

Musical materialism and the inheritance problem

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Some are attracted to the view that ‘multiple’ works of art, such as musical works, photographs, cast sculptures, and the like, are (relatively) ordinary objects with more in common, metaphysically speaking, with tables, people, and cats than with Platonic universals, types, or indicated abstracta. On one way of developing the view, musical works coincide with their concrete manifestations (Tillman 2011), e.g. performances.¹ On another way of developing the view, works are fusions of their concrete manifestations (Caplan and Matheson 2006). Call either sort of view ‘Musical Materialism’.

One objection to these views stems from the thought that if Musical Materialism is correct, then works inherit certain problematic features from their concrete manifestations. For instance, if every performance of *The Rite of Spring* includes wrong notes, then the Musical Materialist seems obliged to accept the absurd conclusion that *The Rite of Spring* includes wrong notes (Kania 2007). The aim of this paper is to evaluate this sort of objection to Musical Materialism.

1. The inheritance objection: first pass

- (1) If Musical Materialism is true, then works inherit all of the features shared by all of their (proper) parts or concrete manifestations.
- (2) So if all of the parts or concrete manifestations of *The Rite of Spring* include wrong notes, then *The Rite of Spring* includes wrong notes.
- (3) All of the parts or concrete manifestations of *The Rite of Spring* include wrong notes and *The Rite of Spring* does not include wrong notes.
- (4) Therefore, Musical Materialism is false.

¹ Some may believe that concrete manifestations include performances, bits of score, or certain mental states or events. However, the objection we wish to consider is most pressing to a version of Musical Materialism according to which concrete manifestations of works just include performances. Since we believe even this version of Musical Materialism can be defended from the objection, we will assume (for the remainder of this essay) that concrete manifestations only include performances.

Premiss (1) is too strong. If performances are parts of works, Musical Materialists are not committed to the claim that the whole has whatever features are shared by the parts. After all, every proper part of a cat may weigh less than nine pounds while the cat does not weigh less than nine pounds. If cats have proper temporal parts, then every proper temporal part of the cat is a proper temporal part of the cat. But the cat is not a proper temporal part of itself. And if works are coincident with concrete manifestations, then works can still have different features from those had by all (or most) of its manifestations. After all, no manifestation of the cat (e.g. a certain mass of nutrients) is identical to the cat, though the cat is identical to itself.

2. *The inheritance objection: second pass*

But even if a work does not inherit *all* of the features shared by all or most of its proper parts, arguably certain important features are inherited, e.g., *including wrong notes*. The proponent of the Inheritance Problem can re-cast the objection as follows:

- (5) If Musical Materialism is true, then works are nothing over and above their (proper) parts or concrete manifestations.
- (6) So if all (or most) of the parts or concrete manifestations of *The Rite of Spring* include wrong notes, then *The Rite of Spring* includes wrong notes.
- (7) All (or most) of the parts or concrete manifestations of *The Rite of Spring* include wrong notes and *The Rite of Spring* does not include wrong notes.
- (8) Therefore, Musical Materialism is false.

Not *all* features shared by all or most proper parts of a work are features of that work. But certain others are. If every proper part of the cat is massive, then the cat is massive. Similarly, the objection continues, since works, like cats, are nothing over and above their proper parts, then if every proper part of a work includes wrong notes, the work itself includes wrong notes.

We can develop the slogan 'the whole is nothing over and above its parts' in two ways. The first is as the thesis of strong composition as identity, according to which a whole is literally identical to its parts (Baxter 1988). Not a fusion or set of its parts, but *the parts*. On this view, identity is a one-many relation that may obtain between a thing, on the one hand, and some things, on the other. As Ted Sider (2007) candidly admits,

this can seem like nonsense. Peter van Inwagen (1994) charges that the notion of identity as a one-many relation is scarcely intelligible, as is the thought that if two things compose a third, the third *is* the two. Worse (as bad?), wholes seem to clearly have certain features not shared by pluralities of parts. As David Lewis (1991: 87) points out, the cat is one, but its parts are many. So Leibniz's Law implies that the cat is not its parts. So if (5) relies on the truth of strong composition as identity, Musical Materialists have good grounds for rejecting (5).

The slogan 'the whole is nothing over and above its parts' can be developed in another way, however. We might construe composition as not literally (classical) identity, but rather analogous to it in important respects. Call such a view 'moderate composition as identity'. This is Lewis's (1991) and Sider's (2007) view. A consequence of this analogy, they take it, is that classical extensional mereology is correct. And classical extensional mereology entails uniqueness of composition (any things compose at most one thing). So those who reject uniqueness of composition are unlikely to be moved by the analogy (van Inwagen 1994: 109). And at least one version of Musical Materialism must reject classical extensional mereology (viz., that version according to which works are coincident with, but not identical to, their concrete manifestations), so at least one version of Musical Materialist should reject any version of the claim that wholes are nothing over and above their parts.

Other forms of Musical Materialism, according to which works are fusions of their concrete manifestations, are compatible with uniqueness of composition. (Though as Ben Caplan pointed out to us, there still may be violations of uniqueness if one can perform two works simultaneously.) However, these Musical Materialists should still reject composition as identity. As Kris McDaniel (2008) points out, no matter which more precise formulation of the slogan that the whole is nothing over and above its parts is on offer, the view will be committed to the claim that a full description of the parts is a full description of the whole. But if that's so, then strongly emergent properties are impossible. But strongly emergent properties are possible, and perhaps actual. For example, as Tim Maudlin (1998: 56) point out, if the cosmos is in an entangled state, then since the quantum state of an entangled system contains information *over and above* that of the quantum states of its components, a full description of the intrinsic properties of particles (and spatiotemporal relations between them) is not a full description of the cosmos. So the quantum state of the cosmos is a

strongly emergent property of the cosmos. If that's right, Musical Materialists of any stripe should reject the claim that any whole is nothing over and above its parts. Thus, Musical Materialists should reject (5).

3. *The inheritance objection: third pass*

Proponents of the Inheritance Problem may maintain that Musical Materialism still has a problem with inheritance. The real worry is not that Musical Materialists are forced to accept an implausible inheritance principle. Rather, it is a mystery how Musical Materialists can *deny* the implausible inheritance principles. With this in mind, we may reformulate the inheritance objection as follows:

- (9) If Musical Materialism is true, then there is no explanation of why works do not inherit their features from their parts or concrete manifestations.
- (10) It's false that there is no explanation of why works do not inherit their features from their parts or concrete manifestations.
- (11) So, Musical Materialism is false.

If Musical Materialism is true, then it seems that there is no way for works to have or get particular features except by inheriting them from their parts or concrete manifestations. The challenge is to see how Musical Materialists *could* explain why a work does not include wrong notes even if its performances do. The thought behind (9) is that Musical Materialists have limited themselves to resources that are too impoverished to afford any plausible explanation of the failure of inheritance. Premiss (10) is plausible because opponents of Musical Materialism *can* explain how works do not include wrong notes even if their performances do. If works are instead abstract objects, no problematic inheritance principle is even *prima facie* plausible.

In response, we aim to take steps toward providing an explanation of how a work's performances can include wrong notes while the work itself fails to do so. The proponent of the Inheritance Problem may have a particular picture of the relationship between concrete manifestations and musical works in mind. On this picture, concrete manifestations are prior to works: bringing about the concrete manifestations *ipso facto* brings about the work. On this conception, the Inheritance Problem can seem intractable. Arranging nutrients in a certain way may *ipso facto* bring about a cat-shaped

lump of matter. And if all of the nutrients involved are red, it is indeed very hard to see how the cat could avoid being red.²

However, if a whole is prior to its parts, it no longer seems *obligatory* that wholes inherit all of the relevant features from parts. So one plausible alternative picture embraces the following principle:

Priority: Musical works are *prior* to their concrete manifestations.

According to *Priority*, a work is prior to its concrete manifestations, much as the cat Possum is prior to a collection of nutrients that is a concrete manifestation of Possum. And if works are prior to their concrete manifestations, as is plausible for cats, then being a concrete manifestation is a matter of conforming to the work's properties as opposed to the work's properties being themselves inherited from entities that depend on them.

Opponents of Musical Materialism may object that even if inheritance is no longer obligatory, there is still a striking disanalogy between tables, cats, and people on the one hand, and musical works on the other. Suppose we grant that wholes are prior to their parts. It is still the case that if all of the concrete manifestations of the cat are one-eyed, then the cat is one-eyed. And so on. But, the Musical Materialist would like to maintain, even if performances include wrong notes, works do not. The disanalogy can tempt one to believe that works, then, *must* be abstract.

The pressure on Musical Materialists is relieved if works are not so disanalogous from uncontroversial concreta. Recall above that we cited certain features of the cosmos that arise from quantum entanglement as strongly emergent properties of the cosmos. And Jonathan Schaffer (2010) argues that the cosmos is prior to its parts, in the sense in which it was claimed above that works are prior to their concrete manifestations. Assume Schaffer is right about that. Then the ontologically dependent (i.e., the parts of the cosmos) are uncontroversially concrete, and that upon which they depend (i.e., the cosmos) has certain strongly emergent features that are not shared by the parts, and do not locally supervene on those parts' intrinsic properties. This arrangement is parallel to the Musical Materialist's assessment of the relationship between works and their parts (or concrete manifestations). But in Schaffer's case, there is *no* pressure to suggest that

² Unless, perhaps, one has a Zeno cat. See Prosser (2009).

the cosmos must therefore be non-concrete. So Musical Materialists may hold that there is not a drastic difference between works and *all* uncontroversial concreta. Granted, there is a striking difference between works and *some* concreta, but there is also a striking parallel between works and *special* concreta.

The Musical Materialist should conclude, then, that musical works are like certain special concreta in that they are prior to their parts (or concrete manifestations). They enjoy certain strongly emergent properties, like having a nature that is incompatible with including wrong notes, that is not shared by their parts (or concrete manifestations). Though this is perhaps not quite how things go with cats, it's how they go with special concreta, like works and (perhaps) the cosmos. Thus, the Musical Materialist is well-placed to offer a metaphysical package that avoids the Inheritance Problem.

If we take the analogy between musical works and the cosmos (as Schaffer sees it) seriously, then we will be committed to the following claim:

Ultimate Priority: Musical works are *prior* to their concrete manifestations and no things are prior to musical works.

On this view, which premiss of the Inheritance Problem the Musical Materialist should reject depends on what is expected of an *explanation*. Recall premiss (9):

(9) If Musical Materialism is true, then there is no explanation of why works do not inherit their features from their parts or concrete manifestations.

Here is the Musical Materialist's explanation: musical works are wholes that are prior to their parts (or concrete manifestations) and enjoy strongly emergent properties that they do not inherit from their parts (or concrete manifestations). Works are thus much like the (uncontroversially concrete) cosmos itself, if Schaffer is correct.

What might be expected, however, is an explanation of how musical works manage *this* feat. But we might similarly ask how the cosmos manages to be in an entangled state that is not in some sense reducible to the states of its parts. And the only correct answer here may be that *it just does*. It's a fact about the cosmos that it's this way. We discovered empirically that this feature of it cannot be reduced in some sense to features of its parts. Similarly, perhaps works *just do* have a nature that precludes their including wrong notes. We discovered metaphysically that this feature of works cannot

be reduced in some sense to features of its parts. According to the Musical Materialist, that's just how works *are*.

The objector demanding an explanation may be dissatisfied. That works *just are* that way doesn't really explain. But if this is what is required of an explanation, then Musical Materialists should deny (10): there just is no explanation of why works don't inherit certain features of their parts or concrete manifestations, just as there is no explanation of *why* the cosmos has an irreducible quantum state.

Some may still be unsatisfied. Fortunately, there are other options for the Musical Materialist. The Musical Materialist might reject *Ultimate Priority* in favour of the following alternative:

Penultimate Priority: Musical works are *prior* to their concrete manifestations, but some other things are prior to musical works.

If *Penultimate Priority* is true, then Musical Materialists can hold that musical works depend for their existence and for their properties on (e.g.) certain mental events. Perhaps the intentions of the composer (or something like that) ground the properties of musical works even if all the performances fail to fit those intentions. This kind of view is not without precedence. On a classical view of the universe, the universe and all its parts depend on God (who is not a part of the universe). Or consider a cat. Whether or not something is a cat, or even a particular cat, may depend on that from which the cat originated. A molecule for molecule duplicate of Possum may not be a cat if it originated from some mass of cells that are in no way ancestrally connected to any species on Earth. Perhaps, then, some features of Possum, such as *being a cat*, depend on things that are not parts of Possum.

So Musical Materialists can say that musical works depend for their properties on certain mental events and deny that the mental events are parts (or manifestations) of musical works. Perhaps musical works have only performances as parts or manifestations, but get their properties from some mental events that are neither.³ On

³ As we mentioned in footnote 1, some Musical Materialists may believe that concrete manifestations include mental states or events. Some may even believe that the intentional mental states of the composer of a musical work are concrete manifestations. Given Musical Materialism, if those intentional states are concrete manifestations of the musical work, then the musical work is either coincident with those intentional states or has those intentional states as parts. Though someone who accepts this version of Musical Materialism would reject *Penultimate Priority*, she could accept an equally strong principle:

this proposal, Musical Materialists have an explanation for why works do not inherit problematic features from imperfect performances: though performances are parts of (or coincident with) works, they get to be so in virtue of their relationship to certain mental events. Moreover, those mental events are responsible for determining features of the work. In particular, those mental events are responsible for grounding that musical works associated with them have no wrong notes even if all of their performances do. So, the Musical Materialist can plausibly respond to even the best version of the Inheritance Problem.⁴

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Discriminate Priority: Musical works are *prior* to some, but not all, of their concrete manifestations.

This Musical Materialist can respond to the Inheritance Objection by noting that all the performances of *The Rite of Spring* may include wrong notes without *The Rite of Spring* itself including wrong notes. This may be so as long as the appropriate concrete manifestations of the work (i.e. the intentional states of the composer) ground that *The Rite of Spring* includes no wrong notes.

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