

# Musical Materialism

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*The consensus is that musical works and other 'multiple' artworks are abstract objects of some sort. According to the standard objections to musical materialism, multiple artworks cannot be identified with any concrete manifestation since concrete manifestations are many, and one thing cannot be identical to many. Multiple artworks are particularly good, while particular concrete manifestations are particularly bad, at surviving the destruction of particular concrete manifestations. Finally, multiple artworks cannot be identified with a particular sum of concrete manifestations since sums and works differ modally. This paper aims to show that by appealing to recent work on the metaphysics of material objects, musical materialists avoid the standard objections.*

## Introduction

Call an artwork *singular* if it has only a single concrete manifestation; for example, paintings, (non-cast) sculptures, and the like. Call an artwork *multiple* if it has or can have multiple concrete manifestations; for example, plays, photographs, musical works, and the like.<sup>1</sup> According to orthodoxy, multiple artworks, unlike singular artworks, cannot be identified with particular material individuals. A perennial temptation is to identify them with abstract objects of some sort: either abstract objects of a traditional kind or some new category of abstracta.<sup>2</sup> The reasons are familiar. Multiple artworks cannot be identified

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- 1 The distinction is not obviously exclusive. In a tightly curved non-Euclidean spacetime, the *Mona Lisa* could stand two feet from itself (in a straight line). Depending on what, exactly, counts as an occurrence, it may have two occurrences in such a scenario. Another exotic, apparent possibility would be for future *Mona Lisa* to be temporally transported to an earlier point in its career. More exotic still: twenty-armed Da Vinci paints ten canvases and the result is ten *Mona Lisa* look-alikes instead of the original. With the right sort of intentions, perhaps he could succeed in thereby creating ten occurrences of the same painting. Ignore these issues for now; the distinction is deliberately sloppy. The issues will be treated with more care below.
  - 2 See e.g. N. Wolterstorff, *Works and Worlds of Art* (Oxford: Clarendon Library of Logic and Philosophy, 1980); J. Levinson, 'What a Musical Work Is', *Journal of Philosophy* 77 (1980), pp. 5–28; J. Levinson, 'What a Musical Work Is, Again', in J. Levinson (ed.), *Music, Art, and Metaphysics: Essays in Philosophical Aesthetics* (Ithaca, NY: Cornell University Press, 1990); P. Kivy, 'Platonism in Music: A Kind of Defense', *Grazer Philosophische Studien* 19 (1983), pp. 109–129, reprinted in P. Kivy (ed.), *The Fine Art of Repetition: Essays in the Philosophy of Music*, (Cambridge: CUP, 1993), pp. 35–58; P. Kivy, 'Platonism in Music: Another Kind of Defense', *American Philosophical Quarterly* 24 (1987), pp. 245–252; G. Currie, *An Ontology of Art*, (New York: St Martin's Press 1989); J. Dodd, 'Musical Works as Eternal Types', *BJA* 40 (2000), pp. 424–440; J. Dodd, 'Defending Musical Platonism', *BJA* 42 (2002), pp. 380–402; J. Dodd, 'Types, Continuants, and the Ontology of Music', *BJA* 44 (2004), pp. 342–360; J. Dodd, *Works of Music: An Essay in Ontology*, (Oxford: OUP, 2007); and A. Thomasson, 'The Ontology of Art', in P. Kivy (ed.), *The Blackwell Guide to Aesthetics* (Oxford: Blackwell, 2004), pp. 78–92.

with any particular concrete manifestation since occurrences or concrete manifestations are (potentially) many, and one thing cannot be identical to many things.<sup>3</sup> Multiple artworks are particularly good, while particular concrete manifestations are particularly bad, at surviving the destruction of particular concrete manifestations. Finally, multiple artworks cannot be identified with a particular collection or sum of concrete manifestations since such an identification would be unfaithful to the modal facts.

The pressures that speak against materialism and in favour of abstractionism about multiple artworks are not univocal. For example, multiple artworks can be created and (perhaps) destroyed.<sup>4</sup> This insight conflicts with the perennial temptation in a couple of ways. First, few hold that anyone (other than God, perhaps) can create or destroy abstract objects.<sup>5</sup> Second, on traditional accounts of abstract objects, abstracta are sempiternal or eternal, not temporary.<sup>6</sup> But songs like the Monads' 'Slap Me Happy—I'm Temporally Gappy' did not exist in the sixteenth century.<sup>7</sup> Finally, one can *hear* a musical work, or at least there are heard properties that are properties of the works themselves rather than (merely) properties of its performances.<sup>8</sup>

Resistance to the perennial temptation also stems from a venerable tradition of finding abstracta *weird* in some way or other; many react with uncomfortable incredulity to the idea of musical Platonism or special-purpose abstract objects.<sup>9</sup> Although it is notoriously difficult to argue someone into feeling comfortable with something or to argue against their incredulity, it is comparatively easier to try to formulate materialist alternatives to the perennial temptation in order to investigate their virtues and vices. That is what this paper attempts to do.

For the sake of definiteness, I focus on the case of musical works. But I believe what I say can be generalized to other sorts of multiple artworks. In the next section I discuss a range of views that fall under the heading *musical materialism*. In the third section, I discuss ways in which musical materialists can avoid the problems that many have taken to be fatal to the approach. Finally, I make an exploratory attempt to begin adjudicating between versions of musical materialism.

3 See R. Wollheim, *Art and its Objects* (Cambridge: CUP, 1980).

4 For objections, see Kivy, 'Platonism in Music', pp. 38–47.

5 See B. Caplan and C. Matheson, 'Can a Musical Work Be Created?', *BJA* 44 (2004), pp. 113–134 for a reply.

6 For arguments to the contrary, see (e.g.) D. Armstrong, *Universals: An Opinionated Introduction*, (Boulder, CO: Westview Press, 1989) and J. Goodman, 'Where Is Sherlock Holmes?', *Southern Journal of Philosophy* 41 (2003), pp. 183–198; J. Goodman, 'A Novel Category of Vague Abstracta', *Metaphysica* 8 (2007), pp. 79–96.

7 See <http://web.syr.edu/~krmcdani/themonads.html> and <http://people.umass.edu/phil511/monads/>.

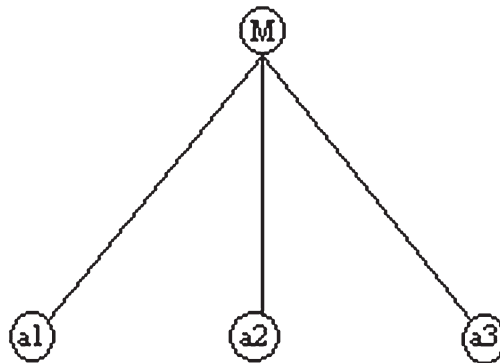
8 Kivy, 'Platonism in Music' mentions the unity of the Goldberg Variations and the passion of Hayden's *Sturm und Drang* symphonies as plausible candidates at p. 37.

9 Kivy, for instance, confesses discomfort with his own theory; Kivy, 'Platonism in Music', p. 35. In the confessional spirit I admit I am inclined toward extreme tolerance of abstracta.

## Varieties of Musical Materialism

### *Musical Atoms and Concrete Manifestation*

Candidates for concrete manifestations of musical works include copies of the score, musical performances, recordings of musical performances, playing of recordings of musical performances, certain mental events, and so on. There are difficult questions about the natures of each of these entities and whether any one of them counts as a concrete manifestation of a musical work in the relevant sense. For instance, suppose we had a clear account of what a musical performance is. One may hold that the concrete manifestations of musical works are only the performances, or that they are performances plus copies of the score, or performances and mental events, and so on. Which of these views in particular is correct is not my concern here. Consider any such view. Call the things that are the concrete manifestations of musical work *M* *musical atoms of M*. Call the relationship that a musical work *M* bears to its musical atoms *manifestation*. So if  $\alpha_1$ – $\alpha_n$  are musical atoms of *M*, we say  $\alpha_1$ – $\alpha_n$  *manifest M*. Where *M* has three atoms, we can think of the relationship schematically as follows:



According to abstractionists about musical works, *M* is abstract and manifestation is *instantiation* or *tokening* (or the like). According to materialists, *M* is concrete, so manifestation is some relation that can obtain between material objects. To fix ideas, suppose that the musical atoms of a musical work are its performances. Then on certain abstractionist views, performances are *instances* of the musical work, while on others performances are *tokens* of the musical work. In contrast, varieties of materialism are determined by considering different accounts of manifestation that accord with the minimal materialist commitment, that musical works are material objects.

### *Musical Persistence*

For the materialist, manifestation has two aspects. The first concerns *how* a work occupies the regions occupied by its atoms: are the musical atoms *parts* of *M*? Is *M* ‘wholly located’ where each of its atoms are? Does *M* stand in some other relation to its musical atoms? The second aspect of manifestation for the materialist concerns the relationship between *M* and

whatever constitutes M: is M identical to some fusion of the atoms that constitute it?<sup>10</sup> Does M merely coincide with what constitutes it? The former aspect concerns musical persistence; the latter, musical constitution. This section focuses on musical persistence and the next focuses on musical constitution.

According to the most-discussed version of musical materialism, manifestation is part-hood; musical atoms are parts of musical works and musical works are *fusions* of their parts.<sup>11</sup> Since on the materialist conception musical works (typically) exist at more than one time, they persist. If they persist by having their atoms as temporal parts, then musical works persist by *perduring*.<sup>12</sup> *Musical perdurantism* is the view that musical atoms are temporal parts of musical works.

Other materialist views of persisting musical works are possible.<sup>13</sup> In order to describe them, a detour through contemporary work on occupation is required.<sup>14</sup> We can specify ways an object can be extended through spacetime in terms of occupation. We can then specify materialist views in terms of ways of being extended in spacetime.

First, we specify the *occupation* relation. As a simplifying assumption, suppose there are material objects and regions of spacetime, that the former *occupy* the latter, and that no material object is identical to any region of spacetime.<sup>15</sup> *Occupation* is primitive; a material object occupies any region at which it is located.

10 x is a fusion of the ys at t iff each of the ys is a part of x at t and every part of x overlaps one of the ys at t, where x overlaps y at t iff something is a part of each of them at t.

11 See e.g. P. Alward, 'The Spoken Work', *JAC* 62 (2004), pp. 331–337; Dodd, 'Types, Continuants, and the Ontology of Music'; B. Caplan and C. Matheson, 'Defending Musical Perdurantism', *BJA* 46 (2006), pp. 59–69; Dodd, *Works of Music*, pp. 143–166 and B. Caplan and C. Matheson, 'Defending "Defending Musical Perdurantism"', *BJA* 48 (2008), pp. 80–85.

12 According to Caplan and Matheson, 'Defending Musical Perdurantism', p. 60 and Caplan and Matheson, 'Defending "Defending Musical Perdurantism"', p. 80, a temporal part of a musical work x at time t is something that exists only at t, is a part of x at t, and that overlaps at t everything that is a part of x at t. On this account musical works do not have temporal parts at any instant (every instant is such that no musical work has temporal parts at it), assuming that performances are musical atoms and performances last longer than an instant. They refer the reader to T. Sider, *Four Dimensionalism: An Ontology of Persistence and Time* (Oxford: Clarendon Press, 2001) for a more careful definition of 'temporal part'.

13 For a related view, see e.g. G. Rohrbaugh, 'Artworks as Historical Individuals', *European Journal of Philosophy* 11 (2003), pp. 117–205.

14 The discussion of occupation follows C. Gilmore, 'Where in the Relativistic World Are We?', *Philosophical Perspectives* 23: *Metaphysics* (2006), pp. 299–336; C. Gilmore, 'Time Travel, Coinciding Objects, and Persistence', *Oxford Studies in Metaphysics* 3 (2007), pp. 177–198; H. Hudson, *The Metaphysics of Hyperspace* (Oxford: OUP, 2006); J. Hawthorne, 'Three Dimensionalism', in J. Hawthorne (ed.), *Metaphysical Essays* (Oxford: OUP, 2006); and K. McDaniel, 'Extended Simples', *Philosophical Studies* 133 (2007), pp. 131–141. For an alternative account of location, see J. Parsons, 'A Theory of Locations', *Oxford Studies in Metaphysics* 3 (2007), pp. 201–232 and J. Parsons, 'Hudson on Location', *Philosophy and Phenomenological Research* 76 (2008), pp. 427–435.

15 For a defence of a contrary view, see (e.g.) J. Schaffer, 'Spacetime the One Substance', *Philosophical Studies* 145 (2009), pp. 131–148. I leave it to the reader to assess the fate of the following accounts on the assumption that spatiotemporal supersubstantivalism or relationalism is correct.

Although occupation is primitive, we can describe some of its more salient features. In the intended sense, I do not occupy (the region occupied by) my house, since I am too small. I also do not occupy the region occupied by my lower half, since that region is too small. Finally, recall that, in *Bill and Ted's Excellent Adventure*, older Ted emerges from a time-travelling telephone booth to greet younger Ted. Suppose Ted occupies the region occupied by older Ted and the disjoint region occupied by younger Ted. It does *not* follow that Ted occupies the fusion of those regions. Although Ted in this case *may* be a two-headed, eight-limbed scattered thing, this verdict is not demanded by the facts about occupation.<sup>16</sup>

Call the fusion of regions occupied by *o* the *path of o*.<sup>17</sup> We are now in a position to specify the ways in which an object can be extended through a region of spacetime. We can define different *ways of being extended* in terms of *occupation* and *path*:<sup>18</sup>

*o* *pertends* *r* iff *o* occupies *r* and *o* has a proper part at every proper subregion of any region that *o* occupies. (Roughly: an extended object with parts at every region.)<sup>19</sup>

*o* *spans* *r* iff *o* occupies *r* and does not have a proper part at any proper subregion of *o*'s path. (Roughly: an extended object without proper parts.)

*o* is *multiply located* iff *o* occupies two disjoint regions and does not occupy their fusion. (Roughly: a part-but-not-path occupier of an extended region.)

In the spatial case, a pertended object that occupies some extended region is what one typically think of as an extended object: it has smaller parts that correspond exactly with the smaller regions it fills. Spanners and multiply located objects are more exotic, in the

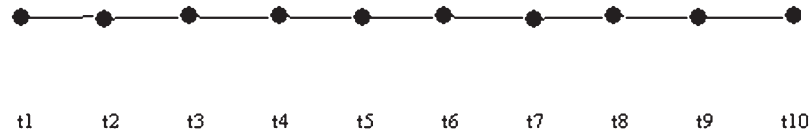
16 We can specify other occupation-properties in terms of our primitive to help distinguish them from occupation proper: where *o* is an object and *r* is a region, *o* *uniquely occupies* *r* iff *o* occupies *r* and there is no other region that *o* occupies. For example, consider a universe just like ours except it consists only of this single instant, and there never was a past and never will be a future. Obama's doppelgänger in this universe uniquely occupies the sole region he occupies. *R* is *not completely free of o* iff some subregion of *o*'s path overlaps some subregion of *r* (including the improper subregion of *r*). For example, if Obama pokes his head into my office, then the region occupied by my office is not completely free of Obama. *R* *contains o* iff every part of *o* occupies some subregion of *r*. For example, if Obama walks all the way into my office, then the region occupied by my office contains Obama. *O fills r* iff *o* occupies *r*, or *r* is a subregion of a region occupied by *o*, or *r* is a fusion of regions occupied by *o*, or *r* is a fusion of regions occupied by proper parts of *o*. So Obama fills the region he occupies, as well as the region occupied by his lower half. Ted fills the region occupied by older Ted and younger Ted. Ted also fills the region occupied by older Ted's lower half and younger Ted's lower half.

17 On the intended reading, the path of *o* is the fusion of (regions occupied by *o*), *not* the (fusion of regions) occupied by *o*. Thanks to an anonymous referee here.

18 We could also do it just in terms of occupation, but the formulations would be clunkier. These formulations loosely follow Gilmore, 'Time Travel, Coinciding Objects, and Persistence', pp. 179–181, Hudson, *The Metaphysics of Hyperspace*, pp. 99–105, and McDaniel, 'Extended Simples', pp. 132–135.

19 We could specify two ways for an object to *pertend* a region. Call *pertending strong pertending*. Then *o weakly pertends r* iff *o* occupies *r*, *o* has a proper part at some proper subregion of *o*'s path, and *o* does not have a proper part at every proper subregion of *o*'s path. (Roughly: like a strongly pertended object with at least one spanner 'bubble', in a sense that will be specified immediately.) Weakly *pertending* will not play a role in what follows.

spatial case at least.<sup>20</sup> But in the temporal case, a pertended object perdures; roughly, it is extended through time by having different parts at different times:<sup>21</sup>



If the above represents *o* as perduring, then each dot represents a proper (temporal) part of *o*, *o* does not occupy any region occupied by any dot, and *o* occupies the union of the regions occupied by the dots. On this view, *o* is ‘too big’, temporally, to occupy any proper subregion of the fusion of  $t_1$ – $t_{10}$ .<sup>22</sup>

In contrast, if *o* spans  $t_1$ – $t_{10}$ , then *o* exactly occupies the fusion of  $t_1$ – $t_{10}$ , but *o* does not occupy  $t_1$ – $t_{10}$  by having a proper part at each or any of  $t_1$ – $t_{10}$ .<sup>23</sup> On this view, *o* is temporally extended, but not by having temporally extended proper parts.

Finally, if *o* is multiply located at  $t_1$ – $t_{10}$ , then *o* occupies each of  $t_1$ – $t_{10}$ , but does not occupy the fusion of  $t_1$ – $t_{10}$ . On this view, *o* is not temporally extended but *o* does have an (improper) part at each of  $t_1$ – $t_{10}$ : *o* itself.

We are now in a position to specify varieties of materialism in terms of ways of being extended. Each of the ways a material object can be extended in spacetime suggests an analogous account of musical materialism: musical perdurantism and the two non-perdurantist views of persistence, spanning and multi-location. Since the latter is closer to what is meant in the persistence literature by *endurantism*, call the view that musical works are material objects that persist by occupying distinct spatiotemporal regions without occupying their union *musical endurantism*.<sup>24</sup>

20 Note that they are not exclusive: an extended object without proper parts that occupies more than one region would be a multiply located spanner.

21 For the ‘temporal’ case, consider regions of spacetime as before but ignore ‘spatial’ extent.

22 See (e.g.) Sider, *Four Dimensionalism*, pp. 59 and Hawley, *How Things Persist* (Oxford: OUP, 2001), pp. 11–13.

23 I first heard the term *spanner* from Kris McDaniel. See McDaniel, ‘Extended Simples’, p. 134.

24 It is important to keep in mind that our primary concern is with how musical works occupy *spacetime* according to different versions of musical concretism. What is important is whether works pertend, span, or multi-locate spacetime regions. It is not so important whether they perdure, span, or endure solely in the temporal sense. This is because whether works do the latter will largely be dependent on contingent features of the distribution of their musical atoms in spacetime. So, for instance, a work may pertend a region even though all of its works that *ever occur* occur simultaneously. Then we may want to say that the work does not have temporal parts (unless it has proper parts that correspond to the proper parts of a performance), but we need not get hung up on this contingent fact; the musical work, despite that, pertends the region it occupies. For an objection to a version of musical materialism that exploits irrelevant contingent facts about the distribution of musical atoms, see Dodd, *Works of Music*, p. 160. For a different sort of reply than the one I am suggesting here, see Caplan and Matheson, ‘Defending “Defending Musical Perdurantism”’, pp. 82–85. (Roughly: Dodd’s objection: Musical perdurantism cannot be the view that musical works have performances as temporal parts since more than one performance can temporally overlap. The reply I am suggesting here: So what? That is no objection at all to the formulation of musical ‘perdurantism’ as the view that musical works pertend *spacetime* regions they occupy and have musical performances as their musical atoms.)

### *Musical Constitution*

An object may extend through a region in virtue of being constituted by some atoms in that region. It is a further question whether the object is *identical* to some fusion of those atoms. According to musical perdurantism, musical atoms are proper parts, *pieces* of musical works, and works are fusions of those pieces. On the assumption that musical atoms are performances, the region exactly occupied by any musical atom is exactly occupied by only one thing: the performance. But the performance and the musical work both share a part at that region. (Compare: the region exactly occupied by your fingernail on your right index finger has only one occupant: the fingernail. But your right index finger and you both share a part at that region.)<sup>25</sup>

Two objects share a part at *r* iff they *overlap at r*. Two objects *permanently overlap* iff they overlap at every region occupied by either of them. Perdurantists *could* hold that works permanently overlap, but are distinct from, fusions of their performances. However, perdurantists typically endorse perdurantism in order to avoid what they take to be objectionable permanent overlap; they hold that *no* two objects could occupy the same spatiotemporal region. So we will follow the historical trend by identifying musical perdurantism with the view that a work is *identical* to the fusion of its atoms. According to the musical perdurantist, musical constitution is identity.

If musical works are spanners, then musical works fill regions occupied by musical atoms, but they do not overlap anything that occupies a proper subregion of the fusion of regions exactly occupied by some musical atom or other.<sup>26</sup> Works are neither identical to performances nor do they have them as parts. Even if the fusion of the regions occupied by the atoms is disconnected (as it would be in any normal case), the work exactly occupies only the fusion of those regions, much how (this token of) ‘spanner’ occupies a disconnected region—the fusion of the regions occupied by (those tokens of) ‘s’, ‘p’, ‘a’, ‘n’, ‘n’, ‘e’, ‘r’—without occupying the subregions of that region.<sup>27</sup>

If musical endurantism is correct, the account of the relationship between a work and any of its particular occurrences is less straightforward. On the assumption that musical atoms are performances, musical endurantism is the view that a musical work is multiply located and occupies any region exactly occupied by any of its musical atoms. Although we may speak of the *path* occupied by a work on this view as the fusion of any regions the work

25 In the example we are ignoring the problem of the fingernail and the fingernail-material. It is also worth noting that the cases are not completely analogous; the performance’s improper part is a proper part of the work, while your fingernail is a proper part of you and a proper part of your finger. (Thanks to an anonymous referee here.)

26 It is important to note that the account leaves open the possibility of an object spanning a highly disconnected region. So if *M* spans the (presumably highly) disconnected region exactly occupied by *M*’s musical atoms, *M* exactly occupies the region exactly occupied by their fusion but not any proper subregions of that region. Note, too, that in the case of spanning, musical atoms are not atomic parts of musical works.

27 The analogy is imperfect since ‘spanner’ presumably has ‘s’ as a part. Ignore that. It is hard to come up with illustrations of spanning because spanning is weird.

occupies, we should keep in mind that, in contrast to musical spanners and musical perdurantism, a musical work does not (typically) occupy its path. According to (materialist) endurantists about persons, though multi-locating is rare in the spatial case (recall Ted), enduring is quite common in the temporal case. If endurantism about persons is correct, you are ‘all here now’ instead of being partly spread out over non-present spatiotemporal regions—you persist through time by being ‘wholly located’ at every moment at which you exist. Since you exist at more than one time, and you are literally identical to something that exists at other times (by being located at those times), you are multiply located throughout time.<sup>28,29</sup>

Musical endurantism is committed to the claim that musical works are multiply located. So what should a musical endurantist say about the relationship between a work and what constitutes it? If musical endurantists hold that musical works *are identical* to the performances, then there are not really distinct performances of any work. There is just one performance that manages to occur first at one time and again at another. That is certainly not how we think performances behave, and perhaps it is this apparent consequence of musical endurantism that has led others to reject it out of hand.

Instead, musical endurantists hold that works are ‘wholly located’ at any region occupied by one of its performances, but are not identical to any performance. Compare again the endurantist (materialist) view of persons. You persist through time by ‘taking turns’, being wholly located first where one collection of molecules was (ones that made you up when you were a child), and later being wholly located where another collection of molecules is (ones that make you up now). You are not identical to any particular collection of molecules on this view. Rather, from a God’s-eye view, you are multiply located throughout spacetime. Similarly, the musical endurantist holds that musical works are multiply located through spacetime by being wholly located where each concrete manifestation is located.

## The Standard Objections Revisited

Recall the standard objections to musical materialism rehearsed at the outset: multiple artworks cannot be identified with any concrete manifestation since occurrences or

28 See e.g. D. Wiggins, ‘On Being in the Same Place at the Same Time’, *Philosophical Review* 77 (1968), pp. 90–95; J. Thomson, ‘The Statue and the Clay’, *Noûs* 32 (1998), pp. 149–173; M. Johnston, ‘Constitution Is not Identity’, *Mind* 101 (1992), pp. 89–105; and K. Fine, ‘The Non-Identity of a Material Thing and its Matter’, *Mind* 112 (2003), pp. 195–234.

29 It is also interesting to note a peculiar feature of musical endurantism. On the standard view of performances, performances are events with beginnings, middles, and ends. Thus they are temporally extended. Supposing their beginnings, middles, and ends are *parts*, performances perdure. So on the assumption that musical atoms are performances and given the standard view of performances, musical endurantism is the view that musical works exactly occupy regions occupied by perduring entities, but they persist by being ‘wholly present’ in the described sense whenever one of their performances is present. Note that there are at least two ways to develop the proposal: on the first proposal, works span regions exactly occupied by musical atoms, so they don’t have proper parts corresponding to the proper parts of the performance. On the second proposal, musical works have parts wherever their atoms have parts. On this view, musical works are multiply located perduring objects and on the former they are multiply located spanners.



concrete manifestations are (potentially) many, and one thing cannot be identical to many things. Multiple artworks are particularly good, while particular concrete manifestations are particularly bad, at surviving the destruction of particular concrete manifestations. Finally, multiple artworks cannot be identified with a particular collection or sum of concrete manifestations since such an identification would be unfaithful to the modal facts. Equipped with our varieties of materialism, let us examine the reasoning behind these objections in more detail.

### *The 'Many–One' Objection*

1. If musical materialism is correct, then musical works are identical to their concrete manifestations.
2. If musical works are identical to their concrete manifestations, then musical works are possibly identical to two or more distinct things.
3. Nothing is possibly identical to two or more distinct things.
4. So musical materialism is incorrect.

The argument is valid. Its third premise is a law of logic and its second follows from recognition of the fact that, like all multiple artworks, musical works can have more than one concrete manifestation. If the latter are performances, the premise is supported by the observation that musical works have multiple performances.<sup>30</sup> Some might resist (2) by appealing to an overly strict notion of *performance*.<sup>31</sup> But this tactic seems unpromising. The fault lies with (1).

If musical perdurantism is correct, then works are not identical to concrete manifestations; works have them as proper parts. If musical works are spanners, concrete manifestations are neither identical to works nor parts of works. If musical endurantism is correct, then musical works are coincident with concrete manifestations but are not identical to them. Since these are all versions of musical materialism, (1) is false and the 'many–one' objection to musical materialism is unsound.

### *The Destructive Asymmetry Objection*

According to some, a musical work may be destroyed, perhaps by destroying every candidate for being a concrete manifestation, including mental states such as memories of musical works.<sup>32</sup> And it is a commonplace that musical works can be created.<sup>33</sup> But while it is

30 Perhaps there could be musical works that could not have more than one performance. Ignore those. Perhaps there could be musical works that have no performances. But note that this claim in no way threatens musical materialism. It only threatens those versions that take all and only performances as musical atoms. Even then it is not obvious that the threat is dire; the insight might be accommodated by a view according to which the possible performance of a work is sufficient for its actual existence. I elaborate below.

31 See e.g. N. Goodman, *Languages of Art: An Approach to a Theory of Symbols*, (Indianapolis, IN: Hackett, 1976).

32 See e.g. Thomasson, 'The Ontology of Art', pp. 79.

33 See Kivy, 'Platonism in Music', pp. 38–47 for objections.

plausible to hold that musical works are created when their earliest concrete manifestation occurs, it is not, the objector contends, similarly plausible to hold that musical works are destroyed when any particular manifestation or manifestations are destroyed. A work can outlive its concrete manifestations. We may state the problem for musical materialism as follows:

5. If musical materialism is correct, then no musical work survives longer than every relevant material object.
6. No sheet music for the Monads' 'Slap Me Happy—I'm Temporally Gappy' exists now and no future performances of it will ever occur.
7. If (6), then some musical work survives longer than every relevant material object.
8. So some musical work survives longer than every relevant material object.
9. So musical materialism is incorrect.

The objection is valid. Suppose musical materialism is correct. Then musical works are material objects of some sort. Since none of them could outlive themselves, (5) is true. Unfortunately, it is plausible to suppose (6) is true as well. If it is not, then the problem lies with vicissitudes of the example rather than the objector's point. And while recordings of performances of the work exist, this point only affects the objection if recordings are concrete manifestations. (If you think they are, then pretend the recordings are destroyed.)

Assuming (6) is true, the truth of (7) depends on which material objects are relevant. That in turn depends on which view we take on musical atoms and which version of musical materialism we are considering. We could perhaps use our intuitions about destruction to guide our theorizing about atoms. So, for instance, if one 'performs' a work mentally, that mental performance might count as a musical atom. Then the musical materialist can plausibly deny that works can outlive their instances.

There is not much force to the intuition that the Monads' 'Slap Me Happy—I'm Temporally Gappy' will exist in the year 5000 even if all of the relevant sheet music, recordings, memories, and any other physical records are irrevocably destroyed. So it is not costly for the musical materialist to take this route, and let intuitions about destruction guide theorizing about atoms. So a musical materialist can plausibly deny (7); works do not outlast their concrete manifestations.<sup>34</sup>

Alternatively, a materialist may bite the bullet and hold that a given work exists exactly when their view says it does, and perhaps try to shore up the cost some other way. The objector may protest to the latter move. To reinforce her point, the objector might note that if the Monads' 'Slap Me Happy—I'm Temporally Gappy' does not exist now, then it does not have any properties now. But surely it does—we just *referred* to it, for instance. Accepting musical materialism at the cost of Meinongianism is an intolerable price to pay.

In reply, any version of musical materialism may make headway against the destructive asymmetry problem by looking more closely at what it takes for a musical work to exist *now*. We can distinguish two different ways of evaluating existence claims. Call the first the

34 This is the reply on behalf of the musical materialist that I prefer. I do not believe it is obligatory, however.

*Container View.* On the Container View, to say truthfully of an object *o* that it exists at *x* location/at *x* time/at *x* world is to say of *o* that the relevant container (location, time, or world) is not completely free of *o*. Consider the claim that the Golden Boy exists in Winnipeg. On the Container View, what it takes for this claim to be true is for the relevant container (Winnipeg) to not be completely free of the relevant object (the Golden Boy). Similarly, consider the claim that the Monads' 'Slap Me Happy—I'm Temporally Gappy' exists in 2010. If the Container View for this sort of claim is correct, then the claim is true just if 2010 is not completely free of the relevant musical work.

Call the second view the *Unrestricted View*. On this view, relativization to containers is vacuous when it comes to existence claims. Existence claims are true just if the relevant object is one of absolutely everything, if reality is not completely free of it. On this view, it is true in Winnipeg that the Golden Boy exists because reality is not completely free of the Golden Boy. Similarly, it is true in Winnipeg that you exist, even if Winnipeg is completely free of you. By the same token, it is true in 2010 that the Monads' 'Slap Me Happy—I'm Temporally Gappy' exists provided that reality is not completely free of it, whether or not 2010 is.

It is important to note that the two views are compatible; it may well be the case that there are these two ways in which existence claims can depend on the world for their truth.<sup>35</sup> It is open to the musical materialist to hold that the only sense in which a work can survive the destruction of its concrete manifestations is in the sense of the Unrestricted View, as opposed to the Container View. Thus, a proponent of this sort of view can reject (5) in the destructive asymmetry argument: though musical materialism is true, musical works can exist longer than any relevant material object.

An immediate worry is that the present proposal only succeeds by defining the problem of destructive asymmetry away.<sup>36</sup> The problem arose from the intuition that there is something different about a musical work's survival than, say, that of Socrates. On the foregoing account, however, even though there is a sense in which a musical work survives destruction of its concrete manifestations, *in this very same sense* Socrates would survive vaporization. So the distinction does not capture what the *difference* is supposed to be between a work's ability to survive and the survival capacity of Socrates.

In reply, I grant that the proposal does not draw deep metaphysical distinctions between a work's and Socrates' continued existence. But musical materialists who opt for this reply can get some mileage out of an apparent difference in our *interests*. For many material objects, our interest in their continued existence is not merely an interest in their continuing to be one of absolutely everything; rather, it is an interest in successive times not being completely free of those objects. So to wish for Socrates to exist in 2010 is (typically) more properly described as a wish for 2010 not to be completely free of him, for example.

35 I want to emphasize that I do not consider the distinction to be primarily a claim of philosophical semantics, and I am not offering any view about which sentences express which sorts of claims. Rather, I intend to mark a metaphysical distinction in the ways existence propositions can depend on the world for their truth.

36 Thanks to an anonymous referee for pressing this objection and for allowing me to clarify how I think the distinction may be of help to the musical materialist.

Things are different with musical works. We do not need them literally to inhabit regions local to us in order for us to get what we want from them. That no one is performing the Monads' songs now does not diminish our interest in them.<sup>37</sup> We could hum them or play a recording of them or think about them, for example.<sup>38</sup> That no one will perform a Monads song does not mean they do not exist now, though sadly they will fade from memory. They live on in the sense of being among absolutely everything, and for musical works, this is enough for survival in the relevant sense.

If something along these lines is correct, musical works outlive their concrete manifestations in some sense; even if 2010 is completely free of concrete manifestations of Monads songs, it is true in 2010 that the Monads' songs exist. It is equally true, in the same sense, that in 2010 the last performance of a Monads song exists, though 2010 is completely free of Monads songs. The difference is that to pine for the last performance, unlike the song, is (typically) more properly described as pining for inhabiting a region local to the last performance.<sup>39</sup> If this is (roughly) correct, musical materialists can maintain that the argument from destructive asymmetry is unsound by appealing first to the distinction between the Container View and the Unrestricted View, and second, to a difference in our interests and attitudes toward works versus non-works.<sup>40,41</sup>

I anticipate the following objection to the present proposal: the same distinctions that are available after the final note of a work has been played are available before the first note is struck. And if the distinction after the fact helps us see how musical works can in some sense survive destruction of their manifestations, the same distinction can help us see how musical works existed before their alleged creation. But to exist before being created is to not be created.<sup>42</sup>

37 It is crucial here that we sharply distinguish the Monads from the 21st-century Monads.

38 Recall that, in contrast to the previous reply on behalf of the musical materialist, I am assuming here that these do not count as musical atoms of the work.

39 This is ambiguous on the present view. One might pine in the sense of either disambiguation in the way specified.

40 Hopefully it is clear from the preceding discussion what musical materialists should say to the complaint that 'Slap Me Happy—I'm Temporally Gappy' existed in the temporal gaps between its performances. Even if the discussed distinction is untenable, the problem of temporal gaps for musical materialism is no more pressing than the problem of spatial gaps in Emmentaler or baked (leavened) bread or, well, anything made of atoms and molecules. It is well known that no region occupied by such entities is completely filled with gapless matter. So is it true at some point between an electron and nucleus of an atom in your heart that you (or your body) exists there? Whichever answer is acceptable is also acceptable for answering the same sort of question for gaps in musical works.

41 Finally, note that the proponent of the view that concrete manifestations of musical works are all and only performances may exploit this sort of distinction to accommodate the intuition that there could be unperformed musical works. On certain views of modality, the actual existence of a score and the possible existence of a performance of the musical work indicated by the score suffice for the unrestricted existence of a performance of the relevant sort. The proponent of this view might not be attracted to the views of modal reality that license the metaphysical implication, however.

42 A related objection is that if the distinction works, it works too well—all musical works are indestructible. I do not know how much of a cost this is. Perhaps it is more natural to say of a forgotten work that it is lost to us; we do not know what we could know about it. But for all that, lost works still exist. At any rate, the reply to the objection in the text could be amended to avoid this problem, if it needs avoiding. A straightforward solution is to follow the earlier tack and let our intuitions about destruction guide our theorizing about which things count as musical atoms.

The objection only has teeth on the assumption that all times are equally real (eternalism); no problem is posed for past-and-presentism. But the problem is a general one for eternalism: whether or not musical works are in fact created, surely *some* things are created, and surely this fact is compatible with eternalism. (Here is a first-pass account: necessarily, *o* is created at *t* iff there is an *x* that bears the appropriate attitudes, actions, causal relations, etc., to *o* and all times prior to *t* are completely free of *o*.)<sup>43</sup> There is no special reason I can see for why a musical materialist eternalist could not simply adopt the best account of creation offered by eternalists generally.

I have offered two responses to the objection from destructive asymmetry on behalf of the musical materialist. On the first, intuitions about destruction should guide theorizing about musical atoms. If we think musical works still exist after their last performances due to certain mental events, then we should include those mental events among the work's musical atoms. If we think musical works still exist after the last of the performances and relevant mental events are gone, but while some recordings still exist, then we should include recordings among the work's musical atoms. And so on.<sup>44</sup>

Alternatively, a musical materialist may appeal to a distinction in how existence claims depend on the world for their truth. On the Unrestricted View, it is true to say of a work that it exists at times that are completely free of the relevant concrete manifestations. If this is survival in the relevant sense for works, but not for concrete manifestations, then musical materialists can hold that musical works can, in the relevant sense, outlive their concrete manifestations.<sup>45</sup> So if either approach is feasible, musical materialists can resist the objection from destructive asymmetry.

### *The Modal Objection*

10. If musical materialism is true, then musical works are fusions of concrete manifestations.
11. If musical works are fusions of concrete manifestations, then they could not have had more or fewer concrete manifestations than they actually have.
12. So if musical materialism is true, then musical works could not have had more or fewer concrete manifestations than they actually have.
13. Musical works could have had more or fewer concrete manifestations than they actually have.
14. So musical materialism is false.

43 This proposal is obviously rough: I am not concerned here with the problem of what exactly someone has to do in order to create something. That problem is a problem on any view of time. Suppose it is solved. My proposal tells you what it takes for something to be created if that problem is solved and eternalism is true. Note, too, that we may have to relativize the account to *o*'s personal time if time travel is possible.

44 Recall that this response rejects premise (7) in the destructive asymmetry objection.

45 Recall that this response rejects premise (5) in the destructive asymmetry objection.

The modal objection clearly proceeds on the assumption that any form of musical materialism is a form of musical perdurantism. But part of the burden of this paper has been to make the case that this is not so. If musical works span or endure, then materialism is true but works are not fusions of manifestations.<sup>46</sup> So (10) is false.

Setting that reply aside, let us turn to the other premises. Premise (11) relies on an assumption about fusions: they are modally inductile. The thought is a natural one: consider a fusion of things. If it could have been a fusion with more or fewer parts, it would have been a different fusion (since it would be bigger or smaller, right?). So fusions are modally inductile. But the natural thought is false. *You* are a fusion if you have parts, and you could have had more or fewer parts.

Some are unconvinced.<sup>47</sup> A prevalent myth concerning the logic of parts and wholes (mereology) is that the seemingly natural thought is supported or underwritten by the classical theory of parthood itself. But it is not. The classical presentations of mereology are synchronic and amodal: they do not by themselves imply anything at all about the modal (or temporal) behaviour of fusions.<sup>48</sup>

We can find support for (11) that does not subscribe to overt mereological myth, however. In Chrysippus' ancient puzzle of Dion and Theon, the titular characters are all of Dion and all of Dion except his left foot, respectively. Suppose that Dion suffers an accident, removing his left foot and, importantly, removing every former part of Dion that did not overlap Theon. Dion and Theon are distinct, since before the accident Dion was bigger. Dion survived, since one can survive the loss of a foot. Theon survived, because nothing happened to 'him'. Thus, it seems, Dion and Theon share all of their proper parts after the accident. But if Dion is *identical* to the fusion of his proper parts, and Theon is identical to the fusion of its proper parts, then since after the accident the parts of Dion are identical to the parts of Theon, are Dion and Theon not identical?<sup>49</sup>

This problem motivates (11) for philosophers hostile to the claim that distinct objects could share all of their proper parts throughout their careers. According to such

46 In spite of that, it is interesting to note that musical spanners are subject to a version of the modal argument that parallels the temporal version of Chrysippus' puzzle originally presented in P. van Inwagen, 'Four Dimensional Objects', *Noûs* 24 (1990), pp. 245–255 and rehearsed below. If musical works are spanners, then if they could have exactly occupied a region smaller or larger than the region they exactly occupy, then they are possibly identical to something that exactly occupies such a region. Since they are not actually identical to any of the things that exactly occupy such regions, they cannot be. So spanners could not have occupied a region distinct from the one they actually occupy. This argument, like the argument against perdurantism, similarly pressures spanners to embrace permanent coincidence or counterpart theory.

47 Some *tollens* the *ponens*: since you are temporally and modally ductile, you are not a fusion. But this gets things exactly wrong. Among its other problems, this view suggests that while you have parts, the *logic of parts and wholes* does not apply to you, given your interesting temporal and modal properties.

48 See e.g. Nelson Goodman and Henry Leonard, 'The Calculus of Individuals and Its Uses', *The Journal of Symbolic Logic* 5 (1940), pp. 45–55 and Peter Simons, *Parts: A Study in Ontology* (Oxford: Oxford University Press, 1987). Further problems with (2) can be found in B. Caplan and K. McDaniel, 'Mereological Myths', M.S. and P. van Inwagen, 'Can Mereological Sums Change their Parts?', *Journal of Philosophy*, forthcoming.

49 See A. Long and D. Sedley, *The Hellenistic Philosophers*, vol. 1 (Cambridge: CUP, 1987).

philosophers, if a certain work ('Ode to Dion') has ten performances, and another work has only nine of those ten performances ('Ode to Theon'), then Ode to Dion could not have had one less performance lest it become identical to Ode to Theon. So if we deny that distinct objects can share all of their proper parts throughout their careers, then we should agree that if musical works are fusions, then they could not have had fewer parts than they have. For similar reasons, we should agree that if musical works are fusions, then they could not have had *more* parts than they have. So philosophers who agree that two objects cannot share all of their proper parts throughout their careers should accept (11).

Musical perdurantists accept that musical works are fusions of their concrete manifestations. Musical perdurantists also deny that two objects can share all of their proper parts throughout their careers. So musical perdurantists should accept (11).

This leads to a problem for musical perdurantism. As Peter van Inwagen has shown, the puzzle of Dion and Theon can be recast to pressure perdurantists to either deny the modal facts or embrace the claim that two objects can, after all, share all of their proper parts throughout their careers.<sup>50</sup> Descartes, for example, could have lived for a year less than he actually did. Now suppose with the perdurantist that Descartes is the fusion of his temporal parts. Descartes-minus is a one-year-shorter proper temporal part of Descartes. Since Descartes is 'bigger' than Descartes-minus, they are actually distinct. According to a possible world-state in which Descartes dies a year earlier, Descartes and Descartes-minus permanently overlap. But complete overlap for distinct entities is impossible on the perdurantist account, and Descartes is distinct from Descartes-minus. The only way out for the perdurantist who rejects permanent overlap is to deny the modal facts: Descartes could not have lived a year less than he actually did.<sup>51</sup>

What goes for the perdurantist goes for the musical perdurantist. The latter is no better placed to escape the dilemma than the former.<sup>52</sup> Thus the musical perdurantist too must deny the modal facts: musical works could not have more or fewer concrete manifestations than they actually have.

50 van Inwagen, 'Four Dimensional Objects', pp. 245–255.

51 Perdurantists could also apply a temporal parts-friendly version of the view defended in M. Burke, 'Preserving the Principle of One Object to a Place: A Novel Account of the Relations Among Objects, Sorts, Sortals, and Persistence Conditions', *Philosophy and Phenomenological Research* 54 (1994), pp. 591–624. But this response, like the move to embrace perfect coincidence, undermines much of the motivation for accepting perdurantism in the first place. The thought is that what is really doing the work of addressing puzzles of coincidence is some non-perdurantist resource. An under-explored option for the perdurantist attempts to maintain the modal facts while eschewing permanent overlap. The strategy is to maintain that (e.g.) Descartes exists in the unfortunate possibility and is the same 'size' that Descartes-minus is actually, and Descartes-minus exists in the unfortunate possibility, but has 'shrunk' an appropriate amount from his actual size. An apparent problem for this proposal arises if there are mereological simples. If a two-simplied fusion could have been smaller, then it could have been one-simple-sized. But the actual smaller fusion cannot itself shrink, if it is already at the threshold for smallness. See J. Spencer, *Material Objects in Tile Space-time* (University of Rochester Dissertation, 2008) for an extended discussion.

52 Perhaps this is too hasty. Perhaps there cannot be musical works that have as their concrete manifestations a subset of some other work's actual concrete manifestations. If so, the musical perdurantist is better poised than the perdurantist to resist this formulation of the argument.

Perdurantists tend to deny the modal facts rather than embrace permanent overlap. They offer a deviant contextualist semantics for modal predicates such as ‘could have been performed more times’. In contexts in which the Monads’ songs are salient (under that very description), the predicate truly applies to them. In contexts where the particular fusions of performances are salient (under that very description), the predicate does not truly apply.<sup>53</sup> To the extent that this sort of reply is viable, the argument is unsound even against musical perdurantism: in any context, either (11) or (13) is false, depending on which description of the fusion is salient.

## Musical Materialism versus Musical Materialism

Some of the advantages of any form of musical materialism are obvious and were noted at the paper’s outset: if musical materialism is true, there is no mystery about how a musical work can be created, temporally located, and hearable. And if the arguments of this paper are correct, none of the oft-repeated objections to musical materialism succeed. If there is a presumption in favour of the material over the abstract, and if the main motivation for musical abstractionism is that materialism is untenable for reasons discussed in the third section, then *musical abstractionism* is unmotivated.

There remains an issue of which version of musical materialism is to be preferred. As far as I can tell, the main reasons for or against any version of musical materialism are exactly reasons for or against endurance, perdurance, and spanning. That said, I will close by noting some advantages of musical endurantism over perdurantism. As already mentioned, musical perdurantists face an objection from modal constancy while musical endurantism does not: the temporal version of Chrysippus’ puzzle does not apply to the musical endurantist since she embraces permanent overlap. Thus, the musical endurantist can embrace the modal facts and escape commitment to the devious semantics for modal predicates. Musical perdurantists are welcome to follow endurantists here and retain the view that works are fusions of their concrete manifestations while embracing permanent overlap. But it is unclear what reason would be left for preferring perdurantism if such a move were made.

Two other objections to musical materialism similarly target musical perdurantism but do not even arise for musical endurantism. According to the first, musical perdurantism implies that works cannot be heard *in toto*.<sup>54</sup> Provided you do not attend every performance of a work, you do not hear all of it if musical perdurantism is true. According to the second, musical perdurantism implies that a composer’s work is not complete until long after her death.<sup>55</sup> Whatever the merits of these objections, neither poses any sort of threat

53 See D. Lewis, ‘Counterpart Theory and Quantified Modal Logic’, *Journal of Philosophy* 65 (1968), pp. 113–126 and D. Lewis, ‘Counterparts of Persons and their Bodies’, *Journal of Philosophy* 68 (1971), pp. 203–211.

54 Dodd, *Works of Music*, p. 157.

55 Thomasson, ‘The Ontology of Art’, p. 82. In both of these objections, ‘implies’ is being used in an extremely loose sense. Hopefully the force of the objection is clear despite the compressed presentation.



to musical endurantism.<sup>56</sup> No special manoeuvring is required on the part of the endurantist in order to capture the intuition that when one hears a performance of a work, one hears that work, or that a composer's work may be completed well before her death.<sup>57</sup>

I tentatively conclude that musical endurantism is preferable to musical perdurantism. I do not know, however, of any exceptionally strong reasons for preferring one version of musical materialism over any other that do not in turn amount to reasons for accepting one of the more general metaphysical views over the other. If you are already a perdurantist, then you will probably not find musical endurantism congenial, and likewise for the other combinations of general metaphysical and musical views. But even if you do not agree with me that musical endurantism is preferable to its main materialist rival, I hope to have shown that musical materialism is generally viable. Or if it is not, its fatal flaw is not pinpointed by the familiar arguments against it.<sup>58</sup>

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56 For musical perdurantist replies to the first objection, see Caplan and Matheson, 'Defending Musical Perdurantism', pp. 61–63 and Caplan and Matheson, 'Defending "Defending Musical Perdurantism"', pp. 80–85.

57 Inspired by Theodore Sider's exdurantism (the 'Stage View') (Sider, *Four Dimensionalism*, pp. 188–208), a musical perdurantist may instead cling to her ontological view while changing her semantic view, allowing that if *M* is a proper name of a musical work, then *M* refers to the temporal parts of the perduring entity rather than the temporally extended whole. While the exdurantist would achieve verbal agreement with the endurantist on questions such as 'When is a musical work heard?' and 'Can a musical work be heard in its entirety?', the endurantist would still benefit in counting (e.g.) each song by the Monads as one musical work rather than allowing that there's one musical work per performance.

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