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Occurrent States

Which ontological categories are required in order to talk sensibly about the things which populate our mental lives?—and how are these various categories to be understood? After at least a half-century of ontological work in the philosophy of mind in which the dominant categories have been those of the mental state and (post-Davidson) the mental event, recent work has finally given the category of process some of the attention it undoubtedly deserves (see e.g. Mourelatos, 1978; Stout, 1997 and 2003; Galton and Mizoguchi, 2009; Crowther, 2011; Hornsby, 2012; Steward, 2012, 2013 and 2015). Much of this work has centred on the potential importance of the category of process for the understanding of the phenomenon of agency, but at least some has also begun to consider the relevance of the category for an improved conception of experience (see e.g. Crowther, 2009 and Soteriou, this volume). I am in no doubt that this suggestion that there is a deep and intimate relation between processuality and experience must be correct. In this paper, though, I want to focus on a distinct, albeit related suggestion that has made a recent appearance in the literature on mental ontology – namely, that the accommodation of that ontology to the experientiality of mind is also going to require a rather surprising adjustment in our conception of one of the more traditional categories of mentality – that is to say, an adjustment in our conception of the category of state. It has been argued by Matthew Soteriou in his (2013) that we are going to have to accept that some mental states must be occurrent in their nature, owing to the role they play in the general structure of experience. His account of that general structure involves a claim he calls the ‘interdependence thesis’, a thesis concerning the close relationships between a certain class of experiential events and processes, on the one hand, and a certain class of mental states, on the other. Soteriou believes that a commitment to the occurrent nature of the relevant class of states follows from the interdependence thesis, in conjunction with certain important facts about our experience of worldly events and processes. The justification for the interdependence thesis itself is said to ‘depend on what explanatory work it can do’ (p.51) – and by that criterion, it is hard to doubt that Soteriou has made a strong case for its truth. Soteriou puts the thesis to work in order to explain: (i) a distinctive form of relatedness to time that can be had only by conscious subjects; (ii) why there are certain things that only phenomenally conscious subjects can do— for example, engage in acts of perceptual imagining; (iii) the phenomenon of knowing ‘what it’s like’ to have a certain sort of sensory experience; (iv) the phenomenology of bodily sensations; and more besides. These apparent explanatory successes are impressive, and together present a persuasive case for the plausibility of Soteriou’s general account of the ontology of mind. And yet, the notion of an occurrent state is, *prima facie*, extraordinarily puzzling. Crudely stated, the central worry is this: states are usually understood by way of a contrast with typical occurrents, such as events and processes, and if some of them are not to be thus understood, because they are themselves ‘occurrent’, what more exactly is there to say about what makes them stative? Why are they not simply themselves events or processes, in virtue of their occurrent nature? That states obtain over time, rather than occurring at a time, or throughout a time period, seems to be part of their very essence. In what follows, I shall try to press this worry, and to argue that Soteriou underestimates the difficulties inherent in making it plain how something occurrent could be a state, at any rate on the most natural understanding of what it is for something to be ‘occurrent’. But the ultimate aims of this paper are irenic. So far as I can see, we can dispense with the category of occurrent state without in the least damaging the central insights of Soteriou’s compelling account of the ontology of mind. The key to the solution, I think, hoves into view once we think a bit more carefully about the concept of a state in general, and in particular, make some distinctions between different claims that might be made by means of the denial that certain

states are 'homogeneous', or 'homogeneous down to instants'. Armed with a clearer conception of what this homogeneity involves, I suggest, we can then preserve the benefits of Soteriou's system in an ontologically more conservative fashion than Soteriou supposes, one which has no need for the problematic idea of an occurrent state.

In section I, I shall explain in broad outline the ontological proposal which is alleged by Soteriou to do all this useful explanatory work, and try to explain how he understands the notion of an occurrent state which lies at the heart of it. In section II, I shall explain in more detail why I think the notion of an occurrent state is difficult to accept, by considering the linguistic structures by means of which we encode our commitments to the existence of states. In this section, I also develop the distinctions between the different conceptions of homogeneity on which I shall rest my reconciliation of Soteriou's account with the insistence that anything truly occurrent would be bound to fail the correct criterion of stativeness. Then, in section III, I shall turn to the irenic reconciliation itself, and will attempt to show that notwithstanding the fact that there cannot be occurrent states, the essentials of Soteriou's view can be preserved intact, once we understand properly what sorts of states we need in order to characterize the contents of the conscious episodes in which Soteriou is interested.

(I) *Soteriou's Ontological Proposal*

At the heart of Soteriou's ontological proposals is the idea that the notion that there is a stream of sensory consciousness is one that needs to be somehow accommodated by any acceptable philosophy of mind. For many particular aspects of his development of this idea, he is indebted to O'Shaughnessy, whose view on the essential processuality of consciousness he quotes approvingly: 'The 'stream of consciousness' is such as to necessitate the occurrence of processes and events at all times' (2000: 43). States, according to O'Shaughnessy, cannot of their very nature be conscious, because their continuity is precisely not processive; it does not consist in the maintenance of anything of a happening or occurring sort. He claims that 'No experiences are states. None can be and of necessity' (2000: 47). Even when the type or content of an experience does not change, so that, for example, one is contemplating an essentially static scene for several minutes, say, O'Shaughnessy emphasizes that we have not escaped processuality in the conscious realm:

Even when experience does not change in type or content, it still changes in another respect: it is constantly renewed, a new sector of itself is then and there taking place. This is because experiences are events or processes, 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). (2000: 42)

It is this feature of conscious experience that characterizes and explains its capacity to keep us constantly in contact with what is going on at any moment in our current environment—even if, in one sense, nothing is going on there. As O'Shaughnessy puts it, 'the internal clock of consciousness ticks on' (2000: 61), even when one confronts nothing but silence and unchanging stillness in the world around. Moreover, O'Shaughnessy insists that these events or processes of which experience is made up cannot be analysable in terms of events that are simply changes to states. The sort of mental process which might, for example, be constituted by the change from being in state M1 at t1, through M2 at t2 to M3 at t3, for example, would not amount to an experience. He asks rhetorically, 'If no psychological states are experiences, how can there be a state whose continuous change constitutes experiential process?' (2000: 47). And it is, I think, indeed hard to see how if states themselves are not experiences, changes to those states might nevertheless go to

constitute experience. In essence, then, neither states, nor processes conceived of merely as things composed out of changes in states, can constitute experience. A more full-blooded kind of processuality is required—one the understanding of which ultimately sheds light on the distinctive kind of conscious contact with time that is given us by wakeful consciousness.

To philosophers used to talk of ‘conscious states’, ‘phenomenal states’, etc., O’Shaughnessy’s view that no experience can be a state might seem bewildering at first. What, one might ask, of a state such as being in pain, or a specific variety of such, such as having a headache? Are these things not conscious experiences? And are they not states? Certainly they seem to endure and to obtain—which would seem to make them stative rather than occurrent, on most accounts of what it is that constitutes the category of statehood. How, then, can O’Shaughnessy possibly claim that no experiences are states? The answer favoured by Soteriou in this particular case can be used to illustrate the general ontological strategy that he applies throughout the book. His answer is that although indeed being in pain (or, more specifically, having a headache) is a state (that is to say, a property of a human being which obtains throughout a period of time), it nevertheless always involves constitutively the having of a located bodily sensation, the best account of which is that the sensation is an event which seems to one to be occurring at that bodily location. One simply cannot be in the state of pain unless such an event seems to be going on somewhere in one’s body. The state of pain is therefore constitutively dependent upon the occurrence of such an event for its existence. But there is dependence in the other direction as well. If one asks oneself what is the essential nature of this sensation-event, one will have to reply by mentioning the property of the subject which s/he has in virtue of the occurrence of the event (e.g. by saying ‘He has a headache’); for the events in question are essentially subjective events, whose existence consists in something’s seeming to be a certain way to a subject of experience. The crucial properties by means of which one will have to single out the crucial event will, therefore, be the stative properties of a conscious subject, not special properties of the event itself. And so there is an essential interdependence here between state and conscious event; each is dependent on the other for the specification of its own nature.

This symbiotic relationship between (i) a contentful mental state of a subject and (ii) a conscious event/process on which that state depends for its existence and character, provides a basic model in terms of which Soteriou proposes we can understand a wide variety of conscious mental phenomena. This is the aforementioned ‘interdependence thesis’ (p.50), according to which conscious sensory experience always involves the occurrence of mental events/processes, just as O’Shaughnessy proposes; but Soteriou adds to this suggestion the idea that whenever such a mental event/process occurs, the subject undergoing the process has psychological properties she wouldn’t otherwise possess (that is, she is in a psychological state whose obtaining is dependent on the occurrence of an event/process of that kind). The nature of the mental event/process is to be specified in terms of the sort of psychological state of the subject that obtains when the event/process occurs (e.g. ‘He has a headache’ or ‘it looks to me as though there’s a table in front of me’); but equally, the nature of the state is to be specified, at any rate at a certain level of abstraction, in terms of the kind of event/process in virtue of whose occurrence it obtains. How are we to understand this talk of ‘levels of abstraction’? The idea is that we can single states out in many ways, but only some such singlings out will make reference to the kind of mental event/process in virtue of whose occurrence the state obtains; and hence, only some such singlings out will truly capture the conscious character of the experience. For example, it would be too abstract to characterize a state of the relevant kind by reference only to its representational properties. Take, for example, the state of its seeming to me as though there’s a table in front of me. Now, it might seem to me as though there’s a table in front of me because I can see it; or because you’ve told me; or because I can hear someone pushing it around; or just because I’ve got a strong and inexplicable hunch that there is. Just

saying that the state is a state of ‘its seeming to me as though there’s a table in front of me’ therefore does not characterize my state at the right level of abstraction to capture its specific nature as a conscious state. To capture its character as a specifically conscious state, it will not be sufficient to give the representational properties—the level of abstraction is too high. In order to capture its conscious aspects, the events/processes in virtue of which the experience is, for example, a seeing, will have to enter the picture—and once those are specified, the character of the relevant conscious episode, and thereby of the state itself, can be filled in.

Evidently enough, the interdependence thesis gives rise to a certain kind of explanatory circularity. One cannot specify the nature of either (i) contentful mental state or (ii) the associated event/process, except in terms of the other. But Soteriou considers this circularity to be a virtue of the view. For it is a circularity which, he thinks, can be used in the diagnosis of certain persistent intuitions in the philosophy of perception—for example, the intuition that an entirely representational account of the nature of experience must ‘miss something out’; and the fact that we find it so difficult to describe these ‘what it is like’ properties that are allegedly thus missed out. We cannot describe the ‘what it is like’ properties because the only way in which we can characterize the nature of the relevant conscious events/processes is by appeal to the states whose obtaining is constituted by them. And yet when we make this appeal, and talk about the intentional content of those states, we inevitably feel that we have then missed out what was most crucial. The view also promises to capture the plausibility of the claim made, for example, by P.F. Strawson, and thereafter endorsed by numerous subsequent philosophers of perception, that if one attempts to try to characterize what the nature of one’s sensory experience is currently like, to do anything other than mention the way the world seems in virtue of that sensory experience is to falsify it.¹ Seeing is always seeing as (and to some extent the same is true, *mutatis mutandis*, for much non-visual sensory experience)—that is to say, it already comes thoroughly conceptualized in such a way that saying what things are really like for the experiencer demands that we offer content in order to explain what it is like, and cannot do so by trying to characterize entirely content-free properties of any event. Soteriou’s proposal therefore promises to provide an interesting analysis of some of the most tenacious intuitions in contemporary philosophy of mind—and seems to have the potential to offer a very fertile account of the relation between the conscious mind and its contents.

There are, however, difficulties with the interdependence thesis—difficulties which concern the question how the content of the relevant state is supposed to relate to the ongoing events and processes on which it depends—and ultimately, it is these difficulties which lead Soteriou to postulate the necessity for the new category of occurrent state. The basic problem relates to the intimate relation which appears to hold between conscious experience and time, and the difficulty of representing this relationship by way of the contents of associated states. Soteriou develops the problem by focusing on our experience

¹ “Suppose a non-philosophical observer gazing idly through a window. To him we address the request, ‘Give us a description of your current visual experience’, or ‘How is it with you, visually, at the moment?’ Uncautioned as to what exactly we want, he might reply in some such terms as these: ‘I see the red light of the setting sun filtering through the black and thickly clustered branches of the elms; I see the dappled deer grazing on the vivid green grass ...’ So we ... explain that we want him to amend his account so that, without any sacrifice of fidelity to the experience as actually enjoyed, it nevertheless sheds all that heavy load of commitment to propositions about the world which was carried by the description he gave. ... Our observer is quick in the uptake. He does not start talking about lights and colours, patches and patterns ... He says instead, ‘... the simplest way to do this ... is to put my previous report in inverted commas ... Thus: ‘I had a visual experience such as it would have been natural to describe by saying that I saw etc. ... In this way I use the perceptual claim ... in order to characterize my experience, without actually making the claim ... And this is really the best possible way of characterizing the experience’ (Strawson, 1979: 43-4).

specifically of events. It seems plausible, Soteriou suggests, that amongst the items we experience are included a wide range of different kinds of events—for example, various movements and changes taking place in time. Soteriou claims, plausibly, that our experience of events is ‘temporally transparent’—that is to say, that ‘[w]hen one introspects one’s experience, the temporal location of one’s perceptual experience seems to one to be transparent to the temporal location of whatever it is that one is aware of in having the experience’ (p.89). In other words, it doesn’t seem to one, when one observes an event, as there is one event happening in the world from t_1 to t_n , say, and then another event which constitutes one’s perceptual experience of that event, happening over some distinct interval of time. Necessarily, the temporal location of one’s experience seems to one to be identical with the temporal location of what it is an experience of. In this respect, as Soteriou points out, perceptual experience is wholly different from the act of recollection, say, where it does indeed seem as though the event which constitutes the experience of recollection does not take place at the very same time as the recollected event.

This feature of perceptual experience might make one think that the best way to think about the nature of experience is to think of it as itself an occurrence, one which unfolds over the same interval as does the event experienced, each temporal part of the experience thereby being concurrent with a part of the event experienced. But according to the interdependence thesis, in order to describe the nature of this experience, we are going to need to say something about the psychological properties or states possessed by the subject over that interval, and these properties (being stative) do not themselves unfold. This, however, as Soteriou points out, makes it very hard to see how those states can play the role they are supposed to fulfil here of characterising correctly the way things seem to the subject when she perceives the event. Soteriou illustrates what the problem is supposed to be by considering two puzzle cases. The first puzzle concerns the perception of instantaneous events. Imagine you are staring fixedly at an object that suddenly vanishes into thin air. Your perception of the object before it disappears is obviously not in itself a perception of the disappearance event, and neither is your perception of the absence of the object, once it has vanished. It seems as though, in order to perceive the disappearance itself, one has to perceive the scene in front of one enduring for an interval of time, t_1 to t_n , an interval which includes the instant of disappearance. But there does not seem to be any instant during this interval at which you are aware of both the scene with the object present, and the scene with it absent. It only seems to make sense to say that you have perceived the instantaneous event over an interval of time which includes the disappearance. On the assumption, though, that if a subject is in a state over a given period of time, then this is determined by, and hence explained by, the fact that she is in that state at each of the instants that make up that period of time, it seems to follow that there can be no interval of time which includes both a time at which the object is present and a time at which it is absent, over which you are aware of the scene before you enduring. And this assumption might seem to be mandated by the very nature of states as non-occurrent entities. How, then, are we to capture the fact that the content of what you have perceived includes a disappearance event? If we insist on the interdependence thesis, with its insistence that we must represent how things seem to the subject using a stative ontology, we seem to run into difficulties.

The second puzzle concerns the perception of non-instantaneous events. One might think that the idea about the temporal transparency of experience dictates the following: that if one successfully perceives the event of an object moving from location L_1 to L_{10} over some interval of time t_1 to t_n , then there is some sub-interval of time, say, t_1 - t_5 over which one is aware of some temporal part of this occurrence—e.g. the object moving from L_1 to L_5 —and that in turn, there are sub-intervals of that period over which one is aware of some even shorter phase of the object’s movement, and so on. But suppose again that if a subject is in

a given perceptual state over a given period of time, this is explained by the fact that she is in that perceptual state at each of the instants that make up that period of time. So, for example, if over an interval t_1 to t_{10} a subject is aware of the movement of an object from L_1 to L_{10} happening over the interval t_1 to t_{10} , then this is explained by the fact that at t_1 she was in that state of awareness, at t_2 she was in that state of awareness, etc. However, it seems plausible (as we said) that at each instant within the interval t_1 to t_{10} the subject is aware only of the temporal part of the event that is concurrent with that part of her experience—and never aware of the whole event of the object's moving from L_1 to L_{10} . We could of course try to suggest that the subject's awareness of the whole event consists of a succession of instantaneous states, each with its own distinct content—but then we seem to have made the perception of events non-basic, something effectively inferred from a succession of instantaneous mental states bearing certain resemblance and difference relations to one another (as would perhaps have been the view of an atomist like Hume); moreover, we seem to have transgressed against O'Shaughnessy's principle that consciousness is essentially processive, in a way which will not withstand reduction to changes in states. Once again, then, we confront difficulties trying to make the temporal transparency of experience consistent with the assumption that if a subject is in a given perceptual state over a period of time, then that is explained by the fact that she is in that perceptual state at each of the instants that make up that period.

Soteriou's solution to the difficulties here is to reject the assumption that he sees as giving rise to them—viz., the idea that if a subject is in a given perceptual state over a given period of time, then this is determined by, and hence explained by the fact that she is in that state at each of the relevant instants during the period. This may, he thinks, be true of the familiar dispositional states such as knowledge and belief which can be possessed even during dreamless sleep—it seems right, he suggests, to say that one retains one's belief that, say, cheese is made from milk even during dreamless sleep and that it is possessed equally by the dreaming sleeper at each of the instants which composes any interval during which she is asleep. But it is not true, according to Soteriou, of states which are essentially associated with consciousness—so called 'occurrent' states. The states are such that they are constitutively dependent upon the occurrence of events/processes—and this means that they are not, as Soteriou puts it 'homogeneous down to instants'. One cannot assume that if one is in occurrent state S over the whole period from t_1 to t_n , then that is because one is in occurrent state S at t_1 , and in occurrent state S at t_2 and in occurrent state S at t_3 , and so on. For the category of occurrent states, this will not be true.

In the next section, I shall try to explain why I do not think this solution is tenable, just as it stands. But I shall proceed by agreeing with Soteriou about one thing, the thing which is, I think, truly most crucial to his account: and that is that we should indeed reject the assumption that if a subject is in a given perceptual state over a given period of time, then this is determined by, and hence explained by, the fact that she is in that state at each of the relevant instants during the period. However, I shall try to argue that we should resist this assumption not just for states which are essentially associated with consciousness, but also for many (though probably not all) of the dispositional states with which Soteriou tries to contrast the 'occurrent' ones with which he is centrally concerned. We might call this position temporal holism about the relevant kinds of states, characterising temporal holism as follows: a state is to be regarded holistically in the relevant temporal sense if the question whether it obtains at a given instant normally depends on whether it obtains over a period which includes that instant, rather than the other way around. But I shall then disagree with Soteriou that the recognition (and indeed generalization) of the fact that some states are holistic in this sense has any consequences for the homogeneity of states 'down to instants' or for their non-occurrent status. We do not need, therefore, to introduce the category of

'occurrent state' into our ontology in order to account for the examples that Soteriou finds puzzling; we only need to understand a bit better what states are like in the first place.

(ii) The Problem with Occurrent States

What are states? In my (1997), I try to answer this question in considerable detail, but we can content ourselves for present purposes with a brief summary of some important points. It is pretty plausible, I think, as William S. Robinson has argued, that in many contexts, the 'state of ...' locution is 'little more than a stylistic variant on ordinary predication' and he continues: 'we can say that Jones is dressed, is sick, is depressed or is cold; we can also say that Jones is in a dressed state (or state of being dressed); is in a sick state (or state of being ill); is in a depressed state; or is in a cold state (or a state in which she is cold)' (Robinson, 1990: 33).² Of course, not all such predications seem to invite state talk—it would be strange, for example, to conclude that S was in a 'late' state from the fact that she was late, or in a 'human' state, from the fact that she is human – though it is rather difficult to understand precisely what principles govern our willingness to move from mere predication to state-talk. But we can say, at any rate, that there is a subset of the category of properties which we are prepared to think of as giving rise to states which things or people can be 'in'; for present purposes, we need not worry too much about how, precisely, we need to characterize this class.

To accommodate states like knowledge and belief, important in the context of discussions of mentality, we need to add to what we have already said that as well as various predications of the form 'A is F', there are also certain predications of the form 'A \emptyset -s', where the predication is of such a kind as to warrant the suggestion that it is equivalent to a claim of the form 'A is in a state of \emptyset -ing'; for example, 'I know that Beijing is the capital of China' is arguably equivalent to 'I am in a state of knowing/knowledge that Beijing is the capital of China'. There have been detailed discussions of how to pick out the relevant stative verbs (or predicative constructions) and I do not propose to add anything further to those discussions here.³ But it is crucial for present purposes to mention that one prominent feature of all the accounts of stative verbs and predications which have been proposed is the recognition that states and imperfective verb structures do not go well together. One cannot be knowing, or be believing; one cannot be in the process of being depressed or cold (though one can, of course, be in the process of getting depressed or cold). Imperfective structure is generally used to indicate things which are in process—and as noted earlier, states are never in process. They can never be given as the right answer to a question such as 'What are you doing?' or 'What's going on?' They obtain, but they do not unfold, which indicates that they have a particular kind of relationship to time which is inconsistent with processuality. As Vendler, whose account of the 'time schemata' implied by the use of various kinds of verbs is the basis for much subsequent work on these categories, puts it:

... although it can be true of a subject that he knows something at a given moment or for a certain period, knowing and its kin are not processes going on in time. It may be the case that I know geography now, but this does not mean that a process of knowing geography is going on at present consisting of phases succeeding one another in time (Vendler, 1957: 144-5).

² Cf also Vendler, who refers to states as 'that puzzling type in which the role of verb melts into that of predicate, and actions fade into qualities and relations' (1957, p.152).

³ See Vendler (1957), Kenny (1963), Mourelatos (1978), Taylor (1985), Steward (1997).

That states do not consist of 'phases succeeding one another in time' is not quite enough to ensure their non-occurrentness—for according to Vendler, there are in fact certain sorts of occurrence which yet do not consist of phases succeeding one another in time. These are the so-called 'achievements'—such as losing or finding an object, reaching a summit or crossing a border. Achievements, like states, are argued by Vendler to be inconsistent with imperfective aspect, but for a different reason. These are events, he thinks, which we conceptualize (at least in certain central cases) as occurring instantaneously—hence, they cannot be going on over a period of time—even though they are occurrences. But it seems plausible that we can, at least, say something like this: if something is occurrent, it must either consist of phases succeeding one another in time in a processual way or be an instantaneous event of the sort included in Vendler's achievement category. And if something like this is correct, that seems to be as much as to say that states are essentially non-occurrent. That fact is the very root of their differentiation from entities such as events and processes, amongst which we can count all of Vendler's other types of entity: activities, accomplishments and achievements alike. We already have, then, a good reason for being extremely wary of Soteriou's proposal that there might be occurrent states. On the plausible hypothesis that anything that is occurrent must either 'consist ... of phases succeeding one another in time' or fall into Vendler's achievement category, states simply cannot be allowed into the category of occurrents.

In the present context, it will be important also to understand another claim that is sometimes made about states, which is that they are 'homogeneous'—or indeed, that they are 'homogeneous down to instants'. One problem with this terminology is that it has not always been used in a consistent way—and that important ambiguities have resulted, meaning that discussions of homogeneity in the literature have become confused, in ways that bear on the question whether states can be said to be 'homogeneous down to instants' or not. I propose then, as a useful preliminary, to explain how the idea of homogeneity originally entered the discussion of such entities as events, states and processes, and to point out some ambiguities of which it is essential to be aware.

Talk of 'homogeneity' seems to trace back to Vendler's original (1957) discussion of time schemata. Vendler utilizes the concept of homogeneity initially in order to distinguish his 'activities' from another category of entity to which he gives the name 'accomplishments'. Of activities, such as running, swimming, eating, etc., Vendler notes that if it is true that someone has been running for half an hour, then it must be true that he has been running for every period within that half hour: 'running and its kind go on in time in a homogeneous way; any part of the process is of the same nature as the whole' (p.146). Whereas, according to Vendler, if someone is running a mile, or writing a letter, say, for half an hour, it will not be true that he has been running a mile or writing a letter for every period within the half hour – as he puts it, these 'accomplishments', 'proceed towards a terminus which is logically necessary to their being what they are' (p.146).

Mourelatos makes what has turned out to be a very important objection to the way in which Vendler draws this distinction between activities and accomplishments—that is to say, a way which suggests that what is crucial to the distinction is the presence or absence of a verb object (e.g. 'run' vs 'run a mile'; 'sing' vs. 'sing a song', etc.). He points out that what Vendler says about accomplishments is actually untrue—since it will be the case that if someone has been running a mile or writing a letter for half an hour, he will have been running a mile or writing a letter for every period within the half hour; as he puts it: 'The generic activity of running can be further differentiated into a species (one among indefinitely many) of running-a-mile without losing its character as an activity. In other words, regardless of whether a mile is or fails to be run, any substretch of running-a-mile activity divides homogeneously into substretches of the same' (Mourelatos, 1978: p. 420). What can be truly said is only that if someone ran a mile in half an hour, he did not run a mile in any sub-period of that half-hour—which shows, according to Mourelatos, that it is not the presence of

absence of a verb object which determines whether we have a predication indicating activity or accomplishment, but rather the aspect (progressive or non-progressive) of the predication in question. 'S was running' and 'S was running a mile' are both imperfective predications, and hence on Mourelatos's view, both indicate the going on in time of processes which are homogeneous in Vendler's technical sense. 'S ran a mile', on the other hand, is an event predication, which indicates the occurrence of a completed event. Mourelatos's aspect-based classification system for whole predications also makes several other improvements on Vendler's lexically-based approach, including a generalization from Vendler's interest in verbs which can be predicated of human beings, to verbs of all categories (so as for example to allow for 'The water is running' as well as 'John is running', and for 'The table is standing in the kitchen' as well as 'Susan is standing in the kitchen'). For Mourelatos, the resulting categories in need of recognition are event, a category which includes predications akin both to Vendler's achievements and accomplishments); process (incorporating Vendler's category of activity); and state.

A number of philosophers have expressed the worry that homogeneity for processes such as running has its limits. Barry Taylor, for instance, argues that many processes are not in fact entirely homogeneous. Once we get down to very short stretches of running, for example, he points out that different stretches may have quite different characters—for example, between t_1 and t_2 , S may be lifting her left foot, whereas between t_2 and t_3 she is putting it down – and so different things will be happening in these two periods of time. He likens the situation here in the temporal realm to that which exists in the spatial realm with respect to stuffs such as fruit cake: 'Division of a lump of fruit cake will produce a lump of fruit cake only until a sample of some minimal size is reached: a mere sultana does not in itself constitute a lump of fruit cake' (Taylor 1985: p.70). But it is important to realize that although what Taylor says is true, it bears not at all on the question whether processes are homogeneous in *Vendler's* sense. Recall what Vendler says in order to introduce his point—viz. that if it is true that someone has been running for half an hour, then it must be true that he has been running for every period within that half hour; whereas it is not true that if he ran a mile in half an hour, he ran a mile in any period of that half hour. These claims are not falsified in the least by Taylor's point about the fact that some bits of the running process may look different from other bits. The homogeneity Vendler highlights is a homogeneity that is to be expressed inferentially, thus: if it is true that o was ϕ -ing between t_1 and t_2 then o was ϕ -ing during any subinterval between t_1 and t_2 . (It does not likewise follow that if o ϕ -ed between t_1 and t_2 then o ϕ -ed during any subinterval). And it simply does not matter to the validity of this inference whether the ϕ -ing is made up of differently constituted parts. Many (though perhaps not all) of the things we might think of as paradigmatic process-types—photosynthesising, digesting, decorating a room, baking a cake, for example—have stages which are different from one another, what Mourelatos calls 'distinct and progressive stages' (Mourelatos 1993, p. 386). But this does not prevent its being true (for example) that any period during which a plant is photosynthesising is a period in each sub-interval of which it is also photosynthesising.⁴ Whereas it is not true that if I built a house between t_1 and t_2 that I built a house at any moment or during any substretch of time between t_1 and t_2 .

Moreover, there is yet another thing one might mean to express with the claim that processes are not homogeneous 'down to instants'. One might mean simply that in order to contain any running at all, a time must be a period, and cannot merely be an instant—since for any running to exist at all, a certain amount of time must pass. One can be running at a given instant, that is, only if one is running over a time period which contains that instant. In

⁴ One might object to this that one can, in a sense, be in the process of ϕ -ing between t_1 and t_2 and yet not be ϕ -ing at each moment between t_1 and t_2 . For example, I may be in the middle of making a cake when the phone rings and I may leave off my cake making to answer it. Am I making a cake while I am speaking on the phone? I may certainly say that I am ('What are you doing?' 'I'm making a cake'). The truth seems to be that certain sorts of pauses in activity are regarded as contextually irrelevant to the going-on of many sorts of process, provided an over-arching intention or purposive direction is maintained.

a sense, then, for processes, the period is prior to the instant, since there could not be a process which existed at a single instant alone—so that if S is running at t, say, where t is an instant, one needs to understand this in terms of the fact that t falls within a period during which S is running. This is to endorse the analogue of the view that I earlier called temporal holism for states, in the case of processes—one understands a process to occur at an instant only in virtue of a prior understanding of what it is for that process to occur over a period of time. If this is what it means to deny that processes are ‘homogeneous down to instants’ then I think we may wholeheartedly endorse the claim. But again, it would be a mistake to suppose that this claim offers any kind of challenge to what Vendler says about the homogeneity of the things he calls ‘activities’. It remains true that if someone has been running for half an hour, then it must be true that he has been running for every period within that half hour. We must be careful, then, about what exactly we mean to deny if we deny that processes are homogeneous down to instants. If all that is meant is that the period has a certain priority over the instant when it comes to the understanding of what it takes for a certain process to exist, we may accept the denial; but this is not to deny the truth of the inferential claims made by Vendler in his original invocation of the concept of homogeneity, the claims in terms of which he hoped to differentiate activities from the other categories of occurrent.

The same caution should attend our consideration of the question whether states are homogeneous down to instants. Once again, the canonical claims about the homogeneity of states in virtue of which we are to understand their essential difference from other sorts of entity are generally expressed inferentially. Vendler, for example, claims that the ‘time schemata’ typical for states is as follows: ‘For states: “A loved somebody from t_1 to t_2 ” means that at any instant between t_1 and t_2 , A loved that person’ (1957, p. 149). Rothstein also comments that states are ‘totally homogeneous’ and glosses homogeneity as follows: ‘If a predicate is homogeneous, then x P-ed for y time ENTAILS that at any time during y, x P-ed was true’.⁵ But these inferential claims are quite consistent both with (a) the general point that many sorts of state are just not the sorts of state that it makes sense to suppose might hold literally for a single instant, so that there the period has, once again, a certain sort of priority over the instant when it comes to the metaphysical understanding of what it is for such a state to obtain; and also (b) the point that there may be variation of various kinds in the property attributed by way of the state (e.g. A’s love for B may wane a little over the period t_1 to t_2 , while it remains the case that at any instant between t_1 and t_2 , A loved B). So far as (a) is concerned, it is very plausible that Vendler’s own example will serve to make the point: it simply does not make sense to suppose that someone could love someone for an instant—love is essentially the sort of state that obtains over a period of time, so that metaphysically speaking, we must explain its obtaining at a given instant in terms of its obtaining over a period which includes that instant, rather than the other way around. The same is true, I think, of a huge number of states. Many states are simply not the sorts of things which could obtain merely for an individual instant—think of e.g. contentment, sickness, depression. It seems to me arguable, indeed, that the same is also true of the states with which Soteriou contrasts his conscious, occurrent states—the states of knowledge and belief. Could one know or believe that Beijing is the capital of China, for example, just for an instant? What would make it the case that one knew it? Surely knowledge has to connect with the capacities and the histories of persons in ways which result in its seeming nonsensical that one might know that p merely for an individual instant. The general point, then, that we come to understand what it means for a state of this sort to obtain at an instant by having a prior understanding of what it means for it to obtain over a period which contains that instant, then, seems to me to apply to a wide variety of states, many of which have nothing particular to do with consciousness.

So far as (b) is concerned, it is evident that many states may obtain over a given period during which certain sorts of variation in their degree or mode of obtaining can be discerned. For example, something which is red between t_1 and t_2 may be deepening in

⁵ Rothstein, p.14.

colour (while remaining red throughout); someone who believes that Beijing is the capital of China for sixty years may be more certain about it in her forties than she is in her eighties, etc. This point is perhaps the analogue for the case of states of the claim Barry Taylor wanted to make in the case of processes—that at different times, there might be a certain sort of variation in the nature of the state which obtains, rendering the state non-homogeneous from a certain point of view. But just as in the case of processes, it would be a mistake to suppose that this point falsifies the inferential claims in terms of which ‘homogeneity down to instants’ is understood by those who have made the feature central to the characterization of states. Such variability is perfectly consistent with its being the case that ‘x P-ed for y time ENTAILS that at any time during y, x P-ed was true’ (to quote Rothstein once again).

In the next section of the paper, I shall try to insist that by distinguishing these different kinds of point from one another, we may perfectly well retain the idea that states are homogeneous down to instants in the sense that matters to the all-important time schemata in terms of which we differentiate states from occurrents. This will enable us to accommodate the points Soteriou wants to make about the essential processuality involved in consciousness, without denying that states are essentially both non-occurrent and homogeneous down to instants in the sense required.

(iii) How to solve the problem without occurrent states

What does Soteriou mean by saying that certain states are ‘occurrent’? He frequently claims that the conscious states in which he is especially interested depend constitutively on events/processes and sometimes he writes as though this is enough to make the states themselves occurrent:

Given that the obtaining of such states depends on the occurrence of events that take intervals of time to occur, there is something misleading in the claim that such states continue to obtain throughout the intervals of time over which they obtain. (Soteriou, 2013: 101).

An obvious question, though, is why we should suppose this. It is not clear why something which depends constitutively on something else must share any of the properties of that other thing. Soteriou himself discusses an example earlier in his book which is taken from what he calls ‘the non-mental domain’—the temperature of a liquid (a state of the liquid), he notes, can depend constitutively upon the motions of the molecules of that liquid (a collection of events), without the temperature of the liquid—say, the liquid’s being at 85 degrees Celsius between t_1 and t_2 —being any less a state of that liquid. With the stative terminology we pick out here what remains constant across the flux—if the liquid remains at 85 degrees Celsius then it remains in that state, no matter what the chaotic and dynamic substructure which gives rise to this constancy over time. In general, the phenomena which may underlie the obtaining of states may be as full of occurrences as one likes without preventing the things we pick out when we focus on the states themselves from being essentially stative.

Soteriou might perhaps reply that this answer may be acceptable in a case such as this, a case from the ‘non-mental domain’, but that it cannot be adequate for the cases he is interested in, which involve consciousness, and in which the relevant mental state must characterize what it is like for a conscious subject to go through a certain experience. If the experience is changing, one might ask, must not the state which characterizes it be changing, too? But the answer to this question is, I think, no; not, at any rate, if we characterize the state in question correctly. And in order to arrive at the correct kind of characterization, it is useful to reflect on the fact that there are many states which depend constitutively on processes for their existence—more or less as a matter, not of physics or metaphysics (as in the case of temperature), but as a matter of logic. To explain what I mean

by saying this, a short digression on some relationships which hold between events, processes and states in general will be useful.

One interesting phenomenon in language is that it is possible to form concepts for states out of various kinds of ongoing process and instantaneous event according to certain recipes. Suppose, for example, to take the case of achievements first, that one has won a race, or crossed a border or lost a pen. Then one can describe oneself as being in a state of having won a race, or having crossed a border or having lost a pen. This relation is, broadly speaking, logical. It simply follows (in the case of achievements) that if one has ϕ -ed, one ends up in a state of having ϕ -ed; one ends up in a state such that the achievement has been achieved, as one might put it. So far as processual predications are concerned, there is a different recipe. If one was reading yesterday, then one is in a state of having been (in the process of) reading yesterday. But there is also something we can do with present-tensed processuals to come by terms for states. Consider, for instance, the process predication, 'Arthur is reading'. If Arthur is reading, then a process of reading is going on. But there is also a sense in which reading can be regarded as a kind of state—the state, as it were, of being engaged in reading.⁶ It is a kind of state, of course, which depends constitutively on a process for its identity. One could not be in the state of being engaged in reading unless something processual was going on. But nevertheless, there is a way of looking at reading as a property of the reader—the reader is, as it were in the state of being engaged in reading (or alternatively, possesses the property of being engaged in reading) for the duration of the period for which s/he is reading. My suggestion is that this recipe for turning processual predications into stative ones is all we need in order to generate the states for which Soteriou is searching—the ones whose obtaining characterizes the nature of the processes which are occurring when conscious experience goes on. When one is watching an object move, for instance, one is in the state of being engaged in watching it move. And these states of being engaged in ϕ -ing are not themselves occurrent. The fact that the state of being engaged in reading depends constitutively on a process for its identity should not make us think that it loses its own temporal character as a state, or that it fails to be homogeneous down to instants in the relevant (Vendlerian) sense. On the contrary, if one is in the state of being engaged in reading, over a period t_1 to t_{10} , then one is in the state of being engaged in reading at each instant within that period. Just because the process is occurrent, and genuinely consists of 'phases succeeding one another in time', the state of being engaged in that process need not be.

Of course, if one is reading, then different things will be going on at different moments of time during the period in which one is reading. But this is the moment to recall that homogeneity should not be taken to imply the absence of any variation in activity or state across the time period. I have already argued that the mere fact that running is made up of different types of movement is no bar to its homogeneity (in the relevant sense) down to the smallest of small periods. Neither is variation in the character of a state any bar to its homogeneity down to instants; recall the red object which deepening in colour between t_1 and t_{10} (while remaining all the time red). As with the case of processes, the homogeneity in question is about inferential warrant, and is not affected in the least by such variation. The point is that if the object is red between t_1 and t_{10} , then whatever instant we take within that period, we know that the object satisfies the predicate 'is red' at that instant, even if it is not exactly the same shade of red at each individual instant. Once we are clear what sort of

⁶ Some treatments, indeed, consider predications of the form 'S is ϕ -ing' to be stative. See e.g. Galton (1984), who writes as follows: 'A state is *dissective* in the sense that any stretch of time in which a particular state obtains can be broken down into sub-stretches in each of which that state obtains. For example, if Jane was swimming from two o'clock until three o'clock on a particular afternoon then she was swimming from two o'clock until half past two and also from half past two until three' (p.24).

homogeneity is essential to states, we can see that the state of being engaged in reading can perfectly well possess it, despite its constitutive dependence on the occurrence of a process.

These various points are, I think, sufficient in conjunction with one another to make it possible to resolve Soteriou's two problems, without recourse to occurrent states. Let us take first the case of the observation of non-instantaneous events. Suppose I am watching an object move from L_1 to L_{10} . Then what is the state by means of which I should characterize my experience? There is no atomic state by means of which I can do it, nor is there any succession of such atomic states. But there is a state which will do the job: I am in the state of being engaged in watching the object move from L_1 to L_{10} over the period L_1 to L_{10} . And this state is homogeneous down to instants. I am in the state of being in the process of watching the object at t_1 and I am also in it at t_2 and also at t_3 , and so on.⁷ The state itself is not occurrent (though the process of watching is), and it is perfectly homogeneous down to instants in the inferential sense, that is to say, that it follows from the fact that I am in the state of being in the process of watching the object move over the period t_1 to t_{10} that I am in this state at t_1 and in it at t_2 , and so on. Of course, things will be altering over the period in question, since the object is moving, and hence the content of my conscious states is changing in certain respects. But it is unchanging in respect of being a state of being engaged in watching the object move.

The thing that Soteriou is right about, of course, is that the question what state a subject is in at a time is not explanatorily prior to the question what state she is in over a given period of time. But this is nothing particular to do with consciousness and it is nothing to do with the nature of a peculiar category called the category of occurrent state. Arguably, it is just the norm for many kinds of state. The direction of dependence is very often the other way about. As argued in section II, states are things which obtain over periods of time, and many things which obtain over periods of time often cannot obtain instantaneously. Their obtaining at a moment thus depends upon their obtaining over a period; and this is a common case: perhaps even the norm, rather than the exception.

What about Soteriou's other case: the case in which an observer is watching an object which suddenly disappears? What is the state in virtue of which the observer's experience has the character it has? It is the state of being engaged in watching (or seeing) the object disappear—a state which lasts as long as the process does, that is to say, a rather short amount of time, from a little time just before the disappearance until very shortly afterwards. Explanatory priority again goes from period to instant, and not the other way about: one counts as having seen the object disappear at t only because one was in the state of being engaged in watching it disappear over a certain (short) period. But the state itself is not occurrent, and it does not fail of homogeneity. One is in the state of being engaged in watching the object disappear at t_1 and at t_2 and at t_3 , and so on. We need not embrace the puzzling idea that the state itself turns out to be occurrent in order to salvage the interdependence thesis.

Conclusion

I have argued, then, that we do not need the category of occurrent state in order to vindicate Soteriou's interdependence thesis: and that is just as well, because it is very hard to

⁷ What if one were to look away for a moment? Couldn't it still be true that one was in the process of watching the object? Yes; see footnote 4 above. Once again, homogeneity in the inferential sense is consistent with variation in the character of what is going on at each individual moment – even variation which implies the existence of certain contextually irrelevant *gaps*.

understand how a state can be occurrent. What we need is only the recognition that there is an important category of states whose obtaining consists in the going on of a certain process: states of being engaged in (the process of) X-ing. But these are not themselves occurrent; and they do not fail of homogeneity down to instants in the relevant technical sense. This point allows us to accept Soteriou's insight that we generally need to characterize the character of the events and processes whose occurrence is essential to conscious experience in terms of a property of the subject whose experience is in question—without getting into the very deep and difficult ontological water which immediately engulfs us if we decide to endorse the category of occurrent state.

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