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Music and Temporal Experience

1. Introduction

There are spatial and temporal aspects of our experience of music. The former concern issues such as where we listen to music, our distance from the singers or instruments, and the distances between them. All of these features condition how we hear the music in significant ways, and some may end up being relevant to the music itself—for example, the spatial distribution of performers has been exploited by composers during different historical periods. Temporal aspects, however, if less readily pinpointed, seem to be incomparably more intimately involved in music. They are essential to rhythm, for instance; rhythm itself being one of the essential components of music.

However, my present interest is in whether the intimacy between music and time not only has a bearing for the making of the music, but also, in a sense, works in the other direction. Not, of course, in the sense that music has anything to do with the “making of time”, whatever—if anything—that might mean, or with the nature of time itself; but in the sense that musical experience seems to have certain aspects that help us to understand the nature of our *experience* of time. Or so I will try to show in this paper in a somewhat indirect way; that is, by illustrating how very simple features in our experience of music can be used as a guide in the debate about the temporal aspects of conscious mental episodes.

Current philosophical views about such aspects may be classified in two main groups. According to one group—“extensionalist theories”—the only essential aspect of a temporal experience is its duration, or perhaps also the fact that experiences of temporal events are themselves ordered in the linear before-after structure, if that structure cannot be reduced to duration. The other group—“representationalist theories”—takes as fundamental an aspect that theories in the first group regard as derivative, namely the past-present-future structure. What I attempt to show here, is how attending to certain features of our experience of music can motivate the different views, leading to their refinement, and finally can help to formulate an account of temporal experience which is in

certain respects midway between the two groups of views and which combines desirable features of both of them.

2. Retentiveness and anticipation

Consider a typical 3/4 rhythm, as in a waltz. Then consider a tone, say an F that sounds at a certain time in a particular performance of some waltz. Assume this tone sounds on one of the weak beats. How it is heard is different from how it would have been heard, had it sounded on the strong beat (even disregarding the stress factor). Hence, we seem to have here grounds for asserting that the experience of the F is conditioned by the fact that another tone sounded just before—or nearly just before—on the strong beat. At first sight then, it is natural to hold that the way the F is experienced is conditioned by the *memory* of the other sound, and moreover, that somehow the memory of that sound and the experience of the F constitute a unit of sorts.

One way to flesh out this unity is to think of it simply as a mixture: we have a temporal coincidence of our separate experiences of hearing the individual tones with very recent memories of preceding tones, which allows us to form *judgments* about sound sequences and their features.¹ According to this view, hearing the three sounds of a measure in a waltz played *allegretto* (*one-two-three*) does not, strictly speaking, constitute a unitary perceptual *experience* (the experience of the music in that measure). There is temporal coincidence (of experience and memory) and the unity appears only in judging.

One issue here is exactly how memory is involved. Consider the difference between acquiring knowledge about the movement of the second hand of a watch or clock, and acquiring knowledge about the movement of the hour hand. You can acquire knowledge about the latter only by *remembering* where the hand was a rather long while ago, and comparing that with where your visual perception reveals it is now. Here, a sort of mixture of memory and perception is at work. How very different in the case of the second hand! At least in the case of one that moves smoothly, you seem to be able to watch the hand moving directly. No memory seems to be required for acquiring knowledge about its movement; it seems to be a purely perceptual affair. So, is hearing a measure of music more similar to one case or to the other; or perhaps to neither?

Confronted with the alternatives, one thing we should say is that if memory is involved at all in the sort of simple musical experience I mentioned, then it is involved in a very different way from the

case of acquiring knowledge about the movement of the hour hand. As I said, what we find in this latter case is simply a mixture of perception and recollection; hence, something that involves as one of its distinctive ingredients a mental event which is one of remembering something. In the case of hearing the music in a measure as something unitary, we cannot discern this distinctive ingredient, even if we agree with the claim that: "What in effect we are concerned with here is the tendency on the part of experience and its given objects to unite across time to form determinate wholes."² Moreover, if the hearing of the tones on the weak beats is influenced by the hearing of the tone in the strong one—and this happens both, by which tone has sounded and by the fact that it has sounded as stressed relatively to the weak ones—it seems that we must also agree that in this case there is an influence of what has happened in the past (or before) on what is happening right now. *Some* form of memory must be at work here, then; but no distinct mental event of remembering or recollecting; retentiveness without reminiscence.³ Moreover, as we saw, a whole unitary experiential event is involved: "There is only one act [= mental event] that counts both as a perceptual act and as a manifestation of memory."⁴

So, what we have so far is the recognition of experiential units. That is, firstly, something unitarian in character, not a mere mixture of ingredients; and secondly, something experiential, given through experience, not uniquely at the level of judgment or thought. A view that seems to be better supported phenomenologically than the view I reported above from Le Poidevin.

Further examples from the experience of music seem to reveal that the influence of the sounds already heard on the present hearing is not the whole story. Indeed, consider a simple example, this time concerning harmonic relations. Most people who are at least moderately used to hearing music in the western tradition (classical, rock or pop) have a characteristic experience on hearing what is called a dominant seventh chord: typically they share the expectation of hearing the corresponding tonic chord, an expectation which is manifested in the feeling of completion when it is indeed heard after the dominant seventh. However, the expectation is, of course, for something which is going to occur in the (more or less) immediate future. So, should we not also include the expected future in the experience of the (first) chord?

3. Extensionalism and representationalism

At this point a natural move to make sense of this apparent—even if limited—involvement of the past and the future in experience, is to regard typical musical experiences—and, based on that

model, temporal experiences in general—as experiences that *necessarily* take time. A musical performance may be characterized as a series of multiple temporally extended processes, and "experiencing a temporally extended process requires time—just as much time as the process itself takes up."⁵ There is, however, a version of this claim that asserts that *temporal extension* is all there is, phenomenologically, to the unitarian character I illustrated above with the two musical examples.

What of the influences of what we experienced in the recent past and what is to be experienced in the near future that we seemed to recognize? The extensionalist might claim that it is all there: within the stretch of time of a unitary temporally extended experience there are different moments of time, some coming before or after the others. However, "before" and "after" do not yield a past or future unless there is also a "now". And the influences we seemed to have detected would appear to require recognition of a "now" within the experience. In any case, it seems right to say that the influence of retention has a different phenomenal character from the influence of expectation or anticipation. This seems independent of any commitment to the recognition of a "now" in experience, and by itself seems to cast doubt on the extensionalist proposal, since that proposal does not seem able to provide for such a phenomenal difference.

There is also another feature of temporal experiences which might seem to count against the extensionalist view. It concerns the fact that, according to that view, temporal experiences are *necessarily* temporally extended. The fact is that, at every *moment* while undergoing a musical experience, we can be certain of experiencing something; something, certainly, with a temporally extended character which we could describe one way or another (perhaps very summarily). However, if the experience itself is necessarily extended, should we not have to wait until the experience is complete to be aware of what the experience is all about?

Musical experiences appear to be clear examples of experiences that present a "momentary" character in the sense just described; and if this feature counts against the extensionalist view, so be it. Thus, we are left with the task of integrating this "momentary" character together with the right sort of recognition of the influence of retention and anticipation that we saw musical experiences also exemplify so well. One way to do this might be to hold that what characterizes temporal experiences is *just* that, at every instant in time, there is simultaneous involvement of retention and anticipation. It is as if, at each instant, our consciousness could "look" to the (more or less) recent past and immediate future, while at the same time capturing the present. Or, dispensing with the simile, at every (non-initial and non-final) instant, the experience would have representational

properties corresponding to past, present and future events. This is a view famously associated—rightly or wrongly—with Husserl's work on the phenomenology of the consciousness of time.⁶

A key point about this view is that the duration of the instants does not play any explanatory role. We could take instants as temporally non extended, in an abstract idealization of the notion that temporal experience is continuous. Or we could regard "instants" as lasting for however short a time we deem convenient. Or we could just leave them to be determined by empirical considerations. All these alternatives are left open by the philosophical view under consideration. The central point is that the temporal extension of instants is not essential to the view; and that means that, according to this view, the temporal extension of, for example, a musical experience, is a contingent feature of the experience.

4. Cross-dependence of phases

I do not think it is necessary to choose between the twin evils of having to renounce the attribution of one or other of these features to (musical) temporal experiences. That is, on the one hand renouncing their "momentary" character: the (alleged) fact that at every "instant" they exist and connect us with features of the (more or less recent) past and the (more or less) immediate future. While on the other hand we have the possibility of renouncing their necessary extension.

The representationalist view, as explained above, has it that it is the *temporal coincidence* at a "point" in time of the instantiation of certain representational properties that holds the key to understanding temporal experiences. An alternative to this "temporal coincidence" idea is that of *constitutive relations*—as such, temporally unmarked—between the representational properties of the experience at different moments. This is how Christoph Hoerl expresses this idea: "... temporal experience must of necessity involve a multiplicity of different contents ... [which are] in relations of constitutive dependence to each other."⁷ Hoerl attributes this general idea to Husserl himself, in what is a somewhat heterodox interpretation of his writings on time. According to Hoerl's interpretation, for example, the experience of a dominant seventh chord is not an experience of a complex sound—several tones occurring simultaneously—which is *de facto* usually or typically followed by the corresponding tonic chord, but an experience that *demand*s—we might say, in common musical parlance—that chord; an experience in which, necessarily, at a later phase, that tonic chord is heard, while the previous chord is retained.⁸ There is no experience of a dominant

seventh chord, as a dominant seventh, without such relationship between different phases; and this interdependent phase organization generalizes, *mutatis mutandis*, to all temporal experiences.

In this way, we form a very different idea of temporal extension: a temporal experience—as exemplified readily by musical experiences—occurs in phases which mutually require of each other: no phases in mutual constitutive dependency, no temporal experience. That would be why, according to this model, temporal experience is necessarily extended.

Moreover, a sense in which temporal experience can be "momentary" is still preserved: we can recognize that we are undergoing such an experience, and (to a point) which one it is, to the extent that we are aware of the relations of dependency between phases (with their respective representational properties). This may be a marginal awareness, if we are not musical experts, but an awareness nevertheless.

5. Extensionalism and the structure of temporal experience

We now have, perhaps, the basis for a firmer opposition to extensionalism (the view that extension is the *only* essential feature of temporal experiences). Hoerl himself maintains that, in Husserl, recognition of the necessary extension of temporal experiences was divorced from extensionalism because of Husserl's idealism about time. Certainly, a view according to which, "when I hear *do-re-mi*, for instance, *both* the succession of tones and my own experience of that succession actually exist as phenomena in time only in so far as I am (or can be) conscious of them as such,"⁹ locates one at the antipodes of the spirit of extensionalism.

Hoerl also holds that the (allegedly Husserlian) explanation given above of the necessary extension of temporal experiences cannot be "unplugged" from temporal idealism. I am unsure about this last point. We should recall how the (allegedly Husserlian) idea of mutual dependency was motivated. One wanted to overcome models of temporal experience which were incompatible with the idea of necessary extension. Now, independently of what Husserl himself might actually have thought, why should one want to do that? In other words, why should one look for a way to save the idea of necessary extension when one is not inclined towards an extensionalist view? It is difficult to think of a place to find the motivation other than in the *unitarian character* of the (musical) temporal experience, as opposed to the feature of a merely assumed necessary *extension* of (musical) temporal experience.

We should also recall that at some point above, the idea of simultaneous influence of retention and expectation at a single instant was advanced as a way to articulate the unitary character of (musical) temporal experiences. The proposal was then that the structure of a temporal experience simply consists of the alleged fact that instants of experience "look" simultaneously at the present and into the (more or less immediate) past and future.

That proposal clashed, however, with the idea of necessary temporal extension; and it failed to provide for that because of its attributing to (musical) temporal experience a merely linear structure (or a pseudo-linear discrete "dot structure"). To move on from here and continue to look for something that is compatible with the idea of the necessary extension of temporal experience, when one does not hold much hope for the prospects of extensionalism, would seem completely unmotivated.

So, let us not put the cart before the horse. We should describe the pieces properly and place them in the right order. We begin by regarding it as evident that—as exemplified clearly in the experience of music—experiences of events are themselves always extended; and that, moreover, they have a form or structure.¹⁰ As musical experience also very clearly reveals (see the simple examples above), and as an independent idea, we think that temporal experience has something to do with a unified "temporal field" of retention and anticipation.¹¹ Studying the structure of the musical experience—or what amounts to the same thing, studying what makes for the unity of this temporal field—we arrive through phenomenological reflection at the necessary cross-dependence of the phases of the experience, each one of them with its own defining combination of retention, present impression and anticipation. With this, we finally realize that the temporal experience is *necessarily* extended, and we moreover obtain an explanation of *why* this is so.¹²

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See Robin Le Poidevin, *The Images of Time* (Oxford: Oxford University Press, 2007), 92.

² Brian O'Shaughnessy, *Consciousness and World* (Oxford: Oxford University Press, 2000), 56.

³ See Ian Phillips, "Perceiving Temporal Properties," *European Journal of Philosophy* 18, no. 2 (2010): 176–202; especially § 6).

⁴ Phillips, 195.

⁵ Barry Dainton, *Stream of Consciousness: Unity and Continuity in Conscious Experience*, London: Routledge, 2nd ed., 2006), 181.

⁶ See, e.g., Edmund Husserl, *On the Phenomenology of The Consciousness of Internal Time (1893–1917)* (Dordrecht: Kluwer, 1991), §11.

⁷ Christoph Hoerl, "Husserl, The Absolute Flow, and Temporal Experience", *Philosophy and Phenomenological Research*, forthcoming, 2012.

⁸ What happens if the tonic chord does not come after all, so that it cannot, literally, be heard? Well, one alternative is to distinguish between cases as types and cases as concrete exemplifications, and restrict the requirement to the types—as befits, perhaps, a constitutive connection. Another is to focus on concrete cases and formulate a weaker requirement for them, allowing that the imagination of the tonic chord sometimes takes the place of hearing it. Presumably, these alternatives could be combined.

⁹ Hoerl is here explaining informally the idea of idealism about time—a position which he certainly does not endorse.

¹⁰ Husserl, 24 : “It is certainly *evident* that the perception of a temporal object itself has temporality, that the perception of duration itself presupposes the duration of perception, that the perception of any temporal form itself has its *temporal form*.” Emphasis added.

¹¹ Husserl, 31–2: “When a temporal object has elapsed, when the actual duration is finished, the consciousness of the now-past object by no means expires with the object, although it now no longer functions ... as impressional consciousness ... The original temporal field is manifestly limited, precisely as in perception’s case. Indeed, on the whole, one might dare to assert that the temporal field always has the same extension. It moves, as it were, over the perceived and freshly remembered motion and its objective time in the same way as the visual field moves over objective space.”

¹² Husserl, 197–8: “According to its sense, perception of succession implies not only the belief that B is present itself ... but also the belief that the A that preceded B was present itself and was perceived—but not just anywhere and at any time, and not by just anyone. On the contrary, *I* mean that I have perceived A—specifically, *before* B ... Here I see ... that such an intention can find fulfillment only in a *process* in which the perception of A stands as the first thing ... and this is then followed by the preservation of the intention and the appearance of B. I see with evidence that *that final state is possible only as a final state*, that *any state or condition that intuits time* is possible only as *extended*, and that *the intuiting of a time-point* is possible only *within a nexus*. I see with evidence that the consciousness of a time itself <requires> time; the consciousness of a duration, duration; and the consciousness of a succession, succession.” Emphasis in the original.