Enacting Musical Experience

Abstract: I argue for an enactive account of musical experience — that is, the experience of listening ‘deeply’ (i.e., sensitively and understandingly) to a piece of music. The guiding question is: what do we do when we listen ‘deeply’ to music? I argue that these music listening episodes are, in fact, doings. They are instances of active perceiving, robust sensorimotor engagements with and manipulations of sonic structures within musical pieces. Music is thus experiential art, and in Nietzsche’s words, ‘we listen to music with our muscles’. This paper attempts to explicate and defend this claim. First, I discuss enactive approaches to consciousness and cognition generally. Next, I apply an enactive model of perceptual consciousness to the experience of listening to music. To clarify what is at stake, I use Peter Kivy’s ‘enhanced formalism’ as a philosophical foil. I then look at how the animate body shapes musical experience.

Introduction

Music surrounds us. With the advent of new listening technologies such as cassette tapes, compact disks, and now digital music players, music has been thoroughly integrated into nearly every practice and institution of our individual and social existence. Music is the ultimate ‘portable art’. We carry our personal soundtracks with us wherever we go, and potentially impose them on whomever we meet. Earphones firmly in place, we routinely construct personal sonic worlds: autonomous music cocoons that mark us as, at least temporarily, inaccessible to the outside world. We can listen to music almost constantly if we want to. Yet despite its ubiquity, music is rife with many philosophical
puzzles. Musical experience — the experience of listening carefully to, understanding,¹ and being moved by a piece of music—houses many of these puzzles. How do we listen to music, exactly? What is the mode of attention through which we sensitively engage with a piece of music? Is music listening primarily a cognitive, perceptual, or affective process — or some combination of the three?

These are philosophically rich questions. I have no pretensions of treating them adequately in a single outing. What follows are instead some reflections concerned primarily with the mode of attention we assume when we sensitively engage with a given piece of music. In other words, I am concerned with the experiential form of our listening-episodes. Put yet another way, the guiding question in what follows is this: what do we do when we listen carefully to a piece of music? Framed thusly, my basic contention is made clear: music listening episodes are instances of doings. They are instances of active perceiving, sensorimotor engagements with and manipulations of information-bearing structures in pieces of music. As Nietzsche puts it, ‘we listen to music with our muscles’ (quoted in Sacks, 2007, p. xi). I will attempt to explicate and defend this claim.

I should note that the following reflections focus on instrumental music: ‘pure’ or ‘absolute’ music, as it’s sometimes called. As the nineteenth-century Viennese music critic Eduard Hanslick notes, ‘Of what instrumental music cannot do, it ought never to be said that music can do it, because only instrumental music is music purely and absolutely…’ (Hanslick, 1986, p. 15). Without endorsing the full force of Hanslick’s claim here, it is nevertheless clear that non-musical elements (e.g., lyrics and vocals) potentially introduce novel representational content, emotional qualities and narrative textures into ‘pure’ music, thereby bringing their own distinct philosophical puzzles to the table. But these particular puzzles fall outside the scope of this paper’s concerns. For the sake of philosophical economy, then — and in the spirit of most recent philosophical treatments of music — I will limit my discussion to pure or instrumental music.

In section one, I briefly lay out the general contours of enactive approaches to consciousness and cognition, paying closer attention to the former. I examine how Alva Noë applies an enactive account of perceptual consciousness to the experience of looking at sculptures by the American artist Richard Serra. Noë terms these sculptures ‘experiential art’. In section two, I argue that music, too, ought to be thought

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¹ By ‘understanding’ in this context, I mean simply the experience of recognizing an organized pattern of sound as music (unlike, for instance, the way that my Shiba Inus experience the music coming from my stereo as meaningless sound).
of as a rich form of experiential art. I use an enactive model of perception to analyse episodes of sensitive music listening; and to further clarify what is at stake in the discussion, I use philosopher Peter Kivy’s enhanced formalist view of musical experience as a foil. Section three then discusses how the active body fits into this picture, making sensitive music listening a robustly sensorimotor phenomenon.

1. The Enactive Mind and ‘Experiential Art’

Recently, increasingly influential approaches to consciousness and cognition have urged that mental phenomena are in an important sense both rooted in and shaped by the body’s sensorimotor apparatuses and active exploration of its world. The basic thesis of enactive approaches to cognition can be expressed in a simple slogan: body shapes mind. Thought and experience are said to emerge from embodied action: the situated subject’s temporally-extended, exploratory activity as it navigates and manipulates the biological and social structures of its everyday environments. Crucially, subject and world are conceived of as dynamically coupled and reciprocally determining; both are co-implicated in the structure of various cognitive processes. Francisco Varela, Evan Thompson and Eleanor Rosch coin the term ‘enactive’ when they write:

We propose as a name the term enactive to emphasize the growing conviction that cognition is not the representation of a pregiven world by a pregiven mind but is rather the enactment of a world and a mind on the basis of a history of the variety of actions that a being in the world performs (Varela et al., 1991, p.9).

Defining their approach in this way, Varela et al. argue against ‘the centrality of the notion that cognition is fundamentally representation’ (Varela et al., 1991, p. 9). They simultaneously challenge the narrowness of dominant models of mind in cognitive science that they claim, at least up to the time of their writing, had ‘virtually nothing to say about what it means to be human in everyday, lived situations’ (Varela et al., 1991, p. xv). The enactive approach to mind was thus developed as a corrective to this phenomenological neglect.³

[2] This is (part of) the title of a book by Shaun Gallagher (2005) who, despite the fact that he rarely uses the term ‘enaction’, nonetheless can be rightfully tagged an enactivist.

[3] The enactive approach has its roots in the western phenomenological tradition of philosophy, particularly thinkers like Husserl, Heidegger, and, perhaps most importantly, Merleau-Ponty. For more on this connection with phenomenology, see Thompson (2005). Varela et al. (1991) also explore some interesting connections between enactivism and Buddhist psychology.
There are at least two major varieties of enactivism: what we might term ‘cognitive enactivism’ (e.g., Varela et al., 1991; Thompson, 2007) and ‘perceptual enactivism’ (e.g., Noë, 2004). The former is the more comprehensive view, aspiring to provide a broad account of mind and cognition. The latter narrows the focus of the enactivist program to questions about perceptual consciousness and subjectivity. As my focus in this paper is on music perception, I will be concerned in what follows with what I am calling ‘perceptual enactivism’.

Alva Noë (2000; 2001; 2002; 2004; 2008) is one of the most prominent current advocates of perceptual enactivism. His book *Action in Perception* opens with a simple statement of the enactive approach to perception he wishes to defend. Noë writes that ‘…perceiving is a way of acting. Perception is not something that happens to us, or in us. It is something we do’ (Noë, 2004, p. 1). For Noë, perceiving is ultimately ‘a kind of skillful bodily activity’ (2004, p. 2). It is not a matter of building up inner representations of an external world but immediate, world-directed interaction. This means that perceptual experience implicates not only our bodies (e.g., our sensory and motor systems) but, additionally, involves an implicit understanding we have as subjects of what our bodies can do (e.g., move around, reach for things, pick them up, crane our necks for a better view, etc.), and how these bodily doings alter our perceptual access to the world. Noë’s perceptual enactivism is thus offered as a ‘theory of access’ (2008, p. 662). It is an attempt to account for both the character (the how) and the content (the what) of our skills-based perceptual experiences of the world and things in it.

Noë cashes out the idea this way. When I see, for instance, a red tomato, I don’t just have a visual experience of the front surface of the tomato facing me at that moment. I experience the whole tomato, including the backside currently occluded by the front. The rich three-dimensionality of objects and scenes always outstrips the perceiver-relative profiles objects and scenes present to us, perceptually, when we visually experience them. Qualities like size, shape, colour, location in space, etc. are never wholly given in our visual experiences. We can’t assume a God’s-eye view of things all at once and see the red surface of the tomato on the front and the back simultaneously — but

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[4] One of the internal debates within enactivist circles is the extent to which *autopoesis* (‘self-creation’) is central to the enactivist program (Menary 2006). Noë (2004) develops his enactive account of perception without saying anything about the notion. Thompson (2007) nevertheless argues that *autopoesis* is foundational for enactivism. For a development of *autopoesis*, see Maturana and Varela (1980). Since this debate is not directly relevant to my concerns in this paper, I set it aside.
these qualities, Noë insists, are nonetheless ‘amodally’ present in our experience (2004, p. 59). Put yet another way, the phenomenal givenness of an object runs ahead of how the object literally appears to me when I (for instance) see it. Despite the fact that I can’t attend to the back of tomato, it is nevertheless somehow *there* in my experience.

Noë calls this the ‘problem of perceptual presence’ (2008, p. 661). How can the back of a tomato be phenomenally given without being directly perceived? The solution to this problem, according to Noë, is to look at how experiences are necessarily mediated by ‘sensorimotor skills’, as well as by the practical knowledge we possess about how to exploit these sensorimotor skills in our active perceiving. Noë summarizes:

> The solution to the problem of perceptual presence consists in recognizing that for a perceiver with the requisite understanding, seeing how things look can be an encounter with how they are. Just as holding your hand can be a way of holding you, so seeing how the coin looks can be the achievement of contact with the coin. In *Action and Perception* I argue that we perceive objects and the environment by exploring how things perceptually appear. Seeing, for example, is thus an activity of learning about the world by learning how things look. But crucially, the look of things are not mental intermediaries. Exploring how things look is just a way of exploring how things are (Noë, 2008, p. 665).

The tomato, including its occluded backside, is thus always given as something that can be touched, handled, and manipulated. As directly accessible, it offers up different affordances relative to my having the sort of body that I do. These affordances (Noë speaks of ‘sensorimotor dependencies’ or ‘contingencies’, 2004, p. 64) determine how objects present themselves to us in our experiences of them: richly spatial objects presenting both (attended) profiles as well as (unattended) features. When I spontaneously reach for a tomato, I unthinkingly calibrate my grip to grasp what it is that I experience: a genuinely three-dimensional tomato — not a tomato that may potentially lack a backside — because the world is full of three-dimensional things that, as an active and embodied perceiver, I tacitly know I can interact with and explore further. Of course, the tomato might be a fake tomato lacking a backside. But if this is so, I will soon learn that I have incorrectly calibrated my grip relative to an expectation of tomato-plus-backside and readjust my practical understanding of how to engage with the backside-less tomato accordingly. This readjustment will...

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[5] By ‘amodal’, Noë means that the occluded side of a tomato is experientially present, i.e., it is phenomenally given in our perception of the tomato without being directly perceived.
then change how the backside-less tomato gives itself experientially. Something like this is what Noë seems to have in mind when he writes

In general, our sense of the perceptual presence of the detailed world does not consist in our representation of all the detail in consciousness now. Rather, it consists in our access now to all of the detail, and to our knowledge we have of this access. This knowledge takes the form of our comfortable mastery of the rules of sensorimotor dependence that mediate our relation to [the world and things in it] (Noë, 2004, p. 63).

Again, the point is simply that our bodily engagements shape the character and content of consciousness. Experience is a mode of situated, skillful coping.⁶

Noë has previously applied this account of perceptual consciousness to aesthetic experience. In his paper ‘Experience and Experiment in Art’ (2000), he discusses the large-scale metal sculptures of the American minimalist sculptor Richard Serra. Noë labels Serra’s work ‘experiential art’. He notes that the immense scale of Serra’s sculptures ‘make us reflect on how we feel, perceptually, in their presence’ (2000, p. 131). Serra’s looming works beckon for an active response. We experience them not simply by looking but by engaging: we walk up to them, touch and handle their surfaces, and navigate amidst the contours of their massive structure, a site-specific form designed to fit within a particular locale (such as a St. Louis park or a New York plaza). In this way, ‘the process of exploring the pieces is a process of exploring the place’ according to Noë, as well as ‘a process by which we come to understand how experience can be...a form of openness to the world’ (2000, p. 132). Serra’s ‘experiential art’, as Noë refers to it, causes us to reflect upon our nature as active perceivers. It says as much about our nature as perceiving subjects as it does the context in which the work is embedded or the material used to construct the piece. The patterns of sensorimotor dependence coupling us with our world, and the ways that our bodily movements modulate our experience of the world by exploiting these patterns (which are normally operative behind the scenes) are brought to light through our encounter with an interactive artwork like Serra’s sculptures. In this sense, Serra’s work is a philosophically rich example of ‘experiential art’.

Noë limits his enactive account of aesthetic experience to a consideration of sculpture. Though enactive views of experience are receiving much attention of late, little has been said of how this approach

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might be applied to musical experience. I contend that music, too, is an extraordinarily rich form of ‘experiential art’. In the next section, I want to explore this claim further. I will suggest that sensitively listening to music is an enactive process, mediated by sensorimotor contingencies that shape the character and content of our experience of the musical piece. In short, sensitive music listening is an event of actively exploring a sonic world.

2. How Do We Listen to Music?

In a certain sense, it seems trivial to say that the experience of listening to a musical work is mediated sensorimotor contingencies. The phenomenology of our experience of a given musical work is clearly shaped by movements we make in relation to the source of the auditory stimulus (such as an orchestra, a band on stage, or a stereo system sitting on a shelf). So my moving behind a wall or some sort of opaque barrier, or tilting my head toward or away from the sound source will clearly affect the experiential qualities of my musical experience in that context.

But this is only the tip of the sonic iceberg. What I have just described are causal relations that exist between sensorimotor contingencies and auditory stimuli. However, I want to make a stronger claim, building off some of the consequences of Noë’s enactivist model of perceptual consciousness. The claim at play is not just about cause but about constitution. In other words, I suggest that the experience of listening to music is actually constituted (at least partially) by our robust sensorimotor engagement with the musical work. Put differently, and to borrow a term from Dewey (1934/1980), sensitive music listening is a two-way ‘transactive’ process. We enact music perception via the sensorimotor manipulation of sonic structures. Sensitive music listening is therefore not just an *undergoing* but is, rather, primarily a kind of *doing*. When I speak of listening sensitively to music, I have in mind the experience of listening attentively and selectively to a work, engaging with it carefully and opening oneself up to the possibility of being absorbed by the music. The mode of attention I am referring to is one of sustained perceptual focus. I will call this ‘deep listening’. In contrast, music can be engaged via a more ‘shallower’ mode of involuntary listening in which it slips idly by, little more

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[7] Iyer (2004) is a notable exception. Whereas I am simply an enthusiastic music listener, Iyer is a musician and composer. Therefore, his discussion of the embodied nature of composition and group improvisation was particularly helpful in shaping some of the central claims of this paper.
than innocuous sonic wallpaper humming along in the background. I am not concerned with this latter form of listening. Once again, my focus is on the enactive structure of the voluntary mode of attention I call ‘deep listening’.

The claim that musical experience is primarily embodied and enacted challenges many classical and more recent ways of thinking about the nature of musical experience. Philosopher Peter Kivy provides a compelling counterpoint to the view I am arguing for. Kivy has written prolifically and sensitively on both the nature of music as a work of art as well as on musical experience itself.8 Over the course of a number of books, Kivy (1989; 1993; 2001; 2002) defends a view of music he terms ‘enhanced formalism’.9 Kivy’s enhanced formalism is a refinement of the ‘formalist’ approach to musical experience defended by thinkers like Kant, Eduard Hanslick, and Edmund Gurney. According to this formalist line, a musical work’s form is the only feature relevant to musical understanding (Kivy, 2002, p. 67). Since music on its own lacks both representational content and narrative capacities (i.e., semantic content) — its only real content is ‘tonally moving forms’, according to Hanslick (1986, p. 29) — it is senseless to describe music (or indeed, our response to it) in emotive terms. Music offers up no stories, pictures, or other representations for us to respond to. The appropriate mode of attention for understanding a piece of music is therefore ‘a matter of attending with extreme vigilance to the composer’s designs in the composed work, following the composition as it unfolds in the context of what has been heard and of expectations concerning what might yet be heard’ (Alperson, 2003, p. 262). In short, we are moved to aesthetic wonder by an appreciation of a musical piece’s form—and nothing else. Deep listening thus entails a sustained focus on the dynamics of a piece’s formal archetonic. But it is meaningless to say that we are emotionally aroused by music since it is in principle incapable of providing us with any kind of content to be aroused by. Music in itself possesses no emotive properties. We ought to therefore avoid smuggling in emotive terms when analysing music and our experience of it.10

[8] Kivy has also had interesting things to say about musical performance. See Kivy (1995).
[10] To say that music possesses (or doesn’t possess) ‘emotive properties’ is to speak to the idea that ‘music can be, and often is, expressive of the garden-variety emotions, such as sorrow, joy, fear, hope, and a few other basic emotions like these’ (Kivy, 2002, p. 31). Kant’s, Hanslick’s, and Gurney’s formalism thus denies that music has these properties.
Kivy concedes the obvious objection to this approach: we are in fact emotionally moved by music. It exerts a profound emotional and affective grip on us, which is one of the main reasons why music is such a universally compelling form of art. It follows, then, that music must possess emotive properties in some meaningful sense. Any view which ignores this fact is simply inadequate as a theory of music and musical experience. Kivy’s enhanced formalism is therefore an attempt to save the basic insight of formalism—namely, that music lacks representational and semantic content, and thus neither represents emotions, strictly speaking, nor possesses dispositional properties of any sort that cause emotions to be aroused in the listener—while simultaneously doing justice to the clear fact that music is, nevertheless, somehow emotionally compelling. Music moves us and therefore possesses emotive properties. How is this so?

According to Kivy, the emotive properties of a piece of music that cause us to emotionally respond to it are neither representational (i.e., a certain chord represents melancholy) nor dispositional (i.e., a certain chord always disposes the listener to experience melancholy). Rather, they are literally in the musical ‘syntax’ itself, embedded within the overall structure of the piece (Kivy, 2002, p. 91). Formalism assumed that emotive properties must be either representational or dispositional, and denied that music possessed either. Kivy argues instead that formalism overlooks a third option: namely, the idea that emotive properties are ‘an essential part of the syntactic structure of music’ (Kivy, 1993, p. 258). Once again, they are ‘in the music, not in the listener’ (Kivy, 2002, p. 95) — but they are in the music neither as semantic content nor as dispositional properties but rather as ‘things happening in the music, and that I hear happening there’ (Kivy, 2002, p. 95). In short, emotive properties are ‘being heard events in the music’ (Kivy, 2002, p. 97). These ‘being heard events’ help constitute a music’s ‘sonic pattern’: a sonic pattern that, among other things, ‘consist[s] in repetition and contrast’, tension and resolution, etc. (Kivy, 2002, p. 91). Music — even absolute music lacking vocals, lyrics, and narrative content — thus moves us because ‘it has human ‘warmth’ … it has human emotions as a perceptual part of its structure’ (Kivy, 2002, p. 92). And the final step in Kivy’s argument is this: the human quality or ‘warmth’ of music emerges from the way that the formal structure of a piece of music, its sonic pattern or ‘contour’ as he also refers to it, ‘bears a structural analogy to the heard and seen manifestations of human emotive expression’ (Kivy, 2002, p. 40). In other words, Kivy’s idea here is that
… a musical phrase may leap joyously, or droop, or falter, like a person in motion…music is customarily described in terms of motion; and so the same descriptions we use to characterize it are frequently the ones we use to describe the visible motions of the human body in the expression of the garden-variety emotions (Kivy, 2002, p. 40).

To sum up Kivy’s view: when we respond emotionally to music, we are registering emotive properties embedded within the ‘physiognomy’ of musical gestures and phrasing — features of the piece’s architectonic — that mimic human behaviour. Tuning in to these physiognomic features is the source of our experience of being moved while listening sensitively to music.

While Kivy’s attempt to save the felt dimension of musical experience (pace formalism) is certainly laudable, there are nevertheless at least three problems with Kivy’s enhanced formalism. First, it overintellectualizes musical experience. Second, it overemphasizes the ‘fixedness’ of the physiognomic properties purportedly responsible for our felt responses to a given piece of music. This results in a failure to account for the autonomy the listener has in shaping the character and content of her individual musical experience via sensorimotor manipulation of its structures. Thirdly, Kivy’s enhanced formalism overlooks the irreducibly situated nature of music listening, and the important role that context plays in shaping the character and content of individual listening episodes. For the remainder of the paper, I will treat these three objections in turn, arguing that an enactive approach is better equipped to capture musical experience’s dynamic and malleable character than is Kivy’s enhanced formalist approach. I will also work to show that the three problems mentioned above all stem from a single source: specifically, the way that enhanced formalism mischaracterizes the mode of engagement by which we listen sensitively to and are moved by the emotive properties of a piece of music. To be more precise: Kivy construes this mode of engagement as primarily cognitive in character. In contrast, I argue that music is fundamentally a mode of active perception: an exploration, manipulation, and drawing out of selected emotive properties via our sensorimotor engagement with the music.

[11] Kivy writes explicitly that ‘Enhanced formalism has, however, moved the garden-variety emotions from the listener into the music. The emotions are not, on this view, felt, but “cognized”. For this reason the view is sometimes called “emotive cognitivism”’ (Kivy, 2002, p. 109).
1. Knowing without ‘Knowing’

To reiterate, the first problem with enhanced formalism is that it overintellectualizes musical experience. The theoretical or intellectual nature of musical experience is amplified by Kivy’s claim that an ‘increase in musical knowledge will tend towards an increase in musical appreciation or enjoyment’ (2002, p. 83). In other words, the more we intellectually know about music, the better equipped we are to hear it. This is because, according to Kivy, possessing a broader repertoire of music-theoretic knowledge (e.g., its history, compositional principles, theory, etc.) means that a given piece of experienced music becomes ‘enlarged’ as an intentional object. Kivy writes that

The more knowledge and experience one brings, the ‘larger’ the intentional object will be: the more there will be to it; for the more we know about the music, the more elaborate our description of it will be, and the more elaborate our description, the more features, literally, the intentional object, the music, will possess for us to appreciate (2002, p. 81).

This claim is obviously true to a certain extent. An expert architect viewing a newly-built structure is going to notice salient marks of fine craftsmanship and design that elude the gaze of the non-architect; likewise, an automotive mechanic will pick up on the subtle difference between a ‘good’ rattle indicating a properly functioning motor versus a ‘bad’ rattle indicating engine problems of a particular kind. Understanding theoretical aspects of building complex things like skyscrapers and bridges, and fixing complex things like cars and computers, allows the theoretically-informed expert to notice and appreciate details that the rest of us don’t. Background training plays a crucial role in shaping much of our experience. And the concepts we possess as part of our background knowledge often determine both what we notice and how we come to notice it.

But it doesn’t follow from this, as Kivy seems to think it does, that the acquisition of music-theoretic knowledge (and the concepts constituting this knowledge) is a process both necessary and sufficient for deepened musical understanding. The music user can accumulate a fine-grained phenomenal knowledge of a particular music experience without the simultaneous acquisition of music-theoretic concepts, or a conceptually-informed understanding of music experience, in other words. By ‘phenomenal knowledge’, I mean simply the firsthand understanding of what it’s like to wakefully live through a particular kind of conscious experience (e.g., the experience of eating a mango, giving birth to a child, listening carefully to a favorite song, or smoking cannabis). This phenomenal knowledge of musical experience
emerges from sensitive perceptual interactions with musical pieces facilitated by the sensorimotor skills that enable these perceptual interactions. In other words, phenomenal knowledge of music is detachable from theoretical or conceptual knowledge of music.\textsuperscript{12} As Paul Crowther notes, much of the richness of aesthetic experience flows from experimenting with the dissociation possible between these two modes of understanding art: namely, ‘a sense of fit or cohes-ion between our capacity to attend to [a work’s] sensory particularity, and our capacity to comprehend it in more general conceptual terms’ (Crowther, 1993, p.158).

As a counterexample to Kivy’s claim about the necessity of theoretical knowledge for deepened musical understanding, consider the experience of listening to music after smoking cannabis. Two well-documented features of the cannabis high are the strong distortion of time-experience and the enhancement of auditory perception (Tart, 1971; Fachner, 2006). Listening to music after smoking cannabis is particularly pleasurable since the effects of the drug often bring about a hyper-attunement to the structure of the ‘sonic space’ of a piece of music (Curry, 1968). That is to say, the experience of passing time slows dramatically and the cannabis user feels immersed in the experiential riches of the present moment. Empirical studies have shown that cannabis functions as a ‘psycho-acoustic enhancer’ in this regard. It ‘enhances auditory perception throughout a temporary change in the metric frame of reference and allows a larger intensity scaling of perceived musical components’ (Fachner, 2006, p. 339). Lived time slows dramatically and ‘the space between the notes’ (Whitley, 1992) elastically opens up, creating novel opportunities for a thorough immersion in and perceptual inspection of previously- unnoticed sonic qualities of a given piece of music. Additionally, qualities of the individual music-component sounds are perceived as somehow richer in their phenomenal givenness than during more coarse-grained sober listening episodes. Different sounds become vividly present, billowing and fluttering as they linger in the sonic space with an uncanny immediacy; song elements break apart and realize a distance and distinction from one another that casts them, suddenly solitary and individuated, with new and subtle shading, nuance and texture. More simply, the music *sounds* importantly different than during sober

\textsuperscript{12} Bennett Reimer (1989) marks a similar distinction between organizing musical experience via ‘conceptualization’, on one hand, and via ‘aesthetic perceptual structuring’ of musical experience, on the other. See also Torff and Gardner (1999) for more on this distinction and its relation to music education. DeBellis (1995) provides an extended treatment of nonconceptual content in musical experience also relevant to this discussion.
listening episodes. It is made fresh and transparent. And the point relevant to present concerns is that this perceptual reframing offers new affordances within the structure of the music-as-heard, affordances which present novel possibilities for perceptual interaction with and manipulation of the piece-as-experienced. These novel affordances, I suggest, are new instances of phenomenal knowledge disclosed independently of the acquisition of any sort of music-theoretic conceptual knowledge. We enact these affordances via a new mode of exploratory, active perceiving.

Certainly one does not have to smoke cannabis to open up new affordances within musical experience. Since the skills needed to become attuned to novel sonic affordances are sensorimotor skills, any means of cultivating these skills (e.g., training that does not involve the use of perception-enhancing drugs) will suffice. For instance, much recent empirical research focusing on meditation’s ability to radically alter one’s attentional and perceptual capacities, as well as one’s affective responsiveness to encountered situations, suggests that contemplative training might potentially enhance one’s aesthetic sensitivity and thus lead to deepened musical understanding and appreciation. More prosaically, simply spending a lot of time listening carefully to different kinds of music might be sufficient in itself to give one a deep phenomenal understanding without the acquisition of music-theoretic concepts. Bigand and Poulin-Charronnat (2006) surveyed multiple studies indicating that musically untrained listeners respond similarly to musically trained listeners in cognitive and emotional tasks related to careful music listening — strongly suggesting, in short, ‘that intensive musical training is not required to respond to music in a sophisticated way’ (p. 119).

[13] This sort of perceptual reframing is what leads musician Lindsay Buckingham to write, ‘If you’ve been working on something for a few hours and you smoke a joint, it’s like hearing it again for the first time’ (Boyd, 1992, p. 210). Ex-Beatle George Harrison notes similarly, ‘I think that pot definitely did something for the old ears, like suddenly I could hear more subtle things in the sound’ (Boyd, 1992, p. 206).

[14] Psychiatrist Anthony Corr says this of his experience listening to Mozart after ingesting mescaline: ‘I was conscious of the throbbing, vibrant quality of the sounds which reached me; of the bite of the bow upon the string; of a direct appeal to my emotions. In contrast, appreciation of form was greatly impaired. Each time a theme was repeated, it came as a surprise’ (1992, p. 40). However, due to an impaired ability to perceive any sort of overarching form to the piece, Corr goes on to describe his mescaline episode as ‘a pleasurable experience, but one which also proved disappointing’ (1992, p. 40).

[15] See Lutz et al. (2007) for an overview of current neuroscientific approaches to meditation research and the link between meditation and the development of perception and affectivity,
Our music listening skills mature with sustained practice. This sort of prolonged ‘deep listening’ is therefore one means for developing the attentional and perceptual skills that are often temporarily manifest during drug-enhanced listening experiences. Again, the point is that enhanced listening skills are perceptual capacities that can be trained and refined. Certainly, formal musical training invokes perceptual, cognitive, and motor skills that give some advantage to the individual who undergoes such training. But the large overlap in brain activities in musically trained and untrained listeners suggests that the human brain is already intensively trained to music through everyday life experience; adding supplementary training in music schools makes it possible to acquire specific skills indispensible to be professional musicians, but it is not what determines the musical ability of human beings (Bigand and Poulin-Charronnat, 2006, p.126.)

The broader lesson remains this: our primary mode of encounter with music is transactive engagement. We enact music experience by probing, exploring and manipulating both the sonic space as well as the musical components—the overall sonic structure, in other words—constituting a given piece of music. To use Kivy’s way of putting it, we can enlarge a given music piece as intentional object not by organizing it conceptually but simply by experientially engaging with it. We can play with the piece perceptually and come to understand it and respond to it more deeply. Importantly, we can do this without the simultaneous application of music-theoretic knowledge or formal training.

2. Whither Physiognomy?

The second problem with Kivy’s enhanced formalism is that it overemphasizes the ‘fixedness’ of a piece’s purported physiognomic properties. Recall that, for Kivy, a music piece exhibits ‘behaviour’ similar to the bodily motions of human beings. It can be jaunty, bouncy,
upbeat, or it can falter, droop, and lumber by heavily, wearily, and morosely (among many other things). These emotive qualities are ultimately a function of a piece’s compositional syntax, which bears a structural analogy to the way that humans embody these different behaviours. A musical piece’s physiognomic qualities are thus fixed by the piece’s compositional structure.

But a difficulty for this view is that much contemporary music, particularly music of a more experimental or avant-garde variety, lacks a clearly articulated physiognomy. A great deal of contemporary experimental electronic music, for instance, lacks the sonic coherence (or ‘contour’, to use Kivy’s (1989) favored term) of more traditional classical forms. Pieces are often composed by multiple layers and levels of often dissonant and competing samples, rhythms, and textures somehow working together in a fragile whole that, nevertheless, fails to approach anything resembling expressive human behaviour. Consider as an example the dense, hyper-accelerated and heavilyprocessed metallic rhythms of the electronic musician Richard Devine’s piece ‘asect:dsect’. What sort of expressive human behaviour does this abrasive piece of melodyless electronica supposedly represent? What is this piece’s physiognomy, exactly? (Notice also that Kivy must covertly import the notion of ‘representation’ back into his view since it is senseless to say that a token episode of ‘restlessness’, for instance, in a given piece of music is identical in kind to a token episode of ‘restlessness’ in a human being). Or consider the cavernous, slowly-evolving long-form drones by the Italian ambient composer Oëphoi, which generally lack melody, rhythm and nearly any sort of discernible formal structure. Despite this architectural privation, they are nonetheless deeply immersive and oddly moving. What sort of human behaviour is analogous to their relentlessly slow unfurling? Or consider, finally, the well-known piece by the American minimalist composer Terry Riley, entitled ‘In C’. Once more, it is a great strain on our everyday way of speaking to suggest that this piece has a clear physiognomy which neatly mimics patterns of human behaviour, or to speak of certain human emotions as being literally somehow in these works. These pieces are not selective aberrations, either. A great deal of contemporary experimental music might be summoned as an example of ‘physiognomy-less’ compositions.¹⁷ But lack of physiognomic representation doesn’t mean that these pieces

¹⁷ I encourage the reader to move beyond my impoverished descriptions of these pieces and, using one’s favorite search engine or online retailer of books and music, to find and engage with some sound samples firsthand. For helpful primers on the history of
are incapable of exuding human warmth, as Kivy puts it. People can — and many, including the author, do! — nonetheless find these pieces emotionally compelling.

Investigating precisely how this is so takes us to a related problem. It is this: by overemphasizing the primacy and ‘fixedness’ of music’s purported physiognomic properties, enhanced formalism fails to account for the real autonomy the listener has in shaping the character and content of her individual musical experience via sensorimotor manipulation of its structures (the specifically motor aspect of this process will be discussed in more detail in section three). According to enhanced formalism, the music listener is emotionally moved by responding to properties of a piece’s compositional syntax, its contour. These properties are what represent expressive human behaviour. Moreover, since these properties are fixed by the piece’s contour, presumably the range of possible emotional responses to a piece of music are also fixed — and ultimately quite limited — since these responses are relative to physiognomic properties embedded in the music’s prefigured contour. The listener registers these properties (e.g., the property of melodic ‘jauntiness’, representing an elevated spirit) and responds accordingly. But music listening is more than passive registration of acoustic properties, as Kivy’s enhanced formalism seems to presuppose, and its mode of engagement phenomenologically richer than one of cognitive pattern-recognition. Again, it is an ongoing, enactive process of exploring a sonic world. Deep listening involves ‘processes such as exploring, selecting, modifying, and focusing of attention’ (Reybrouck, 2005, p. 252). These enactive processes mean that the listener is capable of much more autonomy within her listening experience than enhanced formalism allows. We don’t just discover music. In our active perceiving, we (at least partially) create the contour of our musical experience.

Consider how different listeners may enact and extract dramatically different experiential content from the same piece of music. One listener might focus on grander gestures of melodic phrasing while the other perceptually foregrounds features of a piece’s rhythmic accompaniment, effectively nullifying (or at least phenomenally suppressing) the melody and altering how the piece is experienced within their particular listening-episode. Similarly, listeners can revisit well-worn pieces and hear them anew simply by perceptually refocusing on previously overlooked features (e.g., refocusing on bass or rhythmic experimental electronic music, see Toop (2001); Prendergast (2003); and Collins and d’Escrivan (2008).
elements, as opposed to melodic structures). Part of the joy of savoring a favorite piece for the hundredth time lies in the development of the listening skill to make it become perceptually ‘fresh; that is, to be able to draw out previously-overlooked qualities of the music by playing with it perceptually — probing and exploring a piece to unearth new qualities and textures.

Music gives itself as a malleable structure harboring possibilities for this sort of sensorimotor exploration. Deep listening is the form of engagement through which we implicitly recognize this fact and, as an active perceiver, take an active role in determining the emergent physiognomy of a given piece. Importantly, however, the music listener has much autonomy in creating this physiognomy through selective acts of attention, modification, and perceptual manipulation of a piece’s sonic structures.

In a recent work, Oliver Sacks (2007) describes a case that testifies to the autonomy the listener has in shaping the experiential character and content of their listening experience. Sacks writes of Jacob L., a distinguished composer in his late sixties who suffers from ‘cochlear amusia’, an experience of pitch distortion occurring simultaneously with gradual hearing loss. A visit with an audiologist found a ‘correspondence between [Jacob L’s] hearing loss and his hearing distortion, both starting at around 2,000 hertz (nearly three octaves above middle C), as well as that ‘his left ear sharpened sound more than his right (the difference was almost a major third at the top of the piano keyboard)’ (Sacks, 2007, p. 133). With time and practice, however, Jacob L. found that he could voluntarily modulate the pitch distortions — given his extensive musical training, he could often sense when something was ‘off’ when listening to or composing a piece — and sometimes diminish them via sustained perceptual attention. According to Sacks, Jacob L. ‘compared this sort of voluntary alteration to the way in which one might ‘will’ oneself to see a particular aspect of a visual illusion, such as the face–vase illusion’ (Sacks, 2007, p. 136). Happily, Jacob L.’s deep listening episodes, which he described as ‘musico-neurological calisthenics’, eventually led to a significant improvement of his amusia. The enactive character of musical experience and the content-shaping autonomy the listener enjoys made this improvement possible.

Again, the point is simply put. Within this sort of focused deep listening, we enact perceptual gestures that very literally change the structure of the piece-as-perceived. We manipulate sonic phenomena into different phenomenal configurations that comprise the content of our particular musical experience. And it is the sensorimotor
contingencies that mediate the relation between active listener and music-event that allow this sort of sonic manipulation to occur. Via this manipulation, musical listening becomes perceptual composition. Clearly, a musical piece exhibits a certain degree of compositional structure prior to a listener engaging with it. But it is an open-ended or incomplete structure that is only ‘finished’, as it were, within the sensorimotor patterns of the listener’s engagement. The listener’s perceptual attention and discrimination—their manipulation of salient sonic phenomena — is what transforms and completes the music event.

3. Listening in context

The final difficulty with enhanced formalism I am here concerned with is that it fails to take sufficient account of the fact that music listening episodes are always enacted within unique listening-contexts. In other words, music listening is irreducibly situated. And the situated nature of music listening episodes plays a crucial role in shaping the character and content of that experience.

Note how enhanced formalism’s cognitivist model of music listening artificially decontextualizes musical experience. Again, music listening according to this line is a matter of recognizing the physiognomy articulated within a piece’s formal syntax. But as I have been arguing, this physiognomy is much more fluid and context-dependent than enhanced formalism allows. In other words, enhanced formalism fails to adequately concede the important ways that the physiognomy of musical performances, for instance, are shaped by situational factors such as the particular musicians involved, the venue, the instruments used, and of course, the audience. Musical experience always happens in context: whether a concert hall, an outdoor arena, through headphones on an early morning bus ride, within a dingy backstreet club, on a street-corner, or within the familiar confines of one’s bedroom. And context plays a role in shaping content. Another way of putting this point is that the phenomenal qualities of many musical experiences are, in an important sense, social (Goguen, 2004, p.138). Features of the environment (at times) actually constitute part of the content of our musical experience.

A vivid example of how this is so is the phenomenology of listening to live ‘pure’ music, particularly electronic music of a more dance-friendly sort, or the bass-heavy rhythms of popular rock and pop music. In a live concert setting, the rhythmic pulsing of the bass drum, relentlessly hammering out its 4/4 time signature, gradually
draws the body into an active mode of response — and in doing so establishes the shared temporality of the music event. Dancing physicalizes this temporality. But again, this physicalized temporality is a situated and shared activity. The rhythm and the dancing, considered as an interactive phenomenon, ‘synchronizes the listeners to one body — to one moving mass’ (Vickhoff and Malmgren, 2004, p. 19).

To return to Dewey: ‘Each beat, in differentiating a part within the whole, adds to the force of what went before while creating a suspense that is a demand for something to come. It is not a variation in a single feature but a modulation of the entire pervasive and unifying qualitative structure’ (1934/1980, p. 155).

In a live setting, musicians respond to the environmental cues of their audience (dancing, shouts of encouragement) with their own sensorimotor gestures (improvisations, alterations of tempo and volume, the familiar machinations of Rock Star posing, etc). This organic interplay between performer and perceiver creates a unified qualitative structure, as Dewey terms it, unique both to that location and to that particular performance. Every performance is therefore uniquely situated (Goguen, 2004, p. 121). Moreover, this unique situatedness means that every performance is uniquely ‘embodied, in the sense that very particular aspects of each participant are deeply implicated in the process’ of enacting the music-event, including things like ‘their auditory capabilities, clothing, companions, musical skills, prior musical experience, implicit social beliefs … spatial location, etc.’ (Goguen, 2004, p. 121). Musician and audience are mutually implicated as co-performers. And musician, audience, and situation all are in this way part of the enactive dynamic of the music-event, and play a role in determining the content of the perceiver’s experience in that context.

Throughout this paper, I have been arguing that musical experience is a sensorimotor process. The remarks above have largely focused on the sensory dimensions of musical experience: for instance, the way that modulations of perception and attentional focus shape the structure of the piece itself, as well as the form of our engagement with the piece. In the final section, I want to now consider more carefully the motor dimensions of music listening. In doing so, I hope to round out the picture of musical experience as a robustly sensorimotor phenomenon.

3. Music, Space, and the Embodied Self

At first blush, music appears to be a deeply elusive and ephemeral form of art. This ephemerality is linked to music’s perceived
insubstantiality. Music will often drift quietly in and out of our experience with little impact (think of the bland and unobtrusive muzak swirling about the spaces of elevators and shopping malls). However, at other times certain music seems to descend on us and surround us, gripping our attentional capacities and summoning a vivid visceral and affective response. Depending on our mode of listening (i.e., active and attentive versus passive and inattentive), we can allow ourselves either to be enveloped by a piece of music, or we can disengage and let it recede to the fringes of our awareness. Our relationship with music is thus importantly spatial. Music both consumes and creates space. As Merleau-Ponty notes,

\[
\text{... a piece of music comes very close to being no more than a medley of sound sensations: from among these sounds we discern the appearance of a phrase and, as phrase follows phrase, a whole and, finally, as Proust puts it, a world...All I have to do here is listen without souls-searching, ignoring my memories and feelings and indeed the composer of the work, to listen just as perception looks at things themselves ...} \quad (1948/2004, \text{p. 101}).
\]

In addition to inhabiting the everyday space of our waking experience, a piece of music also constructs a rich sonic world: a spatial soundscape with textures and topographies beckoning our exploration, inspection and negotiation. The animate body plays a central role in shaping how we attend to this sonic topography and how we engage with this sonic world.

A quote from Merleau-Ponty lends insight into how this is so. Despite a curious absence of music in Merleau-Ponty’s otherwise sensitive analysis of art and aesthetic experience, he does offer this interesting observation about relationship between musical experience, spatial awareness, and sense of self:

\[
\text{When, in the concert hall, I open my eyes, and visible space seems to me cramped compared to that other space through which, a moment ago, the music was being unfolded, and even if I keep my eyes open as the piece is being played, I have the impression that the music is not really contained within this circumscribed and unimpressive space. [The music] brings a new dimension stealing though visible space, and in this it surges forward ...} \quad (1945/2002, \text{p. 257–58}).
\]

There is much of phenomenological interest in this short observation. Merleau-Ponty seems to suggest that, as we’ve already noted, the experience of deep listening is thoroughly infused with representations of space. By creatively reading Merleau-Ponty here, we can say that the spatial representations consist of two dimensions: one ‘inner’, one ‘outer’. ‘Inner’ space refers to the spatial-structural configuration
internal to the piece itself. This is the piece’s internal compositional structure; that is, the systematic way that the elements of a musical piece’s syntax hang together (i.e., how components like individual tones and rhythmic progression are arranged in prefigured spatial relations with one another, lending the piece its sonic coherence). ‘Outer’ space captures the spatiality of our experience of music as being located in the world. It refers to our experience of the way that music inhabits its own worldly space external to our embodied perspective on it — but additionally, it also captures the way that music’s perceived spatial location in the world contains information about our own embodied perspective relative to the music’s worldly location (e.g., perceiving the distance of the sound source from our body).

When we listen to music, we for the most part automatically perceive the piece’s internal spatial configuration. This is what it means to listen to music understandingly, to hear it as music and not as random noise. But deep listening is enacted when the listening self is experienced as coming to inhabit this structure. Pace enhanced formalism, this experiential inhabitation is not simply a perception of form, then, but is additionally an entering into the form — a piece’s internal space, once again — so that the listener might actively explore its sonic topography. Deep listening is the experiential fusing of these two forms of spatiality within our sensitive listening-episodes.

So how does this animate body fit into this account? Consider the condition called ‘amusia’, already briefly mentioned earlier. Amusia is the inability to hear music as music. More formally, it is an inability to recognize melody, time-changes and discriminate pitch despite otherwise normal perception of speech and environmental sounds (Ayotte et al., 2002; Sacks, 2007). There are many forms of amusia, given that musical experience is a complex experience presenting different points at which they experience might break down. But for the ‘total’ amusic or profoundly tone-deaf individual, music is experienced as incoherent noise, often of a highly disagreeable character. Amusicics will sometimes say that music sounds like a car screeching, or loud banging of pots and pans.

The conventional explanation of amusia portrays it as an auditory deficit both (1) related to deficiencies in fine-grained processing of musical pitch variations, and as (2) confined to the musical domain and musical abilities (Ayotte et al., 2002). However, recent studies propose instead that amusia is linked not to a specific sensory-musical deficit but rather to a spatial deficit — an inability to represent space (Cupchik et al., 2001; Douglas and Bilkey, 2007). Amusicics were
found to perform significantly worse than non-amusiac control subjects on mental rotation tasks (Douglas and Bilkey, 2007). Additionally, Cupchik et al. (2001) found a correlation between performance on a mental rotation task involving three dimensional figures and the ability of the listener to discern inverse and retrograde musical permutations (i.e., the ability to tell when a musical piece had been played backwards). Given this spatial deficit, and to give the data a more phenomenological interpretation, it seems that amusiacs are unable to experientially enact the fusion of the two dimensions of spatiality within musical experience discussed earlier — they are precisely unable to perceive music as having the sort of spatially inviting structure that might be experientially inhabited — and music thus remains an alien and impenetrable entity.

The acting body plays a central role in the spatial fusing characteristic of deep listening. Bodily movements, such as a swaying back and forth, tapping fingers and toes, and dancing, modulates our perception of the spatial dimensions of musical experience. Bodily synchronization with rhythmic patterns and tempo opens up the inner space of musical pieces. However, amusiacs have a marked difficulty in synchronizing bodily movements (e.g., tapping of fingers) with music — despite a normal ability to synchronize with sequences of nonmusical sounds (Dalla Bella and Peretz, 2003). Put otherwise, they are unable to enact a robustly sensorimotor form of musical engagement. Amusia is thus an inability to perceive and respond to the sensorimotor contingencies afforded by inner space of musical pieces.

As embodied and enactive listeners, how we move shapes what we hear. Jessica Philips-Silver and Laurel Trainor found that movement influences auditory encoding of rhythm patterns in both infants (Philips-Silver and Trainor, 2005) and adults (Philips-Silver and Trainor, 2007). In the earlier series of experiments, 7-month-old infants were trained by listening to an ambiguous two-minute rhythmic pattern (i.e., a pattern lacking accented beats). During this training, half of the infants were bounced on every second beat and half were bounced on every third beat. As a result, the infants expressed a more prolonged interest in the auditory test stimulus with the metrical form (every second beat accented (the duple form) in one stimulus, and every third beat (the triple form) in the other) that matched the metrical form of their training bouncing (Philips-Silver and Trainor, 2007, p.1430). This was also the case when blindfolded. A further experiment showed that personal bodily movement was necessary to establish this metrical preference. In other words, watching the experimenter bounce during the ambiguous rhythm training failed
to establish a preference for either of the auditory stimulus versions (Philips-Silver and Trainor, 2007, p. 1430). A similar set of experiments was later done with adults (Philips-Silver and Trainor, 2007). Unlike the infants, of course, the adults could engage in their own ‘bounce training’. But like the infants, the adults’ synchronized movements of their body determined how they heard an ambiguous musical rhythm (Philips-Silver and Trainor, 2007, p. 543). Once again, they had to personally bounce their own bodies, and not watch a video of another doing it, in order for their experience of the ambiguous rhythm to covary relative to their particular bounce training (e.g., bouncing on every second or on every third beat). But their sensorimotor training determined how they enacted the content of their experience of the ambiguous rhythm.

Bodily movements along with music therefore not only modulate our perception of the inner spatial qualities of the musical piece and the outer spatial qualities of the listening context. Additionally, they modulate the listener’s enactive relation to different features of the musical piece, such as meter and melody. Bodily gestures are a form of attentional focusing and the vehicle of perceptual construction. The animate body becomes a vehicle for voluntarily drawing out certain features of the piece (e.g., rhythmic beats or melodic progression) and foregrounding them in our attentional field. This ‘drawing out’ is an enactive gesture in response to felt affordances within the music. The listener perceives the inner space of the piece as a space that can be entered into, experientially, and by doing just this shapes how the experiential content of the piece-as-given becomes phenomenally manifest. In short, ‘we hear what the body feels’ (Philips-Silver and Trainor, 2007, p. 544). What the body feels are sensorimotor contingencies — possibilities for interaction that determine the character and content of musical experience. Sensitive music listening is thus a kind of skilled coping with a sonic world, a kind of listening with our muscles. As Dewey notes, ‘sounds come from outside the body, but sound itself is near, intimate; it is an excitation of the organism; we feel the clash of vibrations throughout our whole body’ (1934/1980, p. 237). Musical pieces are therefore not simply constellations of acoustic properties or ‘pre-ordained gestures’ (Iyer, 2004, p. 168) collectively transferred from composer to listener. Rather, a piece is actively engaged with. It contains sonic information that summons forth the perceptual and motor skills of the attentive listener absorbed
within its spatial, temporal, and rhythmic duration. In this sense, a music event is interactively constituted. It is enacted.

4. Concluding Remarks

It has been said that writing about music is like dancing about architecture.19 Hopefully, the bit of architectural dancing undertaken above has, if nothing else, reiterated the philosophical importance of musical experience. As mentioned earlier, a broader conclusion of these reflections is that musical experience, or what I have termed ‘deep listening’, tells us important things about the nature of perceptual consciousness. We learn much about how we experience the world simply by looking carefully at how we listen to music. According to Schopenhauer, the metaphysical potency of music stems from the fact that music speaks the language of the **noumenal**. He writes that ‘music expresses, in exceedingly universal language … with the greatest distinctness and truth, the inner being, the in-itself, of the world’ (1966, p. 264). While certainly not looking to suppress music’s metaphysical power, the enactivist makes a slightly humbler claim: music speaks the language of perception. Music is experiential art. If we let it, it discloses important insights about how we enact our perceptual adventures in the world.

Acknowledgments

I am very grateful for comments provided by an anonymous reviewer. Additionally, I would like to thank audiences in Philadelphia, Kaunas, and especially Copenhagen for helpful criticisms of earlier versions of this paper. I am particularly grateful to Dorothée Legrand for comments on a previous draft. Finally, I would like acknowledge my longstanding debt to Brian Anderson and Matthew Falcy, two stellar experimental philosophers of music and partners in musical enaction. This research was in part supported by the EU Marie Curie - Research Training Network 035975 ‘DISCOS — Disorders and coherence of the embodied self’.

References


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[19] This saying has been attributed to a host of different people, including Elvis Costello, Frank Zappa, John Cage, and Laurie Anderson. I have no idea who first said it. For more on this mystery, see http://www.pacifier.com/~ascott/they/tamildaa.htm.

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Vickhoff, B. and Malmgren, H. (2004), ‘Why does music move us?’, *Philosophical Communications*, Web Series No.34. Department of Philosophy, Göteborg University, Sweden. ISSN: 1652-0459.


Paper received May 2008