“Ein schlagartiger Einbruch der Ewigkeit in die Zeit” — On the Spatiality of Musical Time

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Abstract: Throughout history and across cultures, music and time have shared a special bond. Philosophers in the Western tradition have illustrated their theories of time with examples of music, while composers have written music that attempts to alter or even undermine our everyday experience of time. In an echo of medieval Christianity, twentieth century Buddhist philosophy, and 2000s rave culture, theorists such as Christopher Hasty describe the results of these efforts as a “spatialisation of time”. In this article, I go a step further and attempt to articulate a notion of musical time that is necessarily spatial. I argue that the modes in which time is contained in music—rhythm, microrhythm, and form—spatialise our experience of the time in which the music is itself contained. Thus investigating these “metaphors we hear by” facilitates a nuanced understanding of time in music and music in time.

Introduction

Any attempt at reasoning about a fundamental issue inevitably starts by deciding which of Pandora’s many boxes one is willing to open, and which it might be possible to edge around. When reasoning about music, this task is made infinitely harder by the fact that one must begin by escaping from a crate-sized box in Pandora’s collection stencilled “What is music?”. Other subjects suffer from a similar primordial uncertainty; indeed, one might well substitute “music” for “time” in that oft-cited line of St. Augustine’s “What then is time? If no one asks me, I know: if I wish to explain it to one that asketh, I know not”.[2] My current subject matter — the interpenetration of music and time, or, in other words, the existence of time in music and music in time — makes it necessary to crack the lid of both “Music” and “Time”. But to avoid drowning in questions about the physical nature of time, which others are undoubtedly better equipped to answer than I, my definition is rather dull: I define time as a one-dimensional manifold and further stipulate that time is neither circular nor reversible; two statements which, although questionable from some standpoints in theology, seem undeniably true at the level of ordinary human experience. Music, on the other hand, I define as broadly as possible to include everything from Palestrina to Danger music, from Brian Ferneyhough to work songs, and from The Beatles to Qawwālī. Initially, such a definition may seem so broad as to be unproductive, but, as I will discuss below, the “difference that makes a difference”[3] is whether an individual experiences something as music or not. For the same reason, my argument remains agnostic to the ontological status of a musical work as notated, recorded, or memorised.[4]

In what follows, it is my central argument that the experience of music entails a spatialisation of time. The notion of “spatialised time” is neither itself original to me, nor is its application to music. In the

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2 Augustine 2023 [ad 401].
3 Bateson 2000 [1972].
4 Thorough treatments of the ontology of music include: Scruton 1999; Dodd 2007. See also Stock 2007; Mahrenholz 2021; footnote 31 below.

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existing literature, however, is it also not a coherent concept. Christopher Hasty,[5] drawing on the work of Milič Čapek, Henri Bergson, and William James, describes it as the experience of a “timeless now”, or, in the words of Spinoza via D. T. Suzuki, “sub specie aeternitatis”, eternity in time.[6] As Hasty points out, this notion was popular among the continental post-war avant-garde: Karlheinz Stockhausen writes about the “consecrated moment”,[7] while György Ligeti, analysing the works of Olivier Messiaen, Anton Webern, and Pierre Boulez, writes about a “paralysis of the flow of time”.[8] Boulez distinguishes striated spacetime, which we “count in order to occupy”, from smooth spacetime, which we “occupy without counting”.[9] This concept was later taken up by Gilles Deleuze and Félix Guattari in *A Thousand Plateaus: Capitalism and Schizophrenia*,[10] where they apply the characteristics of smooth and striated to geopolitics, travel, cartography, and culture.[11] Across the Atlantic Ocean, the American experimentalists came up with similar metaphors. Writing about the five-hour monolith that is Morton Feldman’s String Quartet No. 2,[12] Chris Dahlen writes, “Anyone who hasn’t heard a Feldman piece may wonder how the time passes. The short answer is that it doesn’t. One of Feldman’s agendas was to turn time into space: to make time feel not like a line, but like a landscape that the listener has dropped into.”[13] Welsh-born composer and improviser Richard Barrett, on the other hand, describes notation as “the spatialisation of time”: a projection of linear, nonreversible time onto the two-dimensional space of the page, a space which can be traversed at will.[14]

More recently, the music philosophical discourse on movement in music has provided new perspectives on the notion of a musical space. Roger Scruton holds that, although the language we use to describe music is full of spatial metaphors (e. g. high and low), this can be nothing but metaphor.[15] On his argument, “[t]he essential feature of a spatial dimension is that it contains places, which can be *occupied* by things, and between which things can move.”[16] Instead, he presents a complex argument about the movement we hear in music (e. g. upwards and downwards) as existing in an acousmatic[17] space that contains a virtual causality wholly unrelated to what caused a sound in the physical world.[18] An opposing argument was initially advanced by Andrew Hamilton, who speculated that music contains something like literal but non-spatial movement.[19] He has later conceded this point and instead argued that music contains “something relevant that moves literally — the listener or performer”.[20] In the same text, a rare example of contemporary scholarship written in the form of a dialogue, Matthew Tugby appeals to quality-space theory,[21] to describe rhythm as “ patterns of changes of qualities in time”.[22] Another counterpoint to Scruton’s acousmatic concept of music, where everything required to completely understand a work is contained in its sound,[23] is Matthew Nudds’ argument that our understanding of the extra-musical causes of a sequence of sounds is central to the way we perceive them.[24]

5 Hasty 2020a: 364–374.
6 Suzuki 1957.
7 Stockhausen 1963.
8 Ligeti 1965.
9 Boulez 1971 as cited in Deleuze and Guattari 1987: 361–362.
10 Deleuze and Guattari 1987: 474–500.
11 Deleuze and Guattari 1987: passim.
12 Feldman 2010.
13 Dahlen 2002.
14 Although Barrett alludes to this notion in a number of his writings (e. g. Barrett 2019), I am not aware of any thorough exposition of the concept. I was introduced to the idea during my undergraduate degree where I studied with him.
15 Scruton 1997.
16 Scruton 1997: 14. Emphasis in original.
17 Schaeffer 1966.
18 Scruton 1997: 49–79.
19 Hamilton 2011.
20 Hamilton et al. 2019: 35.
21 Rosenthal 2010; 2015; Fleming and Shea 2024.
22 Hamilton et al. 2019: 37.
23 Scruton 1997: passim; 2007.
24 Nudds 2019.

Leaning on *auditory scene analysis*,[25] he suggests that we hear low pitches as heavy and loud sounds as close, not as qualities, positions, or movements in some virtual space, but rather as isomorphic with movement in the physical world.[26]

In what follows, I argue that musical time is necessarily spatialised. I also argue that each form of time in music affords a distinct spatial mode: rhythm gives time a vertical dimension in the form of salience; microrhythm turns the location of an event in time from a point or a striation into a directed space; form joins a succession of events into an indivisible span of musical time. To support this claim, I will first discuss the notion of musical time as compared to bare time. I will then describe three levels[27] of musical time: rhythm, microrhythm, and form. Each of these levels have been treated in great depth individually, but are rarely examined together, and rarely through the lens of musical time. Finally, I will revisit the notion of an eternal moment in time from the perspective of a participant rather than a listener, and I will examine how this may function as a tool for collective meaning making within a community.

Musical Time

Across cultures, music is connected to time in a way that is perhaps unique among the arts,[28] yet to describe music as a temporal phenomenon fails to capture anything but the trivial observation that music, like any human activity, exists and unfolds in time.[29] The first question to address, then, is the phenomenological status of music in time.

With the possible exception of media like sculpture, painting, and photography, most art forms are contingent upon a chronology of events. Whether that is the syntactic ordering of words in a novel or the sequential ordering of frames in a film, the experience of a work consists in cumulatively witnessing moments. Depending on the medium, each moment or event may itself have meaning or not, and, depending on the medium, each moment or event may or may not have a duration. Contrary to film, where each frame is a nearly duration-less entity that exists independently of its being projected onto the screen, any "slice" of music only exists for its duration after which "it is gone, in the air".[30] It is in this sense that music is temporal;[31] it not only exists inside of time because the laws of physics demand it, its existence is structurally analogous to time in a way that could even make it reasonable to speak of music "passing".[32]

On this view, and especially in the wake of Maurice Merleau-Ponty's phenomenological argument that time "is born from *my* relation to things",[33] philosophers and musicologists have argued that music

25 Bregman 2006 [1990].
26 Nudds 2019.
27 Although there are parallels to the model proposed by Bielawski (2020), the three levels I discuss do not correspond directly to any of his categories. Bielawski distinguishes between "zones" of time, and "regions" within those zones. These regions are then grouped into "areas" based on our perception of events in those regions. On his analysis, rhythm is located in the area of the "psychological present" within the "zone of time", which corresponds to durations in the range between 2^{-4} s and 2^{4} s.
28 Brelet 1949: 25; music is "l'art du temps par excellence"; Karbusicky 1990.
29 See e. g. Hasty 2020b; Kozak 2023.
30 Dolphy 1965.
31 Cf. "music is a temporal structure; it is not a structure in time" (Stambaugh 1964: 266); musical meaning emerges "in and through time" (Kramer 1988: 2).
32 This entire discussion plays bumper cars with a plethora of Pandora's boxes, none of which the space here allows me to address in any depth. For discussions on these topics see: the ontology of musical works (Levinson 1980; Alperson 1987; Kivy 1987; Davies 1991; Scruton 1999; Dodd 2007; Adorno 2009 [1949]; Mohr 2010); temporality in music and other media (Klein et al. 2000; Klein 2000; Mohr 2012; Blum 2016; Mercieca 2021; Young 2021; Kozak 2023); cultural time and temporality (Agamben 2005; Stadler and Stöltzner 2006; Clayton 2013; Ermolayev et al. 2014; Born 2015; Bielawski 2020; Alaghband-Zadeh 2021).
33 Merleau-Ponty 1945: 471. Emphasis in original.

is particularly suited to facilitating the experience of time.[34] Yet, music does more than give us a ruler by which to measure the passing of time; music makes certain moments more salient to us than others. That salience comes about, as does every instance of salience, through a negotiation between bottom-up sensory stimulus and top-down functions.[35] While our response to sensory stimulus is largely automatic, it can be disciplined or overwritten by cultural hermeneutics.[36] Based on this alone, I submit a rudimentary definition of musical time as a span of time in which music is the primary factor shaping experience. This definition already entails an essential difference between musical time and bare time: its finitude. On Aristotle's view, time is infinite — after all, if it had a beginning there would be something, a moment, before that beginning.[37] Any instance of musical time, on the other hand, is finite. And even though the beginning and end of a given span of musical time may not be punctate to our experience, there is nonetheless a qualitatively distinct "before" and an "after".

A distinct downside of this definition is that it goes against existing definitions of musical time. These existing definitions hardly converge either, but range from Barbara Barry writing about "the experiential amount of time passing in the course of listening to […] a musical work"[38] to Jonathan Kramer's notion of musical time as an ethereal entity which we only experience in its interaction with "ordinary" time.[39] As it happens, both Barry's and Kramer's concepts can be reconciled with my definition; others, however, can not. Barry's notion of musical time as experienced duration describes the quality of time experienced through music most readily associated with our everyday understanding of time. My claim is that duration is but one of several qualities of the experience of musical time. Kramer's claim echoes the phenomenological view of time as something which can only be experienced in relation to "things".[40] Depending on the ontological status one ascribes to music and musical time, a point on which Kramer is less than precise, music may well qualify as such a "thing".[41] And insofar as music is such a thing, two questions arise: what kind of thing can contain time, and in what form is time contained within it. The former will remain in Pandora's possession until another day, but the latter will occupy the remainder of this paper.

Rhythm and Microrhythm

Rhythm is born from the relation between things belonging to a certain category. One of the primary characteristics of that category is duration. If a series of durations are too short, we automatically begin to chunk them into groups of more manageable duration, if too long, we subitize, or mentally divide them into smaller sections.[42] According to Justin London, the upper bounds of rhythmic durations, the "speed limit of rhythm", is somewhere around 300ms, while the lower bound is somewhere between two and three seconds.[43] London's argument, an argument that is supported by a mounting quantity of empirical research, is based on the assumption that metre is a central component to our experience

34 Cf. Langer 1953: 110: "music makes time audible, and its form and continuity sensible"; Mohr 2012; Kozak 2023: 43: "any time we write or talk about music we are implicitly talking about time".
35 London 2012a; Jaeger et al. 2024.
36 Brattico and Vuust 2017; Dideriksen 2025.
37 Aristotle 2014. While that particular argument may not hold up to detailed scrutiny any longer, the infinity of time remains an uncontroversial position (Emery et al. 2024).
38 Barry 1990: 8.
39 Kramer 1988.
40 E. g. Merleau-Ponty 1945.
41 One such ontological stance, which has been quite influential in the more radical quarters of music theory, is "object-oriented ontology" (Harman 2018). Some proponents of this theory posit that a sonic "object" (which can be anything from a musical work to a Schaefferian "objet sonore") is on equal ontological terms with any other object (Wong 2018). Yet, this does not come without some difficulties: "[sounds] make peculiar sorts of objects: their capacity to overlap and pass through themselves makes them stranger than most everyday objects" (O'Callaghan 2010; see also Schaeffer 1966; Scruton 1999 [1997]; Cox 2011; Taxier 2020).
42 Harrell 1937; Polak 2017; Wöllner and London 2023.
43 London 1993; 1995; 2001; 2004; 2002; 2012a; 2012b; 2019; 2024; Danielsen et al. 2024; 2019.

of rhythm, and that the experience of metre is caused by entrainment to a musical signal. For a signal to drive entrainment, it must oscillate with some regularity and although entrainment has been demonstrated in all traditional frequency bands, entrainment in the context of music seems to be limited to frequencies in the 300–3000ms range.[44] There can be little doubt that many, perhaps even most, rhythmical phenomena afford entrainment. Nonetheless, the ethnomusicological literature on rhythm includes numerous examples of music which are emically described with words analogous to "rhythmical" or "metrical", but do not afford entrainment — at least not according to our current understanding of entrainment.[45] Even so, it seems that there is a limit beyond which we no longer perceive something as a rhythmic entity. Instead, we might perceive events beyond such a limit as a "bare" duration, which suggests that duration on its own is not enough to constitute rhythm. This is an argument which I have unpacked at great length elsewhere,[46] but in its most condensed form I submit that musical rhythm has not one but two constitutive parameters: duration and weight. The notion of musical weight is what Western music theory describes as strong and weak beats or, in the more descriptive German nomenclature, Schwerzeit and Leichtzeit. On this view, rhythm truly can be described as "order-in-time".[47] Order, both in the sense of a sequence of durations, but more importantly a hierarchy of events, some more relevant, more salient, than others.

At first sight, one might assume that the experience of musical weight is co-located, if not isomorphic, with the experience of some acoustic characteristic, like amplitude or accent. Certain acoustic features (low pitch, sharp attack, high amplitude) indeed correlate strongly to the experience of weight in a beat-based context,[48] but even these can be overridden by conscious effort or musical enculturation.[49] On closer inspection, it appears that rhythmic weight cannot be located in the acoustic phenomenon itself, or at least not in isolation. This may begin to explain why musical forms which can not afford entrainment may nonetheless be experienced as metrical by insiders in that musical culture.

I have hypothesised that rhythmic weight should instead be understood as the result of relevance realisation,[50] that is, through an opponent process between bottom-up and top-down functions.[51] Regardless of the mechanism or mechanisms at play, this understanding of rhythm shows one modality in which time may be contained within music: as an ordered succession of events, each short enough as to not be perceived as composite, but long enough to be recognised as its own entity. What we call rhythm, then, is born from our relation to that succession of events, from our understanding of their relative durations, and from the difference in salience that result from our perceiving some events as more relevant than others.

Rhythm, however, is not the shortest increment of time in music. Microrhythm is a concept introduced by Anne Danielsen to describe rhythmical phenomena that occur on a timescale far shorter than the one on which we experience rhythm, but which nonetheless has a profound impact on how a rhythm feels; it is microrhythm that makes us experience something as "laid back" or "pushy", or gives us a "pleasant urge to move".[52] Central to her theory is the notion that the temporal location of a rhythmic event is not a point, but a probability distribution, such that "[m]ultiple onsets falling within

44 Lakatos et al. 2019; Madison et al. 2017. It was long assumed that an oscillation had to be isochronous to drive entrainment, but Rainer Polak's work has shown that to not be the case (Polak 2010; 2015; 2021; 2025; Polak et al.2016; Jakubowski et al. 2022).

45 E. g. Deutsch and Weber 2010; Konrad 2005; Dideriksen 2025.

46 Dideriksen 2024.

47 Cf. Hamilton 2011.

48 Danielsen et al. 2024;

49 Brattico et al. 2013a; Brattico et al. 2013b; Brattico and Vuust 2017; Lakatos et al. 2019; Dideriksen 2024.

50 Jaeger et al. 2024; Vervaeke and Ferraro 2013.

51 Dideriksen 2024: 47: "[m]usical weight qua salience is the result of an opponent process between at least three functions: bottom-up stimulus as received and processed by the sensory system; activation of endogenous reference structures by perceived (sensed) stimuli; intentional top-down control and focus."

52 Câmara and Danielsen 2020.

the boundaries of the perceived beat bin will be heard as merging into one beat, whereas onsets falling outside these boundaries will be heard as belonging to another category — namely, that of ‘not part of the beat’”.[53] The width and shape of a given ”beat bin”, correlates strongly to the amplitude envelope of the rhythmic event, with a long attack time correlating to a broad beat bin and a short attack time to a narrow one.[54] This has two consequences: first, multiple events occurring close to but not exactly at the same time can be experienced as being in the same location or belonging to the same entity; second, even though we place a rhythmic event at a concrete location upon perceiving it, there is no guarantee we would place it there every time. On this basis one could make the stronger claim, a claim which Danielsen does not make, that a rhythmic event does not exist in a location as such, but instead affords a space within which we place it upon perceiving it.

Microrhythm thus accounts for two aspects of the experience of rhythm and, by extension, musical time. First, microrhythm shapes where and how precisely we locate a rhythmic event. Second, it affects how a rhythm feels. On this second point, Danielsen’s work has provided an empirical framework through which emic descriptions of rhythm like “swinging”, “groovy”, “flowy”, or “tight” may be compared.

The related phenomena of rhythm and microrhythm are thus not only modes of time in music, they each spatialise time in their own way. Where rhythm creates a vertical space in musical time in the form of musical weight, microrhythm creates a horizontal space, transforming points on a line into thresholds[55] between events.

Form and Music in Time

In analysis, and certainly in theory, it is a relatively straightforward task to isolate a parameter such as rhythm. In empirical studies of music cognition less so, but one might take the opposite approach and use rhythm as a lens through which to look at other parameters by studying what effect, if any, a change in one parameter has on the perception of rhythm. Although, as I argued above, rhythm and microrhythm are both pivotal to the experience of musical time, we rarely hear them as isolated phenomena unless we explicitly focus our attention on them. Instead, rhythm and microrhythm meld with other elements of the musical material such as pitch[56] and timbre[57] when we listen to music. It is this grouping of parameters into constellations in each moment, which lays the foundation of our experiencing musical form. Form in music can result from a variety of processes, and while a complete taxonomy of musical time might distinguish between these processes as different formal levels or categories, that is unnecessary for present purposes. Despite their differences, all these processes lead to the same end: the material contained in a stretch of time closes on itself to form a coherent musical whole.

A common way to achieve this is through repetition. Elizabeth Hellmuth Margulis, an eminent theorist of musical repetition, identifies three primary parameters that influence how readily we recognise a repetition: duration of the repeated element, distance between repetitions, and how precisely the element is replicated.[58] Short, barely changing repetitions following right after each other thus tend to be very salient, while repetitions of long phrases, separated by extended periods of other material, and with significant variation on each iteration requires greater musical expertise to recognise as repetitions.[59]

Contrary to rhythm and microrhythm, where each event is characterised by the experience it calls forth in the moment, repetition joins a succession of events into an indivisible duration of musical time:

53 Danielsen et al. 2019; Danielsen 2010.
54 Danielsen et al. 2024.
55 Cf. Walter Benjamin’s distinction between a limit as a line and a threshold as a zone (Benjamin 1999 [1982]).
56 Danielsen et al. 2024;
57 Danielsen et al. 2024; Cf. Rehding 2021; Dolan and Rehding 2021.
58 Margulis 2015: 188.
59 Margulis 2015: passim.

"When we listen to a melody we have the purest impression of succession we could possibly have — an impression as far removed as possible from that of simultaneity — and yet it is the very continuity of the melody and the impossibility of breaking it up which make that impression upon us."[60] The point at which a series of events we have experienced in succession becomes an entity onto itself is the point at which time recovers itself from music and, in doing so, creates form. Following Vladimir Karbusicky's analysis, "[d]er Begriff der DAUER […] impliziert etwas räumlich Existentes, einen errungenen Zustand […] oder eine Kreisbewegung".[61] In other words, the experience of Bergsonian durée in music transforms time from an empty marker of its own passing, into a substrate in which, and in relation to which, relations can be made.[62] To spatialise time, then, is to give permanence to the impermanent, to turn the experience of something passing into an experience of something that is; in the words of Pierre Boulez, it is the transition from a striated time we "count in order to occupy", to a smooth time we "occupy without counting".[63]

Boulez' notion of smooth and striated, as well as Deleuze and Guattari's abstraction of the concept,[64] differentiates between two experiences of time: time divided into regular or irregular segments by some process, and time as an open expanse through which lines are drawn only by moving through it. In smooth spaces, expression lies in how one traverses a space. This is the quality of writing, drawing, and spinning that Tim Ingold describes as "making lines",[65] and it is at the core of pieces like La Monte Young's "draw a straight line and follow it". In striated spaces, on the other hand, expression lies in navigating existing striations, interpreting and reinterpreting them as one encounters them, and imbuing the results of a thoughtless process with meaning; it is embroidery, navigating a city, and playing the blues. On this view, the experience of rhythm and microrhythm is an experience of time striated by a more or less transparent external process. The experience of form, on the other hand, is smooth. That is not to say that a musical structure, or the material of which it is made up, cannot be characteristically striated — indeed they often are. Rather, the temporal experience of form is the experience of traversing a form already constructed in memory,[66] not putting it together event by event.

The Spatial Topology of Musical Time

In my treatment of rhythm, microrhythm, and form above, I have treated each as if it were a layer independent from the rest. And although it is often necessary to speak of any one element as separate from the others, doing so is always an abstraction. In reality, rhythm, microrhythm, and form are inextricably linked. Microrhythm exists within the frame of rhythm, but, in doing so, shapes how we experience that frame. Similarly, the experience of form integrates rhythm and microrhythm into a larger whole, but a whole whose character is indelibly shaped by the rhythm and microrhythm which it contains. Rhythm, microrhythm, and form are thus neither separate, nor do they stand in static relation to each other. Rather, they are bound in a dynamical system where the slightest change in one parameter has an, often outsized, effect on the others. It is in this interplay, and especially through musical time striated by regular rhythm, that we may access the truly profound experience of timelessness which is perhaps the closest we can get to experiencing bare time.

60 Bergson 2010 [1946]: 125. Similar uses of melody to describe temporal oneness can be found in e. g. Husserl 1991 [1928] and von Ehrenfels (1890).
61 Karbusicky 1990: 252. Emphasis in original.
62 Cf. Kant 2023 [1781]: "Nur in dem Beharrlichen sind also Zeitverhältnisse möglich (denn Simultaneität und Sukzession sind die einzigen Verhältnisse in der Zeit), d. i. das Beharrliche is das Substratum der empirischen Vorstellung der Zeit selbst, an welchem alle Zeitbestimmung allein möglich ist."
63 Boulez 1971 as cited in Deleuze and Guattari 1987: 361–362.
64 Deleuze and Guattari 1987: passim.
65 Ingold 2007; 2015.
66 Cf. Wöllner 2023.

Sub specie aeternitatis

Meister Eckhart’s “êwige nû”, “[ein] schlagartige[r] Einbruch der Ewigkeit in die Zeit”,[67] Buddhist descriptions of sono-mama[68] and shunyata,[69] and Stockhausen’s observation that “[i]f we realize, at the end of a piece of music […] that we have ‘lost all sense of time’, then we have in fact been experiencing time most strongly”,[70] are all strikingly similar to descriptions of flow. I have elsewhere[71] argued that attaining and sustaining states of flow may be a fundamental motivation for choreomusical[72] interaction and for the participation in choreomusical situations as such.

Although flow states have been a topic of continued interest in psychology and cognitive science since Csíkszentmihályi’s introducing the concept in the 1960s,[73] it was the rise of embodied music cognition[74] that brought with it an interest in the role of flow states in musical performance and, more recently, in choreomusical interaction.[75] By now, however, music researchers have contributed significantly to the ethnographic and phenomenological study of flow. One such contribution is Tom Cochrane’s notion of group flow in music as “an experience in which the individual does not experience a mismatch between what she is intending and what the others are intending by means of radically deferring her intentions to the overall musical product. This happens when the musician is highly responsive to the possibilities of the moment and is not distracted by performance errors”.[76] John Vervaeke, Leo Ferraro, and Arianne Herrera-Bennett give an account of flow as an insight cascade, “a highly dynamic and complex phenomenon that creates a stage whereupon the individual can more deeply engage and learn, yet in an effortless manner”.[77] They continue that the “powerfully gratifying experience that accompanies flowing is an evolutionary marker that indicates heightened relevance in processing — the deep sense of doing precisely the right thing at the right time in the right way”.

This notion of “doing precisely the right thing at the right time in the right way” is productively — and perhaps intentionally — ambiguous. On one interpretation, it suggests correctly coordinating one’s actions with the affordances of one’s environment at a given time to achieve a specific goal, say, to play in tune. On another interpretation, it is the “doing” itself, the responding to the affordances of the moment, that becomes meaningful. This second interpretation perhaps better reflects the depth noted by Vervaeke, Ferraro, and Herrera-Bennett. It also points to something more central. If the flow experience is isomorphic with an experience of doing something meaningful, then the pursuit of flow is a pursuit of meaningful, not blissful, experience. On this view, Cochrane’s notion of group flow takes on a different meaning, and it may be more accurate to say that the individual radically defers their intentions, not to a musical project, but to a teleological project aiming at collective, meaningful experience.[78]

67 Meister Eckhart 2008.
68 Suzuki 1957.
69 Nishitani 1983.
70 Stockhausen 1958: 65.
71 Dideriksen 2024.
72 Colin Quigley and others have developed a theoretical and methodological framework around what they describe as “(ethno-)choreomusicology” (e. g. Quigley 2016; Quigley and Mæland 2020). While some of what I describe here may fall under the purview of that framework, I first and foremost use “choreomusical” to refer to the cultural music-dance assemblage.
73 E. g. Csíkszentmihályi 1991; 1996; Vervaeke et al. 2018; Moneta 2004.
74 See e. g. Leman 2007; Lesaffre et al. (eds.) 2017.
75 Bläsing 2023; Burger and Toiviainen 2023; Cochrane 2017; Jensenius 2023; Pakes 2023.
76 Cochrane 2017.
77 Vervaeke et al. 2018: 24.
78 There is an additional argument here which, at the time of writing, remains inchoate. It concerns the authority and status of the project to which a collective of individuals willingly defer their intentions, and the aesthetic value of the collective flow experience. To command such deference, either the collectively meaningful experience possesses an ethical authority — it is good — or the concrete project itself — a symphony, a rave, a chain-dance — carries great cultural value. In either case, the resulting group flow transcends the authority of the project to become an experience of aesthetic pleasure, beauty, par excellence: “Schön ist, was ohne Begriff als Gegenstand eines notwendigen Wohlgefallens erkannt wird” (Kant 1974 [1790], 124).

Scholars studying rave culture repeatedly describe how flow-like experiences create and strengthen feelings of belonging to a group. Walter J. Freeman describes music and dance as "the biotechnology of group formation",[79] and when Bryan Rill notes that "[a]t raves the egocentric self is replaced by an experiential model wherein the 'I' is superceded [sic] by 'We' and thinking is second to feeling"[80] he is describing an experience that is similar to, if not isomorphic with, the experience of (group) flow.[81] Michael Winkelman suggests that modern raves should be understood as an expression of the same biogenic structures that gave rise to shamanic rituals across cultures.[82] In doing so, he points out how dance has the capacity to alter the dancer's state of consciousness by releasing opioids, producing rhythmic stimulation and the brain, and inducing exhaustion.[83]

Winkelman's characteristics are not unique to rave music, but can likewise be found in traditional music and dance across cultures. Most of these musics share some rhythmic characteristics: extended durations of repetitive rhythms highly conducive to entrainment. A particularly striking example is the playing of Polish fiddler Józef Zaraś. Born in the Przysucha province of the central Polish region Radom, Zaraś grew up in the 1930s and 40s. In his early years he would regularly leave his hometown Nieznamierowice to stay with and learn from the fiddler Jan Bogusz in Kamienna Wola, some fifty kilometres away.[84] Starting in his early teens and continuing until his death in 1998, Zaraś played at weddings, village parties, and competitions, recorded for the national radio, and, later, performed at the "Houses of Dance" (Dom Tańca) organised by the 1990's folk music revival.[85]

Zaraś' music and the Radom style of dancing mazurek and oberek appear as if designed to afford entrainment and facilitate states of flow: both music and dance are based on the same short rhythms which are repeated over long periods of time and the repertoire consists of short melodies that are likewise repeated over and over. Despite its repetitive nature, however, variation plays a crucial role, especially in the rhythmic features of both music and dance, forcing musicians and dancers to continuously adapt and respond to changes in the choreomusical environment. Moreover, the constant variation scales with an individual's skill level: as an individual becomes attuned to the rhythmic features of a particular player's or dancer's style, more and more nuances become salient, maintaining the dynamic match between skill and situational demands necessary to achieve and sustain flow.[86] Furthermore, the fast, spinning movement of mazurek and oberek blurs the visual field, thereby driving attention to auditory and proprioceptive perception and supporting an embodied experience of the situation. The varied actions of participants in the choreomusical situation thus not only afford but reinforce states of flow and group flow.

In the liner notes to *Józef Zaraś z Nieznamierowic*,[87] a collection of recordings featuring Zaraś published by Polskie Radio, Piotr Dahlig emphasises that music — and more importantly musicking[88] — of the kind Zaraś engaged in played a crucial social role in Polish village life at the beginning of the twentieth century.[89] Dances ("spinning parties") brought together otherwise isolated village communities and provided respite from long, arduous days in the fields. Moreover, the choreomusical practices may well have served to generate shared and emergent sense-making in a way that verbal dialogue could not. Emic descriptions of the music, musicians, and musicking likewise suggest a spiritual component. Speaking to musicians and dancers from the region, I have heard some fiddlers described as quasi-sha-

79 Freeman 2000.
80 Rill 2010: 145.
81 Cf. Vervaeke et al. 2018; Cochrane 2017.
82 Winkelman 2015.
83 Winkelman 2013; 2015.
84 See the text by Piotr Dahlig in Zaraś 2020.
85 See the text by Dahlig in Zaraś 2020.
86 Cf. Vervaeke et al. 2018.
87 Zaraś 2020.
88 Cf. Small 1998.
89 See the text by Dahlig in Zaraś 2020.

manic figures, both in their ability to enter altered states of consciousness (flow), and in their ability to facilitate transformative meaning-making experiences for their community. These descriptions often draw on motifs from the spiritual and religious framework of Catholicism, describing fiddlers as either “playing to the heavens” (“granie do nieba”) or colluding with “the one below”.

In twentieth-century rural Poland, much like medieval Christianity, twentieth-century Buddhist philosophy, and 2000s rave culture, the experience of an eternal space in time is not only described as a sublime personal experience, but as a site of meaning-making for an individual as well as a community.

Conclusion

I began by examining the idea of spatialised time as it has been discussed by philosophers, mystics, and music theorists. I then considered the notion of musical time, and I claimed that an experience of musical time is an experience of spatialised time. To support this claim, I examined four distinct species of spatialised musical time. First, the vertical dimension that distinguishes rhythm from duration; second, the explosion of a duration-less point into a space on the horizontal plane afforded by microrhythm; third, the Bergsonian durée afforded by musical form; fourth, the experience of a “timeless now” or an “eternity in time”, especially as it may result from the experience of flow states in choreomusical situations. I also examined the meaning-making function ascribed to these experiences in various cultural contexts. Undoubtedly, each of these species are qualitatively distinct, and describing them all as spatialised time may well be a generalisation based purely on the similarity of their metaphors. Nonetheless, it is telling that phenomena as dissimilar as rhythm, form, and flow states afford similar spatial metaphors.

At the time of writing, I remain unsure of the metaphysical status of these temporal “spaces”. Are they spatial in the same way that the physical world is spatial? Probably not, but that does little to detract from the promise held by these spatial metaphors to enable a more nuanced understanding of time in music and music in time.

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