Time in Consciousness, Consciousness in Time

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Abstract
The paper is a criticism of the idea that a notion of 'phenomenal consciousness' has a significant role to play in the attempt to understand how the experience of change is possible. Discussion of such experience must give a significant place to its public and private manifestations. How should we picture the relationship between the experience of change and its manifestations? While we cannot *identify* these, we need not conclude that 'the seeing or hearing itself' is something distinct from – something that has a nature that may be investigated quite independently of – any of its public or private manifestations. With that, we cannot grasp how time can be present in consciousness without reference to the fact that consciousness is located in time.

1. The Source of Temporal Ideas

A philosophical interest in our experience of time may arise from a concern with how we come by temporal ideas: the idea of the *past*, or of one thing happening *before* another. Thus, William James asks: 'What is the original of our experience of pastness, from whence we get the meaning of the term?'[1] He replies: 'the original paragon and prototype of all conceived times is the specious present, the short duration of which we are immediately and incessantly sensible'. Again: '[T]he specious present, varying in length from a few seconds to probably not more than a minute, is the original intuition of time'. Two contemporary analytic philosophers who follow James in aspirations of this form are John McDowell and Hugh Mellor. Thus, McDowell suggests that, since its having rained yesterday 'can be, in memory, immediately available to consciousness', the child's grasp of a conception of the past – of the meaning of the past tense – can be 'drawn from actual confrontation with instances of the sort of circumstance involved'.[2] Similarly, Mellor suggests that the notions of before and after can 'be defined

[1] William James, *The Principles of Psychology*, Vol. 1 (Cambridge, Mass.: Harvard University Press, 1981), 605. Following quotations: 631, 642.

[2] John McDowell, 'On "The Reality of the Past"' in C. Hookway and P. Pettit (eds), *Action and Interpretation* (Cambridge: Cambridge University Press, 1978), 140.

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directly in terms of observable and tenseless temporal relations between events'.[3] One might think that we will only see sense in such suggestions in so far as we are wedded to another strand of traditional empiricist thinking: in so far, that is, as we conceive of having a conception of the past or of temporal priority in terms of a capacity to generate certain forms of mental imagery. And one might think that there is room for serious doubts about *that* aspect of empiricist thought.

I mention this partly in order to mark this discussion off from the issue that is my concern in this paper, and partly to note an analogy between the terms in which these different issues have been addressed. Whether any sense can be made of talk of ideas being 'drawn from' experience, there is, it seems, another philosophical task here: that of understanding how it is possible for our experience to have the features that it does. My concern in this paper is with the suggestion that a notion of 'phenomenal consciousness' has a crucial role to play here: a crucial role to play, in particular, in the attempt to understand how the experience of change is possible. In the position that it gives to mental imagery, or, more broadly, to an idea of 'what is present to consciousness', in its discussion of the experience of change, this suggestion does, I believe, display a significant analogy with empiricist treatments of concept formation.

2. Time in Consciousness

To appreciate that there is philosophical work to be done here we must recognise that experiencing change is something quite different from changing experience. The distinction, and the puzzle that the former gives rise to, is brought to life through reflection on examples of the following kind. We *see* the movement of the second hand of a clock in a sense in which we do not see the movement of the hour hand – even though we can recognise, on the basis of what we do see, *that* it has moved. Again, hearing a melody[4] is not simply a matter of being aware, successively, of a series of notes: it involves

[3] Hugh Mellor, *Real Time* (Cambridge: Cambridge University Press, 1981), 28.

[4] Perhaps we should add: in the sense that is relevant to this discussion. There is a sense of 'hear' such that we can say of someone that she has heard an extended sequence, say Beethoven's Ninth Symphony, simply in virtue of the fact that she was present while it was being played and there was nothing wrong with her hearing.

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hearing the succession. And we do not get from one to the other simply by adding memory: when someone hears a melody the situation is not adequately described in terms of her hearing the note that is being played now and *remembering* the sequence that immediately preceded it (along, perhaps, with anticipating the sequence that will follow).

Change and persistence are directly experienced. Change and persistence both take time. For it to be the case that she is hearing the melody there must, it seems, be some sense in which the listener is aware, *in a single act of consciousness*, of notes that are extended over a period of time. But how can that be? Anything that is extended over time has parts that are not strictly speaking happening now. Given, as one might reasonably suppose, that our immediate experience is confined to the present, how is it possible for us to be immediately aware – aware in the same way as we are aware of a pattern of colour extended in space – of phenomena that are not (strictly speaking) present?[5]

That is the puzzle. Different accounts of the temporal character of phenomenal consciousness provide different answers to the puzzle. On one view, while an individual act of awareness has no temporal duration what is experienced *in* such an act includes, not simply things happening at that instant, but also things occurring at a series of immediately preceding instants. In this sense, my experience is not confined to the present instant; I have direct awareness, at an instant, of a process that is stretched over time. In James' well-known articulation of the notion of the specious present: 'the practically cognized present is no knife-edge, but a saddle-back, with a certain breadth of its own'.[6]

In contrast with this we have views, of the kind defended by Timothy Sprigge[7] and more recently in much greater detail by

[5] My formulation draws on the work of a number of philosophers. See, in particular, Barry Dainton, *Stream of Consciousness: Unity and Continuity in Conscious Experience* (London: Routledge, 2000), 114–15; also Dan Zahavi, *Husserl's Phenomenology* (Stanford: Stanford University Press, 2003), 82.

[6] William James, *The Principles of Psychology*, *op. cit.*, note 1, 574.

[7] '[A] single momentary state of consciousness is not a composite of its elements; these are simply conceptually abstracted aspects of its unitary being, not distinct units in their own right. Such single momentary centres of experience, as I shall call them, should not be thought of as instantaneous. So far as they can be clocked in public time they have a certain dateable duration, but they are single units whose earlier and later phases are not genuine particular realities in the way that they are. They do have, within them, their own special kind of temporal spread, aspects which are later

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Barry Dainton,[8] according to which individual experiences have a certain timeable duration. An awareness of a temporally extended process is itself temporally extended. An experience of, say, a piece of music that lasts five minutes, is composed of a series of overlapping acts of awareness ('phenomenal presents') each of brief duration (perhaps a second or two). The duration of such individual acts of awareness is to be determined, perhaps, by a combination of introspection and psychological experiment. Dainton suggests that this account both explains how experience of change is possible, and, on reflection, can be seen to be true to the character of our experience.

The dispute between such views is a dispute about the character of what is spoken of as 'phenomenal consciousness'. Particular positions are defended by appeal to what phenomenal consciousness *must* be like if certain familiar features of our experience are to be explained; though, as with Dainton, such appeals may be supplemented with a call to careful self-reflection (in the hope – generally, it has to be said, forlorn in philosophically contentious matters – that the careful self-reflection of others will produce results that match one's own).

It is important here to remember that, while what is at issue are features of *consciousness*, they are features of a kind that are not prominent, or perhaps don't figure at all, in our everyday understanding of ourselves and others. Thus, the philosophical dispute about the individuation of acts of phenomenal consciousness is, at best, tenuously related to our familiar, everyday, ways of individuating experiences. Central to *that* is the way in which we pick out single experiences both at a time and over time in terms of their content. That nasty experience in the bus queue (which lasted about two minutes) was followed by the wonderful experience of sitting upstairs and watching the fields roll by (which lasted a full 15 minutes). Half way through the concert I was overcome with an experience of uncanny familiarity that lasted until it finished.

I will return to the relation between philosophical characterisations of features of 'phenomenal consciousness' and our everyday

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and earlier. Only thus can one explain the fact that temporal sequences can be given'. (T. L. S. Sprigge, *The Vindication of Absolute Idealism* (Edinburgh: Edinburgh University Press, 1983), 12).

[8] 'We must … abandon the doctrine that an awareness of change (or succession) consists of a temporal spread of content being presented to a single momentary awareness. Instead, we say that an awareness of change or succession is itself temporally extended..... [I]t is natural to suppose that acts have precisely the same duration as their contents'. (B. Dainton, *Time and Space* (Chesham: Acumen, 2001), 103).

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individuation of experiences. First it will be helpful to consider further the puzzle that calls for a solution in terms of an account of the character of 'phenomenal consciousness'.

3. Experience ' In' and 'At' an Instant

Philosophical puzzlement is characteristically an expression of an apparent clash between how it seems clear things *must* be and how we find them to be in practice. In our case, the task is to show of something that clearly does happen – hearing a melody, seeing the movement of the arrow - *how it is possible*. Underlying the puzzlement is a contrast between experience of something at an instant, for example the hearing of an individual note, and experience of something over time. The former provides our model of how experience *must* be: a model in the light of which the latter must be, and yet apparently cannot be, understood. Different accounts of the character of phenomenal consciousness are attempts to show that, with appropriate modifications, the model *can* accommodate the experience of change. (This representation of the situation may well be disputed. I hope that what follows will provide some substantiation of it).

If, however, we do think of the puzzle in this way – as a puzzle about how an experience of a melody can be as immediate, as non-inferential, as an experience of an individual note – we should hesitate. For an individual note is extended in time in just the same sense as a melody is. There is no experiencing of a note that is not an experiencing of a temporally extended period of sound any more than there is an experiencing of a colour that is not an experiencing of a spatially extended patch of colour.[9] If we are puzzled about how we can have immediate experience of a melody on the grounds that 'a melody is extended over time and so has parts that are not strictly speaking happening now', we ought to be puzzled in the same way about our experience of an individual note. There is, then, room for a suspicion that our puzzlement about the former reflects a confusion in our understanding of the latter: that is, in the model, which we draw from the latter, of how experience *must* be.

It will be helpful here to place the discussion of our *experience* of change alongside questions that may arise about *change*. Compare the following line of thought: 'We say that the orchestra is now playing Beethoven's Ninth Symphony. Yet the opening movement

[9] See J. Foster, 'In *self*-defence' in G. F. Macdonald (ed.), *Perception and Identity* (London: Macmillan, 1979), 176.

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is part of the Ninth Symphony and they are not now playing *that*. How can this be? How can something, a playing of a symphony, that is extended in time be strictly speaking *present* – present in the sense that it must be if they really are playing it now?' We may conclude that, strictly speaking, it is simply not true that they are playing the symphony now. But if we do draw this conclusion on the above grounds we may find ourselves forced to conclude that, strictly speaking, they are not now playing the second movement of Beethoven's Ninth, that they are not now playing B# (since a playing of a note that is over as soon as it starts is not a playing of a note at all), that they are not now playing *anything*.

Perhaps we must conclude that there is something wrong with the idea of 'what happens in an instant' – with the notion of 'present in the strict sense' – that is in play in these discussions. But how are we to say what has gone wrong? We might try saying that the term 'now' always picks out a *stretch* of time, which may be of different lengths depending on our particular interests; and so that the philosophical notion of 'the present in the strict sense' is simply a fantasy. If we do say this, however, we will face the following protest: 'When we speak of what is happening "now" our concern often *is* with the durationless dividing line between past and future. We want to know what he is doing – not throughout the day, nor through this five minute stretch of the morning – but at this instant: four seconds past 10.00. Or: we want to know, not what her average speed was over the hundred yards, but how fast she was moving as she crossed the half way mark. The idea of "what happens in an instant" is not at all a philosophical fantasy'.

The examples bring out that the idea of what is happening *at* an instant is not a philosophical fantasy. Indeed, it is arguable that questions about what is happening 'now' are *always* questions about an instant in this sense. The examples do not, however, show that philosophical talk of what happens '*in*' an instant is completely innocent. *That* notion involves an appeal to the idea that we move closer to a pure description of what is happening now – *in* the present instant – as we move along the series that runs from 'Playing Beethoven's Ninth Symphony' through 'Playing the 4th movement of Beethoven's Ninth' to 'Playing B#' – and perhaps beyond. (We are, perhaps, thinking in some such way when we are tempted to accept Zeno's insistence that at any instant the arrow is at rest: an instant being a time so short – infinitesimally short! – that there is, within it, no room for movement.)

That line of thought – along with the perennial notion of a 'temporal slice' of an object or process, which is a pure expression of

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it – embodies serious confusion. If a 'temporal slice' of an object or process is, like a slice of bread, a thing of a kind of which it makes sense to ask how thick it is then, while slices may take less time than symphonies, the idea of playing or hearing a symphony raises no philosophical puzzles of a kind that do not already arise with playing or hearing a slice of a symphony. If, on the other hand, we picture a 'slice' as something to which the notion of 'thickness' has no application (as when we speak of a slice – a cut – through a loaf) then we are speaking just as accurately – just as precisely – of what is happening at a slice when we answer 'They are playing Beethoven's Ninth' as when we answer 'They are playing B#'. They are playing Beethoven's Ninth now if now is an instant in a stretch of time during which they are playing Beethoven's Ninth; and so the answer to the question 'What are they playing *now*, at four seconds past 10.00?' can, given an appropriate context, as readily, and precisely, be 'Beethoven's Ninth Symphony' as 'B#'.

In summary: we may (taking a tip from Augustine) suppose that we are not, in the strict sense, speaking of what is happening *now* when we say 'They are playing Beethoven's Ninth' on the grounds that any playing of a symphony has parts that lie in the past and future: that, strictly speaking, it would only be true that they are now playing Beethoven's Ninth if they were now playing the first movement of the Ninth, along with the Hallelujah Chorus (and every note of those to boot!). But it no more follows from the fact that they are now playing Beethoven's Ninth that they are now playing the opening movement of Beethoven's ninth than it follows from the fact that I am standing on the car that I am standing on the steering wheel.

To see how these considerations might help us in our concerns with the *experience* of change we must turn to the manifestations of such experience.

4. The Manifestations of Experience

We can divide what I will speak of as 'manifestations' of an experience of change into two broad categories: 'public' and 'private'. The former, which encompasses all of the marks by which we may tell that another is hearing a melody or seeing the ball flying towards him, itself forms a fairly mixed bag. It includes expressive behaviour of which the individual may be quite unaware: her tapping out the rhythm, her smile of pleasure at a particular turn in the music or startled reaction when a note is misplayed, and so on. Such expressive

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behaviour is on a spectrum with intentional actions grounded in what is observed: she reaches out to catch the approaching ball; she is, on being asked, able to repeat the melody, repeat it not simply in the sense of being able to reproduce the series of notes played but in the sense that we can hear the melody in her reproduction. Still in the public domain there is the range of possible linguistic manifestations of experience: she describes the sequence of events she has just observed; or simply says, in response to our question, 'I can see the movement of the hand'. In addition to such public manifestations, there are what I will speak of as 'private' manifestations: responses – such as the thrill of pleasure that I feel on a startling turn taken at a particular point in the music, or my ability to repeat the melody in my head – that are not, in this instance, expressed in any way detectable by others.

Public manifestations play an important, if sometimes more or less implicit, role in discussions of the experience of change. While introspection, careful reflection on the character of my own experience, is a central feature of such discussions, in so far as the philosopher who is concerned with these issues takes herself, not simply to be investigating a personal peculiarity, but to be writing of, and for, others as well, the public manifestations are inevitably of interest to her. For it is only through those that she has any grounds for supposing that others do have, as she does, experience of change. At a more specific level, such public manifestations play a crucial role in the attempt to determine particular features of the 'acts of consciousness' involved in the experience of change. The temporal stretch of what is experienced at an instant, or, on the Sprigge/Dainton view, the temporal stretch of an experience itself, is to be determined through psychological tests involving, for example, the ability to repeat, or re-identify, sequences of sounds of different lengths.[10]

In practice, appeals in these discussions to public manifestations of the experience of change are primarily to things that people *say*. Thus, Dainton justifies his idea that he is speaking for others too in these terms:

> We unthinkingly assume that our conscious lives are broadly similar, and this unthinking assumption receives confirmation

[10] J. D. Mabbott remarks of such tests: 'The aim was to discover the unit of temporal experience. So far as the experiments discovered anything, they found what was the maximum duration of a set of sounds which could be recognized without error' (J. D. Mabbott, 'Our Direct Experience of Time', *Mind* **LX** (1951), 162–4). His doubts are close in form to those that I will raise.

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> over and over again in daily life, in our interactions with others, simply because we rarely (if ever) have occasion to question it. Whenever writers of any kind attempt to describe the general character of human consciousness, whatever the differences in fine details, we can usually recognize them as attempts to describe a mental landscape of a sort we are ourselves acquainted with.[11]

On the face of it, there are, however, no grounds for giving exclusive, or even primary, place to *linguistic* manifestations; still less to descriptions that people offer of their experience. My confidence that my dog perceives change, based on his response to my throwing a ball, is, I take it, as well grounded as my confidence that other people do. And my confidence that people with whom I have contact experience change is grounded most pervasively in their handling of the objects that surround them, in their expressive responses to music, in the smooth flow of their responses to what I do or say in my interactions with them, and so on. We can add that the significance I attach, quite generally, to what a person *tells me* about her experience does not stand alone. Appropriate ties between what she *says about* her experience and other manifestations of it are crucial to my readiness to take her words as I do. To express the point in modest terms: my confidence in accepting another's assurance that she hears a particular melody would be seriously strained if it became apparent that she was, quite generally, incapable of expressing her experience of music in any of the familiar ways. In an extreme case, we would, I take it, have little choice but to say that she simply does not hear melodies; and faced with an apparently sincere insistence on her part that she does, we would, I suppose, have to conclude that she does not have a proper grasp of the sense of those words.

How are we to picture the relationship between the manifestations – private and public, verbal and non-verbal – and 'phenomenal consciousness'? We may picture that relation in causal-explanatory terms. For example, the fact that an individual is, at a given moment, able to introspect, and with that report on, both what he is hearing and what he is seeing, is most plausibly explained on the assumption that these experiences are 'phenomenally unified'.[12] Again, the unusual combination of abilities of those with blindsight is best explained by the assumption that they lack phenomenal

[11] B. Dainton, *Stream of Consciousness*, *op. cit.*, 20.

[12] B. Dainton, 'Coming Together: the Unity of Consciousness' in Susan Schneider and Max Vellmans (eds), *The Blackwell Companion to Consciousness* (Oxford: Blackwell, 2007), 212.

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consciousness.[13] And in the case that is my concern in this paper: the best, or only possible, explanation of the fact that a person is able to re-identify a sequence of notes just played, that he moves to the music as he does, or that he is startled when the music takes an unexpected turn, is that his phenomenal consciousness has a certain temporal structure.[14]

If our fundamental grounds for believing that phenomenal consciousness has particular features – or that the phenomenal consciousness of others is of the same general structure as one's own – are to be of this form we are going to need some account of how the postulated acts *would* explain the phenomena: how, for example, the extended single act of awareness of a series of notes, of which Sprigge and Dainton speak, would explain the smile that lights up his face, or the tingle that runs down his spine, in response to a momentary startling turn in the melody.

How are we to conceive of the mechanism by which the previous stages of that act of consciousness bring about the smile or tingle that occurs, let us suppose, at its end? I do not know of attempts to address this question. Yet in the absence of an account of *how* the postulated feature of phenomenal consciousness would explain things like this, there seems to be no reason to suppose that it *would* do so. And in so far as it is its explanatory power that is to provide our reason to postulate a phenomenal consciousness having certain features (or *my* reason to suppose that the phenomenal consciousness of others is of the same general structure as my own), we have *no* reason to do so until that work has been done.

We may fail to feel the force of this point because, as we may think, *that* link – between directly experiencing a sequence of notes and feeling, say, a distinctive twinge of pleasure – is such a completely secure feature of our commonsense understanding of the world as not to call for our attention at this point. But if there is a truth of some kind there, it is hardly one that can carry any weight when we are speaking of the 'acts of phenomenal consciousness' postulated in these accounts. For, as I remarked earlier, *those* – the bursts of two or three seconds that are to be investigated by the psychological tests, and that make possible what, at an everyday level, we speak of as, for example, 'That nasty experience in the bus queue' – are not a

[13] M. Tye, *Consciousness and Persons: Unity and Identity* (MIT Press, 2003), 122.

[14] If we suppose that the individual has direct, and infallible, access to the character of his own phenomenal consciousness it will only be my attributions to *others* that are at issue here.

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secure feature of our commonsense understanding. Again, we may picture the explanatory power of the temporal length of an experience through analogy with a physical mechanism: what happens when I actually hear the startling note is explained, in part, by the fact that behind it lies a temporal stretch of experience of which the note is a part – much as what happens at the point of physical impact when the train hits the truck is explained, in part, by the fact that behind the front of the train there is an extended object of which it is part. But I take it that to the extent that anything along these lines is responsible for the appearance of explanatory clarity, what we have is *only* an appearance.

5. The Relation Between Experience and its Manifestations

Any philosophical discussion of our experience of change must, I suggested, give a significant place to *manifestations* of such experience: the smile that lights up his face and the tingle that runs down his spine in response to a momentary startling turn in the melody; his ability to repeat the series of numbers that we have just read to him; and so on. It must do so if only because it is through these alone – in particular, through the public linguistic or behavioural manifestations – that the philosopher has any grounds for supposing that he is speaking for more than simply himself. But it must do so also because such manifestations are central to the *significance* that the experience of change has in our lives. Think, for example, of the place of dancing, or singing along together, in our shared experience of music; or, at a more individual level, of the pleasure someone may take in the silent replaying of a melody in her head. If, in a particular case, an individual displays a rich enough range of such manifestations there may, *in practice*, simply be no room for a serious doubt about whether she really is hearing the melody. With that, it has, perhaps, little plausibility to maintain that: 'What we are really interested in when we ask of someone if she hears the melody is something quite distinct from whether she can sing along with it, dance to its rhythm, take pleasure in it, and so on'. Thus, suppose someone says 'Oh, I can hear the rhythm alright; I just can't get my hand to tap along with it, reproduce it in my head, say whether it is faster or slower than that of the tune played a moment ago …'; or, in response to our puzzlement at his not having ducked when a stone is thrown at him, someone says, 'Oh, I saw the stone flying towards me alright; I just didn't grasp its significance until I felt a sharp bash on the head'. While we may put up with a few responses of

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this form, if someone's claims to hear rhythms or see movement are systematically totally disconnected from any manifestations – public or private – in his life we will soon lose interest in his claims. With that, while we should not expect a philosophical account of 'what it is to experience change' to provide us with a story of how *all possible* manifestations are connected with the experience, if we cannot see in it some plausible picture of connections in the most familiar and pervasive cases, we will lack an important foothold for the claim that what has been identified (that is, certain goings on in phenomenal consciousness) is correctly characterized as 'the experience of change'.

Just *how* should we picture the relationship between the experience of change and its manifestations? We may seem to be confronted with a choice. We may hold that the experience of change is something quite distinct from these manifestations. It is an incident in 'phenomenal consciousness' that underlies and explains all of the manifestations of which I have spoken: an incident whose precise character is to be determined by a combination of philosophical reasoning and psychological experiment. Alternatively, we may *identify* the two: to experience change – to hear the melody for example – simply *is* to display such manifestations: to smile, tingle, tap one's foot, and so on.[15] Having noted problems with the first answer, it may seem that I am clearly committed to the second.

Here is one reason we may give for judging that the second answer cannot possibly be acceptable, so that we must return to something of the form of the first: 'We cannot say that the manifestations are what it *is* to experience change, for whatever manifestations he displays it is intelligible to suppose that he is not experiencing change. It is intelligible to suppose that, while he ducked just as the stone was approaching his head, or tapped his foot in synchronization with the rhythm of the music, this was pure coincidence: the ducking or tapping were not expressive of any such experience. The experience of change must, then, be something other than the ducking or the tapping. There must be an underlying act of consciousness that encompasses an awareness of notes extended over time: "must be" – not because the foot tappings could not be explained in any other way – but because it is only in so far as they are explained in *this* way that they are correctly taken to be expressive of an experience

[15] Such an identity claim could come in various forms. In particular, it could come in either a 'type' or a 'token' form. My brief remarks on the identity view will not, however, turn on such possible differences.

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of the melody. The distinction between smiling, or feeling a twinge of pleasure, just *when* the music takes this turn and smiling *at* the turn is the distinction between a smile or twinge that is accompanied by an underlying incident in "phenomenal consciousness" – an experience of the transition – and one that is not'.

Such a line of thought is not, on the face of it, promising. In so far as there is room for a distinction between an expressive and a merely coincidental foot tapping – between my tapping *as* the music plays and my doing so *in response to* the music – there will, on the face of it, equally be room for such a distinction in relation to the postulated intermediary: the *experience* of the music. That is to say, the very distinction that we seek to mark by appeal to an intervening act of phenomenal consciousness equally arises in connection with the relation between the manifestations (both public and private) and the act of phenomenal consciousness that is said to be the experience of change.

It is intelligible to suppose that, in a particular case, two people may display the same manifestations and yet one be experiencing the melody and the other not. That is ground for insisting that we cannot identify the experience of change with its manifestations. We need not, however, conclude that we must identify something *else* with the experience of change (and if the reasoning of the previous paragraph is sound we had better not do so on *these* grounds). For we need not assume that there is a philosophically illuminating answer to the question, 'What does the experience of change consist in?' or 'What is it to experience change?' We will only suppose that there *must* be such an answer (as opposed, for example, to the kind of answer that a German with an incomplete mastery of English will need) to questions of the 'What is …. ?' form if we are working with a fixed set of categories of 'kinds of thing that exist' into which everything must be fitted; or, as we might equally express this, with a picture of the kind of sense that the talk in question must have.

Compare this with the question: 'What does motion at an instant consist in?' The question may produce something of a mental cramp: may even tempt us to say that there is no such thing. If, from *this*, we conclude, with Zeno, that the arrow is *at rest* at any instant, we may well be working with the imagery, discussed earlier, of an instant as a time so short that there is, within it, no room for movement. But however that may be, the claim that it is not possible for there to be motion at an instant depends on a certain picture of the sense that talk of 'motion at an instant' *must* have. If we return from philosophical demands to the sense that

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such talk *does*[16] have, the situation looks rather different. There *can* be motion at an instant. Achilles is running at 27 mph as he crosses the halfway point if the time at which he crosses that point lies within a period at which he is running at 27 mph.[17]

Similarly, the question, 'What is it to experience change?', as raised in a philosophical context, may acquire its appearance both of urgency and of sense from a model provided by the supposed momentary act of consciousness in which a single note is heard. We derive from that case a picture of the kind of sense that talk of 'hearing a melody' or 'seeing the movement of the rock' *must* have; and the solution to our puzzle comes when we see that the experience of something extended over time can be fitted within a modified version of that model: by, for example, postulating an act of consciousness stretched out over time with the melody (or a portion of it) as its content. But if, as I argued earlier, our model of the simple case was defective – if the experience of a single note itself has just those features that were the source of our puzzlement in relation to experience of a melody – then not only our solution, but also our problem is in trouble.

We need to confront our picture of the sense that talk of the experience of change *must* have with a consideration of the sense that talk of 'hearing a melody' or 'seeing the movement of the rock' *does* have. In my discussion of *change* at an instant I noted that talk of what happens *at* a particular time is dependent on the fact that this time is a point in an extended period during which things are happening. This is as true of the *experience* of change as it is of *change*. Thus, a description of what someone is hearing – what he is experiencing – *now* will involve reference to the melody (or note); and the melody (or note) is extended in time, having parts that lie in the past and future. But further, the sense of our claim that he is *hearing* the melody (in the sense we are concerned with in this discussion) is dependent on the fact that *he* persists through time. There is a stretch in the life of this human being in which, for example, he moves to the rhythm of the music that is being played. There is a stretch in the life of this

[16] And to the extent that Zeno is not interested in *that*, we can, perhaps, accept his conclusion 'There is no such thing as motion' – whatever *that* means – with equanimity.

[17] This is not a *necessary* condition. We have ways, greatly refined by the mathematicians, of specifying a speed at which something is travelling at an instant when that instant is *not* contained within a period during which it is moving at uniform speed. While I suspect that this fact contributes to philosophical illusions that arise here, this is not a point that I can dwell on now.

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human being in which he follows the movement of the ball through the air, adjusting his position in readiness to reach out to catch it, and so on. We say of someone who behaves in these ways that he heard the rhythm, or that he saw the motion of the ball: that is what was going on in his life over that period of time. And we may say of an instant that what he was experiencing then was the rhythm of the music or the motion of the ball if that instant lay in a period of time during which he was seeing the motion or hearing the rhythm; just as we may say, of an instant, that what he was doing then was running at 20 mph if that instant lies in a period of time during which he was running at 20 mph.

We speak of what someone is now experiencing: he is, for example, hearing a melody. To see how such a description can have sense, we need not maintain that there is a sense in which the person is, at that instant, hearing notes that lie in the past or future (any more than we need say that someone who is now running the Edinburgh marathon must, in some sense, now be running through Holyrood Park). Nor need we insist that the 'now', 'the phenomenal present', is not strictly instantaneous: that the units of experience are temporally extended slices (any more than we need postulate that time itself comes in non-instantaneous chunks in order to show, in the face of Zeno, how motion is possible). To see that talk of experiencing change does not require such ideas, we need to abandon a certain picture of the relation between 'the experience of change' and its manifestations. The picture is one on which 'the seeing or hearing itself' is something distinct from – something that has a nature that may be investigated quite independently of – any of its public or private manifestations: one on which the sense of talk of what someone is seeing or hearing is quite independent of the fact that the one who sees or hears has a life, extended in time, in which her experience may have a rich variety of manifestations. But, as suggested earlier, there are good, independent, reasons for abandoning that picture.

6. 'Directly Given in Experience'

The following objection can be anticipated: 'You have focused on the *sense* of our talk: on the kind of sense that talk of "hearing a melody", or "seeing the motion of an arrow", has. But, while that is all very well, it completely bypasses the very thing that created the philosophical headaches in the first place: the fact that change and persistence are *directly given in experience*. It may be true that others are, in their characterisations of my experience, dependent on manifestations of it

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in my speech and behaviour. It may be true that the ways in which talk of the experience of change features in our public discourse is closely bound up with the "manifestations" – public and private – of such experience. All of that granted, however, the experience itself is given to *me* quite independently of any of its manifestations. And that is to say: there *is* something – the character of my current phenomenal consciousness – that has its own distinctive nature: a nature that we may, as philosophers, seek to clarify quite independently of a consideration of any of its normal accompaniments in the form of foot tappings or twinges of pleasure'.

'Change and persistence are *directly given in experience*'. If asked 'What are you hearing now?' or 'What are you seeing now?', I do not need to reflect on the manifestations of my experience. Indeed, in most contexts, such self-observation – an observation of my foot tappings, or of the direction of my gaze – would be completely irrelevant to an attempt to answer the question; and if the answer I give were grounded in such observations that would show that I had failed to understand the question. We should not, however, conclude that an appropriate answer is one that is grounded in *another* form of self-observation: in my direct awareness of the current character of my phenomenal consciousness. For, in standard cases, what is called for is not attention to *myself* at all, but attention to what I am hearing or seeing: to the music being played, or to the motion of the ball. This is so whether the primary interest of the person asking the question lies in what is going on in the locality in which I happen to be or in *me*. Either way, a serious attempt to address his question does not call for *self*-reflection at all; and so we need not conclude from the fact that it does not call for reflection on the manifestations of the experience that it calls for reflection on some feature of my mental life with which I am more immediately and intimately acquainted. My ability to report, straight off, that I am seeing a stone flying (or 'the flying of a stone')[18] towards the window of that house over there is no more a reflection of a form of *self*-knowledge than is my ability to report, straight off, that there is a stone flying towards the window of that house over there.

The other learns something about *me* from my sincere attempt to describe what I am seeing or hearing: to describe, that is, what is going on around me. He learns that I am seeing the motion of the ball. In different – perhaps slightly special – contexts he may put his question to me in a way that calls for an explicitly autobiographical answer. He wants me to tell him, not what is going on around me, but

[18] It is, I suspect, a significant fact that such locutions are strained.

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how I am experiencing it. It is common knowledge between us that the hand is moving, or that this melody is being played. His question is: 'can I see the movement; can I hear the melody?' There are, of course, other ways in which he might try to answer his question: for example, by noting the shifts in my gaze, the tapping of my foot, and so on. But we may (and sometimes with good reason) think of *asking* as being the most direct way of his finding out what he wants to know. Now, as in the more familiar case of the previous paragraph, there is no question here of my examining the manifestations, public or private, of my experience.[19] And so it may seem that those manifestations are simply *consequences* of the important thing – 'the experience itself' – to which I alone have direct access and which I report in the words 'I am seeing the motion of the rock'. It may seem that, as I expressed it, 'the seeing or hearing itself' is something distinct from – something that has a nature that may be investigated quite independently of – any of its public or private manifestations.

I spoke earlier of reports of what I am now experiencing as themselves being amongst the 'manifestations' of an experience of change. My point in speaking in this way was, in part, to highlight the fact that such reports do not have a privileged position in our readiness to say of someone that she experienced a particular change. Faced with a radical, and persistent, conflict between, on the one hand, a person's assurances that she hears melodies and, on the other, her inability to sing along with them and so on, we may feel we have little choice but to conclude that her assurances cannot be taken at face value – and we may do so without casting any doubt on the sincerity of those assurances.

That fact is linked with something else that I wish to highlight in speaking of 'manifestations' in the broad way that I have. Consider manifestations of these kinds: he taps his foot to the music, he follows the ball with his eyes, he feels a twinge of pleasure when the music takes this turn, or of fear when the ball swerves towards his head. We do not, I take it, suppose that such responses are an expression of the individual's intimate acquaintance with a certain feature of his current inner life: that his unhesitating tapping is to be explained in terms of a certain species of self-knowledge. But there is no more reason to suppose that his utterance 'I am seeing

[19] This is only so in the case of *present tense* self-ascription. When speaking in the past tense – of how I *experienced* something – I may appeal to its manifestations in much (though not exactly) the same way as others do when speaking of me.

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the movement' should be taken to be an expression of his intimate acquaintance with a feature of his current inner life. That I can say, without investigation of any manifestations, that I hear the melody no more demonstrates that the hearing itself is something that has a nature that may be investigated quite independently of any of its public or private manifestations than does the fact that I can tap along to the music. What it demonstrates, rather, is an aspect of the way in which, given a certain form of upbringing, we may become at home in a language: may become such that my cry 'I can hear it!' reveals my state as immediately as does my involuntary start when the music takes its surprising turn.[20]

7. Consciousness in Time

I have, throughout this discussion, appealed to features of human life in time – where this includes (as it must if it is to be at all adequate) ways in which we *speak* of our experience of time: the way, for example, in which our descriptions of what is happening *now*, or what someone is experiencing *now*, are inseparably linked with the fact that this instant lies within a period during which things are happening and people are responding to them. That, it may be replied, leaves us with the task of understanding how a life with these features is possible. Clearly it is dependent on the fact that *we experience change*: beings who did not do so would never develop the ways of speaking of experience on which I have focused. To understand how our lives are grounded in such experience it must, it may be concluded, be possible to characterise this experience in ways that are uncontaminated by considerations drawn from an understanding of the world that is made possible by it.[21] We must, as we may express this, grasp how time can be present in consciousness without reference to the fact that consciousness is located in time.

[20] None of this is to deny that there are important differences between central forms of linguistic manifestation and many other forms of manifestation. There is, for example, much more ready room for a 'discovery' that I am tapping my foot than there is for a 'discovery' that I am saying 'I can hear the melody'. Such differences may, for certain purposes, justify a resistance to grouping these together under the umbrella term 'manifestations'. They do not, I think, cast doubt on what I have suggested we may learn from placing them together.

[21] In Husserl's terminology, the phenomenological investigation involves a 'bracketing' of our folk and scientific beliefs.

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The conclusion simply does not follow. It is a necessary condition of an individual's having a conception of change that she has *experience* of change. It does not follow that in characterising the relevant *experience* we cannot draw on the forms of understanding of the world for which that experience is a condition of the possibility. We will only suppose that it does follow if we take it as given that there is some deep sense in which we ourselves are not part of that world; or that our experience of, for example, change provides a *justification* for the ways in which we speak and think of change: for our having a language in which we speak of change, and the experience of change, as we do. And those assumptions are not obligatory.[22]

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[22] I have benefited greatly from comments on earlier drafts of this paper by a number of people. Barry Dainton and Julian Kiverstein helped me to see that in an earlier version I did not have the target of my criticisms in proper focus. I hope that the present version does better in that respect. I am also very grateful for invaluable input from Lars Hertzberg, Maureen Meehan, Soren Overgaard, Robin Le Poidevin and Angus Ross.

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