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Creating abstract objects

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Abstract

Beach's *Gaelic Symphony* is plausibly an abstract object that Beach created. The view that people create some abstract objects is called abstract creationism. There are abstract creationists about many kinds of objects, including musical works, fictional characters, arguments, words, internet memes, installation artworks, bitcoins, and restaurants. Alternative theories include materialism and Platonism. This paper discusses some of the most serious objections against abstract creationism. Arguably, these objections have ramifications for questions in metaphysics pertaining to the abstract/concrete distinction, time, causation, vague existence, vague identity, and inadvertent creation.

1 | INTRODUCTION

Abstract creationism is the view that people create some abstract objects. Theorists commonly characterize abstract objects as not being spatially located. Paradigmatic abstract objects include numbers and mathematical sets, whereas paradigmatic concrete objects include tables and planets. Abstract creationists about musical works think that Beach's *Gaelic Symphony* is an abstract object that Beach created. Abstract creationists about fictional characters think that Emma Woodhouse is an abstract object that Jane Austen created. There are abstract creationists about many other kinds of objects, such as arguments, words, internet memes, installation artworks, bitcoins, and restaurants.[1] I will focus on musical works and to a lesser extent fictional characters. Much of what I will say applies to other entities.

Abstract creationism has grown in popularity in recent years, and now is a good time to take stock of challenges it faces. To this end, first I will introduce abstract creationism and alternative theories. Next, I will discuss objections to abstract creationism and how they connect to broader metaphysical issues—including questions about causation, the abstract/concrete distinction, time, vague existence, vague identity, and inadvertent creation. Arguably, whether abstract creationism is correct has ramifications for some of these issues.

2 | ABSTRACT CREATIONISM AND RIVAL THEORIES

The two main rivals of abstract creationism are materialism and Platonism.[2] Materialists think musical works are concrete. Platonists think they are eternal abstracta. Philosophers commonly evaluate these views by gauging how well they account for three ostensible qualities of musical works: *creatability*, *audibility*, and *repeatability*. To say a work is creatable is to say that people create it—that people bring it into existence. There is a commonsense belief that musical works are creatable. On this line, Beach created *Gaelic Symphony*. A related intuition is that *Gaelic Symphony* exists now and did not exist during the Triassic period. To say an artwork is audible is to say that we hear it. There is a commonsense belief that we hear musical works.

Here is a characterization of the third quality: repeatability. We may fully encounter musical works by encountering any of a plethora of concrete objects or events. When I hear a (sufficiently adequate) performance of Beethoven's *Ninth Symphony* in Lisbon I hear the whole symphony. When someone hears a performance of it in Dakar, they hear the whole symphony, too. Sculptures and paintings are not repeatable in this way. You may see Facey's sculpture *Redemption Song* only by interacting with a particular concrete object in Kingston. If you see a sculpture that looks exactly like it in Buenos Aires, then you see a mere copy. Not the real thing. Likewise, you may see Van Gogh's *Starry Night* only by seeing a particular concrete object in Manhattan.

As far as I know, no extant theory of musical works perfectly accounts for all three qualities. Consider Caplan and Matheson's (2006) theory on which a musical work is the collection of its performances.[3] This is a version of materialism. This theory handles audibility well. We hear *Gaelic Symphony* by hearing its parts—that is, its performances. The theory handles repeatability less elegantly. A key fact about repeatability is that when hearing a performance we hear the *entire* work. Caplan and Matheson cannot easily explain how hearing an entire work via a single performance is possible, since a single performance is merely a part of the work. Some materialists fair better in this respect, including Tillman (2011) who thinks musical works coincide with, and wholly exist at, individual performances.[4]

Other issues remain. It's unclear whether materialism can explain how a performance may deviate from a work, especially if all performances of the work contain wrong notes.[5] Moreover, it's unclear how well materialism handles creatability. Granted, according to materialists musical works come into existence. For instance, Caplan and Matheson think that *Gaelic Symphony* comes into existence when its initial performance happens. But one might think, pretheoretically, that Beach creates the symphony by composing it before it is performed. A related worry is that materialism cannot account for a musical work that has been composed but never performed. Intuitively, such works do, or at least can, exist. Materialists may try to handle these objections by allowing for scores and mental events to be parts of, or coincide with, musical works—something that Tillman and Spencer (2012) are open to.[6]

This brings us to Platonism. On Dodd's (2007) Platonist theory, a musical work is an eternal abstract type. Specifically, it is a type whose tokens are sound-sequence events. Performances generate tokens of works. Dodd thinks that we do not directly listen to musical works, since we cannot directly listen to abstracta. We listen to works indirectly by listening to their concrete performances. Dodd argues that this account explains repeatability better than materialism. We hear a work completely (albeit indirectly) on Dodd's account by hearing any of its performances. Analogously, we read the word "kangaroo" completely by reading any of its tokens. Dodd, however, rejects creatability. He accepts that, since musical works are eternal, composers do not create them. They instead discover them, although they might discover them in ways that demonstrate creativity.

Levinson (1980), a seminal abstract creationist, agrees with Platonists that there are eternal types of sound-sequences. These are called "sound-structures." Levinson claims that artists indicate (in a technical sense of "indicate") these structures and thereby create indicated sound-structures, which are musical works. An indicated sound structure is not merely a pre-existing sound structure that has been indicated. It is a new object, created by the artist. It seems promising that abstract creationism may account for audibility and repeatability in roughly the ways Platonism does, without sacrificing creatability.[7]

Despite its appeal, abstract creationism faces serious problems. In what follows I will explain some objections to abstract creationism. I will discuss ways abstract creationists may respond, all with an eye toward broader debates in metaphysics.

2.1 | CAUSAL OBJECTIONS

Creation is ostensibly a causal process. It seems, for instance, then when a carpenter creates a bookcase they cause the bookcase to exist. Moreover, philosophical orthodoxy holds that abstract objects are causally inert—that they cannot enter into causal relations.[8] Thus, philosophical orthodoxy suggests that abstracta cannot be created and thus that abstract creationism is false. Dodd (2000, p. 431) presents this kind of causal objection against abstract creationism.

Mothersill (1984, pp. 347–356) and Dodd (2007, pp. 13–15) raise further causal worries. Mothersill worries that if musical works are abstract—and thus causally inert—they cannot be beautiful, given the view that being beautiful involves *causing* a certain kind of pleasure. Dodd worries about how to preserve the audibility of musical works, since audibility is a causal notion.[9]

Some theorists have responded to causal objections by rejecting the orthodox view that abstracta are causally inert. Brock, Maslen, and Ngai (2013) consider reasons why one might deny that abstracta can be causally affected. They consider, for instance, the principle that causation involves only objects that are in contact. If this principle were true, then abstracta—which presumably cannot contact anything—could not be causally affected. Brock, Maslen, and Ngai (2013, p. 76), however, think that gravity, causal failures (e.g., when one causes a plant to die by failing to water it), and other cases all involve causation without contact.[10] They conclude, in agreement with Caplan and Matheson (2004), that the view that abstracta cannot be causally affected is unfounded.

Moreover, Dodd (2007, pp. 13–15) and Friedell (2019) argue that abstracta cause effects. Dodd argues that films are abstract objects that can cause a riot. Friedell argues that the novel *Uncle Tom's Cabin* is an abstract object that caused many Americans to support abolition. Both theorists rely heavily on commonsense intuitions. If abstract objects are causally efficacious in these ways, then causal arguments against abstract creationism are flawed.

Those who accept the orthodox view that abstracta are causally inert face a challenge: they should defend the view rather than merely assert it. To this end, Juvshik (2018) argues that there is no good reason to accept, for instance, that a film can cause a riot, since we can fully explain why the riot happened by referring to concrete objects (the screen in the movie theater, audience members, etc.) without referring to the film. Friedell (2019), however, claims that it is the very intuitiveness of statements, such as "*Uncle Tom's Cabin* caused many Americans to support abolition," which gives us a (defeasible) reason to believe that abstracta are causal.

Another move for abstract creationists is to accept that abstracta are causally inert but insist that people may still create abstracta. Thomasson (1998) adopts this strategy. She claims that novels are abstract objects that ontologically depend on concreta, such as manuscripts, but are still causally inert. Novels come into existence when authors create physical manuscripts, but authors causally interact only with manuscripts and other concreta—not novels themselves. On this line, causing something to exist does not entail that you affect or interact with it.

Mag Uidhir (2017) denies that musical works are created abstracta but takes Thomasson's view seriously. He grants, at least for the sake of argument, that people create some causally inert abstracta. For example, he grants that when you create a doghouse the singleton set containing only that doghouse comes into existence. You thereby create a causally inert abstract object--the singleton set in question. He argues, however, that such abstracta cannot be art. He thinks artists must be directly responsible for their artworks being the way they are and for being artworks. Consider Le Guin making the physical manuscript for her novel *The Left Hand of Darkness*. According to Thomasson, Le Guin creates a causally inert novel that ontologically depends on the manuscript. Mag Uidhir, however, argues that Le Guin cannot be robustly responsible enough for an abstract object that pops into existence along with a manuscript for that abstractum to be an artwork. Compare how strange it would be for you to take credit for a doghouse being

the way it is *and* for its singleton set being the way it is. If Mag Uidhir is right, then Thomasson may accept that authors create abstract novels but only if she accepts that novels are not artworks. An analogous argument could be given for musical works.

Irmak (2021), in defense of Thomasson's view, argues that there is an important difference between a novel and the singleton set containing only a doghouse. In creating a doghouse, you do not intend to create a singleton set. The set is merely an accidental product. When creating a manuscript Le Guin intends to create a novel. Irmak argues that this intention makes the novel, though causally inert, an artifact and an artwork. Here is one issue Irmak's approach raises. Imagine Le Guin, while creating a manuscript for *The Left Hand of Darkness*, intends *not* to create a novel (perhaps because she hates the idea of creating abstract objects). Irmak seems committed to denying that Le Guin creates a novel. Plausibly, however, Le Guin inadvertently creates a novel. We will revisit inadvertent creation in Section 7.

As we have seen, causal objections pressure abstract creationists to either reject the view that abstracta are causally inert or adopt the Thomassonian line that people create causally inert abstracta. As Falguera et al. (2017) suggests, it might help us to think more about what it means for an object, whether abstract or concrete, to be causal. Metaphysicians focus on event-causation and agent-causation but largely overlook object-causation.[11] A theory of object-causation could help us evaluate whether abstracta are causal. It could also help us evaluate Thomasson's claim that it's possible to create causally inert objects. For example, Thomasson's claim conflicts with a counterfactual theory on which an object is causally affected if something true of that object would be false had a particular event not happened. This is because Thomasson thinks, for example, that Beach's *Gaelic Symphony* would not exist if Beach had never created its score.

3 | TEMPORAL OBJECTIONS

One objection against abstract creationism invokes the Platonist claim that abstract objects are eternal. On one understanding of this claim, abstract object exists at all times. On another understanding, they exist outside of time altogether. Either way, it seems to follow quickly from abstract objects being eternal that people cannot create them. After all, if creating something involves bringing it into existence at a moment in time, it seems that you cannot create something which has always existed or exists timelessly.[12] Abstract creationists typically do not worry about this objection. Paradigmatic abstract objects, such as numbers, are plausibly eternal. But there is no obvious reason to accept that all abstract objects are eternal. Many abstract creationists happily accept that, although numbers are eternal, musical works are not.

Juvshik (2020), following Brock et al. (2013, p. 81), raises a more serious temporal objection against abstract creationism. He claims that, according to contemporary physics, it is impossible for objects with a temporal location to lack a spatial location. Provided that Juvshik's characterization of science is correct, abstract creationism seems untenable—since the view, as commonly understood, is committed to objects that come into existence without a spatial location.

It is unclear how abstract creationists should respond. Falguera et al. (2017) suggests that some abstract objects exist in space—that, for instance, chess is an abstract object that initially existed in India before spreading to other parts of Asia. Korman (2019) also suggests that abstract artifacts have spatial locations. Perhaps, then, abstract creationists should respond to Juvshik's objection by discarding the view that abstract objects are nowhere and instead accept that at least some of them are somewhere but in a special way. The trick would then be to explain the distinctive way that concrete objects are in space.

Cowling and Cray (2017) make a related proposal. They suggest that numbers exist *at* every spatial location without existing *in* any spatial location. Along these lines, abstract creationists could claim that musical works exist *at* some (or all) spatial locations without existing *in* any spatial region. Cowling and Cray's at/in distinction, however, is presently obscure and needs further exploration. It is not entirely obvious what it would mean, for instance, for chess to exist *at* spatial locations in India without existing *in* those locations.

Another response to Juvshik's objection is for abstract creationists to insist that abstracta are nowhere but deny that they have temporal locations. Thomasson (1998, pp. 124–127) claims that fictional characters are created abstract objects with no spatiotemporal location. It's puzzling whether her view can withstand Juvshik's objection, given her claim that fictional characters have a "temporal origin" (Thomasson, 1998, p. 127). Perhaps, it would help to accept that abstract objects have a temporal origin, in the sense that they ontologically depend on timebound events, but are not themselves located in time. Relatedly, Korman (2014, p. 63) discusses, and Fiocco (2014) endorses, a view of "atemporal becoming" on which creative actions that occur in time cause objects to exist timelessly. Deutsch (1991) claims that authors create characters without bringing them into existence. He argues that authors still create characters, since they stipulate—rather than merely describe—what characters are like. Unlike Thomasson, Deutsch does not think characters depend on authors for their existence, and so it is doubtful whether his view preserves the view that characters are created.

Juvshik's objection is urgent. It pressures abstract creationists to rethink what it means for an object to either be abstract, created, or both. Abstract creationists can take solace in the fact that Juvshik's objection raises a problem also for those Platonists who take abstracta to exist at all times, rather than outside of time (e.g., Dodd, 2007, pp. 58–81).

4 | THE VAGUE EXISTENCE OBJECTION

Korman (2014, 2015, pp. 160–182) and Friedell (2017), two defenders of abstract creationism, have worried about whether the view leads to vague existence. Here is the basic idea. Suppose that Beach created *Gaelic Symphony*. It seems there is no precise nanosecond when she brought the symphony into existence. It seems indeterminate when it first existed. The worry is that this indeterminacy requires the word or concept "exists" to be vague, a state of affairs that many theorists (e.g., Lewis, 1986; Markosian, 1998; Sider, 2001) find implausible or even incoherent.[13] Deniers of vague existence think it's fine for an object to be vaguely red if it appears somewhere between red and orange. Likewise, objects may be vaguely round or vaguely tall. But deniers of vague existence think objects can't vaguely exist. Indeed, it is hard to make sense of an object vaguely existing.

Sometimes it might seem that a concrete object vaguely exists. Imagine that children are making a sandcastle by lumping together sand and seawater. Intuitively, there's no precise nanosecond when the sandcastle first exists. During some moments it is vague whether the sandcastle exists. Deniers of vague existence, however, may claim that during these moments there determinately exists *something* that is made of the relevant grains of sand and portions of seawater. It's vague merely whether this object—whatever it is—is a sandcastle. This suggests that "sandcastle", not "exists", is vague.

Korman argues that abstract creationists cannot extend this strategy to abstract artifacts. He claims there is no analogue in the case of abstract artifacts to the intermediate object composed of sand and seawater. And, even if there is an intermediate object in the creation of a symphony--a "proto-symphony" or "proto-composition"--the problem of vague existence will arise for whatever is the first abstract object a composer creates while creating a symphony. Korman concludes abstract creationists are thereby committed to vague existence.

Friedell, conversely, argues that abstract creationists with plenitudinous ontologies, such as Fine (1982), may avoid vague existence. Plenitudinous ontologies include many more objects than commonsense allows. Fine thinks that for each property an object possesses there is a "qua-object" that is composed of that object. For instance, he thinks Biden-qua-president and Biden-qua-spouse are two qua-objects, each composed by (but distinct from) Biden. Abstract creationists may claim that musical works are qua-objects—that they are sound-structures-qua-indicated. Consider a moment when it is vague whether Beach has indicated *Gaelic Symphony*'s sound structure (and thus it is vague whether the symphony exists yet). Call the sound structure s and whatever Beach has done to it *indication**. Given Fine's ontology, there exists a qua-object: s-qua-indicated*. It is vague merely whether this object is *Gaelic Symphony*. On this line, "symphony" is vague but "exists" is not.

Abstract creationists may try to avoid the problem altogether by denying that it is vague when Beach created *Gaelic Symphony*. The idea, more generally, would be that for any abstract artifact there is a precise moment when it is created. Another move is for abstract creationists to bite the bullet and accept vague existence. Evnine (2016, p. 24) and van Inwagen (1990, pp. 271–284) both take this approach.[14]

5 | THE VAGUE IDENTITY OBJECTION

The next two objections I will consider are about fictional characters. We say things like "Jane Austen made Emma Woodhouse," "Arya Stark is a fictional character," and "Sherlock Holmes is more famous than any real detective." Abstract creationists think the best explanation for such talk is that characters are existing abstract objects created by authors (Thomasson, 1998, 2003b). On this view, Holmes is a fictional detective, not a real one. Being an abstract object, he (or *it*) does not actually solve mysteries. He merely solves mysteries according to a fictional story.[15]

Now, just as philosophers tend to be uncomfortable with vague existence, they tend to be uncomfortable with vague identity. Many philosophers insist that for any objects X and Y, X and Y are either determinately identical or determinately distinct. It may be vague whether you and I are friends or mere acquaintances. But it can't be vague whether I *am* you. There's no status in between identity and distinctness. Or so the critics of vague identity think.[16]

Everett (2005) argues that realists about fictional characters are committed to vague identity. He uses peculiar stories, such as "Frackworld":

> Frackworld: No one was absolutely sure whether Frick and Frack were really the same person or not. Some said that they were definitely two different people. True, they looked very much alike, but they had been seen in different places at the same time. Others claimed that such cases were merely an elaborate hoax and that Frick had been seen changing his clothes and wig to, as it were, become Frack. All that I can say for certain is that there were some very odd similarities between Frick and Frack but also some striking differences (Everett, 2005, p. 629).

Realists about fictional characters are committed to Frick and Frack being fictional characters. But, here's the tricky question: are they the same character? It is neither true according to the story that they are the same person nor true in the story that they are distinct persons. The story leaves it entirely open which possibility obtains. For this reason, it seems fictional realists should say that it is indeterminate whether Frick and Frack are identical characters. Fictional realists, Everett concludes, are thereby committed to vague identity. This problem is unique to fictional characters but not unique to abstract creationists. Any realist about fictional characters, including Platonists, should wrestle with this problem.

Realists about characters have given various responses. Schnieder and von Solodkoff (2009) argue that Frick and Frack are determinately distinct characters. They rely on a general principle that any two characters are distinct, unless the story in which they originate explicitly states otherwise. Caplan and Muller (2015), however, plausibly claim that this approach is arbitrary. There is no obvious reason to prefer this principle to a different principle that any two characters are *identical*, unless explicitly stated otherwise. Caplan and Muller propose instead that Frick and Frack are either identical or distinct characters—and that it is a brute, inexplicable fact about which possibility obtains. Since it's unsatisfying to posit that there is no underlying reason that determines whether Frick and Frack are identical, Caplan and Muller's approach, though defensible, should be accepted only as a last resort.

Cameron (2012) and Woodward (2017) concede that it is indeterminate whether Frick and Frack are identical characters. They argue that this is merely because there are determinately distinct objects that "Frick" and "Frack" indeterminately refer to, not because "identity" is vague. This approach is promising but not without difficulty. Are there really two (or more) candidate characters that "Frick" and "Frack" vaguely refer to? And, if so, what are these candidates? It is hard to answer these questions without knowing more about what exactly fictional characters (and

candidate characters) are. Positing the existence of candidate characters—without knowing what they are—seems like wishful thinking. Note that fictional realists could also bite the bullet and accept vague identity, as Parsons (2000) and Evnine (2016, pp. 22–23) do. Given how strange vague identity seems, however, it is hard to know what abstract creationists should do with Everett's argument.[17]

6 | INADVERTENT CREATION

Brock (2010) reveals that it is mysterious exactly what it takes for an author to create a fictional character. Abstract creationists commonly think that authors create characters by pretending to refer to people (e.g. Thomasson, 1998, p. 12). Brock notes, however, that it is false that authors create characters *whenever* they pretend to refer to people. Otherwise, each time George R.R. Martin uses the name "Arya Stark" he would create a new character. Abstract creationists might claim, instead, that authors create characters whenever they (a) pretend to refer to people, and (b) intend to thereby create a character. Brock argues that this proposal fails, too. Imagine that N.K. Jemsion is an anti-realist about fictional characters and that in writing her *Broken Earth* trilogy she intended not to create any characters. Fictional realists, according to Brock (2010, p. 362), should accept that Jemsion inadvertently created Essun and other characters. One might worry that it remains so mysterious how characters are created that abstract creationists should give up their view.

Evnine (2016) and other abstract creationists, such as Soames (2002, p. 93), assume that the creation of characters (and other artifacts) is always intentional. Such theorists could account for the Jemison example by denying that she creates Essun and other characters, or by asserting that she creates these characters because deep down she has the relevant intentions. It might be correct for abstract creationists, however, to follow Zvolensky (2016) in accepting that authors may inadvertently create characters. Zvolensky argues that this shouldn't be surprising, given that mythical objects (such as Le Verrier's Vulcan) and other abstracta are inadvertently created. She claims, for example, that one might inadvertently create a new poem while badly misremembering a Shakesperian sonnet.

If abstract creationists accept inadvertent creation, then they are left with Brock's challenge to explain when fictional characters are created. Perhaps, this isn't so bad for abstract creationists. After all, Friedell (2016) and Evnine (2016, pp. 144–145) note that the mystery of inadvertent creation is not unique to abstract creationism. The same issue arises with concrete artifacts. van Inwagen (1990) doesn't believe in tables. He believes there are merely simples (i.e., partless objects) arranged table-wise. Plausibly, in an attempt to arrange simples table-wise, van Inwagen might still make a table. This result poses a problem for theorists, such as Irmak (2021), who think concrete artifacts such as tables and statues must be intentionally created. Perhaps, then, the key lesson to draw from Brock is not that the creation of fictional characters is too mysterious to be believed. Creation of everything is mysterious. Perhaps the key lesson is that we should discern how characters and concrete objects alike may be inadvertently created.

To this end, Cray (2017) gives a counterfactual account: roughly, authors inadvertently generate characters whenever they take actions such that they would have intentionally generated a character if they had intended to create one while taking the same actions. On this account, then, Jemison in the above example unintentionally generates Essun. Goodman (2021) gives a dispositional account of artifact-creation that ignores intentions, real or hypothetical. Goodman claims, roughly, that someone creates a table whenever they cause there to be a hunk of matter that is disposed to perform a table's function.

Both Goodman's account and Cray's account (extended to concreta) have counterintuitive results. Imagine I create a perfectly good soap dish that, unbeknownst to me, looks like an ash tray.[18] Intuitively, although someone could use this soap dish to contain tobacco ash, it is not now an ash tray. (Likewise, I do not create a dining placemat whenever I create a welcome mat that coincidentally looks like a placemat). On a Cray-inspired counterfactual account, however, the dish is an ash tray. This is because I would have intentionally created an ash tray had I intended to create one while doing the same actions that resulted in the soap dish. Goodman's account gets the same result, since I've caused there to be a hunk of matter that is disposed to perform an ash tray's functions. The problem arises in any case

where someone creates an artifact that coincidentally looks like an artifact of another kind, even an unknown kind from a foreign culture. Although Goodman bites the bullet in such cases, the mystery of inadvertent creation—and Brock's question of when exactly fictional characters are created—remain unsettled.

7 | CONCLUSION

Abstract creationism, though appealing, faces serious objections. Thinking through these objections requires reflecting on metaphysical questions pertaining to causation, the abstract/concrete distinction, time, vague existence, vague identity, and inadvertent creation. Moreover, settling whether abstract creationism is correct will arguably have ramifications for some of these very questions. Here are some examples from what we've seen here. Causal objections show that, if we accept abstract creationism, then there is pressure to accept that either abstract objects are causal or that we can create things without causally affecting them. Juvshik's temporal objection pressures abstract creationists to reconsider whether abstract objects are located in time but not space. Korman argues that accepting abstract creationism requires accepting vague existence. Everett's objection applies pressure on abstract creationists (and fictional realists more broadly) to accept vague identity. Brock's inquiry pressures abstract creationists to accept that characters can be inadvertently created--and to theorize about how this might be possible in the case of concrete objects, as well.

I don't want to overstate any metaphysical import. One could argue that in each of these cases our broader metaphysical commitments should affect our views about the metaphysics of art—and not the other way around. No matter how we resolve such methodological issues, abstract creationism, like most philosophical theses, is not alone on an island. Its proponents should continue to engage with bigger metaphysical debates.

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ENDNOTES

[1] Abstract creationists about musical works include Levinson (1980, 2011), Evnine (2009, 2016), Rohrbaugh (2003), and Friedell (2020). Abstract creationists about fictional characters include Braun (2005), Goodman (2004), Thomasson (1998, 2003a, 2003b), Salmon (1998), von Solodkoff (2014), Kripke (2013), and Zvolensky (2015). Smith and Moldovan (2011), for instance, are abstract creationists about arguments. Evnine (2016), Irmak (2019), arguably Kaplan (1990), and Wetzel (2002), for instance, are abstract creationists about words. For internet memes, see Evnine (2018). For installation artworks, see Irvin (2013). For bitcoin, see Passinsky (forthcoming). For restaurants, see Korman (2019).

[2] I set aside musical anti-realists (e.g. Cameron (2008) and Kania (2013)) who deny that there are musical works. I set aside also those who think musical works are ideas, such as Cox (1986). Note, though, that Cray and Matheson (2017), think musical works are ideas and construe ideas as concrete.

[3] This theory intends to account only for musical works that are designed for performance (e.g., *Gaelic Symphony*). Many theorists distinguish between these works and those that are designed to be recorded and later played back (e.g., *The Miseducation of Lauryn Hill*). I will gloss over this distinction. See, for instance, Adams (2018), Davies (2001), Ferguson (1983) Gracyk (1996), and Kania (2006) for discussion of recorded music.

[4] The distinction between these two kinds of materialism is an instance of the broader metaphysical distinction between perdurantism and endurantism. Perdurantists think concrete objects are four-dimensional objects with temporal parts; endurantists think concrete objects wholly exist at each time they exist. Caplan and Matheson are perdurantists about musical works. Tillman is an endurantist.

[5] Tillman and Spencer (2012) address this worry.

[6] Moruzzi ([2018](#)), alternatively, accepts that works cannot exist without being performed. On her materialist view musical works are identical to individual performances.

[7] Currie ([1989](#), p. 58) notes that Levinson's theory is mysterious. It is not exactly clear what an "indicated sound-structure" is, given that (according to Levinson) it is not just a sound-structure that has been indicated. See Evnine ([2009](#)) for proposals of how we should think about indicated sound-structures. For debate over whether, or to what extent, repeatability, intuitions, and ordinary language support abstract creationism, see for instance, Grafton-Cardwell ([2020](#)), Kleinschmidt and Ross ([2013](#)), Thomasson ([2003a](#)), and Yagisawa ([2001](#)).

[8] See, for instance, Balaguer ([2001](#), p. 1) and Nutting ([2016](#)).

[9] See, for instance, Cowling ([2017](#), pp. 130-161) for discussion of general causal objections to realism about abstracta, including issues pertaining to our alleged abilities to think about and refer to abstracta.

[10] Callard ([2007](#)) also argues that causation does not require contact.

[11] Whittle ([2016](#)) is a noteworthy exception.

[12] Mothersill ([1984](#), p. 356), for instance, raises this worry.

[13] Korman ([2015](#), pp. 177–181) argues that even in some cases of vague existence, the word "exists" is not the source of indeterminacy.

[14] See Hawley ([2001](#)) for a thorough and relatively sympathetic account of vague existence.

[15] Van Inwagen ([1977](#)), though non-committal, is credited with motivating abstract creationism about characters. See, for instance, Friend ([2007](#)) and Sainsbury ([2010](#)) for broad discussion of competing views on fictional characters. Just as with musical works, for fictional characters there are—in addition to abstract creationists—Platonists (e.g. Zalta ([1983](#)) and Wolterstorff ([1980](#))) and anti-realists (e.g., Everett, [2013](#), Walton, [1990](#)). There are other alternatives. Possibilists (e.g., Mercurio ([2019](#)) and arguably Lewis ([1978](#)) think fictional characters are non-actual, possible people. Meinongians (e.g., Meinong, [1904](#); Parsons, [1980](#); Priest, [2005](#)) think characters are non-existent people.

[16] Evans ([1978](#)) and Salmon ([1982](#)) seminally argue against vague identity.

[17] See Thomasson ([2010](#)) and ([2007](#), pp. 107–109) for further discussion.

[18] I owe this example to Megan Lee.

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