf. Frischhut 2013; Hoerl 2014). To pause on one line of considertion[iii], let's say that the relevant phenomenological datum could be read off from the wordly things we are directly or somehow indirectly aware of. Since it is an essential dynamic feature of experience—no experience would lack such a trait, I take it—what is experientially presented to us would always have to contain a dynamic component that went on to determine the phenomenological datum. However, we could actually think of experiential scenarios that conveyed no such elements to us—say, visual cases where the objects and conditions of perception were held fixed or perhaps episodes of extreme sensory deprivation. If coherent, this possibility thereby shows that our sense of temporal passage is not exhaustively explained by the contents of experience—that is, by what experience presents or represents to us. But if what conscious experience conveys to us does not fully determine its phenomenological features, perhaps something internal to it may do so. Putting this thought into sharper focus, new work in the ontology of mind hints at an approach that strives to throw light on our understanding of consciousness by raising the question how the temporal structure of experiences themselves could determine their temporal phenomenology.[iv] The underlying assumption behind this approach may be expressed in terms of the thought that conscious experience and specific aspects thereof cannot be fully described—nor, perhaps, explained—without explicitly or implicitly resorting to a story of its ontological structure over and above its purely intentional or representational dimension. Against the previous background, an increasingly popular Heraclitean doctrine models perceptual experiences as fundamentally dynamic phenomena: change is a fundamental or primitive element of at least a certain aspect of experience. In its purest form, what I shall thus term *Experiential Heracliteanism*—or (EH) for short—prominently features in the work of the late Brian O'Shaughnessy (cf. O'Shaughnessy 2000: specially ch. 1; and, for discussion of that view, Sanhueza Rodriguez 2016). This piece will however focus on Soteriou's more nuanced version.

While no doubt suggestive, it is by no means obvious what an ontological description of conscious experience as stream-like exactly comes down to. That is, how should the Heraclitean metaphor be understood in the domain of conscious sensory experience? The answer to this question is, I believe, more delicate than currently acknowledged. As such, instead of addressing the sexier question how the ontology and the phenomenology of perception relate to each other, the present piece will turn to the more basic but necessary task of parsing two opposing ways of fleshing out the Heraclitean metaphor in our

understanding of experiece. I shall specifically discuss Soteriou's version of (EH) so as to bring out its substantial ontological cost and to introduce what seems to me a more ontologically conservative non-Heraclitean conception of experiences. While I do believe that (EH) invokes an ontologically demanding—and to that extent problematic—notion of process, this piece only seeks to map different ways of understanding the dynamic dimension of our perceptual lives. Of course, specifying a less demanding way of conceiving change in experience, constitutes a necessary even if indirect step for grounding a case against (EH).

The next section will expand on Soteriou's version of (EH): more specifically, I shall parse a number of ways in which the idea of process may be understood, so as to show that (EH) commits to a strong conception of the dynamic character of experience—perhaps one too strong to be endorsed, even though I voice rather than argue for this claim here. This discussion will then lead to the subsequent section, where I outline a more conservative way of understanding the Heraclitean metaphor in the domain of conscious experience. To reinforce this alternative proposal—termed here *Experiential non-Heracliteanism* or (ENH)—this piece will conclude addressing a worry concerning its ability to accomodate the dynamic character of perceptual experience. Hence, my overall line of reasoning by no means constitutes a definitive case for (ENH) or one against (EH): but, if correct, it does enrich a stimulating and potentially fruitful philosophical landscape by expanding the variety of descriptive and ultimately explanatory options in what has up to now been a one-sided discussion.

2. Heraclitean Processes

To flesh out the Heraclitean metaphor in the experiential domain, Soteriou endorses an ontology of perception that describes perceptual experience in terms of dynamic as well as non-dynamic components. He concisely expresses the proposal as follows:

> When one perceives a static scene, the phenomenally conscious state that obtains is an 'occurrent' state whose obtaining over an interval of time is constitutively dependent on the occurrence of an event/process that takes that interval of time to occur. The event/process in question is not an event/process one is perceptually aware of—for in the case imagined one is aware of a static scene. The event/process in question is, rather, a phenomenally conscious event/process that occurs during the time over which the phenomenally conscious state obtains. The 'occurrent' phenomenally conscious state obtains in virtue of, and for the duration of, the occurrence of the phenomenally conscious event/process. (Soteriou 2013: 141)

In a nutshell, perceptual experiences are *occurrent states*, the latter being in turn conceived as mental states constitutively dependent on processes of a phenomenally conscious kind. Processes (e.g. walking,

writing, swimming, etc.) are broadly conceived as the kind of temporally extended items that *unfold* through time or come into existence stage by stage, while states (e.g. being in love, having a color, believing, knowing, etc.) *obtain* or continue obtaining—that is, they are wholly actualized at each instant within the period of time throughout which they exist. In this piece, I take for granted a fairly wide-spread view of states as instantiations of properties or relations: an apple's being red may, for example, be seen as a state that obtains when a concrete particular (i.e. an apple) instantiates a general property (i.e. redness); or again, while being married is a general relation that may be instantiated by multiple couples, John's being married to Mary is a specific state involving John and Mary.[v] What crucially distinguishes both categories is not duration—states as well as processes are typically protracted—but the fact that they pick up on different ways of existing in time.

As suggested by the notion of occurrent state, the previous categories are not mutually exclusive. Soteriou describes occurrent states in general as states the existence of which is underpinned by events or processes of a potentially wide variety of kinds (cf. Soteriou 2011: 496; 2013: 104; Steward 2018). More specifically, they are characterized in terms of two crucial features. (1) Their obtaining *constitutively depends* on the occurrence of events or processes. A liquid's temperature may, for example, be understood as a state in which that substance finds itself when and because it undergoes certain processes at a molecular level. This feature entails two things in turn. First, since the relation of constitution need not be reductive, the relevant states are not explained away in terms of their constituting processes. Occurrent states depend on, but do not collapse into, their constituting processes. Secondly, they are occurrent precisely because of their dependence on processes or otherwise episodic items. While it is unclear whether the relevant states literally inherit the occurrent character of their constituents, the aforementioned constitutive bond at least guarantees that such states are occurrent in an important even if derivative sense: they at least entail the occurrence of certain processes. (2) Occurrent states and their constituting elements could be *non-homogeneous* or *heterogeneous* in the sense that they need not belong to one and the same kind. Crudely put, a temporally extended item of kind S is homogeneous iff its temporal parts are of the exact same (natural) kind S (cf. Vendler 1957; Mourelatos 1993; Rothstein 2004: 10ff.). *Being red* and *knowing* provide more or less uncontroversial examples of the relevant feature: if an apple is red between t_1 and t_x, it instantiates that colour throughout that whole interval t_1-t_x; if Mary knows that *p* between t_1 and t_x, then she knows that *p* at every instant throughout that period of time.[vi] Likewise, certain psychological phenomena seem to depend on states, processes and events that could in principle belong to a wide variety of kinds: my back pain does not rely on pain-processes, but on muscular and nervous ones of different kinds; certain forms of perceptual monitoring (e.g. watching) seem to involve processive and nonprocessive events of different

kinds (e.g. spotting, looking for, staring at, etc.) (cf. Vendler 1957: 151, 158-159; Crowther 2009).

Against the previous backdrop, Soteriou's version of (EH) characterizes perceptual experiences as temporally extended states fulfilling the following conditions: (i) they are occurrent insofar as they are constitutively—albeit not reductively—dependent on occurrent items, such as processes or events; and (ii), they are heterogeneous insofar as neither they nor their constitutive elements need to coincide as to the (natural) kind they belong to. It is more or less clear that this stance displays the dynamic aspect of experience by means of those processes at the heart of experiential states. To understand how this ontological proposal fleshes out the Heraclitean metaphor, it is thereby necessary to expand on the notion of process at stake.

For present purposes, three ways of understanding that notion are specially relevant:

(P1) Processes are temporally extended, continuous changes.

(P2) Processes are temporally extended, continuous changes that may be described in terms of successive series of states.

(P3) Processes are temporally extended, continuous changes which cannot be described in terms of successive series of states.

As its phrasing suggests, (P1) captures a relatively broad notion of process. It is theoretically neutral vis-à-vis the mutually exclusive (P2) and (P3), in the sense that it does not impose special conditions on continuous changes. (P2) establishes a link between continuous changes and states: conceived as continuous changes, processes may be described by picking up on successions of states obtaining in the subjects of change. The process of walking from point A to point B may, for instance, be described in terms of a succession of spatio-temporal states which obtain in a subject between the instant she stands on A and the instant she stands on B. That said, it is also important to appreciate that the link so established is purely descriptive: (P2) does not advance an explanatory—reductive or otherwise—claim; as such, it neither entails that processes could be exhaustively described in terms of a finite series of successive states nor deny that they could be explained in terms of, say, a process ontology. The thought is simply that one could describe different parts of any given process in terms of states—that is, instantiations of properties or relations—obtaining at instants or intervals within the period of time throughout which the relevant process takes place. (P3) in turn denies this descriptive possibility: that is, it rejects the possibility of describing processes in terms of non-dynamic components (e.g. objects, properties, and relations). Since this denial reflects an understanding of processes as fundamentally dynamic or dynamic down to the core,

it seems fair to say that (P3) captures the most radical reading of the Heraclitean metaphor. In spite of expanding on the relevant notion at a purely descriptive—as opposed to explanatory—level, these two understandings of processes have different implications. Framed as a positive claim about how processes could be described, (P2) does not engage in any theoretical commitment as to how they should be accounted for. In virtue of its negative edge, meanwhile, (P3) has more profound consequences: for, by specifying how processes could not be described, this proposal rejects the very intelligibility of thinking about instances of one ontological category in terms of other ontological categories, and hence, presumably, the coherency of an explanatory framework along similar lines.

With (P1)-(P3) in place, let's turn to the question what notion of process is involved in perceptual experience. To the extent that experiential phenomena are dynamic, (EH) would no doubt regard experiential processes as continuous changes. More importantly, it specifies the relevant processive items in terms of (P3): that is, this ontological proposal conceives perceptual experiences as psychological states which constitutively depend on phenomenally conscious processes, where the latter processes may not be described in terms of non-dynamic components like objects, properties, relations, etc. In other words, (EH) takes the processes at the heart of perceptual experiences to be fundamentally dynamic or dynamic down to the core. In O'Shaughnessy's more extreme version of (EH), this understanding of experiential processes is fully manifest: 'experiences are events (glimsing, picture-painting) or processes (walking, picture-painting), and each momentary new element of any given experience is a further happening or *occurrence* (by contrast with (say) the steady continuation through time of one's knowing that 9 and 5 make 14).' (O'Shaughnessy 2000: 42, but also cf. 48, 61, 62, 65) And while less explicit than O'Shaughnessy, Soteriou endorses a similar stance: a major goal throughout his work consists in arguing against a representationalist view of perception on the grounds of its alleged commitment to an ontology of processes along the lines of (P2) (cf. Soteriou 2013: 37ff.).

One point that these remarks on experiential processes intend to stress is that (EH)—even Soteriou's more nuanced version—has a significant ontological cost: it introduces processive items of a special kind into our ontological outlook. Indeed, processes—changes, in general—are a more or less obvious dimension of the natural world. That said, they are also typically conceived in terms compatible with (P2): by describing processes in terms of more cognoscitively obvious even if not explanatorily fundamental items (e.g. objects, properties, and relations), we typically manage to hint at ways in which processes fit into the ordinary medium-sized world or the more technical microscropic/macroscopic domain of scientific disciplines. Even a radical Experiential Heracliteanist like O'Shaughnessy concedes that physical as well as psychological but non-experiential processes may be specified—even constitutively

explained—in terms of successive transitions among states (cf. O'Shaughnessy 2000: 44-47). Building on (P3), however, (EH) suggests that experiential processes could not be described but in terms of further processive or otherwise dynamic items. That understanding of processes no doubt underscores the distinctive dynamic dimension of conscious experience, but it also comes at a not insignificant cost: it is not supported by a general commitment to the existence of processes, for (P3) is not coextensive with the more ordinary processive notions reflected in (P1) and (P2); and, since it thus stands for a special category of items, it seems to obscure, at least at a descriptive level, what place (if any) experiential processes have in the natural—whether physical or psychological—world.

In short, Soteriou's phenomenally conscious processes are no ordinary processes: in virtue of their necessarily dynamic status, they seem to introduce a sui generis set of entities into our more familiar descriptive ontology. The crux of Soteriou's ontological proposal lies in the fact that the phenomenally conscious processes at the heart of experiential occurrent states are not of any common kind. Such processive items are what commit him to a strong understanding of the Heraclitean metaphor: while Experiential Heracliteanists like him and O'Shaughnessy do not seem to take issue with the thought that physical and psychological but unconscious processes are not only describable, but also accounted for, in terms of continuous transitions among states; they invoke phenomenally conscious processes that can only be described, and hence, explained, in terms of further phenomenally conscious processes in order to accommodate the dynamic character of perceptual experiences. Soteriou's experiential processes are like no other standard form of (physical or psychological) processes we know of because of their necessarily dynamic character. In a very literal sense, they fit the metaphor of Heraclitus' river: they flow through and through.

The foregoing remarks on the notion of process also aim to suggest a more positive point: (EH) is not the only form of fleshing out the Heraclitean metaphor. In the next section, I shall describe a proposal very similar to Soteriou's stance, except for the fact that it relies on (P2) rather than (P3). Thanks to this small but significant modification, an ontology of perception could model perceptual experiences as dynamic phenomena, and also hint at potential ways of spelling out what place such phenomena have in the natural world. To reinforce this proposal, the subsequent section will then address a potential objection that Soteriou advances against an ontology of perception that does away with experiential processes along the lines of (P3).

3. A World of non-Heraclitean Experiences

The non-Heraclitean proposal I unpack in this section specifies Soteriou's notion of occurrent state in terms of (P2) rather than (P3): in particular, it models perceptual experiences as *states constitutively dependent on processes of a neurobiological or otherwise sub-personal kind*. As it will be presently explained, this understanding of perceptual experiences not only avoids relying on the potentially controversial notion of process expressed in (P3): it also gestures at how such experiential phenomena could fit into our natural worldview.

To sketch Experiential non-Heracliteanism—(ENH) for short—let's draw some inspiration from Zeno Vendler's seminal piece on times and verbs:

> What happens when we perceive, and what is it that makes it happen? [...] A sailor on deck looking ahead remarks, "It is pitch dark, I don't see anything." After a while, "Now I see a star." We ask him, "What has happened?" "The cloud's gone." "But what else happened?" "Nothing else." Of course things happened in the world and in the sailor. But his seeing is not one of them. (Vendler 1957: 160)

In a nutshell, Vendler describes a state-based or stative account of *seeing* (cf. Vendler 1957: 154-156). By seeing, he does not mean in this context the instantaneous or near-instantaneous event by means of which a subject goes from not seeing to seeing—as he calls it, seeing in a "spotting" sense—but a temporally extended state by means of which a subject is capable of keeping visual contact with an object in particular or her surroundings in general. An example of seeing in this latter sense is a scenario where a sailor sees a star for a given interval of time, t_1-t_x. To shed light on the temporal or otherwise ontological nature of seeing, Vendler explicitly raises the question what happens to the subject when seeing the starry object throughout t_1-t_x. For sure, several extracranial and intracranial happenings or processes take place: physical processes of light-transmission across space and time, neurobiological and otherwise sub-personal processes triggered by retinal stimulation, etc. The description of this perceptual scenario is very crude indeed, but it does highlight the processive character of visual phenomena in general, no matter how simple they might be. In spite of conceding this much, Vendler does not regard seeing as one of the aforementioned happenings: it may be constituted by the sum of such processes, but we should not commit the category mistake of counting it among the members of that sum. His commitment to a stative view seems to suggest that physical and psychological processes contribute to constitute instances of informational relations between a perceiver and her surroundings: as such, seeing would be a more or less temporally extended mental state that obtains in virtue of the instantiation of such informational transactions, where the latter relations are in turn constituted by the occurrence of the aforementioned

physical and psychological processes. Like other post-Rylean philosophers at the time, Vendler is to a good extent driven by an attempt to undermine a traditional philosophical tendency to depict seeing as a special or otherwise mysterious process, and, hence, to resucitate the ghosts of Cartesian epistemology (cf. Vendler 1957: 159-160). As such, by classifying seeing as a state rather than as a process—or, to be more precise, as an activity conceived as a processive sub-category—he thus aims to show that we should not look for visual phenomena where they should not be looked for. While Vendler's proposal is by no means the only historical precedent for (ENH), it is my main source of inspiration here insofar as it will inform an understanding of perceptual experience that shapes occurrent states in terms of (P2) and a plausible ontological line of motivation on its behalf. I expand on these two points next.[vii]

As previously mentioned, Vendler outlines a stative account of *seeing*, but his remarks may be tailored so as to hint at a stative view of *visual experience*. After all, at least for an intuitive and focal understanding of seeing, both phenomena are deeply intertwined: when a subject S sees a worldly object *o* from t_1 to t_x, she is consciously aware—that is, undergoes a visual experience—of *o* for the same or nearly the same amount of time. Like Vendler, one could raise the question what happens when S visually experiences *o*. Once again, a number of physical and psychological but non-experiential processes occur. And while this experiential phenomenon is in a sense a happening or an occurrence, it need not be one of such constituting processes. Instead, it may be an overarching state that is occurrent insofar as it constitutively depends on the existence of the previous processes. To relate now Soteriou's terminology with the notion of process reflected in (P2), S's experience may be described as a temporally extended state that instantiates an informational relation between S and *o*: such a state is in turn constituted by processes of potentially different kinds, and the latter processes may again be described in terms of the succession or the maintenance of states conceived as instantiations of properties or relations. When consciously aware of a star, a sailor establishes an (accurate or inaccurate) informational relation with that object: that is, her temporally extended visual experiences could be conceived as temporally extended states, as the instantiation and subsequent maintenance of an informational relation between the relevant subject and the apparently perceived surroundings. Although (ENH) thus incorporates an important stative element, it does not deny that perceptual experiences are dynamic, for it takes the relevant experiential states to be made of processive items. At the same time, since occurrent states could be heterogeneous, such constituting processes need not be conceived along the lines of (P3). Thanks to (P2), they may be described in terms of more familiar non-dynamic items (e.g. objects, properties, and relations). That being the case, it seems natural to describe them as the physical and subpersonal processes unveiled by cognitive psychology and neurobiology. At this level of descriptive generality, (ENH) manages to place experiential states within

the natural world by relating them to elements within this domain.

As already anticipated, the previous thought points at a key motivation driving the present version of (ENH). Influenced by Ryle's remarks on category mistakes and the myth of the 'ghost in the machine' (cf. Ryle 1949: ch. 1), Vendler claims that a stative account of seeing seeks to avoid the ghosts of Cartesian epistemology. What is he thus trying to avoid? Most likely, I believe, philosophical views that obscure our understanding of a given psychological feature by adopting a non-compulsory conception of the relevant explanandum. In particular, a Cartesian metaphysics accounts for our psychological lives in terms of a para-mechanical realm of objects and events, so as to accomodate epistemic facts about our introspective access to our own selves. By taking this step, a Cartesian outlook unleashes the recalcitrant question how such para-mechanical objects and events fit into the natural world we know and love. Against this problematic backdrop, Vendler suggests that we need not look for episodes of seeing among the events and processes bridging the informational gap between perceivable items and perceivers: instead, seeing may be conceived as a temporally extended state constituted by the previous chain of physical and subpersonal events and processes. Not unlike this approach, the present version of (ENH) is to a good extent fueled by a similar ontological worry. For, while not amounting to a Cartesian view of experience, (EH) does seem committed to a non-compulsory conception of experiential phenomena, and, as a result of this, it potentially obscures our understanding of how perceptual experiences exist in the natural world. So, although not Cartesian in spirit, a Heraclitean ontology of perception would risk describing perceptual phenomena in a way that led us to look for them where they need not—and perhaps should not—be looked for. The worry is then that a notion of experiential process modeled along the lines of (P3) would fail descriptively to relate perceptual experiences to its underlying physical and subpersonal basis. And since this framework is shown not to be compulsory by (ENH)'s alternative depiction of occurrent experiential states in terms of (P2), one could thereby choose to avoid that view altogether in favour of its non-Heraclitean counterpart—that is, in favour of a framework that acknowledges the dynamic character of experience and, at the same time, anchors the processes constitutive of experiential states to our familiar physical and psychological world.

The previous line of motivation may in turn be framed against a broader ontological landscape. Both Vendler's stative account of seeing and ontological proposals like (EH) and (ENH) discharge a tacit albeit wide-spread causal assumption in modern discussions of the *mind-body problem*, that is, the general question how our minds or specific aspects thereof exist in the physical world. According to what Helen Steward calls a *network model of psycho-physical causation* (cf. Steward 1997: ch. 7, 2011), the natural world may be broadly conceived as a complex mosaic of causally interlocking events: as such, the ontological status of

the mental hangs on addressing the questions whether mental phenomena play a causal role within that network and, if so, which one. Aiming to answer these questions, philosophical accounts of the mind typically end up leading to either one of two stances: the causal over-determination or the causal inefficacy of the mental (cf. Kim 2000). The ontological views unpacked throughout this piece transcend the network model insofar as they raise the possibility of bridging the gap between the physical and the mental in constitutive rather than causally productive terms. They do not a priori assume that perceptual phenomena are events causally producing or being causally produced by other (mental or physical) events: instead, they take experiential states to be constituted by physical or sub-personal states and processes. Perceptual experiences would not thereby be billiard balls in the complex table of reality, but conditions in virtue of which physical items could play that game. Or again, to use some Aristotelian terminology loosely, our understanding of the relation between the mental and the physical need not resort to the notion of efficient causality, but to that of formal causality.[viii] Thus conceived, the ontological debate about perception does not turn so much on what causally productive place perceptual experiences occupy in the natural world, as on what ingredients constitute such psychological states. (EH) and (ENH) take different stances vis-à-vis the latter question. For sure, the notion of constitution or constitutive dependence is by no means straightforward or unproblematic, but it does provide a stimulating and potentially promising conceptual framework for revisiting the otherwise stagnant mind-body problem in its more specific guises.

To sum up, this section aimed to outline a version of (ENH) that draws inspiration from Soteriou's work as well as that of Vendler's. More specifically, I have sought to show that the notion of occurrent experiential state need not resort to processes like those hinted at in (P3). (ENH) is, I believe, a more conceptually conservative way of fleshing out the Heraclitean metaphor in the realm of experience: and while my present sketch does not constitute a full-fledged defence of this non-Heraclitean proposal, I do hope it highlighted the fact that Soteriou's version of (EH) is neither trivial nor a priori compulsory.

4. Non-Heraclitean Experiences: Stative or Static?

Soteriou espouses (EH) for its alleged ability to accommodate the phenomenology of temporal passage. Although I cannot assess this claim within the boundaries of this piece, it is necessary to address one of its underpinning assumptions, namely, the negative thought that a non-Heraclitean view misrepresents the perception of change by describing protracted experiential states in terms of ordered successions of static representations—in short, the thought that, when conceived along non-Heraclitean lines, experiences turn out to be static phenomena.[ix] Soteriou's critique directly bears on the plausibility of a view like the present

version of (ENH), for it targets any account of perception that does away with (P3) on behalf of (P2). In a nutshell, that line of criticism seems inconclusive to me for three reasons: first, what Soteriou actually ends up targeting is a representationalist view of experience, not a non-Heraclitean stance like (ENH); secondly, even if (ENH) was somehow bound to perceptual representationalism, it is not necessarily comitted to a static conception of perceptual representation; finally, Soteriou's overall objection assumes that experiential states could answer questions of cardinality, a point I challenge here. By thus shedding light on the implications of a non-Heraclitean ontology, I hope to reinforce the previous sketch of (ENH).

In what exact sense are experiential occurrent states, conceived in terms of (P2), supposed to be static? A static understanding of states typically concerns the previously mentioned feature of homogeneity, where a temporally extended item of kind S is homogeneous iff its temporal parts are of the exact same (natural) kind S. If homogeneous, states would be static by lacking the sort of internal, complex structure that dynamic phenomena typically enjoy—e.g. progressively unfolding stages in the case of processes (cf. Rothstein 2004: 20). That said, it is relatively obvious that occurrent states are not static in this sense, for, as previously noted, one of their defining traits is precisely their non-homogeneity: neither they nor their constituting parts have to belong to the same (natural) kind.

Soteriou thinks that a non-Heraclitean conception of experience is static insofar as it fails to accommodate the perception of change over time: such states fail to capture how things dynamically appear to their respective subjects because, albeit non-homogeneous, they are the sort of temporal items that *obtain* or *continue obtaining* over time. To unpack the objection, let's focus on an extremely crude case where a subject perceives dynamic phenomena: a subject S experiences a banana from t_1 to t_5, and then an apple from t_6 to t_{10}. According to Soteriou, (ENH) would provide only two ways of describing this basic scenario: either (i) S instantiates an ordered succession of discrete, instantaneous or quasi-instantaneous experiential states from t_1 to t_{10}, or (ii) she instantiates a single, protracted experiential state for the same period of time. Both option, he thinks, fail to describe the perception of protracted change.

In regard to the first possibility, Soteriou writes:

> [...] if the psychological states of the subject are changing in this way during the interval t1-tn—if what seems to her to be the case changes during each sub-interval of t1-tn—then it looks as though we fail to capture the fact that over that interval of time t1-tn she has a psychological property that accounts for [...] its seeming to her as though she is aware of an occurrence with the temporal extension of O [that is, the perceived phenomenon spanning the interval t1-tn]. (Soteriou 2013: 95)

A 'snapshot' version of (ENH)—that is, a view according to which a temporally extended perceptual state is the sum of instantaneous or near-instantaneous perceptual states—would break down because a bundle of instantaneous or quasi-instantaneous experiential states could not on their own coalesce into an experience of continuous, temporally extended phenomena. Just as an ordered succession of snapshots would not necessarily constitute a single sequence of moving images, an ordered succession of experiential states does not have to constitute an experiential state of successive events. Hence, the instantiation of several momentary experiential states as of a banana from t_1 to t_5 and of several momentary experiential states as of an apple from t_6 to t_{10}, would not on their own accommodate the idea of S's being aware of a banana followed by an apple from t_1 to t_{10}.

To assess (ii), Soteriou examines a 'one-experience' view along the lines of Michael Tye's take on diachronic experience (cf. Tye 2003: ch. 4). The latter proposal is prompted by a worry concerning experiential individuation: if protracted experiences are constituted by mereological sums of shorter experiences, how should we go about counting how many experiences there are within temporally extended ones? There is apparently no principled way of deciding the matter. To settle the problem, Tye advances the following principle of individuation: for each uninterrupted stream of consciousness, there is a single protracted experience. This hypothesis would allegedly be the most elegant way of dodging the aforementioned cardinality question. According to Soteriou, combining this proposal with a non-Heraclitean ontology of experience results in the view that perceivers have a single mental state with a content *p* throughout a whole uninterrupted stream of consciousness—say, from the moment they wake up to the instant they fall asleep. But then, a view along these lines would be problematic for the following reason: the type-individuation of a protracted state by means of a propositional content *p* entails ascribing to its respective subject a property concerning how things appear to her—crudely put, the property of it perceptually seeming to her that *p* (cf. Soteriou 2013: 110, 149); but such an ascription misdescribes the way we perceive change, for it statically fixes the content of the relevant uninterrupted stream of consciousness.

Soteriou formulates the previous line of reasoning as follows:

> Since the psychological state of the subject—its seeming to her as though she is aware of an occurrence O—is not something that unfolds over that interval of time, one might think that that perceptual state *continues* to obtain *throughout* that interval of time. In which case, we do not then capture the idea that what seemed to the subject to be the case during sub-intervals of that interval of time was different. So it looks as though we do not capture the idea that during the sub-interval t1-t2 it seemed to S as though she was merely aware of a temporal part of O, during the sub-interval t2-t3 it seemed to S as though she was aware of a different temporal part of O, and so on. (Soteriou 2013: 94)

One could perhaps expand or highlight this line of reasoning by noting that experiential states would involve contents scoping well beyond a subject's experiential horizon.[x] For example, since S has a mental state individuated by a content including a banana followed by an apple from t_1 to t_{10}, she would stand in a banana-followed-by-an-apple state all the way from t_1 to t_{10}—that is, even when, depending on the moment of time, a banana or an apple is not presented to her. The content of that single, protracted state would present S with information about worldly items that lie in her future as well as in her past: from t_1 to t_5, a mental state about a banana and an apple would obtain in S even though she has not come across an apple yet; and then, from t_6 onwards, a state with the same content would obtain even though the banana has already left S's sensory field. If, as it is often assumed in the philosophical literature, content-ascription at a time t_x to a subject S determines how things appear to S at t_x, the previous outcome is no doubt unacceptable: we are not normally aware of what lies in the past or what awaits for us in the future, but only of what exists now or within the so-called specious present. Hence, by statically fixing the contents of protracted experiences, a one-experience version of (ENH) would also fail to accommodate the distinctive dynamic way in which our perceptual experiences present the world to us across time.

As previously anticipated, the previous line of criticism seems inconclusive for at least three reasons. First, it actually targets a form of perceptual representationalism, not a non-Heraclitean view of experiential states. In a nutshell, Soteriou's two-pronged attack is that a sense of succession or protracted change is not accommodated either by a succession of representational states or by a single protracted state representing temporally extended succession. All he has done up to this point is to spell out a plausible objection as to how different forms of representation could account for a representation of temporally extended change. But while Soteriou goes to some lengths to show that perceptual representationalism is bound to an ontology of experiential states (cf. Soteriou 2013: 38ff.), he does nothing to show that a view along the lines of (ENH) has to be representationalist. As far as I can see, a non-Heraclitean view does not entail representationalism. On the contrary, it seems natural to articulate this ontological proposal along relationalist lines: after all, a fairly straightforward way of fleshing out the thought that experience or its phenomenal character is relational, consists in describing experiences in terms of states that result from the instantiation of informational relations between a subject and her surroundings. So, in spite of its potential merit as an objection against perceptual representationalism, Soteriou's critique does not obviously target an ontology of experiential states that does away with (P3). In order to do so, it still has to show that perceptual representationalism is a necessary ingredient of a non-Heraclitean ontology of experience.[xi]

Secondly, the variety of perceptual representationalism targeted by Soteriou does not seem compulsory: that being the case, even a representationalist version of (ENH) would still be plausible.

Soteriou's line of reasoning incorporates a widespread assumption about the relationship between content-ascription and perceptual appearances: the ascription of an experience with content *p* to a given subject S over an interval t_1-t_x or a sub-interval thereof codifies how things appear to S during the relevant interval or sub-interval (cf. Soteriou 2013: 40).[xii] This piece cannot divert into a discussion of perceptual content, whereby I shall only voice, not argue for, the plausible claim to the effect that perceptual representationalism need not commit to that assumption. Indeed, the notion of perceptual content is a philosophical device intended to codify personal-level information about what and how a subject experiences the world: as long as it fulfills this general role, the way it relates to the synchronic and diachronic way in which things appear to a subject could in principle take a wide variety of forms. The content *p* of a temporally extended experience E could, for instance, capture how things appear to S over the whole interval of time in which E takes place without, at the same time, fixing how things appear at any particular instant within that interval. This is, in fact, part of what Tye's one-experience account is trying to get at (cf. Tye 2003: 97). If sound, these remarks suggest that even a representationalist version of (ENH) could avoid Soteriou's criticism.

Finally, the very fact that the relevant objection is posed in terms of two allegedly implausible options—namely, (i) and (ii)—suggests that Soteriou neglects an important point about stative individuation: states are not the kind of ontological items that answer cardinality questions the same way particulars (e.g. substances and perhaps certain kinds of events) do so. Consider standard samples of property- and relation-instantiations: it would, for example, be odd to ask whether an apple goes through one or several instantiations of red throughout the interval of time it is ripe; or again, it does not quite make sense to ask how many instances of believing that *p* take place in me over the period of time I hold the belief that *p*. Likewise, if perceptual experiences are conceived as states, we could not answer cardinality questions about experience for the simple reason that such questions would not arise at all. Sure, there is a broad sense in which I undergo one experience over an uninterrupted period of conscious awareness—that is, for the mere fact that my stream of consciousness has to have either definite or ambiguous temporal boundaries. But this should not lead us to think that experiential states could answer the same kind of "how many"-questions that we pose for spatial and temporal particulars. A ripe apple instantiates a particular hue of red for a given interval of time: sure enough, to the extent that such an instantiation has a beginning and an end, we could unidiomatically claim that one such instantiation takes place in the apple. Of course, none of this would mean that one—as opposed to several—states of that particular hue obtain in the apple. Likewise, we could perhaps concede that one experiential state obtains in S over an experientially uninterrupted interval of time. However, this does not mean that one

experiential state obtains in S in a similar way in which there is one laptop—as opposed to two or three—in this room. In short, it seems categorially mistaken to frame experiential states as countable items, that is, as items that answer cardinality questions. Soteriou's critique thus seems controversial insofar as it is spelt out in terms that seem to assume otherwise.

To wrap things up, the present section critically assessed an objection that Soteriou could potentially direct against (ENH). In a nutshell, the thought is that non-Heraclitean occurrent states of perceptual awareness fail to capture our perception of change. In reply, I believe that the objection is not conclusive for three reasons: first, it actually targets perceptual representationalism, not (ENH); secondly, it seems to rest on a very particular way of understanding the relationship between perceptual appearance and content that we need not endorse—as such, even a representationalist version of (ENH) could perhaps dodge it; and, finally, the objection crucially assumes that experiential states could answer cardinality questions, *quod non*. The foregoing remarks have thus strived to provide an initial sketch of (ENH) as well as to dispel an initial worry that it could face. So concludes my modest defense of a non-Heraclitean ontology of perception.

5. Conclusion

Recent philosophical and psychological work on perception is slowly steering away from debates exclusively concerned with the intentional or phenomenological properties as well as the cognitive function of perceptual experience, so as to address the fundamental ontological question what perceptual experiences are. On the plausible assumption that perceptual awareness exists in time and thereby involves changes in our psychological lives, the temporal and dynamic structure of experience may crucially influence how we ontologically categorize perceptual experiences. Against this conceptual background, the Heraclitean metaphor of a flowing river is no doubt suggestive when it comes to characterize the temporal or otherwise dynamic structure of experience. How should we specifically understand this metaphor when applied to the experiential domain? Very carefully, I believe. For, while experience is intuitively dynamic, there is plenty of room for debating how that thought could be cashed out. This piece has focused on two ontological proposals: on the one hand, Experiential Heracliteanism, a view according to which perceptual experiences depend on at least some necessarily dynamic elements; and, on the other, Experiential non-Heracliteanism, a stance that describes the dynamic character of perceptual experience in terms of non-dynamic elements (e.g. states, properties, relations, etc.). Building on a critical assessment of Matt Soteriou's recent defense of (EH), this piece aimed to outline and only modestly defend a stative version of

(ENH). Although both ontological views conceive experiences as mental states constitutively dependent on processes of different kinds, they radically differ on the precise nature of such constituents. Soteriou endorses a form of (EH) insofar as he conceives the relevant processes along the lines of (P3)—that is, as irreducibly dynamic or as processive down to instants. My suggestion is that an ontology of perceptual experiences need not rely on the controversial category of necessarily dynamic processes: instead, experiences may be described in terms of (P1) and (P2)—that is, as the instantiation and subsequent maintenance of informational relations between a subject and her surroundings, states that in turn constitutively depend on processes of a neurobiological or otherwise sub-personal kind.

This article has thus sought to enrich the current debate on the ontology of perception by parsing and putting into sharper focus the virtues and limitations of different understandings of the way in which we wade through the Heraclitean waters of experience.[xiii]

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i For Heraclitus' fragments, cf. fr. 50 and 51 in Kahn 1979: 53. For interpretation and discussion of the underpinning Heraclitean theory of flux, cf. Barnes 1982: 49-52; Graham 2015.

ii When I generally say that we can be aware of instants or sub-intervals of time, this might intuitively be read as a short-hand way of saying that we can be aware of the worldly items at such instants or sub-intervals. But Soteriou actually means to claim that we are aware of instants and sub-intervals, at least in the sense that we experience more or less protracted parts of a *temporal sensory field*. For present purposes, I shall remain neutral on the questions whether conscious subjects are endowed with temporal sensory fields, and, if so, how such fields should precisely be characterized.

iii The following remarks draw inspiration from a subtle yet important move made by Soteriou: when it comes to outline an Heraclitean ontology of perceptual experience, he turns to an example related to the perception of static scenes. As far as I can see, this kind of case is to a good extent chosen for strategic purposes: it avoids conflating the present ontological proposal with a structurally similar view of event perception that Soteriou previously espoused (cf. Soteriou 2013: ch. 4 as well as pp. 139-140 for the latter stance). But, as I explain in the text, his choice of example also suggests that the temporal structure of the world we experience need not exhaustively specify our sense of passage.

iv Cf. O'Shaughnessy 1971a, 1971b, 2000; Steward 1997, 2011; Soteriou 2007, 2011, 2013, 2018; Crowther 2009a, 2009b, 2010, 2011; Lee 2014; Sanhueza Rodríguez 2016, 2018; Di Paolo, Buhrmann, and Barandarian 2017.

v For a notion of states along these lines, cf. Kim 1976; Armstrong 1997: 20; and Thau 2002: 60-61.

vi The notion of homogeneity has a structurally similar application in the spatial domain too: gold and water provide standard examples of homogeneous substances, in the sense that, at an intuitive level of description, their constituent parts are further bits of gold and water, respectively (cf. Crowther 2011).

vii Briefly to mention two other echoing views. At the heart of D.M. Armstrong's doxastic or belief account of perception lies the claim that 'to say that A perceives that p is to say that A comes to be in a certain state, a state which can only be described in terms of its possible manifestations.' (Armstrong 1968: 245-246) I set this view aside, however, for its potentially unappealing intellectualist connotations. Daniel Dennett, in turn, writes that '[c]onscious experience [...] is a succession of states constituted by various processes occurring in the brain, and not something over and above these processes that is caused by them.' (Dennett 1998: 136, but also cf. p. 135) While nominally describing a version of (ENH) very similar to the one I outline here, Dennett does not want to have anything to do with serious ontological distinctions like the one between states and processes, and most likely takes the relation of constitutive dependence to be a reductive one. As such, his claim really boils down to the idea that experiences are nothing over and above cerebral activity. By contrast, I sketch here a more ontologically robust reading of that statement: that is, one that takes the ontological import of categories like those of process, state, and (non-reductive) constitution, seriously; one that potentially delivers a general framework for understanding how perceptual experiences non-reductively depend on phenomena of our physical world.

viii For recent enactivist or radical approaches in cognitive psychology that take this conceptual turn seriously, cf. Juarrero 1999; Di Paolo, Buhrmann, and Barandarian 2017.

ix In fact, I am tempted to think that this negative thought makes a greater contribution to Soteriou's overall defense of (EH) than his positive reasoning from phenomenology. I can only voice this claim here, though: arguing for it would require a lengthier discussion than the one this piece could afford.

x I am indebted to Soteriou for stressing this thought in conversation.

xi To be fair, Soteriou's attempt to bind a non-Heraclitean ontology and representationalism together is not unmotivated. Driven by the task of exploring how ontological categories like those of process and state bear on traditional debates about the intentional and the phenomenal character of experience, Soteriou strives to show how mainstream discussions about representationalism and relationalism overlap with more exotic questions about the temporal or otherwise ontological structure of experience. Against this backdrop, he tends to pair (ENH) with representationalist views, on the one hand, and, on the other, (EH) with relationalist ones. Although his separate discussions of the intentional/phenomenological and the ontological structure of experience are powerful and thought-provoking, the cross-over he then attempts to drive between both discussions seems to be the chink in his overall project's armour. For the time being, my main point is that Soteriou provides no reason for accepting that (ENH) has to be fleshed out along representationalist lines, a claim that is, I believe, essential to his criticism.

xii As previously suggested, this assumption is popular yet tacit. A relatively more explicit statement of it may perhaps be found in Charles Travis' critical remarks on the looks-indexation of perceptual content (cf. Travis 2004).

xiii For comments and suggestions over time, I am indebted to José Tomás Alvarado, Sebastián Briceño, Cristina Crichton, Thomas Crowther, José Antonio Errázuriz, José Antonio Giménez, Christoph Hoerl, Pablo López Silva, Rory Madden, Mike Martin, Krisztina Orbán, Gabriel Reyes, Gastón Robert, Carlo Rossi, Thomas Sattig, Paul Snowdon, Matt Soteriou, Javier Vidal, Keith Wilson, Hong Yu Wong, and Zoltan Istvan Zardai. This piece also benefited from the feedback of live as well as virtual audiences in Rijeka (Croatia) and Santiago (Chile). Finally, this article was also developed under the generous finantial support of a FONDECYT Iniciación Fellowship (No. 11200074).

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