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Dialogue on Rhythm: Entrainment and the Dynamic Thesis

Andy Hamilton, David Macarthur, Roger Squires, Matthew Tugby, and Rachael Wiseman (ed. Andy Hamilton)

The advantages of the dialogue form—in particular, the advantage of openness—have been neglected in post-eighteenth-century philosophy. Unlike the currently dominant journal article form, the present dialogue neither arrives at, nor seeks to impose, a definite conclusion. Debate is left open. Knowledge in philosophy is dialogical. As love of wisdom, philosophy pursues truth via challenging dialogue, knowing that it needs opposing views to approach its aim. That aim is to arrive at truth, and the most fruitful debate can help one get there.

In Plato's Socratic dialogues, Socrates is regarded as the bearer (or at least a "midwife") of truth. We can infer that Plato endorses—though perhaps does not defend—the viewpoint voiced by Socrates. In these earlier dialogues his main positive contribution is the Socratic elenchus, a method of eliminating incoherent beliefs from the set that his interlocutor holds. It is this method, rather than particular philosophical claims, that Plato endorses through Socrates. By the time of the *Republic*, however, Socrates is more like Plato's mouthpiece, and his view seems to prevail.

With Hume, the dialogue form is more open. He used it to evade religious censorship, leaving it unclear whose view the author was advocating—though in the *Dialogues Concerning Natural Religion* it is clear that one character, Demea the deist, does not represent Hume. In the twentieth and twenty-first centuries, the dialogue form is more rare—Brecht's *Messingkauf Dialogues* and Beckett's more imaginative *Dialogues with Georges Duthuit* are two very different philosophical dialogues on artistic questions.

This "Dialogue on Rhythm" is based on contributions from Andy Hamilton, David Macarthur, Matthew Tugby, Roger Squires and Rachael Wiseman. The "Dialogue" is neither a creation by a single author—as the classic dialogues by Plato, Berkeley and Hume were—nor verbatim transcription of actual conversation. Text was passed back and forth, and the final result agreed. Here, no one view prevails, though characters modify their views in the light of criticism. Debate is left open, even to the extent that the alternative positions are not entirely clear—but progress in clarifying them has been made.

Andy Hamilton

Dramatis Personae

SKEPTICUS = David Macarthur

DYNAMICUS = Andy Hamilton

METAPHYSICUS = Matthew Tugby

ANALYTICUS = Roger Squires

VITALIA = Rachael Wiseman

Summary

This dialogue debates the common philosophical assumption that nothing relevant in the music moves literally, that is, spatially—physical movements of performers, or air molecules, are not relevant. It addresses Andy Hamilton's critique of this assumption, and his dynamic conception of rhythm as order-in-movement or order-in-movement-in-sound, defended in his article "Rhythm and Stasis". On that account, rhythm is characterized as "[a primitive] order within human bodily movement or movement-in-sound", and it is suggested that this order "involves a non-spatial yet literal sense of movement".[1] This dynamic account opposes both Budd's and Simons' static accounts in terms of order-in-time, and also Scruton's metaphorical conception of sonic rhythm as movement in space.[2]

While Macarthur (Skepticus) and perhaps Tugby (Metaphysicus) oppose or resist it, the other participants support some kind of dynamic conception. Macarthur rejects the dynamic–static distinction as Hamilton (Dynamicus) presents it, while Tugby offers a metaphysical account of non-spatial movement in terms of quality-space—a view of which both Macarthur and Hamilton are sceptical. Macarthur criticizes Hamilton's original claim that music moves in a literal but non-spatial sense; Hamilton concedes the point, but

[1] Hamilton "Rhythm and Stasis", 29, 40.

[2] Budd "Musical Movement", 209–223; Simons, "Ontology of Rhythm"; Scruton *Aesthetics of Music*.

responds that something relevant does move literally: musicians and audience share a rhythmic, dance-like response. Drawing on aspects of Macarthur's account, and discussion by Squires (Analyticus), he argues that this dance-like response is a participatory manifestation of musical understanding; there is an internal relation between music and movement, such that rhythm constitutes an order of movement. As Ezra Pound said, "music begins to atrophy when it departs too far from the dance . . . poetry begins to atrophy when it gets too far from music".[3] Music, dance, and poetry originated as an integrated practice. Macarthur insists that the dynamic account rests on an implausible view of literal movement in music; Hamilton responds that the non-movement assumption rests on *sonicism*—the view that music is a strictly sonic art, that does not essentially involve bodily and visual experience.[4] On his view, rhythm as order-in-movement does not require an implausible notion of non-spatial literal movement. Squires and Wiseman (Vitalia) develop the movement criterion, arguing that it should be expressed as a capacity, not a disposition.

1. PROJECTION, RHYTHM AND PROTO-RHYTHM

(PALACE GREEN, DURHAM)

SKEPTICUS: Good morning, Dynamicus! I hope you are enjoying the fine weather today. What brings you to Palace Green so early this spring morning? Though surely there is no pleasanter time of day, or more delightful season of the year.

[3] Pound, *ABC of Reading*, 14.

[4] This issue arises with other contributions in this volume, such as Gaiger and Durà-Vilà.

DYNAMICUS: In fact, my thoughts were taken up with the philosophical problem we discussed recently, and I found it hard to sleep. I decided to take some early morning exercise—perhaps its rhythmic nature prompted further ideas.

SKEP: Yes, these issues are absorbing. I find myself in sympathy with your philosophical humanist approach, that treats music both as a sounding, vibrating phenomenon, of changing patterns of intentionally produced sound in time, and a performing art or entertainment. Like you, I want to reject both an abstract, Platonic conception, and also the sub-personal standpoint of neuro-philosophy. I want to insist, with you, that rhythm is essentially a felt person-level phenomenon.

DY: Yes, a humanistic approach has important implications for the understanding of rhythm. So you agree with my view that rhythm is intentional, while creatures or artefacts that do not have or express intentions can produce only proto-rhythms?

SKEP: Not entirely, Dynamicus. My view is that while a rhythm might be *experienced* as if it were intentional and meaningful, it may, in fact, *be* either non-intentional or intentional, meaningful or meaningless. Musical rhythm is intentional and apparently meaningful. But it seems obvious to me that there are non-intentional meaningless rhythms, such as a train running on a track, a heartbeat, or the drip of a leaky tap. We might call these natural rhythms and distinguish them from human rhythms like music and dance, without denying that making rhythms is natural to us.

But let me turn to your argument that in the case of music or poetry, rhythm is imparted by performers, and "imaginatively projected" by listeners.[5] Music, poetry, dance and

[5] Hamilton, "Rhythm and Stasis", 29: "A humanistic account treats rhythm as an *order distinctive of human movement or movement-in-sound*, an order imaginatively projected onto processes that do not literally possess it".

human bodily movement are paradigms of rhythm, you say, understood as the "imposition of accents on sequences of sounds or movements, creating non-periodic phenomena usually within a periodic repetitive (metrical) framework".[6] And you stress that rhythm is humanly-produced—a genetic claim about a sound's causal origins that, I take it, may not be evident to a listener.

DY: I would qualify what you are saying, Skepticus. I am not claiming that all rhythms are humanly-produced. A drum machine produces rhythms, and these are only indirectly humanly-produced—if they're sampled, or given that the machine itself is humanly-produced. I meant rather that human producers of rhythm, and the human practices of music, poetry, and dance in which rhythm is embedded, draw on and incorporate natural sounds, and later mechanical and electronic sounds—often regarding these sounds as in themselves proto-rhythmic, or rhythmic.

SKEP: I see. However, I take your more fundamental point to be that rhythm, in its primary manifestations, is an intentional phenomenon. And as you say, the rhythms associated with music, dance, and poetry constitute "an intentional order".[7] An immediate emendation is to limit the realm of rhythm to intentional bodily movement rather than bodily movement in general.

DY: That might be acceptable, Skepticus—although I might rather say that its realm is *voluntary* bodily movement, of which intentional bodily movement is one species.[8]

SKEP: Let us say that, on your view, rhythm is primarily an intentional phenomenon, whose expression we can and often do perceive in various human activities. It is thus an

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[6] Hamilton, "Rhythm and Stasis", 38, 26.

[7] Hamilton, "Rhythm and Stasis", 30.

[8] Wiseman, *Anscombe's "Intention"*, Ch. 4.

aspect of the human world—a claim that seems to fit well with your humanist inclinations. Rhythms produced by inanimate things, such as a dripping tap, you call "proto-rhythms" and treat them as secondary phenomena.

DY: Yes, that is my view.

SKEP: Now, turning to the question of projection, you seem to want to distinguish *perceiving* intentional or "true" rhythm, from *projecting* "proto-rhythm", the latter being a phenomenon of natural or non-intentional orders of stressed and unstressed accents in time, such as a heartbeat, waves on the shore, or a horse's gallop. Indeed sometimes you speak of rhythms themselves as both being perceived and projected.

DY: "Pulse" would be an alternative term, to capture what you are calling "stressed and unstressed accents".

SKEP: But what we must remember is that the data for philosophizing here involve a range of experiences of rhythm in both human and natural phenomena. So I do not find the distinction between rhythm and proto-rhythm helpful. Perhaps it has this to be said for it: the intentional case structures both non-intentional and intentional rhythm at the level of phenomenology. Rhythm, however it is produced, can often *seem* intentional and meaningful, even where it is not. But for present purposes, let us follow your restricting the term "rhythm" to human-produced phenomena. We can therefore ask, is "projection" needed to explain our experience of rhythm?

DY: You believe it is not?

SKEP: Indeed. Your account appeals to projection principally to explain how we hear rhythm in "proto-rhythmic" phenomena—heartbeats, waves, trains. You argued that in these non-intentional, naturally recurring patterns of stressed and unstressed sound, we cannot avoid projecting rhythm—as I recall, citing La Monte Young's composition "'X' for Henry Flint" (1960), where the performer has the impossible task of producing an

absolutely uninflected pulse without meter. You said that this piece shows both how the performer cannot help creating rhythm, and how the listener cannot avoid projecting it.

DY: Yes, that is a good summary.

SKEP: Well, there is a problem I believe, with the idea that rhythm is "projected". Projection presupposes a *something* that one projects *onto*. This can happen literally: images are projected onto a screen from a film-reel, or sounds are projected into a space from a source; or figuratively: as when one's joy is projected onto the world at large. In the case of perceived rhythm—something experienced as a feature of bodily movement or sound—projection implies one has access to some subjective state of mind whose "projection" can plausibly account for our experience of it as "in" the movement or sound. But what is this inner something that we experience as outer?

DY: I am not sure there has to be an "inner" something—but pray continue.

SKEP: There does if the notion of projection is to make any sense. Perhaps the idea is that rhythm is like color in this respect. Color is often thought by philosophers to be a mental projection onto an essentially colorless world. But I reject the coherence of this way of thinking. We have no genuine explanation of color in projective terms insofar as we have no coherent idea of how color could be a feature of in the inner realm from whence it is supposedly projected. The failure of projectivism here—one rarely noticed in projectivist discussions of color in modern philosophy—is attributable to our having no coherent definition of what we might call, pleonastically, a "color sensation".

DY: This is very interesting, my dear Skepticus. However, you seem to assume that my view is like Schütz's well-known position. He argues that communication rests on a "mutual tuning-in relationship" in which individuals come to share their experience of

"inner time".[9] In his view, rhythmic coordination is prior to any collective agreement. This is not my view. The "inner" in "inner time" is redundant. I favour instead Clayton's view of rhythm emerging spontaneously in individuals and in interactions between them, and so being both natural (physiological) and social in origin.[10] This is the currently popular concept of entrainment, discussed by music psychologists in this volume, which I think captures the idea that rhythm is essentially a felt phenomenon.[11] I differ from Clayton and colleagues, however, in insisting that entrainment is an elucidation, not a scientific explanation.

SKEP: Pray enlighten us, Dynamicus.

DY: I agree with the psychologists that entrainment is essential to music, and that one responds to rhythm by getting in sync. So rhythm is essentially social. What I object to is their view that natural processes themselves entrain. I also object to their apparent denial that a human being can initiate rhythm, on the grounds—they say—that one always entrains to something inner. Entrainment is no more fundamental than rhythm itself.[12]

SKEP: Be that as it may, I still maintain that projection is an otiose explanation of genuine rhythm and an unnecessary explanation of proto-rhythm. Suppose, Dynamicus, we follow you and say that the primary experience of rhythm is as intentional temporal movement—leaving aside for now the question of what distinguishes mere temporal ordering from rhythmic movement. On the view under discussion, rhythm is constituted, not merely caused, by intentional stresses imposed on sequences of sound. It is a genuine feature, a

[9] Schütz, *On Phenomenology*, 212.

[10] Clayton, "Entrainment".

[11] Clayton, "Entrainment", London "Metric Entrainment".

[12] Further discussed at section 4.

perceptible order or pattern that characterizes a range of human bodily movements and sounds—one that allows for ignorance, error and discernment. But as you argued concerning "'X' for Henry Flint", the explanation of our experience of rhythm is over-determined: the performer "cannot help imposing rhythm and . . . the listener cannot avoid projecting it".[13] Is it not redundant to say that one apprehends the rhythm created and imposed by the performer, *and* that one also projects it?

DY: You have correctly characterized my view, Skepticus, though I'm not sure there is over-determination.

SKEP: Surely all we need to say is that the performer cannot help imposing a rhythm, an (apparently) intentional ordering, on the basic pulse for which they are responsible. We can translate your infelicitous claim that we cannot avoid projection of rhythm onto pulse, as the inevitability of experiencing rhythm in a pulse even when there was no intention of producing a rhythm.

DY: I am not entirely persuaded, Skepticus. I would say that in the case of proto-rhythm, there is projection. By "projection", I mean just that rhythm is not entirely an intrinsic feature of the sounds, but also of how they are heard. However, rather than using the metaphor of projection, I would be happy to talk of the listener interpreting or hearing-as—a metaphor that does seem more appropriate in the case of rhythmic or metrical ambiguity, where there is genuine rather than proto-rhythm. An excellent example is Debussy's "Des pas sur la neige" from his *Preludes*.[14] I understand hearing-as on the model of

[13] Hamilton, "Rhythm and Stasis", 34.

[14] Discussed in Cooper and Meyer, *Rhythmic Structure of Music*, 171–4.

Wittgenstein's seeing-as, and Wollheim's seeing-in.[15] But can I propose an adjournment of our discussion to a nearby café?

2. THE MOVEMENT IN MUSIC

(BEAN SOCIAL CAFÉ, DURHAM)

SKEP: To return to our topic, Dynamicus. I have been pondering your characterization of rhythm as "order within human bodily movement or movement-in-sound". You went on to claim that "there is a primitive order underlying" these, "an order that involves a non-spatial yet literal sense of movement".[16]

DY: Yes, that is correct.

SKEP: Well, I must say that this view seems highly problematic. Your aspiration to provide an overarching account of rhythm applicable both to a certain kind of bodily movement—such as dance—and a certain kind of sound, for instance African drum music, is ambitious. But the problem arises with your account of movement itself. As we know from the *OED*, one definition of "movement" is that it is "an act of changing physical location or position or of having this changed". So your proposal seems to equivocate by combining a literal and a figurative use of the term "movement"—literal regarding bodily movement, and figurative regarding sound. Whilst sound does move through space at a certain rate, that is not the relevant phenomenon here. Rather, you seem to advocate the

[15] See Hamilton, *Aesthetics and Music*, Ch. 4, sec. 5.

[16] Hamilton, "Rhythm and Stasis", 29, 40. Zuckerkandl, *Sound and Symbol*, 292 refers to movement in a more or less Kantian space more fundamental than, and comprehensive of, the space of geometry and that of physical objects.

more radical and paradoxical idea that bodily rhythm and sound rhythm both manifest "a non-spatial yet literal sense of movement". But how could this be?

DY: Slow down Skepticus, you are losing me! You find my account incoherent?

SKEP: Yes. Movement is a spatial notion, so to speak of a "non-spatial movement" is to use movement as a metaphor for a non-spatial phenomenon. In appealing to movement literally in this context, you hallucinate a new sense. The only available options are a literal (hence spatial) use of the term, or a figurative use of the term which may (but need not) be applied to non-spatial phenomena. Of course you can give "movement" a new sense, but this must be a reasonable extension from one of its existing senses.

To speak of the rhythm of a line drawing, for example, is to use the figure of movement to describe something spatial and static, according to which one's experience of the (fixed) line imaginatively engages with an idea of the movement required to create (or retrace) it. And to experience the rhythm of a philosopher's thought, is to use the metaphor of movement to describe the changes and development of a connected series of thoughts, where the comparison is with the way one travels to a destination passing through various places on the way. Here we have a metaphorical appeal to movement to describe a non-spatial phenomenon, viz. thought.

DY: Your objection is certainly a strong one, Skepticus.

SKEP: I will develop it further, Dynamicus. Your two suggested models of "non-spatial movement" are based on confusions. Firstly, you say that the term "rapid" means both "happening in a short time" and "happening at a fast pace" (*OED*), and you then appeal to the first of these as an example of non-spatial movement. But "rapid" in this sense is a purely temporal notion and not a form of movement at all. We might conjecture that it was, perhaps, once a spatial metaphor—based on the comparison with moving between or past

various places in a short time—that has ossified into a literal purely temporal (non-spatial) use with no connection to movement.

DY: I see.

SKEP: Second, you suppose that "non-travelling movement around a point" is not spatial because it doesn't involve movement to a new location.[17] But movement need only be *relative*, not absolute, change in location. Consequently, it does not require "travel" in your sense. Rotations around a point, as well as oscillations to and from a point, both count as spatial changes in location, and hence as movements.

As Scruton and others have noted, experiencing rhythm in sound is not an experience of change of location. It is a non-spatial experience of an order of changes in time that we can describe metaphorically, as in the case of the line drawing, in terms of the movement required to create (or recreate) it; or perhaps in terms of a comparison with the rhythm of various forms of ordered movement. Scruton's account of musical rhythm in terms of a metaphorical appeal to movement survives your assault upon it.

DY: These are indeed serious objections, Skepticus. Perhaps our friend Metaphysicus, who I see just arriving, will help me respond. Good morning, Metaphysicus, how are you? What brings you here on this fine day?

METAPHYSICUS: Good morning to you both. I felt the need to escape the oppressive atmosphere of my study for some air to refresh my thoughts.

SKEP: Very understandable, Metaphysicus. We are engaged in a discussion on rhythm, with which I believe you are familiar. Dynamicus has put forward some puzzling claims that I am questioning. In particular, I believe that movement is essentially a spatial notion,

[17] Hamilton, "Rhythm and Stasis", 40.

and so his idea of non-spatial movement, in music and other rhythmic phenomena, must be metaphorical. Yet he denies this, suggesting that rhythm is a literal non-spatial movement.

META: Evidently you are unhappy with Dynamicus' strongly dynamic model of rhythm, Skepticus. Let's backtrack a little, to recall the views of Boghossian and Budd. According to their static conception, talk of movement in relation to rhythm is both metaphorical and dispensable, while Dynamicus' view is closer to Scruton's dynamic view.[18] But controversially, while Scruton regards talk of movement in music as purely metaphorical though essential, Dynamicus suggests that music *literally* moves. Given that music clearly does not move in the ordinary spatial sense, the upshot is a notion of real but non-spatial movement—a much more radical form of dynamism than Scruton's. For Scruton, rhythm in music is dynamic merely insofar as it necessarily involves the metaphorical projection of movement by the listener, the source of which is the listener's bodily movement. But for Dynamicus, music moves in a literal (metaphysical) rather than figurative (metaphorical) sense.[19]

DY: That seems a fair summary of one of my proposals.

META: In defense of Dynamicus, there is a way of responding to the worry about incoherence, which involves holding that movement is spatial, but insisting that the notion of space is broader than it may at first seem. This view concedes that it is a conceptual truth that movement must take place in a space. But according to the strategy I will explore, there are two different metaphysical notions of space. The first is what I call

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[18] Boghossian, "Music in the Sound", Budd, "Musical Movement", Scruton, "Thoughts on Rhythm".

[19] Similarly, Zuckerkandl argues that music moves in a metaphysical, Kantian sense of space, even though nothing relevant in the music physically or geometrically moves.

geographical space, the ordinary three-dimensional physical space we are all familiar with. The second and less familiar notion is what we may call quality space—the kind of space represented by, say, the color gamut chart. Of course, it is natural to assume that there is only a "color space" in a metaphorical sense. However, there is a position in metaphysics that takes a realist stance towards various quality spaces, as a means of understanding and analyzing properties.

SKEP: These are unfamiliar notions to me, Metaphysicus—can you please explain? Doesn't the color spectrum occur in physical space?

META: As I say, when Dynamicus suggests that ordered movement-in-sound is literal but non-spatial, I take him to mean that it does not involve movement in the ordinary geographical sense. But this leaves open the possibility that movement-in-sound is movement in quality space, or some other real, metaphysically defined space.

A realist about qualitative properties, such as sound, can endorse this "quality space" view. So, Skepticus, you are wrong to dismiss a literalist view of rhythmical movement simply on the grounds that it involves a metaphysically incoherent notion of movement.

DY: These are interesting suggestions, Metaphysicus.

META: My proposal agrees that it is an analytic truth that movement takes place in space, but holds that as well as geographical space, there is also quality space, which contains the dimensions of determination along which qualitative properties lie. According to this proposal quality space is just as real as geographical space—that is, talk of quality space is not merely metaphorical. Geographical space is familiar to anyone with ordinary perceptual faculties; quality space is revealed only through metaphysical and scientific reflection. But if there are good reasons for positing quality space, and if sounds are qualitative, as seems plausible, then rhythm could involve distinctive kinds of literal movement in quality space.

DY: This is an intriguing view, Metaphysicus, although Peter Cheyne comments that rather than only people trained in metaphysical or scientific reflection, aural quality space is surely revealed to anyone who can hear movement in music. Such hearers might not be able to explain aural quality space articulately, but it is revealed to them.

SKEP: Dynamicus, I fear that you are being seduced by metaphysical speculation!

DY: My dear Skepticus, it seems that you belong with those anti-metaphysicians who urge us to "just say no"—as President Reagan did in the case of drugs—when asked to engage in metaphysical debate.

SKEP: That is a parody of my position, Dynamicus, as you well know! I say that it is wise to adopt a sceptical attitude to the metaphysician's claims to explain appearances in terms of some supposedly fixed, "fundamental" or "absolute" notion of "reality"—where the appearance–reality distinction invoked has nothing to do with the everyday grammar of these terms. In the present case I am skeptical that Metaphysicus has provided a new sense of "movement" with regard to quality space.

DY: Pray continue, my good Metaphysicus.

META: Let me illustrate quality space by means of color properties. Color can be represented as a 3D space with dimensions of hue, saturation and brightness. Colors can then be considered regions in this quality space, with determinate colors being proper sub-regions of the determinable colors they fall under—so that, for instance, scarlet would be a proper sub-region of the redness region. And the most determinate specification of a color will correspond to a single point on 3D color space. Note that color and sound cases are plausibly isomorphic, since sounds are also specified across three dimensions—pitch, timbre and loudness.

DY: Yes, I can see structural similarities between sound and color. But where does movement enter the picture?

META: Well, if movement must take place within a space, and if quality space is as real as any other space, there may be literal yet non-geographical movement—as Dynamicus posits in the case of rhythm. For quality-space theorists, such a notion allows us to analyse qualitative change. Not only do things exemplify qualitative properties, they also change them. Indeed, music itself can be understood as an artistically created sequence of changes of sound over time, what Dynamicus calls "an art of temporal process".[20] Thus some realists about quality space appeal to the notion qualitative movement.[21]

DY: This is a proposal I must ponder, Metaphysicus. But what do you make of the temporal model of rhythmic movement, which I thought quite promising?

META: This is meant to be a non-spatial model that falls naturally out of the view of music as an "art of temporal process". Recall your example of a rapid sequence of gunshots. Since the succession in this case is purely temporal, and given that the notion of rapidity has connotations with motion, you suggested this may be a case of literal but non-spatial movement.

DY: That is correct.

META: Now, I would say that in one sense, movement uncontroversially must have a temporal dimension. For even in cases of ordinary spatial movement, as when a physical body changes from occupying one physical location to another, such movement necessarily

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[20] Hamilton, "Rhythm and Stasis", 41.

[21] Thus Cowling, "Instantiation as Location", 673, n. 16, advocates "locationism", treating change as motion through quality-space; he assumes realism about quality space, so the "motion" he speaks of is understood literally. Mumford and Anjum, *Getting Causes From Powers*, 23.

takes time. However, whether there can be a *purely* temporal notion of movement is much more controversial.

To resolve these disputes, we need principled metaphysical reasons for thinking there can be non-spatial, or what I call non-geographical, movement—and the quality-space proposal provides them. These reasons involve general considerations about the nature of qualitative properties. Rhythm can then be seen as one among several cases of qualitative movement, rather than a unique case of it—though still a distinctive form, through the humanistic and intentional aspects of Dynamicus' theory. The quality-space strategy places this theory on firmer metaphysical ground.

SKEP: I doubt that, my dear Metaphysicus.

DY: Enough of your sarcasm, Skepticus! My feeling about Metaphysicus's proposal is that movement in quality space needs to be close enough to ordinary spatial movement to express how close music is to that. But it challenges me to think more carefully about the point of insisting that music literally moves—that, for instance, it makes people want to move (in dance, say). I need to ponder further in what sense it moves—and what the "it" is that does not literally move. It seems to me that proponents of this view assume that music is exclusively a sonic art, neglecting bodily and visual dimensions.

META: Indeed. But whatever view one takes on these questions, there are many independent theoretical reasons for favouring my view, which is increasingly popular among realists about properties. For Funkhouser, quality space theory can be applied to all properties, including geometrical, causal and functional properties; it allows us to analyse how things fall under kinds, and also the distinction between determinable properties such as redness, and determinate properties such as being scarlet.[22] Quality space is used to

[22] Funkhouser, *Logical Structure,* 25.

analyse property instantiation as a species of occupation, or the operation of causal powers.[23]

DY: Skepticus looks unconvinced.

META: It is not just realist metaphysicians who should appreciate my arguments. In natural science, abstract notions of space are used to represent the states of systems such as configuration or phase spaces in physics. Like quality space, such spaces are not spatial in the ordinary sense, since they typically have many more than three dimensions. But some scientists and philosophers of science regard such spaces as more than representational mathematical tools that correspond to nothing in reality.[24] The notion of non-geographical space should not be dismissed too quickly.

DY: Thank you, Metaphysicus, for raising these important issues, worthy of further investigation.

META: My good wishes for your project, Dynamicus. I have to leave now for a workshop. So I wish you good-day, colleagues, and hope to see you soon.

3. MEANINGFUL ORDER

(LATER THAT DAY, PALACE GREEN, DURHAM)

SKEP: Dynamicus—when we consider the proposal of Metaphysicus, I hold that "space" in "quality space" is being used in a metaphorical sense.[25] A quality space of colors, smells, tastes and so on is an abstract mathematical representation of qualities, modelled by

[23] Cowling, "Instantiation as Location"; Mumford and Anjum, *Getting Causes From Powers*.

[24] Thus wave function realism in quantum mechanics implies that abstract configuration space is *the* fundamental space of the universe - Ney (2013).

[25] See Nussbaum, "Musical Perception".

a spatial array of qualities ordered along various dimensions by their similarities and differences, with degree of proximity representing degree of similarity.

DY: I am inclined to agree, Skepticus. I appreciate the current popularity of realist metaphysics, but that is not our path, I think.

SKEP: Metaphysicus's proposal does not capture what you call "literal non-spatial movement", I feel. There is no movement in an abstract quality space unless movement is being used figuratively to refer to changes in qualities in time. However, you stressed the familiar sense of movement when you linked the humanistic account of rhythm to "an order distinctive of human movement". And you argued that one should reject, as a "static" conception, the idea of rhythm as a mere pattern of different sound qualities that change in time: what you call "simply order [of qualities]-in-time".[26]

DY: Indeed, Skepticus.

SKEP: It is worth pausing to observe that the notion of changes of qualities in time surely deserves the label "dynamic" no less than a phenomenon that (literally) moves. The term "dynamic" need not ordinarily imply movement even if movement can be properly be described as dynamic. For this reason I reject the static–dynamic distinction as you are using it, Dynamicus. If musical rhythm is, as I think, a pattern of *changes* of qualities in time, then it is dynamic in a perfectly ordinary sense, without being a form of movement. Furthermore, your description of my conception of rhythm as "static" seems to me to imply that you take a block-universe conception of time and deny that time involves genuine change. The question is, ultimately, about one's view of time.

DY: I would not want to commit myself here, Skepticus. But I do want to maintain an ordinary sense of "dynamic" according to which it refers to movement and not just change.

[26] Hamilton, "Rhythm and Stasis", 26, 29.

That is the sense in which I have always used it.

SKEP: I see. But you agree that Metaphysicus's proposal assumes a metaphysical conception of movement at odds with your humanist conception of rhythm embedded in human behaviour and practices?

DY: Indeed. The proposal is ingenious, but I would regard its non-humanistic conception as static, involving merely order-in-time.

SKEP: In my view, this speculative metaphysics is not sufficiently sensitive to the human situation—to reiterate, realist metaphysics should be supplanted by the enterprise of describing the conceptual landscape that we actually inhabit.

Leaving aside the static–dynamic issue, I want to argue that rhythm is experienced as meaningful—intentional or purposive, whether it is or not—and that it is part of the phenomenology of rhythm that it seems meaningful or humanly significant.

One might call this an "as-if intentional" or "phenomenologically intentional" account which we can deepen by exploring the notion of meaningfulness in this context. Some intentional phenomena are communicative, such as speech or art, and some not—compare somebody walking down the street, in an ordinary unreflective way, with the walk of a flaneur, trying to attract people's attention. Central cases of humanly-produced rhythm are not merely intentional movements; they are intentionally *communicative* movements—where the claim of communication is distinguished from that of empirical support, that is, whether the phenomena in question can be considered a reliable symptom or good evidence for various further claims. Just as human gestures intentionally but wordlessly communicate gestural meanings so, too, most human rhythms—excepting language and song—intentionally but wordlessly communicate rhythmic meanings in bodily movements and sounds.

DY: This picture seems persuasive, Skepticus.

SKEP: The non-intentional rhythm of a moving train or windscreen wipers cannot be said to communicate any meaning, but can be heard *as if* they did. This is the main motivation for my saying that such phenomena are cases of rhythm, since what is being *apparently* experienced is a meaningful (hence intentional) order in time. We have a natural tendency to find meaning in a rhythmic order, just as we tend to find fear in a fly struggling in a spider's web, or awareness of sunlight in a plant that turns towards it. Animistic beliefs and rituals in human societies treat natural phenomena such as storms, volcanic eruptions and the cycles of the stars and moon as bearers of meaning. Of course in all these cases I am talking about *apparent* meaningfulness, something consistent with meaninglessness non-intentional phenomena.

DY: I find much of this argument convincing, Skepticus.

SKEP: Understanding rhythm as communicative is a fruitful way of challenging Malcolm Budd's account, which denies that rhythm involves contact with intentions or meanings. Since your account of rhythm as temporal order-in-movement faces difficulties in sustaining the claim that the movement in question is both literal and non-spatial, perhaps the appeal to movement is not the right ground for criticism of Budd.[27] I agree with him that rhythm is an order of changes in time and not a form of movement—though movement through space can provide an analogy for this order-in-time, which is related to the fact that we can measure time by movements in space, such as the moving hands of a clock.

DY: I do regard rhythm as order-in-movement, as we shall see. But pray continue with your account of meaningfulness in rhythm, Skepticus.

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[27] Hamilton, "Rhythm and Stasis", 37: "movement is the most fundamental conceptualization of music".

SKEP: We must contrast two kinds of temporal ordering, one where the elements merely *follow* one another in time—as on Budd's account—and one where they *follow from* one another, and so can be read as meaning-giving structures, as developments or variations or resolutions. The first conception is of a bare order of sounds in time; the second is of a meaningful (or apparently meaningful) order of sounds in time. The vital distinction is not between static and dynamic, but between meaningless and meaningful.

DY: Well, I think we disagree here.

SKEP: Consider Wittgenstein's remark: "Understanding a sentence is much more akin to understanding a theme in music than one may think."[28] For him, a musical theme has an apparent meaning or significance, and so there is such a thing as an understanding of what music is in terms of it. We speak of a piece of music as having an opening, making various statements, restatements, parenthetical comments, and perhaps a recapitulation before coming to a conclusion. Understanding here is like understanding a sentence—it involves a meaningful development of notes, akin to a meaningful development of thoughts.

DY: I am very sympathetic to this idea, Skepticus—as shown by my characterization of music as "thinking in sound".[29]

SKEP: I am glad to hear it, Dynamicus. Logicians regard thought as non-temporal, abstracting from time and psychology to focus on relations of implication—the structural and conditional question of whether truth is transmitted from premises to conclusion. But if "thinking" means "reasoned change in view", it must be time-bound and embedded in psychology.[30] Understanding a sentence and understanding a musical theme, then, both

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[28] Wittgenstein, *Philosophical Investigations*, §527.

[29] Hamilton, *Aesthetics and Music*, introduction and Ch. 4.

[30] Harman, *Change in View*.

depend on understanding the rhythms of thought that they express; both are governed by a sense of necessity, a "logic". Scruton talks of a "virtual causality that governs musical movement . . . one note in a melody is heard to bring its successor into being".[31] But rather than invoking the concept of causation, I suggest, the relation between notes or tones is better understood as a virtual *necessity*, the normativity of meaning, of what *logically must* follow from what.

DY: These are very insightful and persuasive arguments, Skepticus—though I think that by "virtual causality", Scruton offers a helpful synonym for "necessity". I agree with you that humanly produced rhythm is an intentional, communicative, meaningful activity, and that there is a logic to its expression in music, dance, and poetry. However, I think that these considerations lend support to my view concerning music and movement.

I am indebted for this line of thought to my old teacher Analyticus, whom I see striding towards us. Good day, Analyticus!

ANALYTICUS: Good day, Dynamicus and Skepticus! What is your topic today?

DY: Rhythm of course! We are discussing how people *respond* to music, as Scruton stresses, and are not just *caused* to move by it. "Response" in such cases has a logical relation to "call", as in "call and response"—not the purely causal sense of scientific psychology. I was agreeing with Skepticus's view that a rhythm is meaningful.

ANALYTICUS: Yes, that seems plausible, Dynamicus. Grasping a rhythm involves repeating and developing it in different melodies or harmonies, and recognizing it in different contexts—a matter of comprehension, not just perception. Rhythm is something one grasps—it involves cognitive achievement. And one criterion of having grasped it, is

[31] Scruton, "Thoughts on Rhythm", 229.

moving rhythmically. Such movements are controlled responses, not (mere) effects, though they involve a pre-cognitive capacity of the body-subject.

DY: This is a promising suggestion, Analyticus—though some melodies of the most banal commodified pop music seem too simple to require "grasping". At a certain time of year in Britain, one cannot escape Slade's pitiful anthem "Merry Xmas Everybody", with its shockingly bad note-choice—if indeed one can call that a melody.

SKEP: Perhaps we should avoid your elitist views on popular culture, Dynamicus.

DY: Indeed. The humanist claim is that we would not call various sequences rhythms if people did not react to them in certain typical ways.

ANALYTICUS: Yes—typical ways include continuing or repeating certain sequences or related elements of the sequence, by drumming, singing or whistling; moving bodily, in time with the sequence, by dancing, or tapping fingers or feet; and noting and demonstrating changes or gaps in the repeated segments of the sequence. So I sympathize with your humanist insight, Dynamicus. Identified naturalistically, the sound sequence would be the same whether we responded to it or not. But if we did not in general respond to it in the ways suggested, it would not be a rhythm.[32]

SKEP: I would say not that our response constitutes it as the rhythm it is, but that our response can demonstrate whether we understand the rhythm or not, Analyticus—at least for intentional or meaningful rhythm.

DY: You and I agree that "rhythm" is not a natural kind term, Skepticus—but from this fact, I conclude that being a rhythm and being called a rhythm amount to the same thing. However, we cannot pursue that deep issue here.[33] Setting it aside, it seems to me that

[32] Anscombe, "Linguistic Idealism", and Hamilton "Rhythm and Movement".

[33] Anscombe, "Linguistic Idealism", and Hamilton "Rhythm and Movement".

Analyticus's general position is correct. Matching the rhythm of a drum beat is creative in at least a minimal sense, and, more minimally, so is hearing it as a rhythm, as Skepticus stresses. On my account, the paradigm cases of rhythm are human productions, conditioned by natural rhythms. My point is that anyone familiar with music, dance, and poetry is able to initiate rhythms. Music-making is a social phenomenon.

SKEP: I think here you are confusing what rhythms consist in, with what it is to understand them when they are intentional. Not all rhythms are intentional. The rhythm of a train on its tracks is non-intentional, even if we naturally respond to it as an intentional order. There is an apparent meaningfulness, akin to seeing a crab's tracks in the sand that look like a word. Being mere marks there is no word; but we naturally respond as if there is.

But let us return to the original question of the relation of rhythm and movement. Again I want to press you—how do you address my objection that talk of movement in music must be metaphorical and not literal, as Scruton says?

DY: Recall Scruton's argument that "The musical phenomena that we group together under the rubric of rhythm have their counterparts in other areas of human activity"—speech, dance, physical labour.[34] Dance, poetry, and music are conceptually interdependent in that rhythm is essential to each; none can be understood independently of rhythm. Hearing musical rhythm does not only involve experiencing music as behaving like a human body; it also involves experiencing the human body, the person, as behaving, moving, musically.

SKEP: What does that mean? How is a temporal phenomenon (music) like a spatial phenomenon (bodily movement) except in an analogical or metaphorical sense?

[34] Scruton, *Understanding Music*, 61.

DY: Skepticus, isn't it begging the question to assume that music is a temporal and not spatial phenomenon? As a performing art, it has many spatial dimensions. I would characterize the assumption that nothing relevant in the music literally moves as resting on sonicism, the view that music is exclusively a sonic art, or perhaps acousmaticism, the view that music is exclusively an unseen, auditory—acoustic—art, focused on sounds without reference to the means of their creation.[35] I contrast such views with the conceptual holism of music and dance, according to which music is a cross-sensory practice and phenomenon. Scruton does not fully appreciate this conceptual holism. The link is stronger than he suggests—one cannot understand music without understanding dance.

SKEP: I agree with some qualification. I would say something weaker: one cannot *understand* music without entrainment, i.e. without being able to engage in entrained movement to the music. If such entrained movement counts as dance then your thesis is established—but perhaps not all entrained movement does so count.

DY: That view is close enough to mine, I think. The basic sense of rhythmical movement is dance-like, I believe—to hear music as movement is a fundamental way of experiencing and conceiving it.

SKEP: I agree with your invocation of movement as a criterion of understanding musical rhythm, then. But that leaves untouched your original claim that rhythm is literal non-spatial movement. To say music "moves" is a metaphor or analogue! You still have given no sense to "literal non-spatial movement".

DY: If one acknowledges that music has essentially spatial dimensions, and affinities with dance, then there is no need for such a notion, which I've abandoned thanks to your

[35] e.g. Malina and Schaeffer, "Concrete Music and Kinetic Art"; Scruton, *Understanding Music*, 5–13, 22–3, 30–2, 58; Brian Kane, *Sound Unseen*, passim.

persuasive objections. But rhythm as order-in-movement does not rest on non-spatial literal movement, and is not refuted along with it—so I still insist on this idea of an *order of movement*. The static conception that rhythm is a pattern of sounds and silences is surely refuted by the rhythmic nature of dance—how does dance involve a pattern of sounds and silences? A static conception has to make music and poetry the core cases of rhythm, and assert a merely causal connection with dance—which is not my view.

SKEP: You are simply repeating your earlier, problematic position, Dynamicus. Rhythm is a pattern of sounds and silences, or movements and stillnesses, but one that is apparently meaningful. The static–dynamic distinction is unhelpful as I have already explained. Why call an order in time "static" anyway? A rhythm changes in time, so it is "dynamic" in a perfectly ordinary sense without being a form of movement. The *New Oxford American Dictionary* definition for "dynamic" regarding a process is this: "characterized by constant change, activity, or progress". So change in time counts and there is no requirement of any movement.

DY: There may be an ordinary sense in which "dynamic" does not refer to a form of movement, but there is equally an ordinary sense in which it refers to movement rather than change, and that is the sense I am appealing to. Rhythm constitutes what I have termed an order of movement in so far as it implies a conceptual or normative connection between music and dance.

I agree that much work needs to be done in characterizing an "order of movement". But the idea has a history. Plato in the *Laws* describes rhythm as "order in movement".[36] Hanslick characterized music as "tonally moving forms", arguing that music presents the

[36] Plato, *Laws*, Bk 2, 665a.

dynamic properties of emotional experience, abstracting from emotional content.[37] Messiaen defines rhythm as "the ordering of movement", which, he says, is "applicable to dance, to words, and to music".[38] Finally, Schütz writes that "Breathing is only one example of rhythmical bodily movement. Others are walking, dancing, knocking and many operations of working . . . rhythm always refers to actual or virtual bodily movements in space".[39]

It is significant that so many of the terms used to describe music involve movement, especially dance-movement: waltz, march, lullaby, rock 'n' roll, sarabande, stomp, swing, thrash, hip-hop. Your rejection of the dynamic view thus faces a dilemma: Either "rhythm" has a different meaning in "musical rhythm" compared to "dance rhythm", or rhythm is not a pattern of sounds and silences—since that is not an adequate characterization of dance rhythm. And to say that rhythm has different meanings in these cases seems implausible.

SKEP: I reject this dilemma. But as it is getting late, let us resume our discussions tomorrow.

DY: Yes indeed, Skepticus.

4. ENTRAINMENT, THE MOVEMENT CRITERION AND RHYTHM AS "ORDER OF MOVEMENT"

(TEALICIOUS TEAROOM, DURHAM)

[37] Hanslick, *On the Musically Beautiful*, 29.

[38] Messiaen adds that the definition is "incomplete", though he doesn't explain why. Messiaen, *Music and Colour*, 67.

[39] Schütz, "Fragment on the Phenomenology of Rhythm", in *On Phenomenology*, 21.

SKEP: Good morning, Dynamicus and Analyticus. I trust you are both eager for further debate.

DY: Indeed we are, Skepticus. Can we begin by considering the phenomenon that we touched on earlier, which psychologists call *entrainment*—the tendency of a subject to align their movement to an external auditory pulse? Psychologists define it as two rhythmic processes adjusting towards and eventually "locking in" to a common phase or periodicity.[40] Psychological research generally assumes a dynamic but non-humanistic conception of rhythm, I would argue—focusing on bodily rhythms such as heart-beat, blood circulation, respiration, secretion of hormones, and menstrual cycles.

A humanistic conception denies that entrainment in these internal cases is continuous with entrainment on the personal level—rather, they are distinct phenomena with interesting affinities. On the humanistic view, individuals adjusting their speech rhythms to match each other in conversation, or entraining in musical performance, are categorially different from convergence in circadian or menstrual cycles. Moreover, naturalistic accounts of entrainment offered by psychologists involve a misconception—they mistakenly regard entrainment as more fundamental than, and explanatory of, rhythm.

ANALYTICUS: I agree, Dynamicus. The misconception here is comparable to how psychologists and scientistic philosophers of mind explain human memory through memory traces; we are able to remember, it is claimed, because we store knowledge and information. However, "store" in the relevant sense is itself a memory-concept, co-defined with "remember"; it cannot explain the operation of memory.

DY: Indeed. To argue that human rhythmic abilities *arise from* an ability to entrain, is to make the same kind of mistake. Entrainment stands to rhythm as storage stands to memory.

[40] Clayton et al., "In Time with the Music" 2.

The capacity to entrain does not explain our rhythmic behaviour, but is part and parcel of it; just as "storage" is part and parcel of "remembering". Indeed, as remembering involves more than storage—it also involves retrieval—so rhythmic behaviour involves more than entrainment: it also involves a capacity to *initiate* rhythm. Only a subject unacquainted with rhythmic behaviour—such as a paralysed, sense-deprived individual—could not create a rhythm spontaneously. But one who is familiar with such behaviour can create new rhythms, just as a competent language-user can create novel sentences.

ANALYTICUS: That seems right, Dynamicus.

DY: A humanistic conception treats rhythm as essentially a human phenomenon, conditioned by the natural organic phenomena addressed by researchers on entrainment. For humanists, people begin to experience waves on the shore as rhythmic as they begin to create music and dance. The humanistic claim is not that *all* rhythms are humanly-produced, but rather—to reiterate—that rhythm came into being with, or at least is part and parcel of, human practices of music, poetry, and dance. The producers of music, poetry, and dance drew on and incorporated natural sounds—and in later eras, mechanical and electronic sounds.

ANALYTICUS: The contrasting naturalistic view—that these sounds already were rhythmic, and that humans developed the capacity to mimic them, thus creating their own rhythms—also has plausibility, Dynamicus. Conceptual integration of music and life is plausible, because you classify rhythm as essentially musical and stress ubiquity and ineliminability of rhythm in everyday life.

DY: I agree that this opposed view has some plausibility—I favour the humanistic stance, but it is an achievement just to locate the most fruitful dialectic. That is a deep issue. Can we instead pursue the claim of the psychologists that rhythmic ability partly depends on, or arises with, entraining to natural rhythms? This claim seems right, as does the

psychologists' assumption that the musical world is a social one, where rhythms are emulated; rhythmic or metrical behaviour involves a common, social response. However, the psychologists are wrong to deny that an individual can produce a rhythm spontaneously, without entraining to anything. Entrainment, as psychologists conceive it, prioritizes responding over creating, and indeed almost makes the latter impossible. Londinium claims that "meter is related to, and may be a complex form of, entrainment behavior".[41] But entrainment and metre are interdependent concepts, and metrical behaviour cannot just be a form of entrainment.

ANALYTICUS: Indeed.

DY: Londinium commented to me that "creating rhythms outside of a social setting is a degenerate case of entrainment—one half of the two-oscillator system that entrainment requires".[42] When I make rhythms by myself, he argued, entrainment occurs here too, by a coordination of "central timekeeper" and external rhythms.

ANALYTICUS: I don't understand why Londinium regards initiating a rhythm as a "degenerate" case of entrainment. Talk of "oscillation" sounds like a mechanistic account of what it is to grasp a rhythm.

DY: Yes, Analyticus. Entrainment cannot yield a complete explanation of musical rhythm. So against the assumption that nothing relevant in the music moves literally, I would develop Skepticus' earlier suggestion concerning entrainment, and argue that something relevant does literally move. Performers and listeners move to the music, sharing a rhythmic, dance-like response. This is not a merely causal connection, but a manifestation of musical understanding and involvement—an internal relation between music and

[41] *Hearing in Time*, London, 12.

[42] Email communication.

movement. As Ezra Pound writes, "music begins to atrophy when it departs too far from the dance . . . but this must not be taken as implying that all good music is dance music or all poetry lyric."[43] The connection is not just with dance, but with human rhythmic activities of all kinds—marching, labouring, rocking a cradle—which music accompanies and informs.

Thus we see that music, dance, and poetry arise as an integrated practice, and form a conceptual holism or circle of interdependent concepts. This implies a dynamic conception of rhythm. Except at the least dynamic end of the spectrum, as in plainchant, music creates an urge to move in response that shows that one recognizes it as music, and recognizes the rhythm.

SKEP: You admit, then, that since there is no coherent notion of a literal non-spatial movement, music involves no such thing.

DY: I have retracted that claim, or modified it to say "There is something relevant that moves literally—the listener or performer moving to the music". I am arguing that music, dance, and rhythmic bodily movement (leaving aside poetry and prose in the current discussion, though perhaps they could be included too) belong to an *order of movement* a stronger claim than that made by proponents of metaphorical accounts such as Scruton. I am suggesting that to make and respond to music is to be disposed to move rhythmically.

SKEP: This is the entrainment issue we discussed some time ago; I think it is a condition of understanding musical rhythm, not just a matter of what one is disposed to do.

DY: To speak of 'understanding musical rhythm' makes it seem too much like a conceptual matter, but it might not be: infants respond at a very young age to rhythm,

[43] Pound, *ABC of Reading*, 14.

emotionally and physically—is that a matter of understanding? However, it looks like we agree on what I will call the movement criterion. The movement involves bobbing one's head, tapping fingers or feet, gestures such as punching the air or leaping, as well as dancing. Inconsolable grief or sexual arousal can dispose people to move rhythmically, but although neither requires musical accompaniment, they invite it.

ANALYTICUS: What do you make of this objection to the movement criterion: that the disposition can be overridden by social convention, in classical concerts, or church services? Such prohibitions result in what may be called *motionless moving*, analogous to silent speech. At a certain point in history, silent reading became the norm; similarly, perhaps, motionless moving became the norm for listening to certain kinds of music.

DY: Indeed. The movement criterion is illustrated by children's unlearned movement to music—marching to martial music, for instance. There are no societies where one is brought up to understand music without understanding dance, or vice versa. It would be absurd to say that dance might have evolved independently of music. The contrary claim might be tempting, because of how modern concert music has evolved—but this too would be mistaken, even if certain forms of music are now evolving independently of dance. An individual might be forbidden to move to music, or to dance—but a whole society? Maybe under the Taliban—though such societies do not endure. Someone who says, "I am able to move in time with the music, but I never feel like doing so" is someone who does not understand it—medical conditions and syndromes excepted. An example of the latter is the jazz trumpeter Tom Harrell; blowing and valving movements aside, he is almost immobile when performing. This striking phenomenon results from treatment for schizophrenia.[44]

[44] Hamilton, "Review: Koktebel Jazz".

We mentioned kinds of music and poetry to which the criterion seems not to apply. Plainchant tried to exclude the human body from music—it is unmetrical, though not unrhythmic. Children would not move spontaneously to it, as its rhythm is not dance-rhythm—though if asked to move, they might do so appropriately.

ANALYTICUS: But what disposition or inclination is involved then, Dynamicus? Might we say, more correctly, that someone who grasps a rhythm *could* make tracking moves? "Disposition" is ambiguous. "She is disposed to shed tears when listening to music" cites a relative frequency. "She is disposed to jeer at Mick Jagger when she attends his performance tonight" is about her possible intentions on a particular occasion. This is the sense in which a person can *feel* disposed or inclined to do something; what is done will be intentional behaviour, which is not implied by the frequency sense of "disposition".

DY: Doesn't it have to be a disposition, Analyticus? There is a third sense of disposition in addition to relative frequency and possible intention—viz., "a response that amounts to a criterion". An injured person is disposed to exhibit pain-behaviour—such behaviour belongs to an indefinite list including crying out, clutching the affected part of the body, moaning, and so on. This is stronger than the statistical or frequency claim, but weaker, perhaps, than intention. Similarly with music, where defeating factors include social prohibition or stigma, feeling tired, and so on.

The movement criterion shows that something relevant does literally move—the listener and performer—as they respond to the music. And given that such a response is a criterion of understanding, the movement criterion brings together my emphasis on movement, and your emphasis on understanding.

SKEP: It is surely not enough to say that most music naturally inclines one to dance to it, given that we are now interested in explaining how dancing to music contributes to *understanding* music.

DY: I am not sure that there is such an explanation—it seems more like a conceptual elucidation. I would add that most music naturally inclines one to dance—the use of "incline" does not seem to be a philosopher's weasel-word. But that claim does not express the conceptual connection between music and dance, that I am trying to elucidate. It's interesting that proponents of entrainment also make this connection, and that here also it seems to be contingent. For instance, Theodorus Gracykus, in our volume, argues that "The centrality of entrainment explains our near-universal propensity to interpret music as human gait and comportment": "we grasp the music's gait in a preconceptual recognition process. Knowledgeable listeners *feel* the beat. [The listener who sits] still in the concert hall will entrain to the occurrent music, anticipating how to move to it".[45]

Moving to the music is a kind of entrainment—but, to reiterate, entrainment is an elucidation and not, as psychologists suppose, an explanation of the movement. If someone taps their feet to music, no explanation is required—"Why are you doing that?" would be the kind of question someone high on the autism spectrum or a Martian visitor might ask.

SKEP: I most certainly grant this claim! Indeed I formulated a version of it independently of Gracykus. The truth in your intuition of a deep link between music and dance is not that the experience of music *disposes* one to dance—that is causal and non-normative. Rather, it is that unless one IU dance or move to the music—a capacity of following the music, entraining to its rhythm—then one does not know what the music is, one cannot identify it as the music it is. That's a conceptual, normative notion—just what your humanistic account of rhythm requires.

DY: That is well-put, Skepticus—I see that I was wrong to insist that the movement criterion involves a disposition rather than a capacity. We agree that there is a deep

[45] Gracyk, "Musical Expressiveness".

conceptual connection between music and dance—yet to return to my earlier claim, you want to say that "rhythm", as it appears in "musical rhythm" and "dance rhythm", is ambiguous?

SKEP: It is not ambiguous. For a start one could hold, as you yourself once did, that rhythm is disjunctive, characterizing music in one way (accenting sounds, which do not literally move) and dance in another (accenting bodily movements, which literally move): Rhythm is "order in movement . . . viz. the imposition of accents on sequences of sounds or movements, creating non-periodic phenomena usually within a periodic repetitive (metrical) framework".[46] This definition of rhythm as "order in movement" is disjunctive, in my view, because it applies to phenomena either literally (dance) or figuratively (music).

DY: I do not agree that this definition is disjunctive—but pray continue.

SKEP: I respect the intuition behind your definition: namely, that there is no requirement to reduce the phenomena of rhythm to a unity. Clarification can be achieved by *expansion*. Thus rhythm involves hearing or otherwise perceiving accents in sounds—speech (which is not mere sound), non-intentional phenomena (heartbeat)—and in movement—natural objects (cycles of the moon), artifacts (movement of second hand of a watch or of a train), intentional movement (dance, walking gait).

But we can go further, and say that rhythms in music and dance, as well as natural rhythms, have this in common: they are all patterns of changes of qualities in time. That is, a dynamic pattern, if one uses the word "dynamic" to connote change rather than movement—which is not how you use it, Dynamicus. Dewey was right, rhythm is "order

[46] Hamilton, "Rhythm and Stasis", 26

in change"[47]—though as we have seen in the discussion of meaningful order, that is not the end of the matter.

DY: The account that you suggest is certainly not the one I intended. My account aims to be unifying and not disjunctive. A genuinely disjunctive account, such as McDowell's account of perception, finds little in common between the disjuncts. But we are due to meet our colleague Vitalia shortly, and I think we should ask her how she views the debate.

5. HUMAN MOVEMENT

(PINK LANE CAFÉ, NEWCASTLE)

VITALIA: Good day, colleagues. I've overheard some of your discussion on the question of rhythm, and some thoughts on these questions occur to me.

DY: Pray enlighten us, Vitalia!

VIT: First I would agree with Analyticus and Skepticus in rejecting a dispositional account—and would place their objections in a broader context. Most human adults are *not* disposed to show pain-behaviour when in pain. "Humans wince and cry out at pain" would be a false *empirical* generalization, but a true *natural* generalization. In this context, "disposed" is a philosopher's weasel-word. To make a true empirical generalization, featuring a claim about dispositions, one must introduce "normal conditions" and such-like.

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[47] Dewey, *Art As Experience*: "Because rhythm is a universal scheme of existence underlying all realization of order in change it pervades all the arts , literary, musical, plastic and architectural, as well as the dance" (150); "There is a rhythm in nature before poetry, painting, architecture and music exist" (147).

Talk of dispositions loses reference to the subject's history, and refers only to their current state. Possession of a capacity, in contrast, is associated with culture and practice, and conforms with a humanistic approach. Dynamicus's claim should therefore be: just as the natural, pre-linguistic response to pain is pain-behaviour, so the natural pre-linguistic response to music is dance-behaviour. Humans can suppress that natural response, or communicate it in a non-natural, linguistic way.

ANALYTICUS: Thank you for your support, Vitalia!

DY: These are interesting points that I must ponder.

VIT: There is a further issue I would raise. It struck me while considering your humanistic view, Dynamicus, that the movement in question is *bodily* movement. It is the movement of a living self-conscious being, not those of an inanimate object.

DY: Yes, of course—unlike Skepticus, I limit the realm of rhythm to the intentional or voluntary.

VIT: Indeed. Because of our Cartesian heritage, philosophers often treat bodily movement as movement of a thing that *happens* to be living. However, "life" is not an accidental property of some objects. It is what, following Anscombe, one can call a "form of description"—or following Hegel, a "logical category". Likewise, "human movement" is not movement that is accidentally of a human being.

DY: These are sage comments, Vitalia.

VIT: To describe the movements of a living thing is to invoke a form of description quite unlike that which applies to the movements of inanimate objects. As I understand Dynamicus, *human* movement shares an order with sound-patterns that we call "rhythmic". To investigate this claim we need to think about what it is for a human body to be moving. The criteria for this are quite different from those for inanimate things. It can, for example, be right to talk of human movement in the context of an action that comprises a moment of

stillness, and wrong to talk of human movement in the presence of spatial movement. Thus a moment of physical stillness can be an intrinsic feature of a complex pattern of bodily movement; conversely, someone in traction, in hospital, may have their limbs moved by a pulley, while not moving their body. Thus the criteria for continuity and unity of movement are quite different for a human being than for a lump of matter.

DY: That is very helpful, Vitalia. It seems that you and I agree, against Skepticus, that rhythm is an essentially intentional notion, and indeed involves intentional movement—and that you agree with my view that that there is an order of movement shared by music, poetry, dance, and bodily movement.

VIT: Yes, that is well-expressed, Dynamicus. I was unhappy with your suggestion that music literally moves—"literal" is a strange term, and is not required by your account of a common order between bodily movement and that of music. That isomorphism makes it apt to describe the music as "moving". I would therefore argue that it is wrong to describe the ascription of movement as metaphorical, but that equally it is unhelpful to say "the music literally moves".

DY: Do continue, Vitalia.

VIT: The question "literal or metaphorical?" can be raised only after it has been specified to which language-game the description "the music moves" belongs. Contrast the everyday and scientific language-games with "solid". Is the table literally solid? Nothing falls through it; but physicists explain that solid things are literally full of spaces between atomic particles. If we are describing the movements of a raindrop down a window, it is metaphorical to describe them as indecisive. A dancer's movements may be indecisive, in contrast, in virtue of her dance involving significant periods of stillness and immobility; this immobility is, in the spatial sense, part of her movement. A performer may have her limbs moved by other performers, while not moving her body.

SKEP: I agree with your first point, Vitalia. I deny that the music moves in any literal sense, but I accept the importance of human movement as a manifestation of understanding music—and other intentional rhythms—through entrainment. Rhythm is an order of changes of qualities in time that strikes us as meaningful—it is experienced as if intended to communicate something to the listener, even if it is, in fact, non-intentional and meaningless like the beating of a heart. But while there is an analogy between literal bodily movement and the way the music changes in time, this is not an isomorphism of movement as you put it Vitalia—so it is misleading to conclude that the music moves. There may be isomorphism between musical rhythm—an intentional order of sonic changes in time—and dance rhythm, an intentional order of changes in bodily movement in time and space. But rhythm itself is not movement. Movement can, of course, have rhythm but that does not mean that rhythm is movement.

VIT: The nub of our disagreement, Skepticus, seems to be that Dynamicus and myself hold that music and bodily movement share an order of movement, and you do not.[48] This leaves you with the problem of the ambiguity of "rhythm", as it appears in "musical rhythm" and "dance rhythm".

DY: You deny this common order, Skepticus, because you are committed to what I called sonicism, which regards music as exclusively an aural art, and musical rhythm as an intentional order of sonic changes in time. Sonicism sharply separate music and dance.

SKEP: There is no ambiguity in "rhythm" on my account. To reiterate, we can say, consistently with Dynamicus's original definition, that the concept of rhythm is disjunctive, characterizing both music and dance, and, indeed, characterizing both natural

[48] The idea of an order of movement can be developed through the ideas of Simone Weil, explicated by Winch, *Simone Weil*, esp. Ch. 4.

rhythms (heartbeat, respiration) and human rhythms (music, dance). But I prefer to say, with Dewey, that what all rhythms have in common is an order of changes in time. My humanism is a matter of holding, in addition, not that rhythms must be intentional—which is Dynamicus's view—but that rhythms are *experienced as* intentional or meaningful.

VIT: Thank you for that clarification, Skepticus. It seems that we all agree in rejecting a description of bodily movements as if they were movements of an inanimate object—as an analogue of the naturalistically-identified sound-sequence. With such a form of description, the concepts of rhythm and dance get no grip. Under this mode of description, any physical pause will be a cessation of movement and any sound-pause a cessation of sound-sequence.

However, as Anscombe reminds us, our description of human bodies in purely physiological terms is parasitic on vital forms of description. There would be no movements to identify, were it not for the latter. We do not first identify physical movements, and then on investigation come to apply vital descriptions. Rather, we recognize and produce human movements, then by investigating them, come to these other forms of description.

So, too, with the naturalistic description of sound: we recognize (and produce) rhythmic sound sequences, and by investigating them, we apply this other form of description. In the vital mode of description, physical-pause or sound-pause does not imply that bodily movement or rhythm has ended. Such pauses are internal to the concept of rhythm and dance.

DY: A very congenial line of argument, Vitalia.

VIT: Thus we avoid the need to invoke dispositions. Dance, music, and rhythm are forms of description that belong to human life. To recognize a musical rhythm—a movement-pattern in sound—is to apply a description that can be expressed in bodily movement, that

is, dance. This need not imply anything about one's individual psychology and dispositions—I may be quite indisposed to dance. But if we did not have the concept "rhythm"—that is, did not hear sounds as rhythms—"dancing" would not be a possible description of human movement.

DY: To assert a conceptual connection between bodily movement and music is to make a stronger claim than Scruton. He holds that the *source* of the metaphor of musical movement is bodily movement, but in fact—to reiterate—they *share* an order of movement, described in rhythmic terms.

SKEP: When Vitalia refers to "a movement-pattern in sound", this cannot be taken literally as relative change in spatial location. Music and bodily movement may share rhythm, but rhythm is not any kind of movement; rather it's an apparently meaningful pattern of changes in time. Responding to musical rhythm in a dance-like way and even producing music in a dance-like way—which is, at best, all you have established—are distinct from claiming that "rhythm constitutes an order of movement". That is the nub of the problem. The constitutive claim is not established by the cognitive or genetic claims.

DY: On that we differ, Skepticus. But at this pregnant point, my dear interlocutors, we must curtail our discussion—our word-limit has been reached. Our readers must decide whether they favour my still inadequately-developed attempt to capture a long-standing intuition about the connection between music and movement, your incisive critique, or the sage views of our other contributors.

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