A Realist Approach to Categorizing Musical Works

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Abstract

This thesis seeks to advance our comprehension of musical ontology as it pertains to realism from a platonist vantagepoint. Similar to other areas of ontological inquiry, such as fictional and mathematical objects, musical ontology is a specific field in philosophy of art that disputes the categorical nature and identity of musical objects. Much like its fictional and mathematical counterparts, categorizing works of music has been amply discussed by realists. In order to advance our understanding in this field, I will examine the categorical nature of such objects and the consequences realists face upon application.

My dissertation will be separated in two distinct parts: one developing and one applying my platonist account. The first three chapters develop a certain stripe of musical realism that has previously been unexplored in the literature. In order to achieve this aim, Chapter One lays out a taxonomy of ontologies that catalogs realists, non-realists (nominalism and anti-realism), and arealist accounts. Chapters Two and Three provide two realist accounts hitherto undiscussed in the taxonomy. What makes both accounts enticing to the musical realist is that they endorse a property theory of musical works, which stands in contrast to its popular cousin, type/token theory. In particular, Chapter Two unpacks the property theory from an aristotelian perspective, while Chapter Three does so from a platonist perspective. Chapter Three provides the account that I develop and endorse.

The purpose of application—contained in the last three chapters—is meant to not only show my account's implications, but also exhibit how these can render the account advantageous. Chapter Four will explain how realists should approach and contemplate the role of the musical score. Chapter Five will provide a realist response to the role of artificial intelligence in musical composition, and Chapter Four will provide a realist's modest definition of music. My goal is to showcase my account's fruitfulness in these applications, as well as to demonstrate how it can facilitate further questions about the nature of musical works and the categories to which they belong.

Table of Contents

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Finally, I must thank God, who has seen me in my brightest and darkest times, and still loves me regardless. May He increase, and I decrease.

Author's Declaration

I declare that the entirety of this thesis is my own work and that I have done the following:

(i) read and comprehended the University of Glasgow's statement on plagiarism;

(ii) clearly referenced, in both text and the bibliography or references, all sources used in this work;

(iii) fully referenced, including pages numbers and inverted commas for all text quoted from books, journals, web etc.;

(iv) provided the sources for all tables, figures, data, etc. that are not my own work;

(v) not made use of the work of any other student(s), past or present, without acknowledgement. This includes any of my own work, which has been previously, or concurrently, submitted for assessment, either at this or any other educational institution;

(vi) not sought or used the services of any professional agencies to produce this work;

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I am aware and comprehend the university's policy on plagiarism, and I certify that this assignment is my own work, except where indicated by referencing, and that I have followed the good academic practices noted above.

Chapter One: Taxonomy of Musical Ontologies

The first part of this dissertation seeks to answer the following question:

(Q1) If musical works[1] exist, how should they be categorized?

In the contemporary landscape, the dispute over existence and categorization falls within ontology, which itself is the branch of metaphysics that concerns questions of being. Specifically, the ontology of musical works is centered around the philosophy of music in the analytic tradition, meaning that we must focus our attention upon this dispute. To assist with this, Figure 1.1 illustrates a taxonomy of all of the popular options for responding to the existence of musical works.

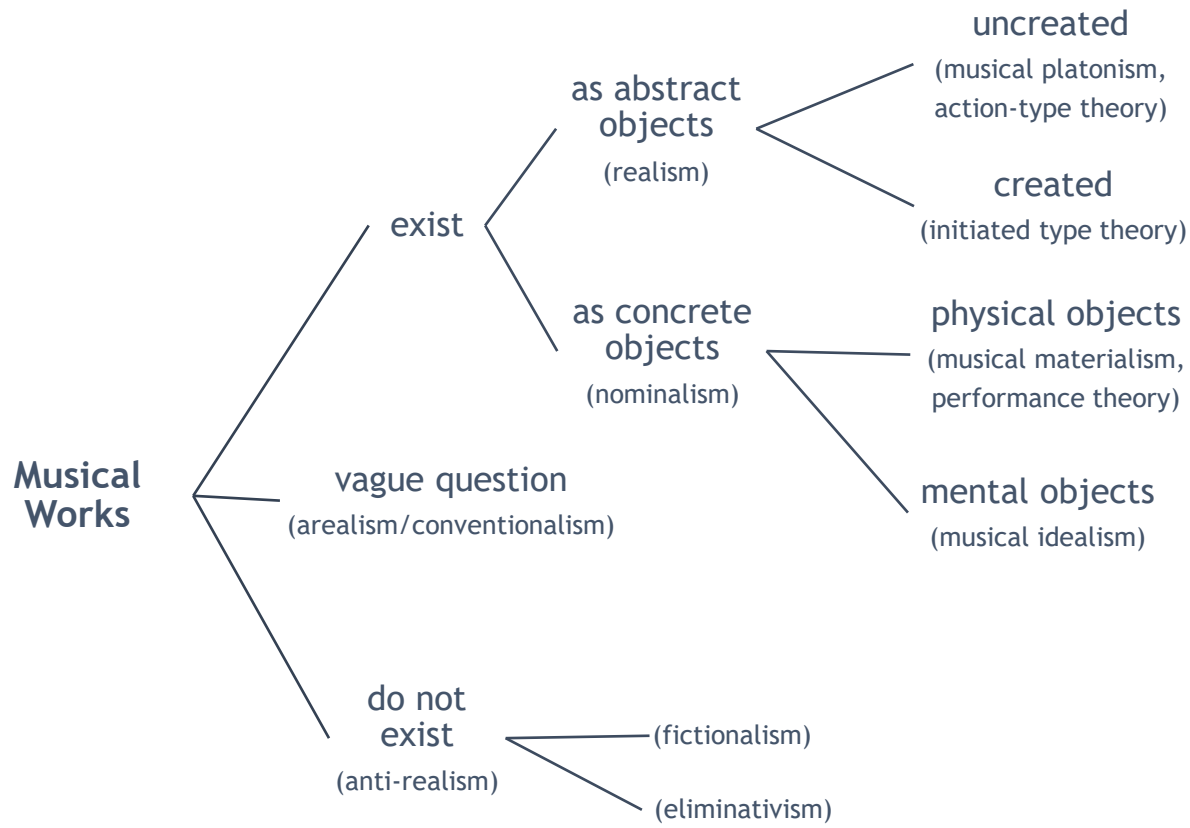

fig 1.1

[1] When I speak of "musical works" throughout my project, it should be understood that I am referring only to paradigmatic cases in the context of Western tradition or culture (e.g., Philip Glass's "Mad Rush," Beethoven's *Fifth Symphony*, etc.). However, while discussing the culture and tradition of Eastern music is a worthwhile endeavor, most of the discourse on musical ontology is centered around Western music.

Figure 1.1 shows (what I labeled as) realist, arealist, and non-realist (i.e., nominalism and anti-realism) responses to whether musical works exist, and to which ontological categories they belong.

With Figure 1.1 in mind, this chapter aims to sketch a picture of each view, as well as to provide their motivations and consequences.[2] While one could argue that I may be overextending myself here, I would counter that providing a comprehensive taxonomy is important for showing that musical ontology is not merely relegated to existing works, but also to those theorized as non-existing, vague, or perhaps contradictory. Therefore, in order to accomplish this goal, I will first investigate the views that hold to the existence of musical works. There are two views in this camp: abstract and concrete objects. Second, I will examine the arealist account, which claims that whether musical works exist or not is an incoherent question. In particular, I will analyze conventionalism and why there are no facts regarding the existence of musical works. Third, I will explore the various anti-realist[3] responses that claim that musical works do not exist. In this section, I will discuss two prominent views: fictionalism and eliminativism. Within each nuanced view, there are what I call "champions" that rise from the ranks to defend their camp. Specifically, this chapter will focus on each section's champion(s) and their contributions.

1.1 Musical Works Exist

Defenders in this camp believe that works are real and existing objects that can have multiple instances and/or manifestations. Though advocates subscribe to the existence of works, as well as their performances at different times and locations, they stand in clear opposition when it comes to classifying what type of objects musical pieces are.

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[2] While this chapter is an overview, *some* of these views will be elaborated upon in greater detail in other chapters.

[3] It is important to note that when I use the term "anti-realism," I am referring to theories that are concerned with meta-ontological issues within the discourse of musical metaphysics. The word "nominalism" will be used to denote the position (in contrast to realism) that there are no universals. Though philosophers sometimes conflate and/or associate anti-realism with nominalism, I will discuss them as two separate viewpoints within my taxonomy. Therefore, I shall use the label "anti-realism" to specify any account to which musical works do not exist.

To help illustrate this idea, Figure 1.2 depicts the relationship between the musical work (MW) and its genuine instances (i).[4]

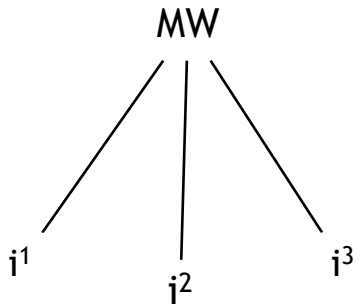

fig 1.2

On one side, there is realism. Realism claims that a musical work is a paradigmatic shareable type or property that is multiply exemplifiable, in the sense that they are identical in their tokens or instances. A shareable type or property is what is commonly understood as something that can be multiply exemplifiable (i.e., universal).[5] Additionally, some realists would claim that these works exist as abstract objects—usually described as objects that are eternal, non-spatial, independent of minds, and causally inert. However, as we will see with the initiated-type theory shown in 1.2.3, musical works under this view could have some causality and intentionality behind their creation. For the realist camp, we will see whether uninstantiated works exist, and if these types of works change as instances when they come into being.

In contrast to realism, a certain branch of nominalism holds that musical works exist as overarching concrete objects with identical multiple concrete manifestations. Nominalism is the view that there can be a general explanation in the fact that some particulars fall under predicates without appealing to

[4] Originally, Christopher Tillman used this figure to represent MW as concrete, and the manifestation being some variety of relation that can be realized between other instances (what he calls atoms). However, I use this figure in a neutral sense to show the relationship between the work and its genuine instances. Chris Tillman, "Musical Materialism," *British Journal of Aesthetics* 55, no. 1 (2011): 15.

[5] The discourse on multiply exemplifiable entities (i.e., universals) is vast and highly contentious. Diving into whether universals exist is a tall order, and goes beyond the scope of this topic. Later, in Chapters Two and Three, I will provide a cost benefit analysis on whether holding to universals can supply a simple way to answer Q1.

properties or types. This means that characteristic features that are (sometimes) shared between and among things can be parsed differently. Through a nominalist conception, a work of music is either taken to be a physical object, such as an inscription of a score or a performance, or rather as a mental object, such as thoughts or ideas (if one grants mental states as being physical states).

Let us begin by unpacking the realist accounts of works.

1.2 Realist Accounts

There are two main motivations for the realist to classify works as abstract objects. The first is that a piece of music can be repeatable. Compared to a painting (i.e., what Goodman refers to as autographic artworks), musical works can have multiple instances in different locations (i.e., what Goodman refers to as allographic artworks). If we were to take Kenneth Noland's painting *Ex-Nihilo*, and Philip Glass's musical piece "Mad Rush," one could argue for a clear difference in their reproduction. *Ex-Nihilo*, as a physical object, can only replicate through copies or forgings of this particular piece. The painting itself cannot genuinely reoccur as only one authentic piece was ever painted by Noland in 1958. "Mad Rush," however, cannot have multiple copies or forgings because it is not a physical object hanging in a museum or in the possession of a collector. Rather, pieces of music, like "Mad Rush," are the sort of entities where the musician(s) can make manifest a genuine instance identical to its first performance. Claiming objects as being multiply exemplifiable seems to answer the repeatability of musical works because it provides the nature of the relation holding between a work and its instance. The second motivation for the abstract object view is that it explains the audibility of a musical work. Nicholas Wolterstorff outline the two things that occur when listening to a symphony: "The symphony and a performance thereof."[6] The listener hears the symphony by listening to the performance. The belief of universals excels in this distinction because it enables indirect listening;

[6] Nicholas Wolterstorff, *Works and Worlds of Art*, (New York, NY: Oxford University Press, 1980), 41.

hearing a work by listening its performance is a matter of hearing a type of sound-event by virtue of hearing one of its instance pattern concrete sounds. Thus, the instance (e.g., the performance) can be heard, thereby enabling one's perceptual experience to pass through the instance, which relates the listener to the universal behind it.

With these two motivating features encompassing all of the realist positions, each nuanced view has its own specific elements that others do not. For the musical Platonist, their element is that works are discoverable entities. For action-type theory, the action of arriving at the specific work is discoverable. For adherents of initiated-type theory, their element is that works are abstract creations of some sort. Let us now assess each of these views in further detail, beginning with musical Platonism.

1.2.1 Uncreated: Musical Platonism

From the time of Plato to the present day, philosophers have believed in the existence of such nonphysical entities as numbers, properties, and propositions. Under the Platonic model, musical works are also treated as nonphysical entities (what I call "abstract objects"). This means that, since they have always existed, works of music are not dependent on anyone bringing them into existence.[7] To return to Figure 1.2, MW would be understood as the abstract object and (i^1), (i^2), and (i^3) would be concrete tokens or instances that instantiates the given MW.

As a result of holding to abstract objects, several challenges emerge which musical Platonists must address. While there may be a plethora of challenges to the Platonic account itself, there are three that seem prominent to this dissertation as they relate to music. First, musical works have often been regarded within the arts as creations, not discoveries. Abstract objects, by their very nature, cannot be created or brought into existence, because they have always existed eternally. Therefore, under this view, Beethoven's *Fifth Symphony*, for

[7] Some philosophers, such as Jerrold Levinson, consider there to be contingent abstract entities that are created.

example, existed before Beethoven was even a twinkle in his father's eye. Just as they seem to be created, musical works also appear to be destructible. This presents a second challenge for the musical Platonist. Since abstracta are eternal, no work can ever be destroyed. Thus, if everyone lost all memory or records (i.e., being uninstantiated) of the *Fifth Symphony*, it would still exist abstractly in what some call "Platonic heaven." Third, musical works possess physical and perceptual properties, whereas abstract objects do not. This means that these works can be heard and have properties attributed to them, such as "sounding beautiful." However, abstract objects cannot be heard and therefore cannot sound beautiful.

The most notable defenders of musical Platonism are Peter Kivy and Julian Dodd. Though there may be different ways to distinguish what kind of entity a piece of music might be, they both provide answers to these three major criticisms. In answering the first challenge of creation, both reply by claiming that considering musical works as a kind of discovery is not especially counterintuitive. Kivy specifically focuses on "invention," which he correlates with "creation." Invention, according to Kivy, is a part of discovery, and discovery is a part of invention.[8] Using Mozart as an example, he proposes that the musical composer is similar to the mathematician Gödel—who discovered the theorem which bears his name. Moreover, it may seem plausible to think of Mozart's works as "Platonic objects of some sort [(like Gödel's theorem)] and, therefore, things that could not have been brought into being."[9] Dodd directs his response to this challenge toward "creativity" being distinct from "creation." Indeed, for Dodd, when a composer discovers the criteria for correct performance, it involves some sort of conceptual creativity rather than creation itself. The analogy that he draws between musical composition and creative discoveries can also be made in mathematics and theoretical science.[10] One of Dodd's examples is Einstein's creative discovery of the facts that comprise the *Theory of Special Relativity*. Like Einstein, the musical composer also discovers certain arrangement of notes—conceived of through creative thinking—and uncovers certain works.

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[8] Peter Kivy, "Platonism in Music: A Kind of Defense," *Grazer Philosophische Studien* 19 (1983): 112.
[9] Ibid. 113.
[10] Julian Dodd, *Works of Music*, (New York, NY: Oxford University Press, 2007), 113.

Neither Kivy nor Dodd believe the second challenge of the indestructability of musical works to be especially worrisome. If anything, if works are not concrete objects, what would constitute their destruction?[11] While initiated-type theorists, such as Levinson, seem puzzled by the question of destructibility, traditional Platonists have a straightforward response by claiming them as eternal and indestructible. Furthermore, this criticism does not seem to harm or indeed affect any of the concrete tokens or instances of the work. Indeed, the musical Platonist viewpoint seems somewhat romanticized in thinking of music as everlasting entities.

The third challenge, which accounts for physical and perceptual properties, has been answered by Kivy. When one says, "I hear the music," Kivy claims that they are actually hearing a sound event (what he calls a performance) of the music, not the universal itself. Thus, the performance might be the instantiation of the perceptual properties.[12] However, Kivy acknowledges that there may be more to say about certain properties of works having audible properties, such as the passion of Haydn's Sturm und Drang symphonies or the unity of the Goldberg Variations.[13] While these properties of musical passion and unity may belong to the works themselves, they are not audible in the way that the token performances are. For example, when someone says, "*The Sixth Symphony of Tchaikovsky* is passionate," they are predicating the universal passion on the work. Put differently, when one says a work of music is "passionate," one is not only talking of its correct performance, but also commenting on something about the work itself. Consequently, in order to have a genuine instance (i.e., performance) of *The Sixth Symphony of Tchaikovsky*, it must be passionate.

While these rejoinders that I have briefly mentioned from Kivy and Dodd may be in need of further explication, I simply wanted to show the reader that the champions of musical Platonism can respond to these challenges and objections.

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[11] Ibid. 111.
[12] Kivy, "Platonism in Music: A Kind of Defense," 110.
[13] Ibid.

In Chapters Three and Five, I will further expound on how a Platonist could answer these challenges. For the moment, let us shift our focus to Dodd's Platonist account in terms of musical works.

Dodd's Platonist Type Theory:

Dodd's musical Platonism seems to be the main contender when it comes to viewing musical works as uncreated objects. He advanced a Platonist-type theory that specifically categorizes musical works as abstract types with their token occurrences. In order to comprehend Dodd's theory, I will first show the similarities and dissimilarities of types and classes, which in turn will show the characteristics a type has. Next, I will discuss the ontological similarities and dissimilarities of types and properties. For Dodd—and, indeed, most of the musical realists—types and properties differ from one another. Third, I will explain that, if types are the sort of entities pieces of music might be, then they should be viewed as normative (norm-types). Lastly, I will briefly describe why Dodd endorses type theory over what has been commonly referred to as property theory. In particular, I will examine two semantical advantages. Let us start with types and classes.

The sort of types that Dodd advocates for are akin to a common understanding of classes. First, types are like classes in that tokens/examples are members of their types. Similar to classes being entities to which members belong, abstract entities are types which members belong to, and the relation between a type and its token is a primitive relation called a type/token relation. A second similarity to classes is that there are types of types (e.g., the type "mammal" includes the type "penguin"), just as there are classes of classes. Although similar, two prominent differences exist between types and classes. The first concerns membership. J.P. Moreland aptly stated that, "No class could have had different members from the ones it does have since the identity conditions for a class involve having just the members it does, in fact, have."[14] For instance, there being actually more penguins than previously thought would only change the class

[14] Moreland was unpacking Nicholas Wolterstorff's kind/case theory, which shares similarities with Dodd's type/token theory. Thus, I found Moreland's distinction to be helpful for comprehending Dodd's view of types.; J.P. Moreland, *Universals,* (McGill: Queen's University Press, 2001), 75.

"penguin," but not its type. The second difference is that nonidentical types may be coextensive in their membership. For example, the Chatham Penguin and the Tyrannosaurus Rex are different types that have the same number of members (i.e., zero). Moreover, while the class of even prime numbers is identical to that of natural numbers greater than one but less than three, they are different types.

Another distinction lies in types and properties. Although some philosophers conflate the two, type-theorists seem to draw a metaphysical distinction between types and properties. This means that, for Dodd, properties and objects (individuals) is one distinction, and types and tokens another. How are these distinctions related? Tokens are straightforwardly objects (individuals/particulars). What are types? Objects or properties? They are like objects in that they are similar to classes, but also like properties as they can multiply and their identity is not settled by the tokens they are types of. For example, when one thinks of a type, such as "The Emperor Penguin," they are thinking of it as if "The Emperor Penguin" were a token. On the other hand, when one is thinking of a property, like "being an emperor penguin," one does not think of the entity as a token, but rather as an instance. Other ways to showcase the dissimilarities between these two entities include:

(a) types have tokens, properties have instances;

(b) performances (i.e., sound events) are tokens which belong to types, while performances are only instantiating properties;

(c) types are a sort of collection of tokens, properties are not collections of anything.

Moreover, there is a further dissimilarity that should be highlighted between types and properties—and one that Dodd seems to acknowledge solely. That is, properties, for Dodd, exist in the immanent sense, whereas types exist in the transcendent sense.[15]

Dodd admits types over properties when it comes to classifying works of music because he believes that the former have two semantical advantages lacking

[15] Julian Dodd, "Musical Works as Eternal Types," *British Journal of Aesthetics* 40, no. 4 (2000): 436.

in the latter. For Dodd, the first advantage of types is examining attributing expressions, like "The Emperor Penguin," "Clair de Lune," or "*The Portland Trailblazers*," are understood as names and not predicates, nor singular terms thereof.[16] Instead, musical works, such as "Clair de Lune," are usually understood as a name that only appears in relational predicates, (e.g., "is a recording of 'Claire de Lune'"). Therefore, types over properties are favorable because they seem to express what an individual name conveys (or an abstract counterpart to the instantiated particulars), rather than expressing what is meant by being some formulated singular term. The second reason for Dodd's favoring type-referring over property-referring expressions is because a work and its performances display a pattern of, what Richard Wollheim calls, "transmitted predication."[17] This relation is more aligned to the type/token model than the property/instance model.[18] Predicate transmission entails that, if predicates are true of a token in virtue of that token's being a token of a type, then those predicates are also true of the type. Accordingly, "is loud" and "is aggressive" are both true of The Stooges' song "Search and Destroy," in addition to being true of its tokens. While this principle of predicate transmission seems to work with the type/token model, it does not for the particulars and their properties. Namely, we do not comprehend loudness as itself being loud.

Another key feature regarding such entities as musical types is that they should be understood as norm-types. Norm-types are certain types that can have either properly- or improperly-formed tokens. For instance, the type "blue thing" does not fall under a norm-type because it cannot have improperly formed examples. Artworks, on the other hand, are classified as norm-types. Examples of norm-types include screenplays and scripts, which can have both correct or incorrect copies, and various symphonies, which can have correct and incorrect performances. As long as the performance "does not lack too many"[19] of the

[16] Dodd, *Works of Music*, 17.
[17] Richard Wollheim, *Arts and its Object*. (Cambridge, MA: Cambridge University Press, 1968), 92-93.
[18] Dodd, *Works of Music*, 17.
[19] Ibid. 32.

properties normative within the type, it can count as a genuine performance of the work.

To conclude, Dodd's type-theory seems to be the most prominent when affirming or refuting musical Platonism. His contribution also exposes that type-theory appears to be the only realist option on the market. Even such realists as Levinson—who disagrees with the nature of Doddian types—also affirms the general principles of type-theory as being "basically correct."[20] In Chapter Three, I will present (and endorse) an alternative model that favors not only Platonism, but also property- over type-theory.

1.2.2 Uncreated: Action-Type Theory

Gregory Currie's action-type theory is in its own sub-section when it comes to works being uncreated. In order to more clearly elucidate action-types, it is worth mentioning the broader sphere of action theory. In its simplest form (as it relates to music), action theory identifies works of music as sorts of action(s), namely, actions of composition by their composers. Embracing the broader context of this theory may seem like a moderate approach, because composers, musicologist, as and ontologists alike all believe in some variety of compositional actions. Additionally, a theory founded on actions has a richer comprehension of identifying the originality of a piece in its musico-historical context. By appealing to the action of the composer, the musico-historical context of a work can be specified whenever the composer initially performs the composition. Thus, the action of composing and performing becomes as vital as the musical piece itself.

Currie's approach to action theory is specifically realist in nature. According to Currie, action-types are understood more along the line as types that can have multiple tokens conceived as the particular actions performed by particular occasions by particular people.[21] However, a musical work (i.e., abstract music

[20] Jerrold Levinson, *Music, Art and Metaphysics*, (New York, NY: Oxford University Press, 1991), 64.
[21] Gregory Currie, *An Ontology of Art*, (New York, NY: St. Martin's Press), 7.

structure) should not be regarded as the abstract type (like Dodd) which has its token manifestations. Instead, the actions culminating in the abstract music structure should be considered the actual type. Figure 1.2 provides a further way to comprehend action-types. MW in this case would be the action-type, while (i^1), (i^2), and (i^3) would be the particular actions performed at a certain time by certain musician(s).

Currie's formulation of his theory was heavily influenced by Jaegwon Kim. Specifically, Kim's idea of individuating events, which has three key elements: an agent, a property, and a time. Currie's idea of an action-type is similar to Kim's conception of events, and consists of four key elements: (i) a composer, (ii) discovering a sonic structure by, (iii) means of arriving on a heuristic path[22], (iv) at a time t. As a result, the composer is viewed as a discoverer of a musical structure, which implies that structures are entities independent of minds and preexist the act of composition. Furthermore, since musical structures are eternal, such variables as the composer's identity and the time of the composition are inessential elements. Conversely, the musical structure and the discovery of the heuristic path are essential elements of the work.

To clarify just how actions can become types, let us use an example taken from trailblazing a path to an undiscovered waterfall. The core of trailblazing is discovering a location that no one has yet been to (in our case, a waterfall). The trailblazer could either intentionally or unintentionally be looking for a waterfall that others might appreciate. Once the discovery is made, the trailblazer begins to make a track heading from the waterfall towards civilization. Lastly, once the path has been set, others will be able to follow it, and thus also appreciate the waterfall. Like the trailblazer, the composer discovers certain musical structures. Once the composer's heuristic path is laid out from the act of composition—because the work can be composed without being played—other composers and musicians alike can token those actions.

[22] *Heuristic path* is a term originally used by Imre Lakatos to explain the processes of how scientists arrive at certain theories. Similarly, Currie uses this term to explain, "the facts, methods and assumptions employed, including analogical models, mathematical techniques and metaphysical ideas." Gregory Currie, *An Ontology of Art*, 68.

While action-type theory may sound appealing for realists concerned with the act of composition, the problems the view encounters might result in a path too steep to traverse. These problems were initially raised by David Davies, who embraced a nominalistic version of action theory, which he labelled performance theory. The three major criticisms of Currie's idea focus on structure, heuristic path, and action-type. Regarding Currie's idea of structure (i.e., a pattern) in the broader context of artworks, affirming these structure types may seem vague within certain artistic mediums, such as paintings. Davies questioned how one could determine the visual structure of certain paintings, since they could have the finest differences in terms of compositional density. However, while this criticism does not necessarily hinder music (since most theorists believe music to have a structure or pattern), this issues seems pertinent to other artistic mediums. The second criticism relates to how Currie uses a heuristic path compared to its original use by Lakatos. Davies noted that Lakatos's concern in articulating the idea of a heuristic path was epistemological—to help develop a philosophical model of scientific rationality. On the other hand, Currie proposes building a heuristic path into the individuation and identity of artworks, which becomes problematic due to Currie's lack of clarification.[23] Lastly, the category of action-type, and how this can be ontologically cashed out, as it were, has also been criticized.[24] From a realist perspective, these types exist independent from their tokens, which Davies calls an unfortunate consequence in the belief of a large number of undiscovered artworks, as well as diminishing the interest of tokens. From a nominalist view, an action-type can only exist if it is being instantiated or tokened, which is similar to a natural kind. The issue with comprehending action-types from a nominalistic perspective is that, essentially, it would result in there being only action-tokens, not action-types. Once more, this might not seem to be an issue for Currie, since he most likely holds that both properties and action-types could exist uninstantiated in some abstract platonic, or third, realm.

[23] David Davies, *Art as Performance*, (Malden, MA: Blackwell Press, 2004), 133.
[24] Davies's third criticism is not specific to Currie's view *per se*, but rather a criticism of the realist position in general. Namely, one would need to endorse abstracta (in this case action-types) in their ontology, which Davies thinks to be erroneous.

In conclusion, Currie's action-type theory seems innovative due to its harmonization of realist types and the actions of composers. Action-type theory, as a whole, is a plausible option within the realist camp. Despite this, it appears to be the road less traveled by other Platonists. Moreover, as Currie's hypothesis relates to broader area action-theory, Davies performance theory seems more prevalent when discussing works as sorts of actions. While it may be less-favored by Platonist and action-theorist alike, it nevertheless captures the intuition of how vital the act of composition is within music. Later, in Section 1.3.2, I will discuss Davies's action-theory, which nominalizes works of music as particular concrete actions that exist without there being any abstract action-types.

1.2.3 Created: Initiated Type Theory

Placed under abstract objects, initiated-types—which also bear a similar moniker to "abstract artifacts"—provide a non-traditional explanation of abstracta. Instead of comprehending abstracta as eternal and causally inert, initiated types claim that types, such as the *Fifth Symphony*, are objects that are non-spatial and non-temporal entities brought into being by human activity. Thus, the activity of the composer is central and has been described as an authoritative condition, whereby the object is a musical work if and only if it has a composer. With this somewhat offshoot version of type-theory, its adherents attempt to harmonize the creation aspect of music while preserving an abstractist model.

Although there is a consensus on creation with this view, there also seems to be a certain level of disagreement on whether created entities are capable of destruction. Namely, there are two routes available to the creationist. The first is that there is symmetry between creation and destruction. Amie Thomasson, who endorsed a version of abstract artifacts, claimed that certain artworks can be brought into existence by human activity, and that they are also capable of change and destruction.[25] Therefore, if all memory and physical records where lost, the abstract artifact would cease to exist. The second route is held by Jerrold

[25] Amie Thomasson, "The Ontology of Art," In *The Blackwell Guide to Aesthetics*, ed. Peter Kivy, (Malden, MA: Wiley-Blackwell, 2004), 89-90.

Levinson,[26] who favored the view that, once the work is brought into existence, it cannot be destroyed. Specifically, once an abstract structure has been indicated by an agent, then it might just inhabit the abstract/Platonic/third realm for eternity. While Levinson has some "residual pull" towards this view, further clarification of the indestructability of a work is wanting.

Regardless of the dispute over destructibility, there are several champions of the creationist model.[27] Levinson could well be considered as the main champion who has contributed the most in the field of music. We will now examined his initiated-type model and the challenges facing it.

Levinson's Initiated-Type Account:

Like Dodd, Levinson admits types into his ontology. What distinguishes Levinson from Dodd is that he believes there to be two kinds of types. The first he calls "implicit" types, which are abstract structures not brought into being by human actions and intentions. He provides the following examples of implicit types: "geometrical figures, family relationships, strings of words, series of moves in chess, ways of placing five balls in three bins."[28] However, Levinson does believe there to be certain implicit types that are musically essential. These implicit musical types are the sound sequences determined by the composer, such as an arrangement of notes, melodies, and harmonies.

Since an implicit type is a pre-existing entity, Levinson argues that musical works do not fall under this variety of type. Rather, he believes there to be a second type that has more exhaustive existence conditions than an implicit type. The second type that seems more aptly suited to musical works is what he calls "initiated types." For an initiated type to be brought into existence (not *ex-nihilo*), there needs to be an intentional act that indicates the implicit types. This act of "indication" is attained when the composer/musician(s) exemplifies or

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[26] Jerrold Levinson. *Music Art and Metaphysics*, 263.
[27] Roman Ingarden, *The Ontology of the Work of Art*. Trans. Raymond Meyers with John T. Goldthwait. (Athens, Ohio: Ohio Press, 1989).; Amie Thomasson, *Fiction and Metaphysics*. (Cambridge: Cambridge University Press, 1999).; Richard Wollheim, *Art and its Objects*. 2nd ed. (Cambridge: Cambridge University Press, 1980).
[28] Levinson, *Music, Art, and Metaphysics*, 80.

instantiates the work through a performance at a specific time. Therefore, musical works, for Levinson, ought to be recognized as an indicated structure, not an implicit sound structure.

In his book *Music, Art, and Metaphysics*, Levinson outlines three requirements, as well as one proposal, which distinguishes a musical work (indicated structure) from sound structures (implicit types). First, a musical work needs a creator, which he terms the creatability requirement:

> (*Cre*) "Musical works must be such that they do not exist prior to the composer's compositional activity but are brought into existence by that activity."[29]

The compositional activity of the composer shown in this foundational requirement implies several things. First, (*Cre*) is not possible without agency. Thus, (*Cre*) implies the (aforementioned) authoritative condition. Second, compositional activity represents some sort of intentionality for the work's existence. Ergo, (*Cre*) implies a dependence condition where the existence of the musical work depends on the composer's intention to create a new kind of abstract structure. Third, (*Cre*) entails dependence on primitive universals. Let us take Philip Glass' musical work "Mad Rush" by way of an example. Glass did not discover this musical work in some kind of Platonic heaven. Rather, he created the piece from building upon already existing abstract structures. Metaphorically speaking, these primitive objects (i.e., implicit types) are the "building blocks" of such musical works that are non-spatially existing objects, such as harmonies, and the notes C and Eb, etc. Glass' compositional activity of specifying these implicit types are what bring this unique abstract structure ("Mad Rush") into existence. Lastly, (*Cre*) shows that musical works should not be understood as merely a mental or conceptual entity, but rather a creation of a complex structure that can be brought into existence once it is performed by musicians, or "machines."[30]

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[29] Ibid. 68.

[30] "Machines" in this context refers to units that can play pre-recorded works, such as turn-tables, car stereos, cd/tape players, etc.

With creatability being the foundational requirement for comprehending the "godlike activity"[31] of a composer in terms of their music, the second requirement is what he labels fine individuation:

> (*Ind*) "Musical works must be such that composers composing in different musico-historical contexts who determine identical sound structures invariably compose distinct musical works."[32]

Primarily, this requirement concerns answering what is known as the doppelgänger effect, which is when two composers produce works identical in notation and structure. In order to preserve (*Cre*) and avoid any sort of discovery, this requirement explicates why these works should be regarded as different—different in the musico-historical context, whereby the composer has distinct aesthetic and artistic attributes attached to the musical piece.[33] The musico-historical context also involves the following areas: (a) cultural, social, and political history; (b) the musical development up to the time when the piece was created; (c) the prevailing musical style of that time; (d) musical influences at the time; (e) musical activities; (f) the composer's personal style; (g) the repertoire of the time; (h) the composer's oeuvre; and (i) the musical influences operating on the composer at the time. With this context in mind, Levinson believes that these variables enable a musical work to be one-of-a-kind and thus differentiated from any other.

Levinson's third requirement is what he calls the inclusion of performance means:

> (*Per*) "Musical works must be such that specific means of performance or sound production are integral to them."[34]

If (*Ind*) requires the musico-historical context of a work, and (*Per*) reinforces (*Ind*) by requiring the specific instrumentation and performance as essential. Let us again take Glass' "Mad Rush" for understanding the implication of (*Per*). When Glass brought "Mad Rush" into existence, his performance consisted of one piano

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[31] Levinson used the term "godlike activity" to describe the significance and value that creating has on musical compositions, and any phrases (he mentions "Ecclesiastes") used otherwise, diminishes the absolute newness of the composition. Levinson, *Music, Art, and Metaphysics*, 67.
[32] Ibid. 73.
[33] Ibid. 68-69.
[34] Ibid. 78.

playing with certain accentuations. Thus, in order to instantiate, or token, "Mad Rush," one would need to use a piano and perform the piece with Glass's same accentuations. If this is not done, then "Mad Rush" is not instantiated. Therefore, in the case of the two guitar or synthesizer arrangement of "Mad Rush," the instrumentation would not be met. Similarly, should a pianist perform "Mad Rush" with different accentuations, the performance would not be met.

Levinson's fourth requirement is not necessarily a requirement, but a proposal of the right way to individuate musical works. He proposes that, in order to comprehend the three requirements, one must recognize a piece of music as a complicated entity.[35] The reason for a piece's complicated nature is that it consists of two structures: the sound and the performing-means (S/PM). He offers the following:

(*MW*) "S/PM structure-as-indicated-by-X-at-t."[36]

With (*MW*), it seems that there is a personal factor (composer(s)) and a temporal one (time of composition). These two factors serve to fix a special context to the work. Should these factors be dissimilar to the "original," then the piece would be something entirely distinct.

Overall, Levinson's initiated-types seem a promising option for any realist that wishes to hold to abstract objects and the intuition that a piece of music can be created. Some philosophers[37] have further this by suing initiated-types as a model from which to modify their own nuanced account of creatable types. Nevertheless, the concept of initiated-types faces its own unique challenges.

Challenges with Initiated-Types:

There are two main objections that initiated-types face. First, they seem to be metaphysically obscure. Currie first raised this issue by critiquing Levinson's proposed creation distinction.[38] With the first distinction, the composer C

[35] Ibid. 79.
[36] Ibid. 7.
[37] Robert Howell in particular proposes property associates which incorporate Levinson's initiated-types.
[38] Gregory Currie. *An Ontology of Art*, 58.

discovers a pre-existing sound structure S. On the second distinction, C then creates a musical work S', which composes S-as-indicated-by-C-at-t. However, how is one to comprehend what exactly S' is by adding an historical condition? By way of example, Currie uses Columbus's discovery of the Americas. Indeed, Currie asked whether America-as-discovered-by-Columbus-at-t is a new created entity. Currie adds,

> "If Levinson's argument establishes the existence of indicated structures in the arts, they seem to establish their existence in a number of other areas where they are not wanted. And in no sense do we have a grip on what these entities might be."[39]

Similar to Currie, Stefano Predelli[40] raised a second challenge concerning the inadequacy of relations with indications. The issue is that it is not always the case when an agent enters a relationship with an object at a certain time that they bring new objects into existence. For instance, no one would believe that, when writing the number seven, they thereby bring a new object into existence, that is, the number seven-as-indicated-by-X-at-t. Thus, Predelli sought to highlight vagueness on Levinson's part in terms of the relation of indication, and that further clarification is needed.

Overall, Levinson's initiated-type theory may well be attractive to the Platonist who wishes both to endorse the temporal existential asymmetry implied by creation claims and validate abstract objects. While Levinson's view seems convoluted when one contemplates abstracta being created, it does appear to be the only creationist game in town for the realist. In Chapter Two, I will provide an Aristotelian account that can provide a less convoluted explanation of musical works being created and multiply exemplifiable.

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[39] Ibid.
[40] Stefano Predelli. "Musical Ontology and the Argument from Creation," *British Journal of Aesthetics* 41, no. 3 (2001): 289.

1.3 Nominalist Accounts

While musical realism endorses an abundance of non-spatiotemporal objects in their ontology, musical nominalism[41] prefers simplicity (something akin to Occam's Razor) regarding the objects that ought to be admitted to one's ontology. What makes this account simplistic as well as attractive is that it has a rooted conditional that rids supernatural entities, such as abstract objects. As such, instead of endorsing a kind of mysterious universal as the character grounder of an object, musical nominalists ground the character of a musical work with its collection or set of concrete particulars. However, whether those particulars are identified as physical or mental objects remains disputed in this camp).

The attractiveness of this view is that the theory is in tandem with what is physically attainable. Chris Tillman, a defender of musical nominalism (what he labels "musical materialism") argued that, if there are any presumptions for the material over the abstract, then one should reject any type of musical abstractionism.[42] This sentiment seems to be essential to most nominalists (and desired by certain realists[43]) because, if there is an idea that could be taken for grounding an object to something material, then that is where the conversation should start from. Put differently, our best scientific theories should inform us on what does and does not exist. Since our strongest scientific theories can justify belief in the existence of musical works, we should thus hold said works to exist. Conversely, if our best theories do not provide this justification, then we should be wary in admitting them.

While the allure of having fewer objects, as well as justification for the existence of works, may seem to be a strength of nominalism, there are also several motivations in endorsing musical works as concrete objects. First, there is

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[41] I am using the term "musical nominalism" in the broad sense to encompass views that do not subscribe to abstract objects or any variety of realism.
[42] Chris Tillman, "Musical Materialism," *British Journal of Aesthetics* 55, no. 1 (2011): 28.
[43] Peter van Inwagen, a prominent (but also reluctant) realist, confessed his discomfort with allowing abstract objects in his ontology by stating, "it would be better not to believe in abstract objects if we could get away with it." He further added elsewhere that he would "like to be a nominalist." Peter Van Inwagen, "A Theory of Properties," In *Oxford Studies in Metaphysics Vol. 1*, ed. Dean Zimmerman (Oxford, NY: Clarendon Press, 2004), 107.

no dispute or mystery to the central intuition that artists/composers create their own unique works. Under this view, for any artifact to come into existence, an agent would need to either think of, arrange, or perform an artwork to make it manifest. Compared to realism, there is no added explication on a work's creation or whether there can be any causal interaction between abstracta. Second, works are temporally located in any genuine copies of them. Whether such a work is wholly or partially located in a specific place is up for discussion.[44] Third, assuming that musical manifestations are performance, musical works are audible.[45] Whether the musical work is heard in toto, however, depends on the route a musical nominalist takes. If one holds to musical perdurantism, an audience member does not hear the whole work, but rather one piece of it. In this case, only by attending and listening to every performance can an audience member hear the entirety of a work. Musical endurantism, however, holds that an audience member hears the entirety of work in that instance upon hearing a piece of music.

The motivating factors and a brief synopsis of musical nominalism can take two major routes in terms of classifying musical works. I have previously depicted these routes (i.e., physical and mental objects) in Figure 1.1. Let us begin by considering pieces of music as physical objects.

1.3.1 Physical Objects: Musical Materialism

In Figure 1.1, the first option in the "physical objects" menu is musical materialism, as propounded by Nelson Goodman, who was one of the earliest philosophers to discuss the categorization of music. Goodman, specifically, claimed that, since musical works are allographic (i.e., having multiple concrete manifestations) and not autographic (i.e., identified with a single individual), they ought to be defined by their written scores. Namely, there needs to be a written

[44] Chris Tillman breaks down the cost–benefits of musical perdurantism versus musical endurantism. To avoid certain objections from "musical abstractionism," he concluded that the latter is preferable to the former. Chris Tillman, "Musical Materialism," 29.
[45] The audibility motivation does not work with the mental objects model, which I tied within the concrete objects section in Figure 1.1. While the work is concrete, in the composer's conception, that concept does not emit anything audible for anyone to hear. The audibility motivation also does not apply to Goodman's approach, which defines the musical work by its written score. However, written scores cannot be audible.

musical score that specifies notation that must meet a certain criteria or desiderata in order for there to be multiple genuine instances of a work. Any deviation from the desiderata would lead to there being no way of identifying a work as allographic. To relate this to Figure 1.2, MW in this case would be the written score, whilst the performances (i^1, i^2, i^3), if played correctly, are the genuine instances or manifestations of the work.

Since Goodman, there has been somewhat of a shift from identifying works with their written scores to works coinciding with either their concrete performances, recordings, or a blend of multiple concrete objects. Contemporary materialists in musical ontology have not followed in Goodman's footsteps due to the rigidness he placed on a performance being a genuine instance of the work. For example, if the Glasgow Philharmonic attempted Beethoven's *Fifth Symphony* and one wrong note was played by a musician (let us say the third chair violinist), then the Glasgow Phil would have failed to manifest Beethoven's *Fifth Symphony*. For Goodman, this failure was due to not having flawlessly matched the written score without any discrepancies (this would also include notes that have been added to or omitted from the performance).

Tillman, one of the recent defenders of musical materialism, argued that musical works ought to accord with their performances (i.e., concrete manifestations). Moreover, since performances coincide with the work itself, they persist. Namely, musical works extend through space having different spatial parts in different locations. Tillman has offered three possible routes a musical materialist could take when it comes to persistence. The first is what he calls musical perdurantism, which understands a work of music as being a thing that persists as a melding (what he calls fusion) of all the concrete sound occurrences/events. For instance, Beethoven's *Fifth Symphony*, under this view, would simply be the fusion of all the symphony's sound occurrences. Each sound occurrence of the *Fifth Symphony* is thus a part of the musical work written by Beethoven. The second route concerns musical endurantism, which holds that a musical work can persist as a concrete object by occupying distinct spatiotemporal regions without occupying their union. In particular, concrete sound events (what

he calls its atoms), are wholly present in each concrete sound event itself. The third route is musical spannerism, which is the notion that a musical work is comparable with its concrete sound events, but not indistinguishable from them. What makes spannerism peculiar, or "weird,"[46] when compared to perdurantism is that concrete sound events of a given work are not be understood as the work's parts.

Since spannerism appears to be the route less traveled regarding accounting for a work's persistence, I will focus my attention on certain challenges that perdurance and endurance encounter when it comes to music. The first challenge I have previously addressed, namely an audience member's ability to hear a piece of music in toto. Dodd raised this objection to show that, if performances are just temporal parts of a work, how does an audience member hear its entirety?[47] With the perdurance route, an audience member could not hear the entirety because the work is just the collection of all of its parts. For example, if my wife, Caitlyn, were to say that she loved Taylor Swift's song "Shake it Off" from start-to-finish, a defender of perdurantism should be in disbelief. The reason for this is that they would question whether Caitlyn was there when Swift performed the song for the first time, as well as her ability to travel to all the locations and times to hear all of the sound occurrences of "Shake it Off." Of course, this example may be somewhat gauche, yet it does serve to demonstrate the challenges in understanding a sound event as one single part of the musical work. Additionally, another implication with the perdurance in music is that the composer (i.e., the initial creator) would not be able to hear the completion of their own work, unless they were able to outlive its own destruction.[48]

While hearing the entirety of the work seems to be an issue with musical perdurantism, musical endurantism (favored by Tillman) seems unscathed.

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[46] Tillman does offer a spanner alternative, but eventually considers it peculiar and difficult to provide an illustration that seems to benefit the view. Chris Tillman, "Musical Materialism," 19; fn 27.

[47] Julian Dodd. *Works of Music*, 21.

[48] Caplan and Matheson are the main defenders of musical perdurantism, and have addressed Dodd's objection and other issues with this view. Ben Caplan and Carl Matheson, "Defending Musical Perdurantism," *British Journal of Aesthetics* 46, no. 1, (2006): 59-69.

Endurantism is committed to the claim that works are multiply located and identical to their performances. While perdurantists think performances have spatial and temporal parts, endurantists believe them only to have the former.

However, the challenges for endurantism, and indeed all other forms of materialism, still have serious implications. Specifically, one challenge concerns claims made for possible performances. Andrew Kania addressed by explaining that nominalist approaches claim that works can be paraphrased into claims about sets and possible performances. Indeed, this also contains most performances of a certain work, including even possible ones in which several wrong or omitted notes may appear.[49] Therefore, the challenge seems to be how a materialist schema that paraphrases could make sense of the supposition that certain works, such as "Clair de Lune," contains several wrong or omitted notes. Solving this may not be as difficult as it appears, as all that is needed is to distinguish the work as independent of its instances. While Kania has argued that this solution may seem "unavailable to the nominalist,"[50] a Goodmanian style approach (or something similar) might resolve this issue due to viewing the musical score as an object independent from its various performances.

1.3.2 Physical Objects: Performance Theory

The second account that falls under physical objects in Figure 1.1 is what has been coined performance theory. Defended by David Davies, this theory identifies works of music as sorts of act(s), namely, actions of composition by their composers. This differs from Currie's action-type theory in two primary ways. First, musical works can only be action-tokens, since there is no abstract realm to house action-types. In other words, the physical action of a composer is what makes an instance of a work manifest. Second, Davies rejects Currie's "heuristic path" as being a key feature for creative performance. Instead, for Davies, creative performance is best

[49] Kania, Andrew, "The Philosophy of Music," *The Stanford Encyclopedia of Philosophy* (Fall 2017 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/fall2017/entries/music/>.
[50] Ibid.

understood in terms of intentional manipulation of certain materials (e.g., marble, paints, sounds, etc.).

Though dissimilar to Currie, the appealing aspects of Davies's performance theory runs fairly similar to the action-type model. One of the benefits of this view is its rich comprehension of the originality of a piece in its musico-historical context and the importance of compositional actions. In particular, Davies's theory seems more enticing than Currie's for several reasons. First, performance theory only grounds the act of composition to the particular concrete manifestation, meaning that there is no need to add some abstract action-type to be the character grounder of the action. Second, performance theory understands the act of composition as a creation and not a discovery. Hence, discovering some non-spatial action-type ceases to be a requirement, and the commonsense act of creating becomes obtainable.

In order to more deeply understand Davies's particular brand of action theory, we must first briefly analyze the view presented in his book, *Art as Performance*[51]. Here, Davies sets out to defend the notion that artworks should not be regarded as a "work-product" (the overall outcome or product of a performance), but rather the artwork is the performance itself, which helps specify a particular work-product. The work-product is merely the evidence which helps the individual appreciator comprehend the artistic vehicle, content, and medium of the performance (i.e., what Davies calls "work-focus"). Davies regards the artistic vehicle as the action in which the artist is manipulating certain materials of a given physical artform. For example, the artistic vehicle for music is the way in which the composer intentionally manipulates certain sounds. Artistic content is described as the meaningful or expressive features realized in the specific vehicle. Lastly, the artistic medium would be the particular set of understandings shared by the artist and audience that helps articulate those particular statements or contents. Davies used this sort of terminology for describing his account in order to help build a cumulative case for performance

[51] David Davies, *Art as Performance*, (Malden, MA: Wiley-Blackwell, 2004).

theory against other rival ontologies, such as (what he calls) structuralism and contextualism.

When it comes to the specific artform of music, Davies's theory seems somewhat fitting and straightforward in that it views the act of the performance as the instance of the work itself. Music is a performative artform that has an individual occurrence/event. Thus, making the work's instance be the action of the composer seems somewhat plausible. However, making this type of maneuver may seem counter-intuitive to the way one thinks of an instance of music. The reasoning for going against pre-theoretical intuitions is that most may think of the performance (work-product) as the instance of the work and not the action (work-focus) of the composer. As an example, let us again consider Glass' "Mad Rush." For Davies, an instance of "Mad Rush" would not be the overall sequences or patterns of sounds, or indeed, even audible to the listener. Instead, an instance of "Mad Rush" for the appreciator would be the composer's actions for achieving the outcome of a performance.

In sum, Davies's performance theory seems to have some puzzling consequences when we think of an instance of a piece of music. However, he provides a rich account that takes into consideration the particular action of the composer/artist. By focusing only on action tokens—the composer's action within a performance—Davies aptly represents and defends a coherent and straightforward nominalized action theory.

1.3.3 Mental Objects: Musical Idealism

The second account that falls under the concrete object category is the view of musical works as mental objects or ideas. Broadly speaking, this view claims that mental states are usually seen as physical states, thereby making ideas concrete particulars. As a general metaphysical approach, idealism's rich history has enabled its adherent to propose a strong focus on the mental aspect of how we contemplate ontology. The motivating factors behind this theory (as it relates to musical ontology) is the intuitive appeal of works being mentally created and

composed by their composers (i.e., agents). For instance, when my wife Caitlyn composes pieces of music on her ukulele, she has ideas involving pushing and plucking strings, formalizing melodies with her vocals, and so on. What her various mental compositional activities do is permeate and give rise to new musical "creations," as well as pinpoint the origin/genesis of the concrete manifestation at a certain time, at a certain location, and for a certain lifespan. Accordingly, under this view, MW of Figure 1.2 would be the mental object, and (i^1), (i^2), and (i^3) would be its concrete manifestations (performance, recording, or thinking of the work).

The difficulties of this view are twofold. First, if musical works are mental objects, then musical works cannot be made public and shareable by more than one conscious mind. This means that Beethoven's *Fifth Symphony* would only be accessible to Beethoven himself. The second difficulty is that works of music are audible, whereas mental objects are not. What follows from the inaudibility of musical works is that it is possible to have manifestations of a given work separate to its being played. For example, if one asked a musical idealist to play the *Fifth Symphony*, they could very well sit in contemplative silence.

Mental objects as musical works has been advocated by Benedetto Croce, R.G. Collingwood, Renée Cox, and (most recently) by Wesley Cray and Carl Matheson. While its early conceptions received a wealth of challenges (to the point where the view was abandoned for some time), I would argue that Cray and Matheson's modifications have helped resuscitate the view. Therefore, I will be mainly focusing my attention to Cray and Matheson's modifications.

Cray and Matheson's Sophisticated Idealism:

In their article, "A Return to Musical Idealism,"[52] Cray and Matheson proposed a sophisticated idealism that views musical works (what they call "musical compositions") as completed ideas for (but not of) musical

[52] Wesley D. Cray and Carl Matheson, "A Return to Musical Idealism," *Australasian Journal of Philosophy* 95, no. 4, (2017): 702-715.

manifestations.[53] What makes their modification of idealism more appealing than its earlier conceptions is that they claim ideas are systems of related token mental states. For Cray and Matheson, token mental states are: "(i) tokens of the same type, with the relevant types individuated by the content of their tokens, and (ii) sufficiently causally and historically related."[54] Thus, if ideas are understood as tokens of a system type, then ideas are no longer private works, but rather public and shareable. For example, the idea that is the *Fifth Symphony* can be shareable with minds other than its creator's because Beethoven (being the originator) communicated his idea by writing down the content via a musical score. From the musical score, the musician's tokening of that particular content would be sufficiently causal and historically related to Beethoven's original token. Thus, the musician tokens not only the system of content *Fifth Symphony*, but also the mental state or idea of content *Fifth Symphony*. For Cray and Matheson, each musical work or composition has its own system that is causally and historically unique. Therefore, if a contemporary composer tokened the same content of *Fifth Symphony*, but was causally and historically unaware of Beethoven's token, then the contemporary composer would have the foundations of a new system type. Though the content may be identical, the token ideas themselves would be dissimilar from the idea type, thereby making both works distinct.

The dependency of a system account is the main reason why this brand of idealism is able to make musical compositions public and shareable. For Cray and Matheson, systems (at this current time) can either be mereological aggregates or a new kind of entity.[55] If the former, then systems are "fusions of components such that the fusion exist partly at any time that, and partly at any place where, those components exist."[56] If the latter, then systems can be described as:

> "entities that come into existence when the first of their components come into existence, exist partly at any time and place that those components

[53] Ibid. 707.
[54] Ibid. 705.
[55] Cray and Matheson, "A Return to Musical Idealism," 706.
[56] Ibid.

> exists, but continue to exist as long as any component could come into existence."[57]

Although Cray and Matheson have not settled on the description of what sort of systems they are dealing with, they have argued that a system account is imperative for ideas being concrete particulars that transcend past idealistic theories.

Another element that further differentiates sophisticated idealism from other idealistic accounts is that compositions are capable of being audible. Previously, one of the main charges against musical idealism was that compositions were incapable of being audible, since works privately reside in the mind. However, Cray and Matheson's explanation of the audibility of a composition runs similar to how a realist would explain the audibility of an abstract sound structure. Namely, the composition is not directly audible, but rather heard indirectly through the manifestation's direct performance. As such, two things are happening when you hear a performance of the *Fifth Symphony*: the symphony itself (i.e., the idea) and the performance thereof.

With their modified account of musical idealism, Cray and Matheson were able to side-step many of the issues previously raised against it. Endorsing a system account allowed them to propose a maneuver similar to a realist conception of the type/tokens model. However, theirs is dissimilar to a realist type theorist model because sophisticated idealism confines types to the mind, not abstract objects. By confining idea types to the mind, Cray and Matheson explained that compositions can have mental token states that are public, shareable, and audible.

The challenges leveled against this type of account predominantly focus on how one is to unravel "systems." Understanding this concern, Cray and Matheson raised two questions that require answers. The first concerns whether distinct systems are capable of merging, and the second regards the content of a system. Specifically, how can the mind retain content of a certain composition that might

[57] Ibid.

be too complex to retain in its entirety? Though both of these questions certainly seem as if they must be addressed in future, Cray and Matheson modified idealism so as to be more attainable than its previous counterparts.

Whilst, one could object to the way Cray and Matheson implement systems, a newer issue seems to pose more problems to any sort of idealism (whether simplistic or sophisticated). This new issue concerns the technological advancements made in artificial intelligence (AI). Namely, does AI, which lacks compositional activity, have the capability to create a piece of music? Unfortunately, several units do seem capable of producing what some comprehend as being musical works. For an idealist of any stripe, this seems to be an issue that is lacking sufficient attention. Possible responses could include either the idealist rejecting that what the AI is producing is a work of music, or an endorsement of the AI having a mind, whereby its compositional activity produces a work of music, or something else. Regardless of whatever route the idealist attempts to make, it may seem to be a cost of this metaphysical approach. I will further explore the technological advancements made in AI, as well as the challenges it poses, in Chapter Five.

2 Arealism: Musical Ontology is a Vague Question

While (Q1) seems like a worthwhile topic to explore within a thesis, some may find the question to be incoherent, obscure, or even vague. This camp in particular thinks that trying to investigate the reality, or irreality, of certain entities (in this case, musical works) seems to be a pseudo-question that would fare more successfully within a certain linguistic framework. If (Q1) is merely a question that is dependent within a certain linguistical context, then it seems that (Q1) should be seen as a meaningless enterprise. Another way to put it, answering any question as it pertains to the existence of an individual entity is pointless because adopting a linguistic framework of any variety needs no justification as it involves no assertion of reality, and thus, is neither a true nor false simpliciter. It is for this reason that Figure 1.1 classifies conventionalism as the main view in the arealist section, as choosing an ontology is simply a mode of convention. By choosing a

linguistic framework, one is purely choosing an ontological framework that is no more accurate than the other.

What separates arealism from anti-realism from my understanding is that when it comes to musical ontology, anti-realists tend to deny that certain meaningful ontological questions have objective answers, and therefore conclude that musical works do not exist. Anti-realism, in particular, is chiefly concerned with mereological inquiries in their disputes; hence, they are also inclined to say that musical works are not concrete entities. Arealists on the other hand, are inclined to think there is plainly no fact of the matter whether works of music are abstract, concrete, or non-existing.

The motivations for embracing an arealist view seems to provide a quick and easy cure for answering (Q1). If there is no real objective truth about the existence of works of music existing or not existing, then there can be no ontological significance to pursue. Internal questions in a linguistic framework may answer whether works of music are abstract or concrete, however existence questions beyond the scope of that linguistic framework plainly has no answer and should not be entertained. In recent times, as related to musical ontology, Aaron Ridley seems to be a certain defender of an arealist approach. Thus, I will focus briefly on his specific brand musical arealism.

Ridley's Brand of Arealism:

Ridley argued that it is a worthless venture to specify the sort of entity a musical work might be. In his article, "Against Musical Ontology,"[58] Ridley sought not to endorse some variety of conventionalism, but rather to claim that ontology has no significance or weight in musical aesthetics. If anything, musical metaphysics of any sort is predicated on musical aesthetics, leading him to state that, "in musical aesthetics, ontology comes last (at the end of time, perhaps)."[59]

[58] Aaron Ridley, "Against Musical Ontology," *The Journal of Philosophy* 100, no. 4, (2003): 203-220.
[59] Ibid. 215.

In his article, Ridley did not focus on the central discussion of what sort of entity a musical work might be (i.e., abstract object, concrete object, mental object, etc.). Instead, he focused primarily on the discussion of what establishes the identity conditions for a particular piece of music, and the degree to which a particular performance would need to comply to be a legitimate instance of said piece. While the musical ontologist would see the central and identity discussions as connected (central being prioritized first), Ridley saw no connection and held that the debate of identity is a role of musical aesthetics.

Ridley argued that musical aesthetics precedes musical ontology due to the "content" of a given work being revealed in its "faithful" performance:

> "If a performance's faithfulness is, minimally, a matter of understanding it shows, then a performance is, in that much, to be valued in proportion to the richness, depth and insight, subtlety and so on of the understanding it evinces."[60]

Ridley's use of the term "faithfulness" seems to be describing the degree of importance, goodness, or value of a musical sound event. Furthermore, if a performance's faithfulness is described as such, then he claims that "much of the content of a work is only revealed in the understanding that faithful performance of it evince."[61] In other words, if the evaluative work is only a matter of understanding the faithfulness of a performance, then there is no real need to specify the identity conditions of a work.

Andrew Kania's response to Ridley's Arealism:

Kania, in favoring the importance of musical ontology, identified several issues with Ridley's scrutiny and rejection of ontology. First, Ridley may have misdiagnosed the aim of the musical ontologist. Kania highlighted that Ridley in fact equated musicologists with musical ontologists. For instance, the musicologist (generally speaking) is concerned with the sort of content of a particular musical piece, whereas the musical ontologist is "chiefly concerned on hypothesizing what

[60] Ibid. 213.
[61] Ibid.

sort of musical things there are and the relations between them."[62] Accordingly, Ridley is correct in thinking that musical ontology is not necessary for understanding the content of a particular performance, but wrong to suggest that musical ontology is concerned with those sort of evaluative questions.

Second, Kania highlighted Ridley's belief that one can theorize and perform musical aesthetics from an ontological-free zone. This means that, for Ridley, musical performances can indicate certain things about works without embracing any ontological view. Kania argued that Ridley cannot be ontologically neutral on the matter because of how he implied certain ontological presuppositions. Namely, Ridley presupposed the way one individuates a performance of a work to say a different performance of a different work. Regardless of Ridley's position on performances, he has taken a type of ontological stand on the matter.

The third issue concerns ontology and value. Kania explained that "if musical value judgments presuppose ontological judgments, then Ridley's arguments must fail."[63] Kania referenced Kendall Walton's example of the musical tradition of Martians and how a Martian performance of a work could sound identical to a performance of Beethoven's *Sixth Symphony*. For Kania, a classical or musical enthusiast would not be able to judge whether that specific performance was performed by Martians or not. In other words, judging the musical value of a performance has no bearings if that work belongs to Beethoven's *Sixth Symphony* or "Marthoven's" *Sixth Symphony*.

Accordingly, Kania's criticisms seem troublesome for Ridley. However, this does not mean that Ridley must abandon his notion that musical ontology is a worthless endeavor. Indeed, one way to combat Kania and still endorse some sort of arealism would be to embrace a classical arealist approach, which would appeal to musical ontology as a sort of internal query within a given linguistical framework. Such a maneuver would allow Ridley to side-step Kania's three issues.

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[62] Andrew Kania, "Piece for the End of Time: In Defence of Musical Ontology," *British Journal of Aesthetics* 48, no. 1, (2008): 67.
[63] Ibid. 71.

However, embracing a classical arealist outlook would also render questions about musical aesthetics as worthless.[64]

3 Musical Works Do Not Exist

The last response to (Q1) that I wish to address is the anti-realism approach. Anti-realism claims that works of music do not exist. Despite this non-existence, the semantic content of how we talk about music may still be useful. Compared to arealism, anti-realism approaches musical ontology from a meta-ontological vantagepoint (focusing predominantly on the external, rather than internal, questions). This means that the anti-realist tends not to think about the nature of existence like realist and nominalist do, but rather the methodology of ontology itself. However, in contrast with arealists, anti-realists tend to believe there to be a reasonable response in terms of comprehending the external questions of ontology. Anti-realism shares both similarities and dissimilarities with nominalism. The main similarity is that both accounts deny the existence of abstract objects. The main dissimilarity is that nominalism, under my terminology, argued that musical works exist as some sort of concrete object. Kania explained that the materialist (i.e., nominalist) believes that "the existence of abstract musical works can be paraphrased into claims that commit us only to *concreta*."[65] Conversely, anti-realists (for the most part) hold that works of music do not exist and therefore cannot be concrete objects.

As with realism and nominalism, anti-realism consists of different versions. The way to parse out each version is not by classifying what sort of object a work is, but rather observing the way each anti-realist thinks that the truth-values of unproblematic ontological existence assertions fail to be objective and determinate. Namely, within musical ontology, there are two prominent views that

[64] While musical arealism may be a plausible and enticing account to more deeply develop, I will not discuss this view any further. The reasoning here is that it essentially goes against (Q1) and the general aim of this thesis.

[65] Andrew Kania, "Platonism vs. Nominalism in Contemporary Musical Ontology," In *Art and Abstract Objects*, ed. C. M. Uidhir (Oxford, UK: Oxford University Press), 209.

have been discussed: fictionalism and eliminativism. We shall first explore Kania's brand of fictionalism before turning to the eliminativism of Ross P. Cameron. While other views exist within the anti-realist camp, I will only touch upon these two theories due to their being the most prominent in the literature.

3.1 Musical Fictionalism

Generally speaking, fictionalism is the view that declares the non-existence of objects (i.e., musical works) being quantified over singular terms or abstract objects. Musical discourse in this regard is nothing more than useful fictions. While no such abstract objects exist under this view, it is useful to converse as though they do—thus, the name fictionalism.

To comprehend this account in detail, it would be imperative to first shed light on two scenarios of application that the fictionalist account might be addressing. In the broad conception of the term, fictionalism claims that, when ordinary speakers utter certain musical sentences, such as "a is F," they do so fictionally. However, within this narrow conception, there is a distinction between whether these musical sentences are applied fictionally to works as concrete objects (scenario one) or to works as abstract objects (scenario two). In the former, utterances of certain musical sentences may be fictional, but perhaps also true about something in the real world (i.e., works are concrete objects). In contrast, the latter holds that utterances of certain musical sentences may be fictional, and therefore the sentences exist. Keeping with scenario two, if the philosopher thinks these fictional utterances are talking about works being abstract objects, then they are not true of anything in the real world (i.e., they do not exist).

Another distinction that can be made within this account is the ways of construing musical fictionalism. In other words, the sort of approach the fictionalist adheres to when describing fictionalism. Following John Burgess, there

are two approaches of interpreting fictionalism.[66] The first is the hermeneutic approach, which advocates that composers only mean their musical assertions in a non-literal fictional sense. Simply put, the hermeneutic position is that composers do not take their musical assertions as true in the literal sense, but instead offer a fictional hermeneutical interpretation as the content of their assertions. This approach has been recently explored by Elisa Caldarola.[67] For Caldarola, when ordinary speakers make musical assertions, such as "I have listened to Philip Glass perform 'Mad Rush' live more than three times," they are talking fictionally. Caldarola has thus proposed that her hermeneutic fictionalism can be applied with either concrete or abstract scenarios. If it transpires that musical works are concrete objects (established by nominalists), then ordinary speakers are talking fictionally about something that is true in the real world. If they are abstract objects (established by realists), then ordinary speakers are merely talking fictionally about non-existing objects.

In contrast, the second way of understanding fictionalism is from the revolutionary approach. This approach grants the interpretation of musical discourse to have its intended meaning on the part of its composer, but instead, offers a reinterpretation of such discourse that does not commit one to the existence of works. The revolutionary nominalist, therefore, would advocate that theirs reinterpretation of musical discourse is superior to traditional interpretations (e.g., being abstract objects). The champions of the revolutionary approach as it pertains to musical ontology are Andrew Kania and Anton Killin.

And yet, Kania and Killin also differ in terms of their application of the revolutionary approach. On the one hand, Kania offered what I call a traditional revolutionist approach that grants the intended meaning of musical works being abstract, but reinterprets being abstract as fictional. This also means that musical works, under Kania's account, do not exist. If the concept of musical works

[66]Burgess was the first to distinguish between what he calls hermeneutic and revolutionary nominalism (what is understood as fictionalism under my view). John P. Burgess, "Why I am Not a Nominalist," *Norte Dame Journal of Formal Logic* 24, no. 1 (1983): 93-105.
[67] Elisa Caldarola, "Methodology in the Ontology of Artworks: Exploring Hermeneutic Fictionalism," In *Abstract Objects: For and Against*, ed. Jose Falguera and Concha Martinez-Vidal (Springer, Cham, 2020), 319-337.

existing as abstract objects becomes fictionalized, then musical works themselves do not exist. On the other hand, Killin's abnormal revolutionary fictionalism of musical discourse does not deny that there are musical works. Rather, it merely denies the musical works have the peculiar objective musical properties (apparently) ascribed to musical practices. Thus, Killin would not be an anti-realist (compared to Kania) when it comes to his unique fictionalism, but instead would be more accurately categorized as what Philip Letts has labeled a "material fictionalist."[6869]

Moving forward, this section is dedicated solely to anti-realist accounts that reject the existence of musical works. Since Killin has not denied the existence of musical works and Caldarola has remained neutral on the matter, I will focus specifically on Kania's brand of anti-realist fictionalism.

Kania's Fictionalist Theory:

As briefly described, one of the main differences between Kania and Killin's theories is that the former claims that works do not exist, whereas the latter does. Additionally, another aspect that separates their theories is that Kania based his fictionalism on the methodological approach of descriptivism. In order to comprehend this approach, Kania initially proposed a revolutionary treatment claiming that musical assertions which presuppose the existence of musical works should not be taken literally. However, there is "a realm of [musical] discourse may have a value other than truth that justifies its continued use."[70] As with the revolutionist, Kania argued that musical practices[71] are valuable to discuss, but when there are sentences that refer to musical work concepts (i.e., the work itself), it is done so in a fictional spirit.

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[68] Philip Letts, "Against Kania's Fictionalism about Musical Works," *British Journal of Aesthetics* 55, no. 2, (2015): 223.
[69] Killin embraces Letts' moniker of "material fictionalism" to differentiate himself from Kania's stripe of fictionalism. Anton Killin, "Fictional about Musical Works," *Canadian Journal of Philosophy* 48, no. 2 (2018): 275.
[70] Andrew Kania, "Platonism vs. Nominalism in Contemporary Musical Ontology," 211.
[71] Kania's "musical practice" comes from David Davies and Guy Rohrbaugh's pragmatic constraint, which states that critical and appreciative practice is an epistemological premise that help form our ontological intuitions. In other words, the ontology of musical works is beholden to our musical practices. Andrew Kania, "The Methodology of Musical Ontology: Descriptivism and its Implications," *British Journal of Aesthetics* 48, no. 4 (2008): 426-444.

Kania's next step in employing revolutionary fictionalism was to endorse some variety of descriptivism, which he did for two reasons. The first is that descriptivism, for Kania, is true because it can explain that musical works are creations produced by their musical practitioner. If there is no initial description of the conception of the musical work given by the musical practitioner, then musical works cannot be created at all. The second reason is that descriptivism is useful for explaining how musical practices determine the ontological nature of musical works.[72] For Kania, musical ontology is a descriptivist field that renders ontological theories unimportant because they are not held to anything apart from their musical practice. Indeed, he wrote that, "the point of descriptivism, it might be said, is change not the way we go about metaphysics, but how we conceive of what we are doing."[73] What this means is that, if we approach musical ontology in a descriptive fashion, then we would be merely describing our conception of musical works rather than focusing on the objects themselves. The objects in the extension of the concept of musical works are dependent on the particular conception and cannot diverge with the description confined in the concept. Therefore, musical works for Kania would have no existence outside of these particular conceptions of them.

With the employment of descriptivism and a revolutionist approach of fictionalism, the descriptive concepts of musical works are able to exploit the unwanted ontological commitments to dubious objects, while simultaneously acquiring the benefits of those commitments from the use of fictionalism. Nevertheless, Kania's certain brand of anti-realism remains poorly clarified and underdeveloped. Specifically, further clarification is needed on how he is able to harmonize his descriptivism with his anti-realism. Letts addressed this issue, finding it "mysterious" how Kania could endorse anti-realism due to the evidence presented by a descriptivist methodology.[74]

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[72] Ibid. 439.
[73] Ibid. 437.
[74] Philip Letts, "Against Kania's Fictionalism," 219.

Furthermore, Kania believed his sort of descriptivism to be true, and that works are created and conceived by their practitioner. Despite this, his anti-realist fictionalism led him to claim that musical works do not exist. The cause for concern here is that, if anti-realism is correct and works of music do not exist, then how is it that musical practitioners are able to create something that is non-existent? Kania responded to this by maintaining that works of music do not have any existence outside of their conceptions.[75, 76] Namely, musical works cannot exist independently of our conceptions of them. If this is the sort of response and conclusion that Kania elicits, it seems to rather effectively correspond with his descriptivism. Unfortunately, it leaves his anti-realism in something of a vulnerable position in that it seems that Kania is proposing the existence of musical works as some variation of musical idealism.

To conclude, Kania's brand of fictionalism is somewhat intricate and, as of very recently, was the only fictionalist theory available in musical ontology. Despite others, such as Killin and Caldarola, having contributed their own brand of fictionalism, Kania seems to be the only one committed to endorsing an ontology that rids musical works entirely. Moreover, despite the seeming intricacy of Kania's account, it still requires further explication. However, it should be noted that this need is not a limitation of his fictionalism *per se*. It could very well be that his view is plausible, especially if one endorses mereological nihilism of some variety.

3.2 Musical Eliminativism

Similar to its fictionalist counterpart, musical eliminativism is the view where musical works have no real referent. However, "we can still hold our commonsense statements about them being true."[77] While eliminativism may seem like fictionalism, I believe a differentiation could be made on their evaluation. The

[75] Andrew Kania, "The Methodology of Musical Ontology: Descriptivism and its Implications," 441.
[76] Ibid. 444.
[77] Livingston, Paisley, "History of the Ontology of Art," *The Stanford Encyclopedia of Philosophy* (Fall 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/fall2021/entries/art-ontology-history/>.

musical eliminativist not only thinks musical works should be eliminated, but that there certain musical sentences should be removed as well. For the eliminativist, if these certain sentences (x) are eliminated, then we can begin talking about sentences (y) that can reach the fundamental level of musical discourse. The fictionalist, however, does not seek to eliminate certain musical discourses for some fundamental discourse, but rather to simply fictionalize all discourse related to musical manners. However, the eliminativist could eventually be categorized into a certain brand of materialist, as with how Cameron's account falls under the anti-realist bent—the reason being how, like Kania, he endorsed a musical realist style discourse.

Cameron's Eliminativist Theory:

In his article, "There are No Things That are Musical Works,"[78] Cameron applied a meta-ontological approach for handling ontological queries of musical works. Contrary to the traditional understanding of ontology (i.e., what there is), Cameron chiefly concerned himself with "fundamentality."[79] By fundamentality, he does not mean to paraphrase away common-sense sentences concerning musical works, but rather understanding what "there" fundamentally is. To discover this, he employed a language he called "Ontologese." The quantifiers of this unique language capture the entities that are in the domain at the fundamental level. Therefore, we see two distinguishing languages being used throughout his article: English and Ontologese.

Once more, Cameron sought not to refute the common-sense everyday truth claims (in English), such as musical works, statues, or the Supreme Court, existing in the semantic sense. Instead, he proposed that the truth value of English sentences find their truth-makers in the facts presented in Ontologese. How his meta-ontological view is applied can be shown by viewing the inconsistency of three instinctual music claims:

1. Musical works are created;

[78] Ross P. Cameron, "There are No Things that are Musical Works," *British Journal of Aesthetics* 48, no. 3, (2008): 295-314.
[79] Ibid. 303.

2. Musical works are abstract objects;
3. Abstract objects cannot be created.

Through this, Cameron aimed to show that, if one endorses works existing, then one would need to abandon one of these claims. With musical realism, all accounts/theories accept that works are abstract objects of some kind, as shown in (2). However, it is in the rejection of propositions (1) or (3) where the realists divide. Musical Platonists defending works as uncreated abstract objects would have to deny (1). Those who hold to a looser kind of Platonism (e.g., Levinson) would need to deny the metaphysical presumption (3). If one is a nominalist that advocates musical works as only physical objects, then (2) must be rejected.

What Cameron sought to show by exposing the inconsistent triad is that the denial of any of these truth claims would be unsettling. For him, denying propositions (1) or (2) would run counter to any intuitive claim made toward the thesis of musical works. To deny (3) would also be problematic because abstract objects, in the Platonic sense, would be atemporal, eternal, and casually inert, thereby conflicting with (1).

However, Cameron argued that, if one were to apply his meta-ontological view, then there would be no issues in musical work discourse. The way his view avoids any inconsistencies is by distinguishing propositions (1) and (2) to be true in English, and (3) to be true in Ontologese. This may require further explanation on my part. By claiming (1) and (2) as true in English means that one does not have to ontologically commit to musical works. Instead, the truth of (1) and (2) is presented in the fact of (3). Cameron's view thus holds (3) to be true in Ontologese, meaning that the quantifiers of this claim capture the entities of abstract sound structures, the act of indication/composition, and the instructions for performance.[80] For example, the eternally existing abstract sound structure is indicated by the composer (e.g., Beethoven), and then the composer gives direction or instruction for its token performance. In terms of the fundamental level, nothing new comes into existence from any compositional act because the composer is only "making certain pre-existing entities perform a role as a musical

[80] Ibid. 305-306.

work, a role they were not performing prior to the act of composing."[81] Therefore, for Cameron, the truth-maker for (1) in English is just the sound structure coming to play in a musical work role at a certain time. There is thus no need to commit to any creatable abstracta, but rather only to acknowledge the truth claim of English from the musician's first time tokening the abstract sound structure.

Two responses to Cameron:

This novel approach might be helpful in clarifying the field of musical work discourse; however, it seems incomplete and in need of further development. Notably, Stefano Predelli[82] and Robert Stecker[83] have presented some insightful criticisms towards Cameron's view. I will focus on two areas that ought to be explicated. The first is an epistemological issue whereas the second is fundamental in nature. Let us begin with the epistemological issue.

To either accept or reject this view, Cameron would need to explicate why certain sentences must be nihilistic in the first place. For example, (1) and (2) are shown as corrupted sentences because they do not explain what "there" fundamentally is. On the other hand, (3) is a sentence in Ontologese that provides what "there" fundamentally is (abstract sound structures). Where issues arise is that, even if we grant this meta-ontological approach, taking a realist account seems to be the most attractive for comprehending Ontologese sentences. In other words, his abstract sound structures fall into the same epistemological problem as that faced by Platonists. That being said, how does a composer have knowledge of abstract structures that are eternal, atemporal, and independent of minds?[84] While Cameron acknowledged this concern, he still argued that favoring his view would lead to a better balance of costs and benefits.[85] Despite favoring this view, he still needs to elucidate how finite beings have access to abstracta. He could reply to

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[81] Ibid. 306.

[82] Predelli's criticism focuses on Cameron's conception of Ontologese. Stefano Predelli, "Ontologese and Musical Nihilism: A Reply to Cameron," *British Journal of Aesthetics* 49, no. 2 (2009): 179-183.

[83] Stecker claimed that Cameron's view preserves neither common sense nor simplicity (Cameron believed to have gained both). Robert Stecker, "Methodological Question about the Ontology of Music," *The Journal of Aesthetics and Art Criticism* 67, no. 4 (2009): 375-386.

[84] Cameron, "There are No Things That are Musical Works," 314.

[85] Ibid.

this by saying that this was not one of his project aims, yet if he embraces a realist account of uncreated abstracta he needs to provide some sort of answer—whether that is having knowledge by intuition or by science. Knowledge from intuition contends that the mind has an intuitive faculty that enables one (by way of some mental process) to have direct awareness of such abstract objects as properties. On the other hand, knowledge by science explains that abstract objects are understood by our best scientific theories. Cameron, at this juncture, would need to take the knowledge by science route because explaining knowledge by intuition would be problematic given his questioning of whether even people exist.[86]

It is possible that I am not understanding the benefits that Cameron offered by solving the intuitive propositions of the inconsistent triad. Such realists as Levinson or Dodd (musical Platonist) have found no issues with denying one of the three propositions. It would be harder for Levinson (who denied (3)) because he would need to elaborate on how a composer can create an abstract artifact that did not exist prior to the compositional activity. However, Dodd could easily deny (1) as merely a figure of speech. For instance, a father telling his daughter that the sun is going into the ocean is a figure of speech. The father does not really think that the sun is literally going into the ocean during a sunset. Just like the sun going into the ocean, "musical works are created" is a figure of speech because they are uncreated entities. Cameron might agree and go further by including (2) as another use of a figure of speech. If so, then why would he not think that "musical works are abstract objects" is true in Ontologese? The reasoning for placing (2) as true in English, but not Ontologese, is that musical works could not exist before the act of composition.[87] The act of composition seems to be the lynchpin for avoiding musical Platonism.

This leads us to the second issue, fundamentality. Throughout all of Cameron's article, he wanted the reader to know that ontology is not what there is, but rather what "there" fundamentally is. If his aim was to reach the fundamental level, how did he then arrive at sound structures, compositional

[86] Ibid. 311.
[87] Ibid. 305.

actions, and musical work roles? First, sound structures may be something that fundamental ontologists would be keen to avoid in their domain of entities. Second, acts of composition are another thing that should be denied at the fundamental level. Lastly, if there are actions, then there need to be musical work roles. However, as I alluded to above, Cameron is skeptical on whether people even exist, so why would musical work roles fall into the domain of the fundamental? These three things appear vague in his view because they seem to be inconsistent with the fundamental ontologist project.

In summary, Cameron offers a clever way to have your cake and eat it too with musical discourse. His distinction between English and Ontologese helps the musical ontologist differentiate which sentences are ontologically barren (sentences in English) and ontologically committing (sentences in Ontologese).

Innovative as this view may seem, there are some glaring holes that need to be addressed. First, his view leads to the same epistemological problem encountered by Platonist holding to abstracta. If musical works are fundamentally abstract sound structures, how then does the composer have access to these eternal entities? Secondly, his meta-ontological approach of finding what "there" fundamentally is conflicts with his view of what a musical work really is. By claiming that works are fundamentally sound structures, acts of composition and musical work roles seem to be entities that fundamental ontologist would wish to exclude from their realm. If these issues cannot be satisfactorily elucidated, proceeding in English should be, at this point, the most enticing and intuitive for determining which sentences are made true.

4 Conclusion

In this chapter, I presented a taxonomy that lays out three main routes that have been explored. In route one, I presented and described the views that believe in the existence of musical works. Two branches emerge from this position: the realist branch, which holds that works exist as abstract objects; and the nominalist branch, which validates works existing as concrete objects. The former can be

parsed as either being uncreated or created types, whereas the latter can either be understood as physical objects or some sort of mental objects. In route number two, I explained the arealist position that views musical ontology as a vague and meaningless question. Specifically, arealism focuses on whether works exist or not is a meaningless endeavor. Lastly, the third route I unpacked concerns the views that believe that musical works do not exist, but nonetheless the semantic content of musical discourse is still useful or valued. In particular, the two main options I looked at were fictionalism and eliminativism.

In sum, all of these accounts and views have both advantages and disadvantages in terms of explicating how a piece of music should be classified. Some have more advantages than disadvantages, and vice versa. The way in which an ontologist performs a cost–benefit analysis may differ depending on what they determine as being advantageous. In the literature, such accounts as realism and nominalism are the most prominent in musical ontology and, for me, is the main focus of this thesis. However, I would feel remiss if I did not display a broad, all-encompassing taxonomy to show the way one could think about the existence of a musical work. In the following chapters, however, I will narrow my focus by specifically examining two realist accounts hitherto unmentioned in the debate. Namely, they are accounts that adhere to property-theory and claim that musical works are not types, but rather properties. In Chapter Two, I will present the Aristotelian account that claims musical works to be immanent universals. In Chapter Three, I will discuss and endorse the Platonist account which claims musical works as transcendent universals. I would argue that both accounts have been (somewhat unfairly) sidelined within musical ontology, thus making my goal for the rest of the dissertation to show that the advantages of the Aristotelian and more importantly the Platonist approach (i.e., the account I admit) that embrace property-theory outweigh the limitations.

Chapter Two: Musical Works as Created: An Aristotelian Account

In Chapter One, I presented a taxonomy of ontologically available views for categorizing musical works. Although some routes, such as arealism and anti-realism, are not viable options for answering (Q1), the following two chapters will be dedicated to answering (Q1) from a realist vantage-point.

When it comes to musical ontology, if one were to believe that musical works exist, one would be faced with two options. Either one is a certain realist that claims musical works exist as abstract objects, or a nominalist who believes works exist as concrete objects. The nominalist route (displayed in Figure 1.1) seems to have a variety of nuance within their camp. The realist, however, seems only able to propose a fine-grained Platonic theory. This specific theory that I am referring to is the view that claims musical works exist as abstract *types*.[88]

As someone currently leaning toward realism (namely, Platonism), I am not satisfied with the thought of type-theory being the only available option. Accordingly, I was glad to have read Letts's introduction and defense of what he calls the *property-theory* of musical works.[89] This theory, which admits properties over types, is another option that musical realists are now able to explore. Consequently, both this chapter and the following will build upon Letts' arguments, and explore two plausible (though differing) accounts that describe the nature of musical works as properties. Similar to there being two ways of comprehending the nature of types (i.e., created versus non-created), the nature of properties also has accounts that view these entities as being the sort of objects that are created or non-created.

[88] There is, of course, nuance within type-theory. For instance, in terms of describing the nature of types, there is an ongoing dispute on whether these musical types should be regarded as created or uncreated.
[89] Philip Letts, "The Property Theory of Musical Works," *The Journal of Aesthetics and Art Criticism* 76, no. 1 (2018): 57-69.

The chart in Figure 2.1 helpfully compartmentalizes the two theories and their varying distinctions:

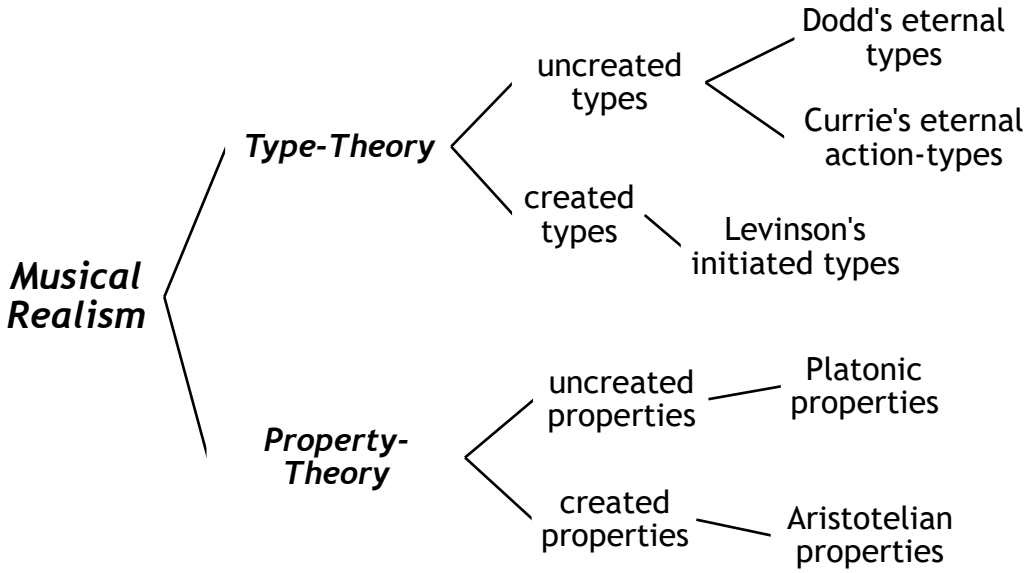

fig 2.1

I will begin this chapter by first examining the account that views musical properties as created dependent entities. This is known as the Aristotelian[90] account. Providing such an account seems appropriate for the musical realist that does *not* want to endorse any sort of *uninstantiated* objects in their ontology, nor endorse types in their ontology.

To achieve this aim, I will first need to outline the conception of musical works being conceived as properties. Accordingly, this section will outline how types and properties are differentiated within the literature. This section will also briefly explain how property-theorists respond to the various challenges made by type-theorists. In so doing, I will lay a solid foundation for the rest of this chapter and the one which proceeds it. Second, I will more closely examine property-theory by explicating the way in which one could parse out the nature of

[90] I will not be describing the historical Aristotle and Plato in this chapter. To clarify, when I use the terms "Aristotelianism" and "Platonism," I am alluding to the contemporary discourse between differences of universals and exemplification.

properties/universals[91]. This section will distinguish the nature of properties in two ways: immanent and transcendent. Since this chapter focuses solely on an Aristotelian account, I will establish immanent over transcendent properties first. Third, I will describe the Aristotelian account when applied to musical ontology. Specifically, I will postulate and present some of the beneficial features that allows this view to stand apart from other realist accounts. Fourth, I will address that, if a musical work is understood as having immanent properties, then it could be categorized as a certain species of property (commonly referred to as a structural universal). Specifically, I will draw from the work of Anthony Fisher in this section. Lastly, I will evaluate some of the concerns facing both the Aristotelian and structural universal accounts, as well as some of the rejoinders an apologist of the view might advance.

Before I advance the Aristotelian account, there are certain items that I want to address. First, it should be made clear that I do not view musical Aristotelianism as the default to property-theory. Rather, it is merely the first view in the literature that endorses and interprets property-theory (i.e., the nature of properties being immanent). Thus, presenting the Aristotelian account after my Platonist account would seem to be an error, since the only literature endorsing property-theory (at the moment) comes from the vantagepoint of an Aristotelian. Second, it seems appropriate to present Fisher's musical Aristotelian account of structural universals prior to my Platonist take on structural universals. In the literature (provided initially by D.M. Armstrong), Structural universals are to be understood as being Aristotelian, not Platonic (i.e., being transcendent). Thus, presenting the Aristotelian view of structural universals prior to Platonic structural universals seems fitting. The last item to mention is that the musical Aristotelian account provides footing/context for how Platonists, such as myself, can conceive musical works from a property-theory vantagepoint. This does not mean I am sneaking certain Aristotelian undertones. Rather, my view emerges out of an

[91] Universals describe entities that can be multiply exemplifiable at different times and at locations. The sort of entities that satisfy a universal can range from properties, relations, facts, propositions, numbers, and even types. Of course, this is not an exhaustive list, but only certain examples of entities that could be universals.

understanding of how musical Aristotelianism operates and implements property-theory.

1.1 Property-Theory

There seems to be a common thread in musical realism regarding classifying a piece of music. That is, if one is a musical realist, then musical works of any sort are elucidated under the umbrella of *type-theory*. Platonists, such as Richard Wollheim, Levinson, and Dodd, have all claimed that musical performances of a given piece are concrete tokens that instantiate or exemplify some sort of abstract type. Furthermore, while there is disagreement on the nature of types, Platonists (like those listed above) tend to agree that type-theory is the ideal for categorizing musical works. Surprisingly enough, property-theory was only recently proposed in the literature by Letts. Compared to type-theory, property-theory is the view that claims a piece of music is some kind of property that is instantiated by its occurrence/event or particular.

As stated earlier, this section has two primary aims. First, I will describe the way type-theorists distinguish between types and properties. Indeed, I shall be examining how type theorists differentiate between the two. To show these distinctions, I will describe Levinson's conception of properties and ways of being that runs parallel (if not identical) to the way type theorist think about the disparity of the two entities. Second, I will unpack Letts's defense and argumentation for property-theory. Specifically, I will evaluate Letts's response against predicate and analogical transmission, as well as some of the beneficial features of property-theory over type-theory. Providing a plausible account of property-theory will facilitate the explication of the nature of properties/universals (i.e., immanent versus transcendent).

1.2 The Way Type-Theorists Distinguish Types from Properties

As a first-year student studying metaphysics, I was under the impression that types and properties were used synonymously. I thought they were the sort of things that

realists implemented to ground the character of ordinary objects. However, within musical ontology, the realm of attributes is bipartite between types and properties. Moreover, the way in which this metaphysical distinction is made is done *descriptively* and focuses on how we *conceive* in characterizing musical works.

Though there is some vagueness (maybe on my part) when it comes to making a metaphysical distinction between types and properties, the best way I want us to think about the characterizing features between these entities runs very similar (if not identical) to how Levinson distinguishes *properties* and the *ways of being*.[92] In his article, "Properties and Related Entities,"[93] Levinson explains that properties should be understood as being-a-certain-way, while ways of being focus in on the *ways which it is*. This means that properties being-a-certain-way only describe the conditions that objects can be in, while ways of being focuses on *how* or the *ways* which objects or individuals are. Let us use the flag of the United States as an example. When one conceives of the conditions of a United States flag, they are directing their attention to the flag's characterizing features or properties. In this case, the properties of *being red*, *being white*, and *being blue*, and so on, would express the conditions the flag can be in. On the other hand, when one conceives of the object (i.e., the flag of the United States), one focuses their attention specifically on the way the object is. As such, my father speaking about the emotions he felt upon seeing the Star-Spangled Banner raised by firefighters after the attack on the World Trade Center is an example of a way of being. My father was not mentioning or thinking about the flag's colors or shape, but rather the object itself (e.g., its being emblematic of freedom, liberty, and his patriotism).

Another distinguishing quality which makes the way of being different from properties is that objects that are ways of being emerge from properties. In other

[92] I found that the explanation type theorists provide to distinguish types from properties to be vague. Thus, the provision of Levinson's article on "ways of being" is used more as a helpful source to alleviate that vagueness.
[93] Jerrold Levinson, "Properties and Related Entities," *Philosophical and Phenomenological Research* 39, no. 1 (1978): 1-22.

words, "the way of being map into properties, but not vice versa."[94] Therefore, to return to a previous example, the flag of the United States Flag taken as the way of being would map into such properties as *being red*, *being white*, and *being blue*. It would not, however, be the case that every red, white, and blue property instantiated would map into the United States' flag.

1.3 Arguments in Favor of Type-Theory

Now, if we turn our attention to the advocates of type-theory, *types* are regarded and described (for the most part) *as ways of beings*. Let us first recall Dodd's thought process for distinguishing types and properties (see Chapter One).[95] Dodd claimed that a musical work is a type that is essentially a *blueprint* which expresses an individual name (e.g., "Mad Rush") that is an abstract counterpart to the tokens that it instantiates (i.e., its performances). Therefore, types of any sort are unlike their property associates which merely describe the conditions of whether a thing is alike or different. Instead, types have a distinctive semantic profile and should be conceived as things in their own right.

For instance, when a type-theorist conceives of a type *K*, the identity conditions for *K* is explicated in terms of their *property associate* (*being a K*). This unique property does several things for the type that it is tied to. First, a property associate helps characterize the ways which a particular type is. For instance, the conditions of the type "the flag of the United States" is characterized by the property associate *being a flag of the United States. Being a flag of the United States* means that the properties (*being red*, *being white*, and *being blue*, etc.) are being instantiated. Second, the property associate is what allows the conditions for a specific type to have its tokening. Put differently, a token of the type "the flag of the United States" is determined and individuated by the

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[94] Ibid. 22.

[95] It is worth noting that I will be focusing primarily on the way *Dodd* distinguishes types and properties. Letts exposes various nuances within type-theory and shows that some theorists are more rigid than others. Dodd's type-theory is on the rigid side because of his commitment to there being a metaphysical distinction between types and properties. For the non-committed, or less rigid, type theorist, I will refer to Letts's article. Philip Letts, "The Property Theory of Musical Works," 57-58.

property associate that is being instantiated. Thus, if *being a K* is not instantiated in the token, then *K* cannot be exemplified.

This congruent function of types and property associates helps provide type-theory to develop a serviceable hypothesis. However, most type-theorists would not equate *K* with *being a K* due to the divergence in their semantic/descriptive features. In order to grasp the semantic divergence between type and property associate, let us take my wife listening to the band The Stooges as an example. If my wife were to say: "the song 'Search and Destroy' is loud," type-theorists could possibly respond with, "if the predicate 'is loud' is true of the token performance of 'Search and Destroy', then it is also true of the type (i.e., the musical work 'Search and Destroy')." On the other hand, however, this would likely *not* be the case if my wife were to say: "the song *being* '*Search and Destroy*' is loud." Indeed, this sort of utterance would intuitively strike one as being off, as it were. The reasoning here is that, when one thinks about "Search and Destroy" in property associate terms, then it results in a property that is capable of being itself loud. This assumption is unsatisfactory for particulars and their properties—just as we do not explicate *loudness* being itself loud. Thus, there seems to be some semantic divergence between types and properties.

Examples that exhibit such variances as in the above form part of an argument labeled the *predicate transmission*. First proposed by Wollheim (and supported by type-theorists), predicate transmission is an argument that shows the variance of types and properties. Letts indicated that predicate transmission, as well as other divergence arguments, usually implement Leibniz's law of *Indiscernibility of the Identical* to make their case of ontological parity.[96] Following from Letts, and using my "Search and Destroy" example, the predicate transmission argument in standard form would go as follows:

(P1) "Search and Destroy" is loud;

(P2) *Being "Search and Destroy"* is not loud

(C1) "Search and Destroy" is not identical with the property *being* "*Search Destroy*."

[96] Letts, "The Property Theory of Musical Works," 61-63.

Under predicate transmission, (P1) is true because the musical work itself typifies the property *loudness*. (P2) does not typify *loudness* due to it being the property associate of "Search and Destroy." Therefore, the musical work "Search and Destroy" cannot be identical to the property associate *being "Search and Destroy."*

If the transmission of predicates seems like a plausible *semantic* argument, then (in Wollheimian thought) there is also a mirroring *metaphysical* argument of divergence, known as *property transmission*. Property transmission means that whatever predicates are inherited from token to type, then the properties that represent the predicates are also applied. According to Wollheim, this transmissions of properties are *not* synonymous to their property associates. Rather, when "is F" is a predicate transmitted between, for instance, a musical work and its token performances, then that property for which "is F" stands is being transmitted as well. "'Search and Destroy' is loud," under property transmission, would say that the abstract-type "Search and Destroy" shares the property *loudness* with all of the work's token performances.

It is important to note that predicate transmission (which mirrors property transmission) is *not* the only plausible route available. Indeed, there is a further divergence argument at the type-theorist's disposal—Nicholas Wolterstorff's principle of *analogical predication*.[97] Analogical predication is an account whereby predication in certain cases (such as musical works) are not univocal or equivocal, but analogical. When a token performance of "Search and Destroy" is loud, for instance, the predicate stands for the property of *being loud*. However, the type, "Search and Destroy," (compared to property transmission) is not that. When the predicate "is loud" is applied to the type, "Search and Destroy," it stands for the property of *being such that something cannot be a properly formed instance of it unless it is loud*. This means that there is a systematic non-univocality about "is loud" which expresses two different properties; one holding for the type, "Search and Destroy" and the other for at least every properly-formed token performance

[97] Nicholas Wolterstorff, *Works and Worlds of Art*, (New York, NY: Oxford University Press, 1980).

thereof. Predicates for types and tokens are used analogically, and therefore do not replicate Wollheim's proposed property transmission. Instead, Wolterstorff's analogical predication replicates the certain requirements a type imposes on its tokens.

In this section, the type-theorist has sufficient grounds to distinguish types and properties. These two entities, in terms of their semantic and *possibly* metaphysical profile, seem to be bipartite. Properties explain the conditions an object can be in, while types explain the way an object is. To show this kind of divergence, type theorists can appeal to either Wollheim's predicate transmission or Wolterstorff's analogical transmission.

1.4 Letts's Property-Theory of Musical Works (PM)

Although type-theorists are adamant on differentiating between properties and types, property-theorists, such as Letts, present a simplified theory that focuses heavily on properties over types. In a conciliatory move, Letts offered a specific version of PM that identifies each type with its property associates.[98] He claimed that a *reductive property theory* (RPM) is "more virtuous and ontologically simpler than any sort of type-theory."[99] In terms of ontological simplicity, Letts explained that endorsing RPM is qualitatively and quantitatively simpler to type-theories that claim that each musical work is a type and none is a property. Qualitatively, RPM shows the same ontological explananda of type-theory in that it "posits fewer exemplified basic kinds of entity."[100] For instance, type-theories posit two exemplified categories (types and properties), whereas RPM can only posit properties. Quantitatively, RPM shows fewer "*examples* of its basic kinds."[101] For

[98] When it comes to admitting *types* to one's ontology, Letts mentioned that some PM-adherents could deny that there are types to begin with, or suspend judgment on the matter entirely. While I am somewhat incredulous toward types, I believe Letts's reductive approach shows the strength of properties preceding over types. Philip Letts, "The Property Theory of Musical Works," 60.
[99] Compared to Letts, I am somewhat inclined toward an ontology that eschews types entirely. However, whether one denies types (as I am inclined to do), or suspends thought on the matter, I still think Letts is able to provide solid grounds for only endorsing properties over types regarding musical works.
[100] Letts, "The Property Theory of Musical Works," 60.
[101] Ibid.

instance, type-theory postulates the property constituents as an addition to the type, while RPM only postulates a type being identical to its property constituents.

While some type-theorists have drawn a deep metaphysical line in the sand between properties and types, some noncommittal type-theorists have established a parity between them. If such a parity exists for the noncommittal type-theorists, Letts expressed that RPM is able to achieve this through a basic merging hypothesis: "each type is identical to its property associate."[102] Additionally, RPM, presents a clearer theory about types to the noncommittal type-theorist. Letts also pointed to the *Indiscernibility of Identicals,* and argued that the characterizing features of each type precisely accord with their property associates. Furthermore, if types are identical to their property associates, then RPM seems like a strong and plausible theory.

However, for the committed type-theorist, Leibniz's law would render that properties and types are *distinct* due to the arguments of predicate and/or analogical transmission. While both of these arguments are valid, Letts argued that these divergent arguments are unsound. Let us begin with Letts' critique of predicate transmission.

Regarding the (Wollheimian) application of predicate transmission, property transmission would also need to be true. What that means is that such predicates as "is loud" express the same property when applied to types as when applied to tokens. Other examples of types instantiating properties in this case could include "is bipedal" and "lasts four minutes and thirty-three seconds." However, this seems to be an error as only physical particulars or individuals are able to have (for example) volume, legs, or temporal parts. Types, therefore, cannot be the sorts of entities able to house these properties due to their being regarded as abstract objects.

Letts is not the only one to have addressed this sort of concern over Wollheim's argument. Dodd also cautioned that the thesis of property transmission

[102] Ibid.

produces awkward consequences of types. Dodd critiqued property transmission with the following:

> "Richard Wollheim, for one, fails to see [the issue of property transmission], claiming that a raft of properties are transmitted from a type's token to the type itself… '*The Union Jack*,' he says, 'is coloured and rectangular, properties which all its tokens have necessarily' (1968:93). But this remark sees Wollheim failing to appreciate the consequences of his own conception of types as abstract entities. For if *The Union Jack* is an abstract entity, and if 'coloured' and 'rectangular' express the same properties they do when ascribed to tokens, it cannot be true that *The Union Jack* is coloured and rectangular. Types cannot have physical properties such as these."[103]

Dodd here argued that, if a type is understood as abstract then, by its nature, a type is an object unable to possess any sort of physical characteristics. When relating this to musical works as types, a work of music is, therefore, something that is not itself audible. Rather, the concrete token performance is what has the capability of being audible.

If Letts and Dodd are correct in their assertions that Wollheim's predicate transmission is unattainable for type-theorists, then what remains is Wolterstorff's analogical prediction. For Dodd and other type-theorists, this is the main route for showing divergence between types and properties. The reason for analogical predication being preferred over property transmission is due to the former being less metaphysically objectionable (not needing property transmission). However, Letts has argued that using analogical predication to show divergence between types and properties would also be erroneous:

> "On the doctrine of analogical predication, explaining the truth of [certain predicates to types] requires that their predicates to be read analogically. Yet, property associates provide types' *tokening conditions*. Thus, every predicate inherited by a type is, on its analogical reading, by the type's property associate. The Lion and *being a lion*, for example, both instantiate the property is such that something cannot be a (properly formed) instance

[103] Dodd, *Works of Music*, 45.

> of it unless it is four-legged expressed by the analogical reading of 'is four-legged."[104]

For Letts, reading predicates analogically seems to be an awkward position for such type-theorists as Dodd because it does not really show any divergence regarding the metaphysical makeup of types and properties. If anything, reading predicates analogically reveals that the property associate is all that is *needed* to explain the semantic phenomenon. Simply put, adding another entity (types) seems to be an extra, but *unnecessary*, step for comprehending what is going on metaphysically.

What PM seems to offer—after briefly mentioning the sort of responses to these two divergent arguments—is that types are either their property associates (RPM), or they are an extra metaphysical step that is not strictly needed within one's ontology. Accordingly, embracing PM of any sort seems promising and plausible for the musical realist who is still undecided as to whether admit types into their ontology, or is noncommittal when it comes to dividing properties and types. While there may be more to say and argue about property-theory, I essentially adhere to, and appealed by, Letts's explanation of the complexity of PM. My aim in the following sections is to advance PM by more deeply evaluating the two ways a property theorist could parse the nature of properties.

2 Immanent Properties versus Transcendent Properties

If a realist were to implement PM, they would be faced with two possible options for comprehending the nature of properties: immanent and transcendent properties. The latter is more common within realism and is mostly understood as the Platonic approach. The former is, for the most part, also viewed as a realist account because, when obtaining attribute-agreement, the Aristotelian (or neo-Aristotelian) approach would also appeal to properties. Appealing to properties may be compatible with both views, but the ways in which Aristotelians and Platonists conceive of properties are incompatible. For Platonists, properties are

[104] Letts, "The Property Theory of Musical Works," 65.

understood as abstract, whereas they are understood as non-abstract for Aristotelians.

To understand what it means for a property to be immanent compared to transcendent, an Aristotelean may propose something akin to the following:

(1) Properties are spatially in the being of an object;

(2) Properties are constituents of ordinary objects;

(3) A property depends on at least one particular exemplifying it.[105]

Starting with (1), immanent properties are spatially *in* the being of its instance. Within (1), there are two aspects that can be drawn out. The first is that, if properties are spatially and temporally located, then they bestow certain causal powers to particulars. Particulars, in this case, act and are acted as a result of having properties. The second aspect is that properties are imbedded in the spatio-temporal world, meaning that a property is located wherever the particular exemplifying it is situated. In this case, exemplification would be known as a sort of "present-in" relation. For example, the property *pinkness* is spatially located *in* the racquetball that sits on my desk. Furthermore, if *pinkness* is spatially located in my racquetball, then the same case would go for all the other pink objects that exist in the world. Cotton candy, Barbie's dream house, and Elvis Presley's 1955 Cadillac all have *pinkness* in their instance. Hence, if a given property is present in multiple objects, then the immanent ontologist would claim that properties/universals are "one-*in*-many."

Transcendent properties, in contrast, are known as being *ante-rem*, which means they exist outside time and space. Therefore, transcendent properties are conceived as "one-*over*-many" because the universal is over and above its instances. Exemplification would here be a sort of "tied-to" relation. Returning to my example of the racquetball, exemplification would be a non-spatial nexus between the property *pinkness* and the concrete object (e.g., my racquetball). Although (in this view) *pinkness* is causally inert and *not* in my racquetball, *pinkness* is still tied to my racquetball as well as to any other particulars that

[105] After talking in person with JP Moreland, he helped me flesh out these three common features that advocates of immanent properties admit.

purportedly instantiate the color pink. Another example, but pertaining to music, could be seen in Dodd's type/token realism. According to Dodd, types are transcendent and abstract, whereby each concrete manifestation (whether performance or recording) are tokens that are externally tied-to a type.

If properties reside in the being of objects for the Aristotelian, then (2) explains that properties are constituents of ordinary objects. An ordinary object—or, what some Aristotelians refer to as a *substance*—is a complex thing that is composed out of its constituents and internal relations. According to Robert Koons and Timothy Pickavance:

> "Just as some things have physical structure, defined by the nature of and relations among its physical parts, [ordinary objects] have metaphysical structure, defined by the nature of and relations among its metaphysical parts, its *constituents*."[106]

To illustrate (2), let us consider a white dot that I will call Jarred. The metaphysical makeup that Jarred instantiates has three constituents and nothing less. Those constituents would be the properties *whiteness*, *roundness*, and the relation between them. The immanent property account,[107] therefore, is a particular version of *constituent ontology*; namely that properties are the metaphysical parts that ground the character of complex ordinary objects.

It is for this reason that an Aristotelian account has sometimes been referred to as "thickly charactered" or a "layer-caked ontology," since there can be more than one property in an ordinary object. For the relational ontologist (i.e., Platonism) in contrast, ordinary objects would be seen as "thinly charactered" or a "metaphysical structureless blob," since properties are not in their objects, but rather tied to them. Returning to my example of Jarred, the relational ontologist would only require that the fundamental *relation* of instantiation is needed between Jarred and its properties. Since

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[106] Koons, Robert and Pickavance, Timothy, *The Atlas of Reality: A Comprehensive Guide to Metaphysics*, (West Sussex: Wiley-Blackwell, 2017), 179.

[107] Other theories, such as Classical Bundle Theory and Trope Theories, could also endorse a constituent ontology approach for answering whether properties are the constituents of substances. Due to space and time, I will focus on what has been called the Classical Substrate Theory, which is commonly understood as the Aristotelean model.

properties/universals reside outside of their concrete objects, instantiation is primitive and irreducible to the relations that bind them.[108]

Lastly with (3), if Aristotelian properties reside in, and are constituents of, ordinary objects, then any given property is dependent on at least one particular which exemplifies/instantiates it. This means that properties have the possibility of being non-existent or destroyed if there is no particular instantiating it. For instance, if humanity were to be wiped off the face of the earth, the property *humanness* would be destroyed and cease to exist. Transcendent properties, on the other hand, are not dependent on particulars, and could exist uninstantiated. D.M. Armstrong (one of the main spokespersons for immanent universals) claimed that, if one does *not* endorse (2) and (3), then universals must be placed in a special domain (i.e., Platonic heaven).[109] The distinction made in (3) is important because if one admits immanent properties, then they are only appealing to entities that exist in the physical world. However, for Platonists, transcendent properties are those entities which exist in the non-physical or immaterial world (thus making them abstract).

3 Musical Aristotelianism (MA)

Now that we have an understanding of the significant features between immanent and transcendent properties, we can now turn to discussing some of the insights or intuitions of how an Aristotelian account could be applied to musical ontology. While some of these insights can be seen as highly contentious, it is worth explaining each in depth. In order to do this, I will *apply* and *highlight* what Fisher has already proposed regarding MA.[110] I intend to display what facts MA brings to light so as to prompt further consideration. In order to do this, I will separate each

[108] It is not always the case that relational ontologies are thinly-characterized and understood as structureless blobs. In Chapter Three, I will present a relational ontology that is both thickly-characterized and structured.
[109] Armstrong, DM. *Universals: An Opinionated Introduction*, (Boulder, CO: Westview Press, 1989), 76-77.
[110] ARJ Fisher, "Musical Works as Structural Universals," *Erkenntnis* (2021): 4-7/http://doi.org/10.1007/s10670-021-00400-1.

insight into four parts. While Fisher offers more intuitions, the following four seem to be the most perinate to MA:

(a) Musical works are repeatable;

(b) Musical works are wholly *in* their particulars;

(c) Musical works are created;

(d) Musical works can be destroyed.

Starting with (a), one of the motivations for endorsing realism of any stripe is that it can account for music being repeatable. This also applies to MA because musical works could be recognized as immanent universals that are multiply exemplifiable in each of its instances. Immanent universals, in this case, can only be multiply exemplifiable in space and time. They are the sort of entities that provide the nature of the relation between a work and its instances. For example, all of the performances and recordings of Glass's "Mad Rush" are all instances of the same immanent universal. Although this insight is not mutually exclusive with MA, it does provide an essential and intuitive feature regarding a piece of music being repeated at different locations and times.

The second insight of MA that is unique within the realist camp is that a work is *in* their particulars. The reason for MA being unique in this regard is that a universal is located and occupies in any region where any of its concrete manifestations reside. For instance, a Platonist conception of types would *not* be in any of its tokens. Types are not locatable, nor do they occupy any region where tokens are being exemplified. Exemplification, for Platonic type-theorists (and, indeed, most Platonists in general) is a primitive and irreducible tied-to relation, but *not* a tied-in relation as in MA.

In essence, the musical nominalist account (holding to endurantism) shares the similarity of works being wholly present in their performances. When it comes xxs being spatiotemporally distributed, both endurantism and MA are going to look identical. Namely, both views are committed to the claim that the entirety of a musical work is spatially located and occupies the region where a performance occurs. For instance, if I attended a performance of Glass's *Prophecies* at the

University of Glasgow's Memorial Chapel, what I would be perceiving and experiencing is not one part of the work, but rather its entirety.

Though both views are similar when it comes to spatiotemporal distribution[111], what differentiates the two has to do with what a musical work should be categorized as. For the musical nominalist (musical endurantist), works of music are particulars. For the musical realist (MA), works of music are universals. Or, in Anthony Fishers words:

> "The relevant contrast between Musical nominalism and Musical Aristotelianism is that, according to Musical nominalism, musical works are particulars, whearas the Aristotelian says they are universals."[112]

Though both views can account for the entirety of the work in each performance, the nominalist account will say that work should be categorized and understood as a particular, meanwhile, MA would say that work should be categorized and understood as an immanent universal.

The third insight of MA is that it can account for the intuitive claim that works of music (and art in general) are creations. This means that MA also accounts for the temporal existential asymmetry inferred by creation claims. Namely, at one time, the work does not exist, whereas it does so at a later point. Accordingly, "Mad Rush" did not previously exist in some Platonic heaven or third realm, but was rather brought into existence by Glass in 1979. There are two reasons why MA can support this insight. First, an immanent universal has a dependence role with their instances. Second, an immanent universal is dependent on whatever composer/musician brings it about. With the former, the existence of an immanent universal is contingent on their being something instantiating or exemplifying in the physical world. With the latter, the first instance of a work

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[111] After discussing with Chris Tillman about musical endurantism being similar to MA, Tillman concluded that both accounts are similar when it comes to spatiotemporal distribution. However, Tillman (at this current moment) is somewhat uncertain whether musical endurantism should be labeled "nominalistic" and "materialistic". Though there is uncertainty on Tillman's part, I still think there to be a metaphysical distinction between the two.

[112] Fisher's statement is directed towards nominalist accounts that endorse musical perdurantism and Tillman's musical endurantism. ARJ Fisher, "Musical Works as Structural Universals," *Erkenntnis* (2021):2 /http://doi.org/10.1007/s10670-021-00400-1.

appears by means of there being a causal relation holding between an individual (e.g., a composer/musician) that has the applicable universals and a particular that has them. Therefore, the occurrence of the first instance of "Mad Rush" marked a time stamp or birth of that musical piece.[113]

Regarding realist accounts of the creation of works, Levinson's initiated-type theory, or abstract artifact theory, can also claim that works are creations. Namely, MA and Levinson's view are in agreement that human activity is needed for a work to come into existence. Though these views endorse realism of some kind, they are dissimilar in terms of the sort of entities they should be categorized. Levinson's view, for example, argues that types are transcendent. Whether these types are *implicit* or initiated, they are the sort of entities that reside or begin to reside in an abstract realm outside of time and space. Although initiated types are viewed as abstract creations, the foundational building blocks of a musical piece, such as musical notes, harmonies, and melodies (i.e., implicit types) previously existed in an abstract form. This is not the case for MA. For MA, the musical "building blocks" (if you will) do not exist some abstract realm. Musical notes, harmonies, melodies, etc. can only exist in time and space.

Another dissimilarity that could be made is that Levinson's types do not reside in their concrete manifestations, while MA claims that works reside in their concrete manifestations. For Levinson, or any apologist of abstract artifacts, an initiated type does not reside in the particulars that are instantiating it. Once more, initiated types exist abstractly, which means that exemplification is a "tied-to" relation. MA, on other hand, would argue that works are immanent, which means they are in their particulars (e.g., performances). Thus, exemplification for the Aristotelian would be understood as a "present-in" relation.

MA does not endorse abstract objects/transcendent types. Instead, universals for MA are dependent on at least one particular exemplifying it. As such,

[113] Of course, there is the possibility that "Mad Rush" could have existed prior to 1979. Mozart, for instance, could have been in a manic drunken stupor at his flat and been the first to instantiate what we know as "Mad Rush." All I am trying to explain with this insight is that musical works (whenever they were created) have a time stamp of origin.

the building blocks for musical creations are only accessible to the composer if there is at least one particular in the world that exemplifies it. MA, in this case, seems to be a more attractive than initiated-type theory because admitting immanent universals can cleanly account for creation without diluting its conception as something that is established on objects that exist abstractly.

The fourth insight is that, if works can be brought into existence, then they can also go out of existence. The destructibility intuition is unique within the realist camp because works under the Platonist conception are properties in the transcendent sense, and can be neither created nor destroyed. While Levinson's initiated created types may certainly claim the creatability of a work, he strongly argued against destructibility. Whatever "residual pull"[114] Levinson may have sought to cling onto, the fact of the matter is that, with MA, works *can* be destroyed since properties are dependent on their particulars. If there is no particular exemplifying a certain property, then that property would cease to exist. This seems sensible in the case of music because there are descriptions of ancient works in manuscripts or religious texts that, unfortunately, have neither been passed on orally, nor have scores or recordings to capture how they should be performed. For example, whatever musical piece the Israelite David played on the lyre to sooth King Saul has ceased to exist.[115] This means that, if there are no future instances of David's musical piece, then it seems intuitive to say that that work no longer exists.

With these four motivating intuitions for MA, I also consider it pertinent to add an evaluative motivation for endorsing this sort of account. In Cray and Matheson's article, "A Return to Musical Idealism,"[116] they presented a useful method for evaluating what makes an ideal or best ontology of music. For Cray and Matheson, this method must be able to meet three criteria: *contentful*, *concrete*, and *of-ness*. With the first condition, an ontology must be able to specify or present the degree to which an instance should manifest. The second condition

[114] Jerrold Levinson, *Music, Art, and Metaphysics*, 263.
[115] 1 Samuel 16: 14-23 (ESV).
[116] Wesley D. Cray and Carl Matheson, "A Return to Musical Idealism," *Australasian Journal of Philosophy* 95, no. 4 (2017): 713.

involves works of music being entities that are "sufficiently related to the concrete world in that they are creatable, spatiotemporally locatable, and able to interact causally with concrete objects."[117] The third, which some accounts would not take as essential, is that the concrete manifestations are actually *of* musical works.

Surprisingly enough, Cray and Matheson noted that the majority of musical ontologies can only satisfy two of these three features. For instance, musical Platonism satisfies contentful and of-ness, but not the concrete constraint—due to the notion that a work of music is not created or spatially located, and is causally inert. Musical materialism, on the other hand, can only satisfy the contentful and concrete conditions, but fails to meet of-ness because a work, under their view, only corresponds to their parts, and is *not* of anything.

While Cray and Matheson argued that the weightiness of each of the three criteria evidences the triumph of their *sophisticated musical idealism*, MA can also satisfy each condition. MA can meet the contentful condition (which we shall further explore when viewing works as structural universals). Second, MA satisfies the concrete constraint. Works, under MA, are technically created, located spatially in their instances, and have some sort of causal powers between particulars. Third, MA satisfies of-ness, because a concrete manifestation is of something, namely, a complex immanent property of some kind. Therefore, it seems that if one holds significant weight to each of the criteria mentioned by Cray and Matheson, MA would be well-worth one's consideration.

To conclude, we can see that the realist route has another plausible option that could be added to the taxonomy chart. In order to show MA in the realist branch, I will switch the branch showing musical works existing as abstract objects to *universals*. This allows there to be both a Platonist (i.e., abstract objects) and Aristotelian (i.e., immanent universals) conception of universals, as shown in Figure 2.2.

[117] Ibid.

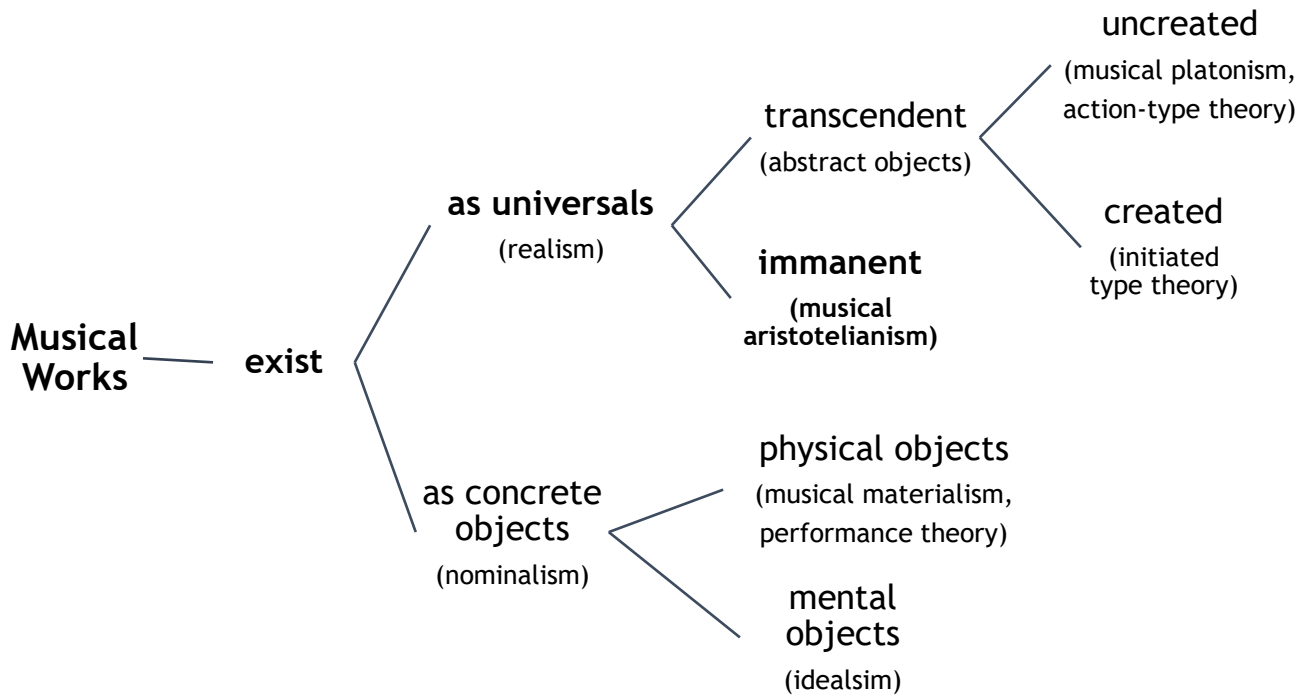

fig. 2.2

4 Classifying Musical Works as Structural Universals

If one were to endorse immanent properties as a viable option, MA would require further explication in terms of describing the nature of a musical work as a specific species of property. One of the most attractive ways MA could cash out a musical work is by viewing it as a structural universal, whereby a work is a complex universal composed of simple properties and relations as its constituents. Such a classification has been recently defended by Fisher, and is relatively new to the field of musical ontology.[118] That said, I would like to state that I find identifying musical works as a certain sort of structural universal to be highly attractive for reasons I shall discuss later in this thesis. However, before I delve any further into discussing some of the strengths structural universals may serve when it comes to musical works, it would be germane to mention how one should comprehend this specific complex universal.

[118] Anthony Fisher, "Musical Works as Structural Universals," *Erkenntnis* (2021): 1-23/http://doi.org/10.1007/s10670-021-00400-1.

4.1 What are Structural Universals?

The origin of structural universals was initially articulated by Armstrong, who claimed that certain universals identify to the realization of intricate or complex structures. This means that a universal is structural if its instantiation by an object consists in said object having proper parts that instantiate certain properties and stand in certain relations. Armstrong used the property of *being a methane molecule* to describe a structural universal.[119] What this complex property entails is that it is made up of five atoms—four hydrogen atoms chemically bounded to the centralizing carbon atom. *Being methane* is a property that is not only complex, but seems to be a universal that is shared between all other individual methane molecules. While complex universals can be seen as structural (e.g., methane or water molecules), there are also simpler cases of complex universals, which are described as *conjunctive universals*. Conjunctive universals here means that universals are instantiated by the same particular that instantiates the parts of the universal. The white dot Jarred, *being white and round*, would be a case of a conjunctive universal because Jarred has only the universal *whiteness* and *roundness* as its constituents. Despite the fact that conjunctive and structural properties may seem to go against Ockham's Razor regarding conspicuously having an extra universal associated, I *would* argue there are sound arguments for endorsing such universals.

Notably, David Lewis offered six good reasons (despite having rejected these entities) why a realist must account for complex universals.[120] For brevity, I will not restate all six here, but focus only on three cases that I find relevant in the musical discussion. First, structural universals could serve as the meaning for amalgamated predicates. For instance, structural universals can account for complex predicates, such as "is a water molecule" and "methane molecule."

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[119] D.M. Armstrong, *A Theory of Universals: Universals and Scientific Realism, Vol. II* (Cambridge, UK: Cambridge University Press, 1978), 68-71.
[120] David Lewis, "Against Structural Universals," *Australasian Journal of Philosophy* 64, no. 1, (1986): 25-46.

Though this reason seems plausible, it may pose an issue for any immanent universalist who holds to a sparse (rather than abundant) theory of universals.[121]

The second argument for structural universals is that it accounts for resemblance. I consider this argument to be strong due to their being some things that resemble each other by being alike in their structure. Thus, structural properties are needed "so that we can give an account for this sort of structural resemblance as the sharing universals."[122] Moreover, accounting for resemblance is also attractive if one thinks there are such things as *Gestalt similarities*.[123] A Gestalt quality is a "feature of a structured whole that emerges from and supervenes on the instantiation of simpler universals by the parts."[124] An example of Gestalt qualities, as pertaining to music, is the artistic style of a composer or the sort of musical tradition or period a piece might resemble. Certain works of music, for example, could have an all-inclusive quality that could mark them as products of the minimalist period, or of Philip Glass. The resemblances of two of Glass's works, for example, are not reducible to pitch-by-pitch comparisons of each musical segment. Rather, once you fix the distribution of pitch, time relations, volume, etc., you have also determined whether it has that indescribable Glassian quality. By determining these certain Gestalt qualities as such, the resemblance between the structural universals is what grounds the instantiation of the quality by the particular whole. It is worth noting here that Gestalt qualities need structural universals to be their supervenient bases or providers, which is an important detail that is often overlooked in musical ontology. Namely, when music critics or lovers listen to certain artists or bands, they are also fixating their attention on the musical style or genre that piece might fall under. Therefore, implementing structural universals as the bearers of these Gestalt qualities seems plausible.

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[121] I think this is an issue for any realist (such as Armstrong) who holds to a sparse ontology. However, this will not be an issue for the Platonic proposal of structural properties that I will propose in the next chapter.
[122] David Lewis, "Against Structural Universals," 28.
[123] Robert Koons and Timothy Pickavance. *The Atlas of Reality: A Comprehensive Guide to Metaphysics*, 215.
[124] Ibid.

The third argument—which Lewis thought had the most significant weight behind it—was that there is the possibility that there are no simple universals. It could be the case that there are simply structures upon structures *ad infinitum*. For instance, the hydrogen atom used to make a water molecule consists of a negatively charged electron and a positively charged proton. Lewis also mentioned that, even at the atomic level, protons consist of quarks and (speculatively speaking) those quarks in turn are composites.[125] Therefore, it seems that if we cannot account for simple properties, it would be intuitive to admit complex universals of the structural sort.

Of course, Lewis eventually rejected structural universals. However, he still effectively highlighted some of the beneficial features of this complex entity. In Chapter Three, I will address and respond to Lewis's main objection against structural universals.

4.2 Fisher's Theory of Musical Works as Structural Universals

As stated earlier, Fisher was the first to provide a coherent account for identifying a work of music as a certain kind of structural universal.[126] Fisher described musical works not through such comparatively descriptions as "being a methane/water molecule," but rather by stating that they involve two components. The first component being the simple universals/properties, which are the sound properties (e.g., A_4 or 440hz). The second component being the relations that structures the complex universal. Fisher stated that these *musical relations* "*must* hold between simpler universals to yield an ordered structure of sound."[127] In order to explicate musical relations, Fisher began by claiming that music is an artistic medium that is audible and composed of various systems of sounds. Whether these systems of sounds consist of tonal and rhythmic ordering, or

[125] Ibid.
[126] I would like to add that I concur with Fisher's assessment of viewing works as structural universals. Though I agree with his identification, I would hesitate from endorsing a traditional Armstrongian or Aristotelian model. Rather, Chapter Three will endorse a Platonist conception of structural universals.
[127] Anthony Fisher, "Musical Works as Structural Universals," *Erkenntnis* (2021): 14/http://doi.org/10.1007/s10670-021-00400-1.

additional musical dimensions, helps provide us with the fact that sounds are combined and structured in a particular order, held together by these musical relations. Additionally, this sort of mereological sound ordering—which are instantiated by their specific properties—are structured and ordered by the relations that hold between the various properties. This means that, if the properties are instantiated by the parts, then the sum of both the mereological parts and properties that have them stand in a relation to each other. The mereological sum would stand in some sort of external (spatial) relation to each other, and the properties would stand in some musical relation to each other (rhythmic or tonal relations). Fisher's account of structural universals can be outlined as follows:

> "*S* is a structural universal of kind *K* if 1) *S* is instantiated by mereological sum *s*, 2) *s* has (proper)parts *a*, *b*, *c* …, *n* that instantiate properties *P1*, *P2*, *P3*, … P_n respectively, 3) *a*, *b*, *c* …, *n*, stand in some external relation *R* to relations *R1*, *R2*, …, R_n to each other, and 4) *P1*, *P2*, *P3*, …, P_n stand in some relation *R** or relations *R*1*, *R*2*, …, R^*_n to each other."[128]

To comprehend how structural universals are implemented in this way, let us take Glass's "Mad Rush" (i.e., a complex performance) as an example. The properties of "Mad Rush" would be the totality of the sounds or pitches of whatever Glass or the pianist is performing. Fisher would call the properties that instantiate these sounds the work's *sound properties*, and the tonal and rhythmic ordering would be the relations[129] (i.e., the musical relations) that bind a piece of music together. Thus, when a composer or musician manifests a certain sound structure (musical work), they are instantiating certain sound properties that stand in some kind of musical relation. The manifestation of a particular work occurs and is locatable at a specific time and space. Additionally, Fisher noted that such works as "Mad Rush" are certain complex entities spread out over time, whereby their parts cannot exist all at once.[130] Lastly, the individual parts (e.g., instruments, people

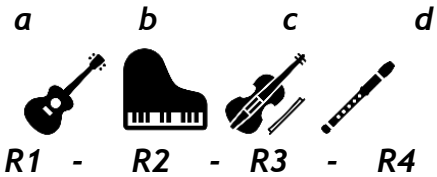
[128] Ibid. 13.
[129] These particular relations are what structure the universal. The rhythmic and tonal relations will be discussed further in Chapter Three.
[130] Anthony Fisher, "Musical Works as Structural Universals," *Erkenntnis* (2021): 14 /http://doi.org/10.1007/s10670-021-00400-1.

playing or programming instruments) of "Mad Rush" stand in spatial relations to each other. This means that spatial relations—whether specified by Glass or what have you—are *audibly* significant to manifesting a work. The below is a visual image of Fisher's view of musical works as a structural universal:

A structural universal is instantiated by:

|

Mereological Sum (parts a, b, c, d),
that stand in some spatial Relation (R1, R2, R3, R4) to each other.



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Each mereological part instantiates sound properties (P1, P2, P3, P4),
whereby each property stands in (musical) Relation (R1*, R2*, R3*, R4*) to each other.*

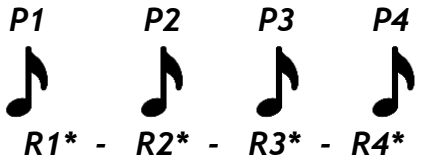

fig. 2.3

To clarify further, what Fisher sought to promote is that, in order for any performance *x* to be of work *W*, *x* would need to exemplify the structural universal of *being W*. Therefore, in terms of such a complex particular as a performance, it is of a specific structural universal. Furthermore, a structural universal is evaluated in terms of a conjunction of *state of affairs*.[131] Fisher stated that, while some musical ontologists might think of performances as sound events or occurrences, MA could just adapt their talk into state of affairs.[132]

[131] Fisher used "state of affairs" in the Armstrongian sense to represent *facts* that obtain or are actual.
[132] Ibid.

5 Challenges for MA Structural Universals and Aristotelianism

What are the challenges facing the endorsement of MA and structural universals to ground the character of musical works? Moreover, if one were to endorse the metaphysical account of Aristotelianism, what metaphysical questions could arise? Here, I will report some of these challenges, and how an apologist for MA or an Aristotelian account might respond. Accordingly, I will first examine some of the consequences that Fisher mentioned relating to structural universals/MA, before presenting certain challenging issues within an Aristotelian model in general.[133]

5.1 Two Challenges Raised by Fisher

Fisher identified four consequences of MA that need further clarification. However, as challenges go, I would argue that most critics would choose only two of these. The first challenge regards MA's need to clarify whether the constituents of a structural universal are essential for any given musical work. For instance, let us return to Armstrong's example of *being a methane molecule*. This universal is structured in a particular way in which the constituents *being hydrogen*, *being carbon*, and the *bonding relation* are essential. As such, *being a methane molecule* could *not* be instantiated without hydrogen or carbon. Now, if we think about a musical performance of the *Fifth Symphony*, would it need every note to be played flawlessly in order to properly instantiate the structural universal *being Fifth Symphony*? In other words, are the constituents as essential as those of chemical compounds? Fisher responded in the negative, because musical works have a normative feature that is *not* present in the hard sciences.[134] Compared to chemistry, the structure of a certain piece of music is set by the composer, and therefore a performance of a given piece can still be instantiated even if some of the conjunction of the state of affairs do not obtain. Omitting, admitting, or modifying simpler sound universals can still instantiate a given work, but only

[133] Before proceeding, I should note that these challenges may not be defeaters *per se*. However, they might be consequences that are perhaps unappealing for a musical realist to endorse.

[134] Anthony Fisher, "Musical Works as Structural Universals," *Erkenntnis* (2021):s 16/http://doi.org/10.1007/s10670-021-00400-1.

partially. This type of response, like all other normative responses, will eventually face issues relating to vagueness (i.e., how many sound properties can be omitted before it is not the work?).

While Fisher's response seems to have a normative aspect in aesthetics, there is another alternative at the Aristotelian's disposal. That is, every property and relation that constitute a structural universal *is* essential for identity. If we were to entertain this alternative, it would be comparable, for the most part, to the hard sciences (e.g., *being a methane molecule*). For example, if a pianist misses one note during a performance of "Mad Rush," then (under this view) they did not instantiate the structural universal *being* "Mad Rush." Such a rigid response seems similar to how Goodman thought of performances and their need to adhere to the musical score note-for-note. While this response certainly seems rigid, it does alleviate there being any discrepancies or issues with the instantiation and identity of a given work. However, the issue with this response turns to the oddity of a musical piece not being instantiated due to there being one wrong or omitted note—leading to its rigidity. Returning to Fisher's response, while it seems intuitive in respect to the normative aspect of aesthetics, it does however lead to the emergence of an identity worry. Namely, to what degree does the violation (or deviation) of a performance disallow that particular performance's ability to identify to a specified musical work?[135]

The second challenge that Fisher addressed is whether structural universals can account for the change of key or pitch standards over time. For example, "Mad Rush" could be performed in various keys (changing from C to B) and still be audibly recognized as *being* "Mad Rush." Additionally, certain pitch standards have changed over time. For instance, pitch A_4, which is now the frequency 440hz, was at one time 415hz during the Baroque period. This type of challenge is directed toward sound properties of a structural universal, and whether these are essential for the structure of a given piece of music. Fisher's response, which may seem

[135] This sort of vagueness worry is not mutually exclusive with MA, but is also a challenge to other rival ontologies. This does not mean this worry should be dismissed, but rather further analysis is required for all accounts that endorse this sort of response.

correct, is that sound properties could differ slightly, but the musical relations are entities essential for a piece of music. Musical relations, for Fisher, are what *govern* the structures of a piece of music. Therefore, if musical relations are unchanging, then the sound properties can somewhat resemble each other.

Take the musical work "The Star-Spangled Banner" as an example. In the United States, the work is typically sung by an individual before each major sporting event. Depending on the vocal range of the individual, the vocalist tends to sing the national anthem in the key that most suits. Accordingly, despite the song having been originally written in the key of Bb, one might be inclined to instead sing it in C. What Fisher's response hopes to show is that, when an audience member hears "The Star-Spangled Banner" in a different key than the original, what they are attending their senses to is the ordering (musical relations) of the song, but with a slightly different, but similar, *tone* (sound-properties). Thus, viewing musical works as structural universals *can* allow the change in pitch over time while still allowing for resemblance as long as the musical relations remain intact.[136][137]

5.2 Two Challenges Towards Aristotelianism

These challenges are directed toward the metaphysical account of Aristotelianism. Such challenges are meant to undercut the metaphysical enterprise of Aristotelianism, thereby making MA a nonstarter and rendering this ontology as one built upon an unstable or problematic foundation.

Challenge One:

The first issue deals with properties and relations being located at the place of their instances. In other words, if properties and/or relations are understood in

[136] Of course, the Aristotelian following a rigid direction (as in the last challenge) might say that the sound properties, like their musical relations, cannot change either. This would mean that, if the key changes from what the composer intended, then they are not instantiating what the composer created.

[137] These challenges directed toward structural universals as musical works are not exhaustive. There may be other issues that I have overlooked. However, this section is meant to highlight the challenges that have already been mentioned and addressed regarding this account. This area, in particular, is worthy of further exploration.

the Aristotelian sense, then they are the sort of entities that are located wherever the physical objects instantiating them may be. For instance, if a pink racquetball is located on my desk, then the property of *pinkness* would also be located on my desk. Another example would be that the relation that holds between sounds in a musical chord would spatially reside wherever the chord is being played. In the cases of *pinkness* and this certain musical relation (and all properties and relations for that matter), it is unclear what it means for these entities to be spatial.

The Platonist, on the other hand, has a reductive paraphrase that clearly views these entities as non-spatial (i.e., abstract objects). The Platonist could say the following: the racquetball is located on my desk but *pinkness* is not. Likewise, the musical chord is audibly located, but the relation that holds between the sounds in that chord are not. These paraphrases say all there needs to be said regarding spatial location; there are the spatial particulars (the racquetball and the musical chord) and non-spatial entities (*pinkness* and the musical relation). What the Platonist is trying to explain with these paraphrases is that, when one attends to their senses in terms of spatial things, they are attending to the instances of those things. They are not (like the Aristotelian) attending spatially to the facts that we know make up *pinkness* or the musical relation. It would seem odd or unclear to think that the facts of *pinkness* (e.g., being a color, having a saturation or hue, resembling red more than green, etc.) are spatially located wherever the instance is being instantiated.

Challenge Two:

The second issue that seems problematic for the Aristotelian is highly similar to the first. The issue is that it is hard to make sense of an immanent universal as a constituent of an object. Another way to contemplate this issue is that a concrete object would have universals as its *parts*. For example, my racquetball has its color by having *pinkness* as a part. Eric T. Olson reaffirmed this notion of constituency and parthood:

> "A thing's constituents are *in* it—built into its structure. And to be *in* a thing was to be a sort of part of it, or something like a part."[138]

If this sort of assessment seems right for the Aristotelian, then *constituency would end up being some sort of parthood*, which may seem erroneous in the mereological sense because constituency and parthood are incompatible with each other. If constituency and parthood are compatible, then the Aristotelian would need to make sense of constituency as a kind of mereological relation. Olson highlighted one of the reasons why these terms are incompatible:

> "If a thing's constituents could be parts of it but needn't be, we should expect some of things' properties to be parts of them and some not to be. (It would be surprising if properties *could* be parts of their instances, but they never are.) But which? In what circumstances would a property of a thing be a part of it? Without some answer to this question, however incomplete, there will be no solution to the problem of quasi-abstract objects [i.e., objects/entities/things that are more "abstract" than ordinary concrete particulars]. And it's hard to see what the answer might be."[139]

Olson's worry is by no means new within Aristotelianism. Indeed, this is why Aristotelians regularly appeal to non-mereological responses, such as endorsing state of affairs. This endorsement side-steps any mereological challenges. This is why Fisher claimed that performances (which are usually regarded as sound events) could be analyzed as state of affairs.[140]

Summary:

In summary, it would be pertinent of me to mention that these issues have been addressed by several notable Aristotelian/constituent ontologists.[141] Whether those responses made by the apologists are strong or weak remains up for dispute.

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[138] Eric T. Olson, "Properties as Parts of Ordinary Objects," In *Being, Freedom, and Method: Themes from the Philosophy of Peter Van Inwagen*, ed. John Keller (Oxford, NY: Oxford University Press, 2017), 78.

[139] Ibid.

[140] Anthony Fisher, "Musical Works as Structural Universals," *Erkenntnis* (2021): 15 /http://doi.org/10.1007/s10670-021-00400-1.

[141] Most recently, David Philip Squires has effectively defended the Aristotelian account—specifically through combating Peter Van Inwagen's critique as it pertains to universals being spatially located. David Philip Squires. "A Defense of Aristotle's Constituent Ontology," Ph.D. diss., (University of Norte Dame, 2017).

My aim was to highlight that (like all other ontologies), issues will always need to be addressed.

6 Conclusion

In this chapter, I first presented the methodological account of property-theory, which defends the notion that musical works should be parsed out by their properties, not types. Appealing to properties is relatively new to musical ontology and still requires further discussion. Namely, how is one to parse out the nature of properties? This led to the second section which distinguished the nature of properties as being either immanent or transcendent. From there, the third section focused on the Aristotelian account of musical works. Specifically, I presented some of the insights that the account has to offer, as well as Fisher's specific approach. Lastly, I presented some of the possible issues MA might encounter, as well as certain challenges to the metaphysical account of Aristotelianism.

While there is more to be said for MA (e.g., individuation, exemplification, etc.), I will finish this section by saying the following: MA is a plausible alternative to the realist seeking to ground character in objects by appealing to universals that are not transcendent. Furthermore, MA seems like a plausible account for the realist who wishes to embrace a methodological approach of property-theory of musical works (compared to type-theory). MA also offers the realist a less convoluted alternative regarding musical works being creations. I will leave it to the musical realist to decide whether these features are advantageous or disadvantageous. Lastly, and perhaps most importantly, this chapter is meant to not only highlight MA or Fisher's account, but to provide some footing/context for how Platonists can conceive musical works from a property-theory vantagepoint.

Chapter Three: Musical Works as Discovered: Music Nature Account

I introduced the Aristotelian account of properties in the previous chapter in the implementation of property-theory to musical works. Musical Aristotelianism (MA) is an account of musical ontology that categorizes works of music as structural universals that are immanent in their instances. In this chapter, we will examine the *favorable* route open to property-theorists for explicating the nature of properties. This Platonic route views properties as transcendent. This is to say that, in the contemporary sense, this view holds that properties and entities (relations, propositions, numbers, etc.) exist abstractly (i.e., abstract objects). These things are non-physical and are independent of minds. *Musical Platonism* is thus the ontological view that categorizes musical works as transcendent universals. There are, of course, certain musical ontologies that embrace the Platonic route. However, those views are parsed out within a type-theory model, *not* a property-theory model.

In this chapter, I seek to elucidate the Platonist conception of properties, as well as introduce and defend an account that categorizes musical works as Platonic structural universals, or what I will call *music natures*. This account, therefore, endorses a specific kind of transcendent property, namely a complex entity that is comprised of simple properties and relations. This species of structural universals will help us comprehend the "of-ness" (i.e., the character grounder of an object) of musical works.

To achieve this result, I shall proceed as follows. First, I shall outline the Platonist conception of properties. Specifically, this section will briefly discuss why any realist would understand properties as abstract objects. Second, I will provide an explanation of structures, and why a realist could admit such entities in their ontological categories. This section will touch upon both concrete and non-concrete (or abstract) structures. Third, I shall explicate the content of the music nature account. Indeed, I will unpack the theoretical features of the account and the ways to metaphysically parse out a piece of music. Fourth, I will present both the questions and their rejoinders that musical Platonism, as well the music nature

account, might receive. If successful in these four sections, my hope is to conclude that the music nature account could be enticing for realists. If unsuccessful, I have no issue with retreating to the next best option for property-theorists, namely MA.

1.1 Why Endorse Abstract Objects?

Ever since Plato, there has been a rich philosophical tradition in believing that certain non-concrete objects/entities exist outside of time and space. These sorts of entities are unchanging and hold no cause-and-effect relationship with any other objects. These abstract objects, such as properties and relations, reside outside any mind and exist eternally.

Unfortunately, appealing to tradition by exegeting the rich history of abstracta is not a philosophically virtuous position by any means—particularly when it comes to granting these entities' admission to one's ontology. Neither do I believe it philosophically virtuous to appeal to such entities because of one's experience or reference. For instance, it is not an argument to say that, since I can see colors (e.g., distinguishing red from blue), colors are therefore properties. The same is true for appealing to abstract reference, such as stating my favorite number to be 37, or my favorite color being crimson. While these confessions may have personal worth to the realist, argumentation is weak or lacking.

In the contemporary landscape, two central arguments are used to defend abstract objects, such as propositions, numbers, properties, and relations. These arguments are, and are known as, the *one over many* and the *singular term argument*. To comprehend these arguments, let us look at Mark Balaguer's formulations:

One Over Many Argument:

> "I have in front of me three red objects (say a ball, a hat, and a rose). These objects resemble one another. Therefore, they have something in common. What they have in common is clearly a property, namely, redness; therefore, redness exists.

Singular Term (Indispensability) Argument:

1. If a simple sentence (i.e., a sentence of the form 'a is F,' or '*a* is R-related to *b,*' or…) is literally true, then the objects that its singular terms denote exist. (Likewise, if an existential sentence is literally true, then there exist objects of the relevant kinds; e.g., if 'there is an *F*' is true, then there exist some *F*s.)
2. There are literally true simple sentences containing singular terms that refer to things that could only be abstract objects. (Likewise, there are literally true existential statements whose existential quantifiers range over things that could only be abstract objects.) Therefore,
3. Abstract objects exist."[142]

The one over many argument seeks to claim the existence of properties and relations, while the singular term argument explains a variety of different objects (e.g., propositions, properties, numbers, relations, etc.). While the former can be traced back to Plato and has assumed various forms over the years, it is generally regarded as an unsound argument. This is due to the various responses made by nominalists and anti-realists (e.g., paraphrasing away or fictionalizing the singular term of a given sentence).

That said, the optimal route for endorsing abstract objects for the contemporary Platonist would be a singular term style argument. Looking at premise one, it expresses what is commonly understood as the criterion of ontological commitment. This criterion is a standard that informs us when we are "dyed-in-the-wool" to believing in objects of certain type in virtue of having agreement to certain sentences. Premise two expresses that there are no paraphrases available with which to rid the quantification over abstract objects. An example that premise two is describing could be something akin to "3 is prime." Therefore, following from the previous premises, three concludes that abstract objects exist.

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[142] Balaguer, Mark, "Platonism in Metaphysics," *The Stanford Encyclopedia of Philosophy* (Spring 2016 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/spr2016/entries/platonism/>.

This sort of singular term argument finds solid ground in the area of mathematical objects. For instance, a sentence like "3 is prime" is taken by most mathematicians and philosophers as being literally true. If correct, it shows that the singular term "3" denotes an abstract object (since the number does not exist in the physical world). Accordingly, such sentences indicate mathematical singular terms and their existential quantifiers range over these abstract objects. Of course, there are various anti-realist positions (fictionalism, for example) that claim that such sentences as "3 is prime" is true in the same sense that "Harry Potter is a wizard" is true.[143] However the case, Platonism still seems the predominant view for comprehending mathematical objects.

Like the mathematical Platonist that implements the singular term argument to endorse Platonic mathematical objects, the musical Platonist can do the same for musical objects (i.e., pitch/sound of A_4 or 440hz). For example, a Platonist could view an individual sound property that 440hz instantiates as being the kind of entity that runs parallel or equated to the mathematical number 3 being the object that 3 concrete particulars instantiate. This harmonization between mathematics and numerical sound frequencies also connect in other areas (e.g., the relations of duration, rhythm, harmony), leading some to state that music is nothing more than math made audible.

Much ink has been spilled regarding whether the one over many and the indispensability arguments hold any significant weight when it comes to admitting abstract objects. Regardless of where one lands on admitting or omitting these objects in their ontology, the (musical) realist has at the very least plausible grounds to think such objects do exist (i.e., I am not trying to prove anything, but only to sketch the main reasons why one would believe in abstract objects). While much more could be said about these arguments, I would not argue against a musical realist's appeal to them.

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[143] This sort of response was introduced by the fictionalist Hartry Field. Field explained that "Harry Potter is a wizard" is true according to the writings of J.K. Rowling. "3 is a prime," like Harry Potter, is true according to standard mathematics. Hartry Field, *Realism, Mathematics, and Modality* (Oxford, UK: Blackwell Publishing, 1989), 2.

2 The Category of Structures for the Platonist

When an ontologist contemplates what categories the world consists of, various nuances emerge within such a categorization. One category worth admitting to one's ontology (whether realist or nominalist) is that of *structures*. Structures are complex things comprised of simpler things. If we were to think about the study of the sciences, for instance, structures seem to be ubiquitous. In chemistry one can study the structure of molecules (e.g., methane molecule CH_4) and in physics the structure of atoms (e.g., a carbon atom). Arithmetic focuses on the complexity of (real) numbers that are held together by the relations of sums, sequences, etc. Structures seems to be the sort of entity that exists for nominalists and realists alike.

If a realist who subscribes to Platonism were to admit structures in their ontology, they could distinguish structures as being temporal and atemporal.[144] The former structures consist of spatial parts that have certain temporal phases. In other words, these structures are concrete, complex individuals that are datable and locatable in space and time. The latter is the sort of structures that consist of non-spatial parts that stand in some sort of relation to each other. These atemporal structures could be understood as complex abstract objects, structural universals, or, regarding the categorization of musical works, music natures.

It would be well worth explicating the essential characteristics of atemporal structures. To do so, it would be helpful to unpack *another* complex entity that is often confused with an abstract structure, namely a set. Following from Grossman, sets are complex things constituted of a group or collection of things. The elements that compose a set are not related to each other, while the elements of structures always are. For example, the set of natural numbers 30–37 does not need to be arranged in any particular order, while the natural ordering of numbers

[144] I endorse Reinhart Grossman's view when it comes to admitting structures as well as distinguishing structures that are temporal from atemporal. Reinhart Grossman, *The Existence of the World: An Introduction to Ontology* (New York, NY: Routledge, 1992), 47-51.

by size arranged from, say, 30, 31, 32, etc., to 37 would be understood as a structure.

The key difference between sets and structures in this example is that the latter are things in *relations*. This means that relations are a necessary feature for structures—indeed, they would not exist without relations. Returning to the example, the natural numbers in the set stand in no relation to each other, and are not ordered or arranged by size. However, if they were to be arranged as such (i.e., smaller-than or greater-than), then the set would be a structure, since 30 stands in size relation to 31, and so on.

Another key feature that should have been recognized by now is that an atemporal structure (like its temporal counterpart) is comprised of *simple non-relational entities*. These simple abstract entities are the parts, or building blocks, which form a structure. Without simple entities, nothing can stand in relation to another thing, and then there can be no complex entities. Returning again to the above example, the simple entities in this case would be the natural numbers 30 through 37. These simple entities, as pertaining to atemporal structures, can be anything from numbers to properties.

The last thing to mention regarding the Platonist conception of atemporal structures is that they are also recognized, like the Aristotelian, as universals. They are universals in that they can be multiply instantiated/exemplified at different places and times. The difference between the Aristotelian and Platonist accounts can be delineated by comprehending Armstrong's example of the methane molecule. For Aristotelians and Platonists, *being a methane molecule* is a structural universal, and is located in its instances for Aristotelians. For Platonists, on the other hand, *being a methane molecule* is *not* located in its instance due to is being atemporal. This also means the simple properties of *being carbon* and *being hydrogen*, and the bonding relations, are also atemporal. Therefore, the instance of the methane molecule instantiates the atemporal structure, whereby the instantiation of exemplification that occurs between the structured instance

and the abstract structure is a tied-to relation (and not a tied-in relation like in the Aristotelian account).

To summarize, I am using a broad brush to show how a Platonist could conceive of the category of structures (temporal and atemporal).[145] On the atemporal side, a structure is a complex entity consisting of simple atemporal entities and the relations that configures it. Without relations and simple properties, there could be no structures of the abstract sort. On the temporal sense, a structure would be a complex particular that has the proper parts arranged accordingly that instantiate their atemporal structure.

Now that we have some sort of context of structures, we can shift our focus to a specific brand of musical Platonism. This musical account will be one that implements the methodological approach of property-theory, and admits abstract objects and atemporal structures to one's ontology.

3 Musical Works as Music Natures

Rationale:
There are several reasons for including music natures to the discussion. The first is to provide a Platonist account that adheres to the property theory of musical works. The second is more of a response to a challenge raised by Fisher directed toward musical Platonism as a whole:

> "This argument begins with the premise that sound structures have some kind of complexity that must be explained. Any theory that does not explain this complexity is worse off than a theory that does. Musical Platonists identify each musical work with some sound structure S or an indicated structure that has sound structure S as a constituent. Prima facie, S has some kind of complexity. A musical work is a sound structure and sound

[145] Of course, some would deny structures in the atemporal sense and would only endorse abstract simples instead. David Friedell made such a maneuver pertaining to musical ontology. Friedell stated that musical works are created (like Levinson), abstract objects, and have no parts. While endorsing musical works as abstract simples might be a worthwhile account for the Platonist, I will not address it in this thesis. David Friedell, "Why Can't I Change Bruckner's Eighth Symphony?" *Philosophical Studies* 177, no. 3 (2020): 805–824.

> structures have some kind of complexity that cries out for explanation. Platonists to date have not given any such account."[146]

There are three correct statements made by Fisher. One, musical Platonists identify each musical work with some variety of sound structure. Second, sound structures have a kind of complexity that cries out for explanation. Third (and somewhat unfortunately), Platonists have not given an explanation for such an account. The goal of this section is to provide such an account.

3.1 The Abstract Explanation

If a tune is actually played and performed, there are objects (physical sounds like a guitar being strummed) that have properties. However, the tune itself exists merely as a structure of properties and relations, without objects. Accordingly, I hold that musical works are composed of simple Platonic properties and relations. Consequently, I must explain both what these simple properties are and why I describe them as "simple." Simple Platonic properties are what I take to be, once more, the building blocks that help construct complex entities. In terms of musical works, these simpler entities are the properties that individual *sounds* instantiate. These sounds are the perceptual phenomenon whereby vibrations travel through the air or in another medium (e.g., water) that can be heard by living organisms (e.g., humans, animals, and, as some have argued, plants). Each sound is distinct and can be scientifically measured in terms of its frequency (i.e., hertz) or what some would call pitch. In music, the numerical frequency of a particular sound determines the musical note. For example, the scientific pitch notation A_4, which is the musical note above middle C, is audio frequency of 440hz. Thus, each individual sound instantiates their property; or what Fisher termed their *sound property*.

The relations are what structure musical works (important note, I am using the term "relations" here to mean an ordinary 2-place relation). All relations, in my view, are Platonic like my properties, but distinct from properties. On the

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[146] Anthony Fisher, "Musical Works as Structural Universals," *Erkenntnis* (2021): 9 /http://doi.org/10.1007/s10670-021-00400-1.

"abstract" level, properties stand in various relations to other properties, which in turn stand in other relations to more properties—all of which serves to order the thing we call the "musical work." Regarding there being a "concrete" level to relations, I would like to state that a sound instantiates some sound property of being that sound, and that sound stands in some relation to another sound which instantiates a property of being that sound. This process eventually results in the instance of the musical work.

The various Platonic relations that I am alluding to can be parsed out depending on how many relational dimensions[147] one wants to account for when it comes to musical works. To grasp some of these dimensions, let us think about a pianist performing a specific work in a café. The first relation I could mention is that the audible sound structure that constitutes the piano performance stands in some *spatial* relation to a given region (e.g., inside of the café). This dimension may track the spatial whereabouts of a given sound structure; however, this dimension is extrinsic, and should *not* be counted as an essential or vital component for the structuring of musical works. For instance, the spatial relation of being performed inside a café to being performed inside of a recording studio does not affect the overall structure of the musical work played by the pianist. Yet, spatial relations are useful for composers specifying the specific region (or regions) wherein their composition should be performed (e.g., can only be performed inside of the Carlsbad Caverns, New Mexico). Moreover, one could make the case that spatial relations might be handy for the acoustics of a given region (e.g., the acoustics of the performance might sound better inside of a church than a café).

Although the spatial dimension is not essential for the structuring of musical works, the temporal dimension (or relation) *is* for the structuring of a musical work. To continue with the piano performance in the café, one could say that these audible sounds produced by the pianist stand in a *temporal* relation to each

[147] The way I am using "dimensions" here is to describe the differences, facets, variety, or aspects that could arise within the sound relation scope. If one construes dimension(s) in another way, please refer to the other descriptions mentioned here.

other (certain sounds being earlier- or later-than other sounds). The temporal dimension could be unpacked and dissected within a musical framework. For example, a musical work could have temporal relations of duration, melodic, harmonic, and/or rhythmic ordering. In terms of duration, the relation could be holding a certain note or chords to be longer- or shorter-than when performed. In terms of melodic relations, it deals with the direction or path that certain sounds move between each other. In terms of rhythmic ordering, there could be a relational metric patterning of a given work. These various temporal components are essential for the structuring of any given work. For example, the café performance needs one or more of these temporal relations to accomplish the musical work.

Another essential dimension that structures musical works are the relations of *pitches*. Where a pitch is situated with respect to others in an octave is an essential relational fact within music. The relationship of an octave, for example, is the interval between one pitch (A_4 440hz) and another with a doubled frequency (A_5 880hz). A_5 is one octave higher than A_4. Like octaves, intervals of all stripes are relational facts between pitches. Moreover, without pitch relations, one could not obtain melodies and harmonies. (It should be noted that pitches themselves are not relational—i.e., that they are just properties).

Some have also argued that the dimension of *volume* is another essential relation in structuring musical works.[148] In terms of volume, there can be the relation that holds between certain sounds being either softer or louder than other sounds. In music, this is recognized as the *dynamics* of a musical piece. With dynamics, there are various ranges of volume. *Fortissimo* being the loudest, *pianissimo* being the softest, and *mezzo-piano* and *mezzo-forte* being the moderate volumes in between. For instance, when a composer writes a musical score, such dynamics are usually written above or below the musical notation to show the change of volume in a given part or bar of music.

[148] Kingsley Price argued that a piece of music is made up of three dimensions: pitch, time, and volume. Kingsley Price, "What is a Piece of Music?" *British Journal of Aesthetics* 22, no. 4 (1982): 322-336.

In sum, the relations I am inclined to endorse regarding the structuring of musical works are those of pitch and of time. While I find myself leaning toward a two-dimensional account,[149] my view could also incorporate a three-dimensional account (like Price) that allows for volume. My inclination toward a two-dimensional account is because it seems to provide a less rigid account of identity. By admitting the relation of volume, on the other hand, it may be more difficult to parse out whether a work like Beethoven's *Fifth Symphony* played only in *Forte* is the same as the *Fifth Symphony* that has the wide range dynamics specified by Beethoven. Spatial relation, or the dimension of space, on the other hand, may be useful for acoustics and composer sensitive motives. Nevertheless, spatial relations should be regarded as extrinsic and non-essential for the structuring of works. These relations I presented as being essential (or plausibly so) are what Fisher has tended to call *musical relations*.[150]

Before continuing on to describe the sort of complex entity these properties and relations make up, I would like to distinguish these from Fisher's musical relations. Instead of musical relations, I will simply call these *sound relations* because there are other collections of sounds (e.g., the spoken word) that are also structured and ordered by, say, time and pitch relations. Thus, broadening the term allows for other complex entities to be structured under the umbrella of these relations. Of course, this broadening comes at a cost—especially when we distinguish which of these sound relations are associated with musical structures from non-musical structures. I will return to this point later in the thesis.

Indeed, if a musical work is composed of simple sound properties and structured by their sound relations, what sort of complex entity is this? I term this *music nature*. A music nature is a kind of Platonic structural universal that comprises sound properties and its sound relations. It is a structure because of the

[149] William E. Webster, for example, believed the set of relations of a musical composition to be two-dimensional. William E. Webster, "Theory of the Compositional Works of Music," *The Journal of Aesthetics and Art Criticism* 33, no. 1 (1974): 61-62.
[150] Anthony Fisher, "Musical Works as Structural Universals," *Erkenntnis* (2021): 12-14/http://doi.org/10.1007/s10670-021-00400-1.

combination of properties and relations, and a universal because it can be multiply instantiated/exemplified in more than one location. Thus, *music natures are what I take to be musical works*.

The thought behind the moniker "music natures" runs similar Peter Forrest's explanation of modality and counterfactuals. Namely, how Forrest viewed possible worlds as *world natures*. Forrest understood world natures to be complex *uninstantiated* universals that are the combination of all their (what he called, natural) non-relational properties.[151] Similar to Forrest's world natures, I conceive of the nature of musical works as being another kind of uninstantiated complex/structural universal. The added caveat to music natures, compared to world natures, is that there are natural relations as well as natural non-relational properties (i.e., sound properties) that constitute the nature of a musical work.

3.2 The Concrete Explanation

What is it for something to instantiate a music nature?[152] This question asks what sort of complex physical object or event instantiates a music nature. Could it be something like a mental object, something concrete like a musical score, or is it an audible event? To answer this question, I will first rule out mental objects as being the entity instantiating music natures. Mental objects do not instantiate music natures, but they do involve the *concepts* of music natures. As such, when a composer, for example, thinks of a complex musical structure in the mind, what happens is not an instantiation of the structure itself, but rather a mental event of understanding a complicated structure. The distinction between the concept of a

[151] Peter Forrest's article does not discuss whether world natures as uninstantiated properties should be said to exist. In my account, however, I claim that *musical natures* as uninstantiated properties do exist (in some Platonic heaven or third realm). Forrest, however, claimed that these uninstantiated properties (world natures) do not exist and should be understood as fictional state of affairs (following from Armstrong). That said, while Forrest took these uninstantiated properties to be fictional, I consider them *Platonic* and real. Peter Forrest, "Ways Worlds Could Be," *Australasian Journal of Philosophy* 64, no. 1 (1986): 15-24.

[152] This question could be understood in two different ways. One way, which I will not explore here, is the nature and function of instantiation or exemplification. The second way, which I presented above, is answering the question of what concrete object is the right one to instantiate a music nature.

music nature and the music nature itself will also be useful for explicating how a composer composes such entities.

I would also like to rule out concrete objects, such as musical scores being the entities that instantiates musical natures. In contrast with Goodman, I do not hold written scores as being the objects that ground musical works. Indeed, scores are the linguistic counterparts of music natures. As such, when it comes to a composer writing a score, what they are doing is writing out instructions for auditory performances. This is similar to a chef writing out a recipe for a particular dish. The recipe—from the point of view of the culinary arts, critics, and food lovers—is not the dish itself, just as the musical score is similarly not viewed as the piece of music. In Chapter Four, I will more fully develop the role of the musical score.

I consider auditory entities to be the right categories for instantiating a music nature. Holding to this sort of view seems to be common-sensical since most musicologists, composers/musicians, critics, lovers, and musical ontologists (at least in the realist faction) hold that music employs a collection/combination of sounds as its art medium. However, if the entity is a collection of sounds, another question can be motivated. Namely, what sort of audible entity are we referring to here? Is it a sequence (in the mathematical sense) of concrete sounds, or a sound pattern construed of a physical event(s), or something else entirely?

3.2.1 Sound Events

The sort of audible entities that I think to instantiate music natures are sound structures construed of physical events—which are audible, temporal, and locatable in a given region. I will take my cue from Dodd and refer to these sort of complex events as *sound events*.[153]

[153] Julian Dodd, *Works of Music,* 13-16.

Specifically, endorsing Jaegwon Kim's theory of events (i.e., events are particulars that exemplify a property at a given time[154]), seems enticing for comprehending sound events. For Kim, an event should be viewed as a structure that can only exist if the appropriate particulars exemplify the appropriate property (what he called the constitutive property) at the appropriate time. Namely, Kim individuated an event by its constitutive property. Though an event could exemplify any number of properties, the constitutive property is not exemplified by the event, but by the event's constitutive substance.[155] Furthermore, appealing to constitutive and non-constitutive properties demonstrates that events are individuated based on their intrinsic features.

Returning to the pianist's café performance will help us further comprehend Kim's theory as it pertains to sound events. When we think about this café, there could be many different sound events occurring at the same time as the performance. Let us say that there are three audible things occurring simultaneously: the piano performance, a couple arguing in the corner, and a machine grinding coffee. Under Kim's account, each of these sound events involve three different properties as well as one or more distinct particulars. What makes these events (in this case sound events) separate from each other are the intrinsic features that each event has. Thus, the grain of events would be understood as fine-grained.

Kimian events seems to be the best route for endorsing the music nature account.[156] There are several reasons for this. First, if music natures are structural abstract entities, then the events that instantiate them must appeal to their

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[154] Jaegwon Kim, *Supervience and Mind: Selected Philosophical Essays* (New York, NY: Cambridge University Press, 1993).
[155] Jaegwon Kim, *Supervenience and Mind: Selected Philosophical Essays*, 170.
[156] Another option when it comes to events comes from Donald Davidson. Davidson's account takes a descriptive approach by theorizing events as structureless particulars that can be subject to various descriptions or characterizations. An event, for Davidson, is structureless because there can multiple descriptions hosting different properties and particulars. Indeed, if a given event can host any number of properties and particulars, then individuating an event is not done through some Kimian-style constitutive property. Instead, for Davidson, events are individuated in terms of causes and effects. Donald Davidson, "The Individuation of Events." In *Essays in Honor of Carl G. Hempel*, ed. Nicholas Rescher (Dordrecht: Reidel 1969): 216-234.

intrinsic features, which Kim's theory allows. Specifically, a Kimian event could have any number of properties associated with them, however, the constitutive property is what individuates it. These constitutive properties could plausibly be viewed as music natures regarding audible (or musical) events. Second, Kim's events are viewed as particulars, which appeals to the notion that music is an audible phenomenon that is datable, temporal, and locatable.

Assuming that Kim's theory of events is correct, then one could say sound events are the concrete objects that instantiate music natures. In term of taxonomy, one could think that the genus *sound event* stems many species. For instance, these species could be anything from verbally arguing with your mom about politics, birds chirping, police sirens, the spoken word, to a pianist performing "Mad Rush," among many others. While these are all sound events, their classifications would differ. When it comes to a sound event described as "music," this sort of species is what I will refer to as *music events*. Likewise, the spoken word could be described as spoken word events, and so on and so forth. My account would thus say that a single *music event instantiates its music nature*. A spoken word event, comparably, would instantiate its spoken word nature, etc.

3.2.2 Poetic and Prosaic Approaches

Narrowing our focus to music events, some of these instances are performances, some are playings, and some are other things entirely.[157] For performances, these music events are the configuration of sounds produced by musicians performing a particular work. The pianist in the café is an example of a performed music event. The second are music events that happen when someone is playing their media player (Spotify, turntable, radio, etc.). Following from Dodd, I think it is right to also add what he called playback artefacts, such as a player piano. The third could be instances that are neither the first nor second. These sorts of instances are music events produced by means of naturally occurring objects, such as the wind

[157] Dodd made these distinctions and claimed that sound events (i.e., music events) are work-tokens, such as performances, playings, and something that could happen in neither of these ways (e.g., the whistle of the wind). Julian Dodd, *Works of Music*, 16.

whistling through the trees, or birds chirping. This third instance is somewhat controversial and requires further explication. I will broach this question when I discuss the definition of music. For now, suffice it to say that these are three different and plausible instances that produce music events.

Viewing a music event as an instance of a piece of music is nothing new or novel to musical realists. However, there is an issue that is often overlooked or unanswered when it comes to endorsing sound events as the right entities for instantiating works of music. Namely, which sound events are understood as music or non-music events? For example, a spoken word event, like a music event, is a physical event that is structured with individual sounds standing in a sound relation to one another. Thus, it is possible that I could take a spoken word event to be a music event.

It would be vital for me to address this issue, not only to explicate my view in further detail, but to also address how one is to define or describe what music is. There are two plausible routes one could follow. The first is what I call the *poetic* approach, which would state that all sound events are music events. Endorsing this would mean that all objects that are sound events (e.g., spoken word, conversations, meetings, a baby crying, and machine sounds) instantiate their own music nature. Thus, under this broad approach, every structured sound event could be understood as music.

Holding to the poetic approach seems to be a romantic response to the person who would like to think everything audible is music. However, some would find this approach to be both unappealing and unconventional due to there being a plurality of sound events that are described differently from each other. Moreover, it may be somewhat odd to think of certain sound events as being music events. It would be strange and revisionary to think of the audible event of my son crying, or me arguing with my mother about politics, as being understood as music or instantiating some music nature.

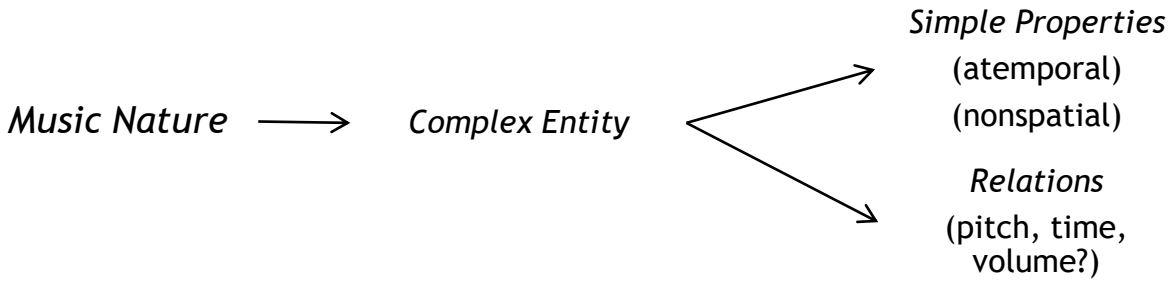
Regardless, there could be some traction to the poetic approach if one were to harmonize an intensional definition that endorses a *community-relative* view, whereby a musical work's historical and (more importantly) communal context was taken into account. In other words, this definition pays due consideration to which sound events a given community describes as being music. I will expound upon this definition in the last chapter.

The second (and possibly more appealing) route is what I call the *prosaic* approach, which provides a more restrictive take on what objects are understood as music events. By endorsing an exclusive definition that rids unwanted objects (i.e., sound events) from the term "music", some will also endorse a restrictive intensional definition that provides a sense of the term by providing necessary and sufficient conditions. For instance, one could add a tonal aspect or aesthetic experience to a given event. Though these sorts of conditions might be plausible for distinguishing music events from non-music events, they each have their own issues to address. For the sake of space and time, let us assume that an added condition of some kind is needed to most suitably identify which sound event is a musical one.

3.3 Concluding the Abstract and Concrete Explanation

To conclude my account of musical works as music natures, I think it is important to reiterate that this account is a Platonic theory that differs from those of Fisher and Forrest. Indeed, contrary to Fisher and Forrest, the simple sound properties and sound relations that comprise a music nature exist abstractly. Both Fisher and Forrest appealed to an Aristotelian account, which would reject the eternality of properties and relations. Additionally, music natures are not causal and are not in their instances. While Forrest claimed that world natures are uninstantiated structural universals, he considered them to be fictional and not real. As an unrepented Platonist, I instead argue that these uninstantiated structural universals are non-fictional and real.

The music nature account yields the following pattern, shown below:



Another pattern can also be made for a music event that instantiates its music nature:

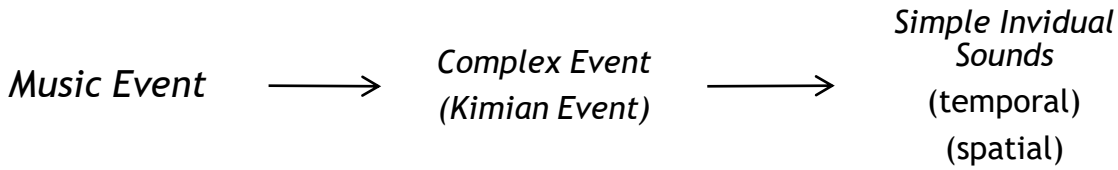


fig. 3.1

Now that we have the ontological ingredients for conceptualizing musical works as music natures, it would be pertinent to dedicate some time to exploring the areas of contention, as well as any possible issues, which may arise.

4 Defending and Motivating Musical Platonism and Music Nature Account

In this section, I will be responding to several questions directed toward the account I just presented. Some of these could be possible issues, while others may instead be regarded as clarificatory queries. In order to unpack these questions, I will separate them into two groups. The first will focus on questions regarding musical Platonism as a whole. Questions of these sort have issues with the admission of abstract objects. The second group will focus on questions directed towards the music nature account. Specifically, these questions are concerned with whether the account is a plausible view to endorse within the realist camp.

The goal of this section is to be able to give a satisfactory response to both musical Platonism and the music nature account.

4.1 Questions Regarding Musical Platonism

4.1.1 The Epistemological Worry of Abstract Objects

Question:
If musical Platonism is correct in thinking that pieces of music are abstract, then its adherent would need to be able to provide a satisfactory epistemology of such objects. By this I mean that the explanation must be informative—non-ad hoc—on how one could obtain knowledge of properties, relations, etc. For instance, one could ask how a composer, for instance Danny Elfman, is able to have access to a music nature like the theme song to *The Simpsons* that does not exist in time or space and is causally inefficacious? Questions of these sorts are specifically aimed at all theories sympathetic toward Platonism, compared to such other realist theories as Aristotelianism.

In the contemporary landscape, the epistemic worry toward Platonism centers on the philosophy of mathematics, namely mathematical objects (e.g., numbers, sets, etc.). This worry is also applicable to other Platonic entities, such as musical works. Originally, this argument was developed by Paul Benacerraf and later revised by Mark Balaguer. The argument, which focuses on mathematical Platonism (but could apply to any sort of Platonism) goes as follows:

i. Human beings exist entirely within spacetime.
ii. If there exist any abstract mathematical objects, then they do not exist in spacetime.

Therefore, it seems very plausible that:

iii. If there exist any abstract mathematical objects, then human beings could not attain knowledge of them.

Therefore,

iv. If mathematical Platonism is correct, then human beings could not attain mathematical knowledge.

v. Human beings have mathematical knowledge.

Therefore,

vi. Mathematical Platonism is not correct.[158]

With Balaguer's version, compared to Benacerraf's original, this challenge rids the causal theory of knowledge in the argument. Balaguer's alteration is stronger because most, if not all, Platonists would respond that knowledge of any species of abstracta is not subject to a causal theory of knowledge.

Through this exclusion, Balaguer preserves that the first two premises offer anti-Platonists with a sufficient reason to admit the third. Specifically, knowledge of abstract objects (in this case mathematical objects) cannot be acquired by human individuals. Additionally, this means "premise (vi) is an outcome of (iii), therefore, giving at first sight reason to accept that Platonism of any sort is false."[159] This alteration, thus, challenges Platonists to provide a positive account for knowledge of abstract (here, mathematical) objects.

In attempt to provide an account for knowledge of abstracta, Platonists have taken three different approaches to rid, or at least dampen, this epistemological challenge to guarantee epistemic admission. The following are three approaches a (musical) Platonist could use to respond to this worry.[160]

Response:

Option One: Appealing to Intuition. This first approach to answer the epistemic worry is commonly-referred to by Platonist as appealing to intuitions. Champions of this tactic include Kurt Gödel, Charles Parsons, and J.P. Moreland. Appealing to intuition, the Platonists in this camp would deny the finite nature of humans and their lack of epistemic access to abstracta (premises [i] and [iii]). By denying these two premises, Platonists would argue that the human mind has

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[158] Mark Balaguer, "Platonism in Metaphysics," In *The Stanford Encyclopedia of Philosophy,* ed. Edward N. Zalta, Spring 2016 ed. ([Stanford, CA]: Stanford University, Metaphysics Research Lab, 2016), accessed August 5, 2020, http://plato.stanford.edu/archives/spr2016/entries/platonism/.
[159] Balaguer, *Platonism and Anti-Platonism in Mathematics* (Oxford, NY: Oxford University Press, 1998), 23.
[160] It is worth noting that I am somewhat indifferent on the manner. I believe the three accounts that I present are plausible approaches to solving the epistemic issue.

intuition as a faculty that allows, through mental activity, the perception of abstract objects—which differs from what is known as sense perception. However, both perceptions run parallel to each other in that there is some kind of direct acquaintance between abstract objects and agents.

Supplicating what Edmund Husserl calls *eidetic intuition,*[161] Moreland expanded a Platonic conception of this term as it relates to how one has access to universals. In his exposition of Husserl, Moreland described that, when one focuses their attention on a moment (what he called a "property-instance"), one can directly perceive the universal in the moment, and thereby "in the substance of which the moment is a mode."[162] Moreover for Moreland, Husserl's eidetic intuition runs parallel with perception, whereby the "direct perception of a universal is a different mental act from an ordinary perception of a moment, but in no way involves attending to something outside the moment itself."[163][164]

Laterally, by positing a faculty of intuition to account for abstract objects, most (if not all) proponents of this approach often hold to a commitment in philosophy of mind. Namely, they claim that there is an aspect of the human mind that is immaterial. For example, Moreland and Gödel held that the human mind is dissimilar from the brain, meaning that, just as we gather information of mathematical objects by mathematical intuition, so also do we gather information about physical objects through sense perception. Thus, under this account, the mind has a faculty of intuition that enables the subject to have a non-spatial connection to the mathematical realm.

The musical Platonist could endorse this sort of account to justify how we have knowledge of music natures. For example, the composer, compared to the mathematician, has some sort of non-spatial connection to the musical realm.

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[161] There are various ways to exegesis Husserl. Specifically, both Moreland and Dallas Willard held Husserl to be a Platonist.
[162] J.P. Moreland, "Exemplification and Constituent Realism: A Clarification and Modest Defense," *Axiomathes* 23 (2013): 253.
[163] Ibid.
[164] Moreland gained this insight about Husserl in Husserl's *Logical Investigations*. Edmund Husserl, *Logical Investigations: Volume 2*, trans. J.N. Findlay, ed. Dermot Moran (New York, NY: Routledge and Kegan Paul Ltd., 1970), 340, 357, 361, 379.

Accordingly, the composer is able to grasp discoverable concepts of certain musical groupings or structures. Like the mathematician that discovers such formulas or equations, the composer is able to discover musical works/melodic structures.

There are, of course, several issues related to having knowledge by intuition. For instance, the Platonist would need to account for how perceptual intuition can achieve *information transferring*. Though the mind is immaterial under this view, it does not fully explain this phenomenon by comparing it to that of sense perception. Namely, abstract objects are not able to transfer information to the mind (even if the mind is immaterial). The reasoning here is that such words as "transferring" or "imparting" seem to imply *causal* overtones, which is what Platonic entities lack.[165] The second issue, which may be less problematic, is the endorsement of Cartesian or substance dualism when it comes to the comprehension of the mind. For the dualist, the mind is separate from the body, and for most dualists, the mind is immaterial. Once more, this may not be an issue for the Platonist and, therefore, may seem like a worthwhile path for one who endorses any stripe of dualism. However, the issue of transferring still remains.

Option Two: Appealing to Science. Another route available to a musical Platonist is having knowledge of abstract musical objects by appealing to science. This account rejects Balaguer's third premise, and argues that we do not have any intuition or information transferring of these objects, but rather knowledge of abstract objects from our best scientific theories. Champions of this view are typically proponents of some variety of naturalism, which holds that the natural sciences help us investigate reality. Quine, in regard to this view, stated that the sciences are "fallible and corrigible but not answerable to any supra-scientific tribunal, and not in need of any justification beyond observation and the hypothetico-deductive method."[166] Thus, what is required for having knowledge of

[165] While Platonic objects, such as properties, are causally inert, the Aristotelian conception of properties can account for the intuition approach. Aristotelian properties are those entities capable of having causal interaction with the agent, because they are dependent on the agent that instantiates them.
[166] Willard V. Quine, *Theories and Things* (Cambridge, MA: Harvard University Press, 1981), 72.

abstract objects is exclusively accounted by holding to the best scientific theories available at the time. Other notable champions that have written on this approach include Michael Resnik and Mark Steiner.

The general thought behind this view is that leading scientific theories are committed to abstract objects. If these theories are accepted, then they provide justification for adhering to them. Moreover, because these theories provide justification, then they also justify the individual in having knowledge of abstract objects. Simply put, the endorsement of abstract objects is due to the empirical evidence of the leading scientific theories, which thereby accounts for one having epistemic access of such objects.

One advantage of this approach is that one can explain having knowledge of abstract objects without having any sort of causal contact or information transfer. The musical Platonist, therefore, can have knowledge of musical works because leading musical and scientific theories are committed to sounds and pitches of all ranges having various numerical audio frequencies. Indeed, since these musical and scientific theories justify accepting sounds and pitches of all ranges, then they also justify the individual's capability to have knowledge of numerical frequencies as being abstract objects.[167]

This approach is made plausible by confirmation being holistic, which means that the whole of a theory is parsed by the evidence that confirms only its constituent parts. However, one of the *disadvantages* of this view is that you need to endorse the controversial thesis that confirmation is holistic. Balaguer, among others, expressed that confirmation by holism is false. Balaguer outlined the problem that emerges when we think of mathematical objects:

> "Confirmation may be holistic with respect to the *nominalistic* parts of our empirical theories, but the mathematical parts of our empirical theories are *not* confirmed by empirical findings. Indeed, empirical findings provide no

[167] This sort of musical Platonist response could be highly contentious for various reasons. That said, all that I am trying to show in this rejoinder is that the musical Platonist could take the same approach as the mathematical Platonist in endorsing mathematical objects as being abstract.

> reason whatsoever for supposing that the mathematical parts of our empirical theories are true."[168]

Balaguer's issue with the scientific approach derives from the view that the nominalistic content of our best empirical theories does not explain/confirm the truth of mathematical, or indeed Platonic, content.

As of the time of writing, the two approaches (intuition and science) I summarized are the more historical routes Platonists have taken to circumvent the epistemological worry. Though both views have their challenges, I believe the musical Platonist could still pursue one of the two options—as long as they are willing to provide an explanation for the challenges posed. The third approach, however, may appear as the road less traveled, but seems to be a powerful alternative for the musical Platonist.

Option Three: Appealing to Plentitudinism. The third and final approach also rejects premise (iii) and holds that you can have knowledge of abstract objects without having contact or transmission. The way in which human beings have knowledge of non-spatial and causally inert entities is that we adopt a specific brand of Platonism, known as Plentitudinous or principled Platonism. Plentitudinous Platonism is the view that all mathematical objects (as an example) that possibly could exist, and are internally consistent to mathematics, do exist. This means that, in order to attain knowledge of abstract objects (e.g., mathematical objects), all we must do is generate an internally consistent theory. Moreover, if it is true that we can devise an internally consistent mathematical theory, as an example, then it is also true that every consistent mathematical theory truly describes part of the mathematical realm, which is to say a collection of mathematical objects.[169] Champions of this approach include Balaguer, Bernard Linsky, and Edward N. Zalta.

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[168] Mark Balaguer, *Platonism and Anti-Platonism in Mathematics*, 40.
[169] Ibid. 51-52.

What makes this view somewhat more radical than other Platonists accounts is that, in terms of such a field as the philosophy of mathematics, advocates of this view do not take sides on whether mathematics is reducible to logic. Instead, the plentitudinous option of the abstract realm focuses on *consistency* and whether a given theory is reliable within its own parameters. In other words, as it pertains to mathematics, there is not just one existing single-set theoretic hierarchy, but rather a plethora of existing (consistent) hierarchies and mathematical structures.

This could well be a viable option for the musical Platonist despite the sheer vastness of the ontology of abstract reality under this account. When we think about the musical realm, there are various musical systems and structures that are practiced within their own limits. There is no hierarchy of a single musical practice that exists, but rather a plentitude of them which exist within the musical realm. For instance, if I were to think of a kind of musical work and articulate a musical axiom system about it, and ensure the system's consistency, I could conclude that it exists.

Therefore, when a composer creates an internally consistent musical system, such as Schoenberg's atonal system, it truly describes part of the musical realm. The atonal model, in particular, is a musical system that functions in contrast to, for example, the 12-tone or tonal model. As such, the composer that has knowledge of a certain musical system can also claim to have genuine knowledge of the abstract realm.

One objection the Platonist will need to address if endorsing this option is how plentitudinism itself is even knowable. Sam Cowling touched upon this objection (as related to the philosophy of mathematics) with the following:

> "The most worrisome objection… alleges that plentitudinism is itself unknowable. And, since it leaves our knowledge that abstract reality is plentitudinous more or less unexplained, it cannot account our pedestrian mathematical knowledge."[170]

[170] Sam Cowling, *Abstract Entities: New Problems in Philosophy* (New York, NY: Routledge, 2017), 140-141.

Balaguer provided one way to circumvent this objection by holding that, if one commits themselves to an *externalist* view of justification, then they could also accept a plentitudinous account of knowledge (musical or mathematical), while leaving open whether we are allowed to know whether the abstract realm as being plentitudinous is knowable.[171][172] This sort of response might be questionable, but if the musical Platonist has no issue with rejecting an internalist view of justification, it seems like an approach worth pursuing.

4.1.2 The Issue of Discovery

Question:
Embracing a Platonist approach to music would lead to facing the unappealing consequence of discovery. Namely, our basic intuition is that art of any sort, including music, is something that is created rather than discovered. Indeed, is there any argument or evidence to suggest that musical works are discoveries? (Contrary to the intuitive appeal of creation, I am not as perturbed by the notion that there could be uninstantiated musical entities that that can be discovered by their composers). At any rate, there are three options that the musical Platonist could implement for rejecting the premise that a musical work is created by its composer. Specifically, Predelli laid out three options:

(i) insist that our firmly entrenched belief's need not be taken into account by an adequate philosophical theory of musical works;
(ii) deny that our pre-theoretical views actually include the claim that musical works are created;
(iii) claim that our beliefs about creatability clash with even stronger intuitions, that is, present an argument from such immoveable intuitions to the conclusion that musical works are not created.[173]

Like Predelli, I believe that ostracizing the widespread pre-theoretical intuitions of creation makes (i) an inadequate solution for endorsing the discovery of musical

[171] Ibid.
[172] Mark Balaguer, *Platonism and Anti-Platonism in Mathematics,* 53-58.
[173] Stefano Predelli, "Musical Ontology and The Argument from Creation," *British Journal of Aesthetics* 41, no. 3 (2001): 281.

works. Accordingly, the two remaining options are more enticing approaches for Platonists. In Chapter Five, I will embrace the approach of option (iii) and will aim to purge any pre-theoretical intuitions of creation by appealing to an argument that accounts for the technological advances in music.

However, while my discussion on AI and music will not be highlighted here, I would like to focus on two other aspects of discovery that require further clarification. That is, how can composers discover a music nature and how would a musical Platonist think about the temporal existential asymmetry implied by creation claims.

Response*:*

Thinking about discovery, what is it that a composer finds a complex music nature? Is it a certain aesthetically characterized musical structure of some kind? A concept of a musical structure? Or something else?

> *Rough Intuition*: A music nature might be a structure consisting of simple sound properties and sound relations that exist abstractly outside the mind. However, when a composer discovers a music nature, what they are really discovering is that they have a *concept* of the musical structure of that work.

This rough intuition suggests two things that must be distinguished regarding a composer's discovery. The concept, which resides in the mind, and the music nature itself, which resides outside of it. The concept of a specific music nature is not the structural universal itself, but rather a comprehension of such structure. For instance, in the concrete sense, there is a difference between me drinking coffee at my desk compared to only thinking about doing so. Likewise, in the abstract sense, there is a difference between an abstract thing that exists sempitemporally compared to *thinking* about such a thing. By marking these distinctions, all I am trying to do is to keep complex mental properties inside the mind, and non-mental complex properties outside of it.

Another parallel to nudge this intuition is to consider the differences made between the linguistic counterparts of written scores and the musical work itself.

The written musical score, in my view, should not be understood as the work of music itself. For instance, Glass's manuscript for "Mad Rush" is not the musical work itself. Rather, the written score of "Mad Rush" is nothing more than the linguistical counterpart of the work "Mad Rush." It is, if you will, Glass's musical concept written down on manuscript paper. Much like the linguistic counterpart, the concept or idea of "Mad Rush" in Glass's mind is the mental counterpart of the work "Mad Rush." It is thus the comprehension of the musical work in the mind of Glass.

Additionally, distinguishing between the concept and the work itself is why Platonists tend to endorse the view that composers *creatively discover* a piece of music. Kivy discussed that the composer's concept of a musical composition is that of creativity rather than bringing something into existence.[174] Similarly, Dodd stated the following:

> "Creativity can coexist with Platonism: we have can acknowledge a composer's originality and creative brilliance in seeing what is beyond the ken of the rest of us. It is only the creation of musical works that is ruled out."[175]

The "*concept*" of the composer stated by Kivy, and the "*originality*" of the composer stated by Dodd, seem to allude that, in terms of creativity, it is the way in which the composer uniquely conceptualizes a musical structure. In other words, I take this to mean that creativity is the imaginative process of understanding a certain mental concept in the mind. This concept is not the creation of the musical structure itself (which is abstract), but rather the creative and original comprehension of a particular musical structure. Thus, the composer's unique mental states are what is meant by creatively discovering a work of music.

The last thing to mention for the process of discovery is that a mental concept is not always needed for discovering music natures. Musical Platonists, such as myself, allow for the possibility that non-mental machines or operating systems (e.g., AI) are also capable of discovering a piece of music. If musical works

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[174] Peter Kivy, "Platonism and Music: A Kind of Defense," 113.
[175] Julian Dodd, *Works of Music*, 113.

are understood as abstract, then it is possible for AI to compose a piece of music without conceiving of a certain complex musical structure (since current AI lacks a mind or phenomenal consciousness). Though these advanced machines are capable of discovering such musical works, human beings are the ones that actually comprehend what the machine produced. Once again, I will present how technological advancements shape our ontological intuitions at a later point. For the moment, I will leave the process of discovery by appealing to this rough intuition.

Temporal Existential Asymmetry:

The problem of discovery does not only focus on how one is capable of it, but also on how there must be a strong response to the temporal existential asymmetry implied by creation claims. In other words, how does a Platonist address the creation claim that, at one time, the work does not exist, but does so at a later time? Generally speaking, ontologists who endorse musical creations would say something along the lines of the following.

For the Platonist, there is a plausible way to respond to the temporal profile of musical works. This response is to say that the assertions of creation claims are misplaced because claiming there being nothing prior is merely the result of presupposing a *domain restriction*. The time at which something comes about in the concrete realm does not indicate the existence of the object, but rather its unavailability in the domain at a certain time. For example, Einstein's theory of general relativity may have always existed (possibly eternally), however, the first time it was tokened or exemplified in 1916 may be viewed as "new" in the concrete realm. The following is a way to apply a domain restriction to Einstein's discovery: "there was no general relativity in 1816, but there was in 1916." What this proposition entails is that, in the concrete realm of 1816, general relativity was not available, whereas it was in the concrete realm of 1916, i.e., maybe the first token/exemplification was made possible. In the musical context, the Platonist has this same sort of response for musical discoveries. They could say that "there was no 'Mad Rush' in 1879, but there was in 1979." Similarly, this means that "Mad Rush" was unavailable in the concrete realm of 1879, but was in

the concrete realm of 1979. These two examples serve to show that scientific and musical discoveries are actual in some abstract realm, but unknown in the concrete sense. Applying a domain restriction to discoveries in this way seems dismiss the temporal existential asymmetry inferred by creation claims.

Further, Letts—who initially presented this sort of domain restriction response—discussed how phenomenon that should not feel foreign to normal language users are so appealing to domain restrictions.[176] For example, domain restrictions may occur when one runs out of beer in their apartment. When my friend Jace checks my fridge and says, "there is no beer," he is implying that there is nothing in my flat (domain) that we can consume (something alcoholic that is dark and a stout). When Jace travels to the nearest liquor store, however, he enables us to satisfy the condition of there being something alcoholic that is dark and a stout (purchasing Guinness). Therefore, it is safe to say that, for domain restrictions, these occurrences happen relatively frequently and are typically assumed when others are making them.

Summary:

This question may appear incomplete. That is, I have not answered the issue with discovery. Rather, I instead laid the groundwork for the chapter primarily concerned with the argument for discovery. For the time being, I first presented what a composer is discovering, namely the concept of the musical work rather than the musical work itself. Furthermore, the comprehension of a musical work in the composer's mind is not essential, since there are other methods of discovery without having any concept of said work. Secondly, I addressed the assertion made by creation claims, and argued that they are misplaced because of their imposition of restrictions on the domain of the concrete world.

This concludes our first group of questions. I am sure there are more questions to ask concerning the promotion of musical Platonism. However, the above two questions are those which typically receive the greatest amount of

[176] Philip Letts, "Musical Works: Category and Identity," Unpublished Ph.D. Dissertation (University of Manchester, 2013), 90.

attention within the literature. That said, let us now turn to the second batch of questions that are directed toward the music nature account.

4.2 Questions Regarding the Music Nature Account

4.2.1 The Unintelligibility of Structural Universals

Question:
When one admits structural universals of any variety (Aristotelian or Platonic), one must address the issues raised by David Lewis's article "Against Structural Universals."[177] In this article, Lewis argued that the coherence of structural universals is questionable. Specifically, the composition of such structural universals having other universals as its parts multiple times over is unintelligible. Directed towards Armstrong's account (and those of other structural universalists), Lewis used *being a methane molecule* as his example. Lewis explained that, in parthood, something can only have a part once. Therefore, structural universals should be rejected because it would be incoherent to say that *being a methane molecule* has the universal *being hydrogen* four times. This objection, in particular, was aimed at (what Lewis called) the *pictorial* conception of structural universals. This conception is the view that structural universals are isomorphic to their instances. Lewis also addressed other conceptions, such as a linguistic and magical. However, I will focus only on the pictorial conception because of its relevance to my account.

Lewis offered several ways to remedy his objection regarding the pictorial formulation—two of which I shall address here.[178] One way is to recommend an entity that called an "amphibian," which is halfway between a universal and a particular. A strange entity like this both alleviates and explains the intuition of an object having its parts multiple times over. However, Lewis noted that admitting

[177] David Lewis, "Against Structural Universals," 25-46.
[178] Lewis offered three different ways of repairing the pictorial concept. I discuss only two here because I find the amphibian and non-isomorphic routes to be the most plausible for one that adheres to a mereological account of structural universals.

amphibians in addition to structural universals to satisfy the pictorial conception is too bizarre to take seriously.[179]

The second option is for the pictorialist to say that structural universals are not isomorphic to their instances. Eschewing the isomorphic variant of the two entities would allow the parts of a given object to happen only once, which seems like a positive step for the structural universalist. *Being methane*, under the non-isomorphic view, would only have *being hydrogen* one time over, compared to the isomorphic alternative which would have it four times over. Lewis's issue, in this approach, is that ridding the isomorphic variant of structural universals and its instance would deny a dogma of classical mereology, which is the denial of the principle of extensionality or uniqueness.[180] Uniqueness in mereology is the view that any two distinct things must differ in their proper parts. Methane CH4 and butane C4H10—which both have carbon, hydrogen, and their bonding relation—are distinct molecules because they differ in their proper parts. Unfortunately, if one were to deny uniqueness, two structural universals, which are not isomorphic to their instance, could be one and the same because they are merely made up of the same universals. In other words, the problem of individuation becomes an issue that needs to be addressed. For example, *being methane* and *being butane* would be understood as the same structural universal because they are composed of the same universals. Thus, the pictorialist that denies extensionality must further explicate how one is to individuate two structural entities that share the same simple universals, but have distinct instances (having different proper parts).

Response*:*

This issue of mereological composition as it pertains to the pictorial conception of structural universals seems rather challenging. However, endorsing a non-isomorphic variant (over amphibians) seems to be the best route to pursue. Specifically, the non-isomorphic response that I am sympathetic toward comes from Kathrine Hawley's article "Mereology, Modality, and Magic."[181]

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[179] David Lewis, "Against Structural Universals," 40.
[180] David Lewis, "Against Structural Universals," 38-39.
[181] Kathrine Hawley, "Mereology, Modality, and Magic," *Australasian Journal of Philosophy* 88, no.1 (2010): 117-133.

In her article, Hawley presents two key features or responses for resolving Lewis's challenge. The first is to reject the principle of uniqueness and embrace the "non-uniqueness" of composition. By rejecting uniqueness on the level of composition, Hawley was able to account for the parts of a given object to only happen once, *instead of* happening multiple times over (i.e., being isomorphic). For Lewis, on the other hand, the non-uniqueness of composition seems to be an error, especially for comprehending the analogy of identity and composition.

Under most accounts (my own included), identity is often understood as unique—in the sense that an object of any sort cannot be identical to two distinct objects. In terms of composition, which is an analogue of identity, Lewis proposed that this must also be unique (although I will not here address his reasons for doing so).

Hawley, on the other hand, agreed with the analogue made between identity and composition. However, it would not be a necessary prerequisite to say that, as identity is unique, so is composition. Specifically, Hawley argued that one could arrive to the analogy by appealing to a non-uniqueness conception of composition. To explain this, Hawley used the relationship of the same parts of the structural universals *methane* and *butane*, and the case of a statue and lump of clay that have the same particles. In both of these examples of complex entities, some of their features are irreducible, but certainly not all.[182] *Methane* and *butane* are such that, if *being butane* is instantiated by *x*, then some parts of *x* instantiates *being methane* as well. Fisher explained Hawley's point thusly:

> "Even if *methane* is analogously identical with its parts and *butane* is analogously identical with those same parts (where the analogy of composition as identity is weakened appropriately), the fact that *carbon* is part of *methane* explains why every instance of *methane* has an instance of *carbon* as a part."[183]

[182] Ibid. 127.
[183] Anthony Fisher, "Structural Universals," *Philosophy Compass* 13, no. 10 (2018): 8.

Additionally, when using the statue and lump of clay parallel, Hawley explained that:

> "…just as a molecule's being a part of a statue explains why the molecule is where the statue is, even if the statue shares all its parts with a distinct lump of clay. And we can accept this point even if we reject the claim that statue and lump are distinct."[184]

Ultimately, Hawley's first feature holds to the analogy of identity and composition, but merely weakens the perquisite of uniqueness by rejecting composition as being itself unique.

Providing some sort of rationale as to why uniqueness is not needed for composition may alleviate the pictorial conception. However, it does lead to an individuation issue. Namely, if composition is not unique, then how is one able to individuate between composite objects or events? Hawley's response to this issue is what I take to be her second feature. Indeed, her response is both highly interesting and plausible. Furthermore, I especially think it might be an option when it comes to thinking about individuating a music event that is instantiating its music nature.[185]

Hawley's second feature offers an explanation on how one is able to individuate between entities that may share the same parts, since compositional uniqueness is not on the table. She proposed that distinctions of similar objects do *not* occur in the parts, but rather the way in which *parts stand in certain relations* to each other. Using her illustration of the lump of clay and statue, the statue "imposes a certain spatial arrangement upon their parts, in the sense that the very statue cannot have had an entirely different shape, whilst the lump is more tolerant."[186]

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[184] Katherine Hawley, "Mereology, Modality, and Magic," 128.
[185]It is worth noting that Hawley and Lewis discussed individuation in the metaphysical sense. Metaphysically speaking, individuation is the ontological relationship between entities, and what makes a single entity that entity, and what makes it distinct from others. For Lewis, mereological uniqueness is important for individuation because this doctrine claims that no two wholes can be comprised of the same parts.
[186] Kathrine Hawley, "Mereology, Modality, and Magic," 129.

What this means in the metaphysical sense is that each structural universal characterizes its instance in a distinct manner. Therefore, when the concrete instance instantiates a structural universal, it is not individuated based on the parts it has, but rather the certain relations those parts stand in. To push this idea further, let us consider the concrete compounds of butane and isobutane. Both compounds have the same parts—sharing the same amount of carbon and hydrogen molecules. However, they are what is known as constitutional isomers, which means they differ due to their connectivity or the arrangement they stand in. As individuation goes, it is the bonding relations that are what make the compounds distinct from each other. While the parts are exactly the same, the bonding relations that arrange the carbon and hydrogen are what differentiates butane from isobutane. Moreover, as structural universals go (e.g., *being butane* and *being isobutane*), they are what ground the character of these concrete objects (e.g., the compounds butane and isobutane).

The Platonist Dimension:

It should be noted that structural universal accounts are predominantly Aristotelian. That is, these complex universals wholly reside in the instances that instantiate them. In the Aristotelian account, Lewis's challenge becomes apparent—especially for accounts that take a mereological approach (compared to non-mereological accounts of structural universals) because structural universals (wholes) seem to be connected to the composition (parts). In other words, the whole seems to be comprised of its parts. Accordingly, Lewis's issue seems to be a strong objection for the Aristotelian who wishes to endorse such complex universals.

However, when it comes to the Platonist account of structural universals, Lewis's challenge seems to lose some of its efficacy. For the Platonist, a structural universal is *over and above* its parts. To say a structural universal is isomorphic to its instance seems to be an error, because a structural universal does not reside in its instance. There is no rooted-in analysis of exemplification. Rather, the Platonist holds to a tied-to analysis of exemplification. Lewis could well see this as an error on behalf of the Platonist, because composition as identity is equally

fundamental, since the parts just *are* the whole. Of course, the Platonist would likely not consider this to be an error, because the whole is merely *over and above* its parts.

Additionally, some Platonists who do not endorse structural universals would go further to say that the analogue of composition as identity is misplaced because it violates the rules of grammar.[187] Namely, it would be somewhat peculiar to think of identity signifying both a single thing (whole) and a plurality (parts). Simply put, it would be odd to think of *x* as being identical to the *y*'s. However, Platonist like myself (i.e., those who endorse abstract structural universals) do not consider the analogue of composition as identity to violate any rules of grammar. Namely, identity can signify a complex thing (whole) and a plurality (parts). The main caveat for the abstract account is that the complex whole is *over and above* its parts.

4.2.2 Clarification on Identity and Individuation

Question:
The individuation question is one that every musical ontologist must address at some point. That is, to provide the identity conditions for works of music. Alternatively, in Dodd's words:

> "The ontologist of music should thus provide something informative of the form 'Work *W* and work *W** are numerically identical if and only if…,' or else explain why no such account can be forthcoming."[188]

There are a wide range of responses for providing an informative account of individuation. Some of these have been rigid/strict, some flexible/loose, and others have remained silent on the matter. Unfortunately, this last option does not seem to be philosophically virtuous—especially if one wants to have a full-bodied account of musical works.

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[187] Peter Van Inwagen, "Composition as Identity," *Philosophical Perspectives* 8, Logic and Languages (1994): 207-220.
[188] Julian Dodd, *Works of Music*, 1.

Response:

I would like to provide two accounts that could be appealing toward the music nature account (i.e., the Platonic account). Specifically, I will provide a *strict* account, as well as a *loose* account that presupposes an ontology that admits a realist conception of complex entities. Of these two accounts, my sympathies lie with the loose approach. However, I am by no means ready to commit to either one.

Additionally, these responses are certainly not comprehensive. However, they do allow for a glimpse into the rationale an advocate of music natures could pursue. By factoring musical works as such, individuating musical works must accord to the conditions a music (or sound) event must meet to be a genuine instance of that work. For the strict account, individuating would mean that the conditions a music event must meet are rigid, whereby the sound properties and relations are essential for a genuine instance of that music nature. For the loose account, individuating would mean that the sound relations is the *only* condition essential for a genuine instance.

In order to explicate the strict and loose accounts (first looking at the strict response), I will offer three cases that will help shed light on their responses:

- Transposing Case: Transposing "The Star-Spangled Banner" for performance from one pitch to another;
- Discrepancy Case: A performance of Beethoven's *Fifth Symphony*, whereby the first chair violinist plays one wrong note;
- Doppelganger Case: Two works (that have *no* association with each other) that have the same sound properties and sound relations being performed at different times and locations.[189]

Before moving forward with my responses, it should be noted that these cases raise slightly different issues when it comes to individuation. For instance, the transposing and discrepancy case raises questions about *necessity* of the proposed

[189] Worth noting, the doppelganger case is addressing questions concerning two composers composing distinct but indiscernible works. Specifically, each implementation section will respond to whether works like these are possible (i.e., being two separate works) or impossible (i.e., one work being instantiated at different times and locations).

criterion of individuation. Meanwhile, the doppelganger case raises a problem for *sufficiency*.

Also, I want to add that in the implementation sections, I will be distinguishing each case in what I call a "metaphysical/abstract" sense, and in a "physical/concrete" sense. The former is addressing whether two musical works are identical from each other. On the hand, the latter is addressing whether two performances perform the same musical work. Once more, these responses are by no means to be comprehensive, rather they are to briefly showcase how one can rationalize the metaphysical/abstract and the physical/concrete.

Option One:

The Strict Account (*Rationale*). The strict account of individuating is to say that the work's identity requires both sound properties and relations. If there are any discrepancies in terms of playing the right sounds or discrepancies that deal with the sound relations, then instantiating the desired work results in failure. For instance, work *W* and work *W** are numerically identical if and only if *W* and *W** have the same sound properties and sound relations. To further explain this account, let us make an analogy with other structural universals, such as H_2O. If one hydrogen atom were missing from the molecule, then the structural universal of H_2O could not be instantiated or exemplified. Thus, the proper parts and relations are essential for the instantiation of each structural universal, whether in the hard sciences or in musical works.

(Implementation). Therefore, when it comes to transposing "The Star-Spangled Banner" from Bb to the key of C, for example, the strict response would say that these are two different works. "The Star-Spangled Banner," which is the Bb version first instantiated by Francis Scott Key, and the second work, which sounds like "The Star-Spangled Banner," but in the key of C. This may seem like an odd and unintuitive response for the strict account; however, it clearly explains the identity and individuation since every sound property and relation is accounted for if one is attempting to instantiate a piece of music. *Metaphysically*, it seems clear because, if the sound properties differ due to transposing, then the music

nature itself would be different from that which was originally composed. In the *physical* sense, the sounds may sound similar (i.e., the instantiation of sound relations being the same), yet there would still be a difference in scientific frequency and overall acoustics (different sound properties being instantiated from the original version).

In terms of the discrepancy case, the strict approach would simply say that playing one wrong note (i.e., sound), modifying, or omitting a note from Beethoven's *Fifth Symphony* would result in its not being instantiated. If the sound properties and relations are not instantiated, then the music event of the work is an improper or different instance. This sort of response may run similar to how Nelson Goodman has described the conditions for a genuine performance. That is, if one note is played incorrectly, or modified or omitted from the written score, then the work fails to be a genuine instance of the work. Likewise, the strict account that presupposes music natures would agree with Goodman, despite differences of categorization. Furthermore, with the strict approach, if Beethoven's *Fifth Symphony* were performed with all the right notes, but (say) the temporal relation held between two notes were off, this would also result in a failure to instantiate the music nature. *Metaphysically* speaking, this seems clear because there is no clarification needed with identity. The *Fifth Symphony* is a specific music nature that only has the sound properties and sound relations that it has. A lack of any of these properties or relations would simply be an instantiation of another music nature that is not the *Fifth Symphony*.

When it comes to the doppelganger case of two performances sharing the same sound properties and relations, the strict response would say both performances instantiate only one work, *not* two. This is due to both works having the same sound properties and relations. Put differently, one could think of a performance of a work that took place in 1821 that is named Stephan's *2nd Symphony*, which has the same musical arrangement (sound properties and relations) as Gary's work *22nd Symphony* that was performed in 2021. If we grant this doppelganger scenario, the strict account would say that there is no Gary's *22nd Symphony*, but rather two instances that instantiated Stephan's *2nd Symphony*.

Alternatively, we could say that Stephan's 2nd Symphony = Gary's 22nd Symphony, or indeed that there is no Gary's *22nd Symphony*, since the first instantiation or instance of that given music nature was performed by Stephan two centuries prior. Therefore, there is only Stephan's *2nd Symphony* being performed in both instances.[190] In the *abstract sense*, this seems clear because, if music natures are atemporal and eternal, then there is no issue or dependency on the time the work is instantiated. In the *concrete sense*, this response seems intuitive because, if a listener could hear both Stephan's and Gary's performance, then they would be under the audible impression that they had heard the same work. The necessary time travel required to be able to hear both performances aside, this seems like a plausible and intuitive way to conceptualize the issue.

To conclude this brief response of the strict account, the appeal of its method of individuating is that it is relatively clear and straightforward. The identity of work *W* and work *W** are identical if and only if both share the same sound properties and relations. The music event would need to instantiate every sound property and sound relation for it to be a genuine or proper instance of the music nature.

However, the negatives or critiques for a strict account are twofold. (Performance Critique) The first (and, quite possibly, main) critique focuses on the unintuitive appeal of its being too rigid an approach, especially when we think are to about it in performance (concrete) terms. Similar to Goodman's way of individuating, the strict approach would say that, if one note was missing, omitted, modified, or what have you, "we could go all the way from Beethoven's *Fifth Symphony* to 'Three Blind Mice.'"[191] For the music listener, this way of individuating seems unintuitive because, if they were to hear a magnificent performance of Beethoven's *Fifth Symphony* wherein the first chair violinist unintentionally missed/omitted a note, they would not technically be listening to an instantiation of the *Fifth Symphony*. The musical ontologist in the audience

[190] This response towards the doppelganger case is common within musical Platonism. Specifically, if musical works are abstract objects, then it does not really matter what the instrumentation, or the historical or artistic context, has with its instantiation.
[191] Nelson Goodman, *Languages of Art*, 187.

could inform the music listeners at this point that what they heard was not Beethoven's *Fifth*, but rather another musical work entirely. As individuation goes, that specific performance with the one omitted note would be nothing more than an instantiation of another music nature and not the *Fifth Symphony*.[192]

(Work Critique) The second critique would say that a strict account serves to bloat the ontology, which is to say that there would be an unnecessary amount of existing music natures. For instance, there would be existing works with one, two, or more missing notes (*ad infinitum*) from Beethoven's *Fifth Symphony*. Following from Quine, this sort of critique would offend the aesthetic sense for those who prefer an ontology that resembles a "desert landscape."[193] Additionally, someone could charge a bloated ontology as going against Occam's Razor in terms of admitting more entities than needed.

Of course, these critiques are indictments, *not* objections. An apologist for this strict approach could be entirely content with a bloated ontology. It may be the case that this sort of apologist may favor an ontology resembling (for example) a rainforest, rather than desert, landscape. Moreover, they could respond to the unintuitive critique as not being an issue because they might see cases of missing or transposed notes as being intuitive. Therefore, the strict route may have some plausibility behind its strict individuation. However, like most musical ontologists, I have some visceral reaction against the strict account, thereby directing my sympathies more toward a looser alternative, which we will explore next.

Option Two:

The Loose Account (Rationale). The loose account for the music nature advocate is that the identity of a work requires *only* sound relations. This means that there could be discrepancies regarding the sound properties due to their being non-essential. However, if the sound relations are instantiated, then a

[192] This is one of the areas where the strict way individuating music natures differs from a Goodmanian way of individuation. That is, if one note were to be played incorrectly, omitted, or modified in a performance, it would result in instantiating another music nature. For Goodman, it would not be a genuine performance of anything, since there is no musical score to ground its character.
[193] Willard V. Quine, "On What There Is," *The Review of Metaphysics* 2, no. 5 (1948): 23.

performance could count as a genuine instance of the music nature. Put differently: work *W* and work *W** are identical if and only if *W* and *W** share the same sound relations. What makes this account enticing is the weight that it places on the sound relations of music, which allows for a more intuitive approach compared to the strict account. That is, when a music critic or layperson listens to a performance of a work they enjoy, they are drawn not by the notes *per se*, but rather by the way in which said notes are arranged or structured. Another intuitive element of the account is that particular performances of a given work can be understood as being "bad performances." The reason why certain performances can be audibly recognized as "bad" is not because the structure of the song is off, but rather the sound properties are not being properly instantiated. If the sound relations that structure the work were unrecognizable in the performance, then there would not be a "bad" performance, but a different one entirely.

Other than stating the intuitiveness of the loose account, there are two motivations for classifying sound relations as essential and sound properties as non-essential. The first motivation show that sound properties are non- or partially-essential. The non-essential route (favored by the loose account) explains that, as long as the sound relations are instantiated in a performance, it does not really matter what properties are being implemented. Indeed, sound relations are essential for identity. The partially-essential route states that, in aesthetics, there is some sort of normativity regarding works of art (in our case, music). This is in contrast to the hard sciences, wherein the constituents are essential (see my description of the strict account). The normative aspect focuses on the sound properties within the music nature. These sound properties are normative within the music nature because they can be used in such a way as to allow for appropriately or partially-formed instantiations of the work. To fully comprehensive this aspect, let us consider the property of *being a penguin*. If a penguin is born without a wing, or a tail, it would still instantiate the property of *being a penguin* or *penguiness*. Just because one of its parts is missing does not mean that the wingless or tailless vertebrate does not instantiate the property of *being a penguin*. Likewise, there is also a normative aspect to sound properties within a music nature.

I should note that I am drawn towards the non-essentiality (over partial-essentiality) of sound properties. My reasoning here is that endorsing partial-essentiality in ontology makes for an incoherent way of parsing out identity. I have included partial-essentiality here because most musical realists like having a normative aspect to music. I do not favor the normativity route because it opens up various issues of vagueness. While some Platonists think they can avoid the vagueness issue, I instead believe it to be a consequence of the view.

The second motivation is adapting a sort of Hawley-esque way of individuating structural universals. That is, to think of relations as being the essential component that not only helps structure the complex entity, but also facilitates individuating between other structures. For instance, Hawley's example of the lump of clay and the statue explains the difference between the two objects. To distinguish between them, one must focus on the composition relations. Though they share the same parts, they are differentiated by the relations those parts stand in. Likewise, music natures could be similarly understood. For instance, let us consider every sound as being the musical lump if you will, and a particular musical work, say Glass's "Mad Rush," as being the statue. What makes "Mad Rush" that specific music nature and different from the musical lump is the sound relations that structures it from the musical lump. Furthermore, the metaphysical labor the sound relations here perform serve to distinguish it from other music natures.

By employing both motivations, you have a *somewhat* loose conception of individuating a piece of music. My use of "somewhat" here is to suggest that there is still some rigidity to identity. The rigidity I am referring to is the essential feature of sound relations. The non-essential, or normative aspect, to sound properties allows a degree of metaphysical flexibility for certain performances to count as genuine instances, even if some sounds could be either modified or incorrectly played. The component of sound relations as being an essential feature

for structuring the work and differentiating between other music natures allows for some metaphysical tightness, or immutability, for individuating.[194]

(Implementation). Accordingly, when it comes to transposing "The Star-Spangled Banner" from Bb to the key of C, for example, the loose account would say both performances are instantiating the same music nature. *Metaphysically*, transposing does not hinder the identity of the work due to the essential component of sound relations. Alternatively, in modal terms, in all possible worlds the sound relations that compose "The Star-Spangled Banner" are necessary (modally inflexible), while the sound properties are modally flexible. Thus, you can have "The Star-Spangled Banner" in various keys (e.g., C, Bb, A, etc.). In the *physical* sense, audience members can easily comprehend that they are hearing an instance of "The Star-Spangled Banner" regardless of the key it is transposed in. Therefore, if Christina Aguilera were to perform the anthem in the original key of Bb, and Iggy Pop transposed the anthem in the key of C, the audience members would not be confused by the fact that Iggy Pop sang the anthem in a different pitch. This seems intuitive and commonsensical, especially if the relational structure is intact in both patriotic performances.

When it comes to the discrepancy case, the loose approach would say that modifying, omitting, or playing (more than) one note incorrectly wrong from a performance of Beethoven's *Fifth Symphony* would still instantiate the work. While responding in this fashion seems to be intuitive, it still requires further explication. Namely, how can a music nature keep its identity if certain sound properties are missing or played incorrectly during a performance? Furthermore, how many discrepancies does it take for a performance of Beethoven's *Fifth Symphony* to not be an instance of the work? These questions are challenging to answer for any musical ontology seeking to endorse a loose account of identity.

[194] There are other ways of conceiving identity and individuating than what I have proposed here. I have not included them due to space limitations, but this area could be explored in future.

Consequently, I am only implementing a "somewhat" loose account of identity. Through its admission of sound relations, the loose account I am offering can answer the discrepancy case as follows: as long as the sound relations are instantiated, then the sound properties being instantiated are arbitrary. Responding in this manner seems correct in the concrete sense, because if one note were played incorrectly in the *Fifth Symphony*, the sound relations would not have been altered or hindered. Though the note could be played incorrectly, it would still be played at the right time and rhythm of the structure.

An analogy seems appropriate to comprehend the *metaphysical* way of responding. Specifically, let us think of the mathematical formula of the Pythagorean theorem exhibited in geometry (and, for the time being, let us grant mathematical Platonism as the right way of categorizing). Any formula (in our case, Pythagoras's theorem) is nothing more than mathematical relations articulated in symbols. For the Pythagorean theorem, the equation is $a^2 + b^2 = c^2$.[195] Now, if we were to insert any number into this formula, it would still instantiate the Pythagorean theorem. Of course, the hypotenuse would differ depending on the natural numbers implemented, yet it would still yield the formula that bears Pythagoras's name. Likewise, the loose account of identity of music natures would act in the same way. The identity of the music nature *Fifth Symphony* is characterized by the sound relations it has. Furthermore, let us think of the sound properties as being the natural numbers. It does not matter what sound properties are being implemented, because if the sound relations of the *Fifth Symphony* were instantiated, then it would still be an instance of the work.

Of course, this might seem like a consequence of the view because, in the *physical* sense, certain instances of a given work can sound aesthetically unappealing to the listener. For example, when I would teach piano to five- and six-year old's, I would teach them such works as "Mary Had a Little Lamb." At the end of the month, they would perform the piece to me and their parents. Usually, the performances sounded aesthetically unappealing to the ears because there

[195] The Pythagorean theorem is not just an equation, but also a claim: "In any triangle with a right angle, if c is the length of the hypotenuse in meters, and…, then…"

would be multiple notes being played differently from the written score given. However, what seemed interesting is that their performances, despite multiple incorrect notes, were still audibly recognizable as "Mary Had a Little Lamb." Metaphysically speaking, this audible recognition is due to the sound relations seeming to have been instantiated, even though the notes were performed differently from the score I provided.

Interestingly, in the discrepancy case, the loose account I am offering would say that notes are not played incorrectly, but differently. This might seem like another consequence of the view, however, if sound relations are the only essential feature of identity, then there can be no right or wrong way the sound properties must be for a music nature. Naturally, some of the sound properties being instantiated in a performance might sound aesthetically unappealing or "bad," but if the sound relations are instantiated correctly, then it seems that one would have a genuine instance of the musical work.

However, someone could pose a different discrepancy question to push this loose response further. Namely, what happens if every sound property of the *Fifth Symphony* were to be played correctly in the score written by Beethoven, but in the violinist section, a sound relation in the fourth bar were not instantiated. Would such a case be a genuine instance of the work? Unfortunately, in this case, it would not be a genuine instance of the *Fifth Symphony*. While this consequence may seem innately unintuitive, it is relatively straightforward in the metaphysical sense. Since the identity of the work is grounded in sound relations, then any divergence of them would fail to instantiate the *Fifth Symphony*. This is where the normativity apologists might step in to save the day. Unfortunately, the rescue would only be partial for the normative aspect because its end result resides in ontological vagueness.

In the doppelganger case, the somewhat loose and strict accounts would have near-identical responses. That is, both performances would instantiate only one work, not two. This is nothing new or novel, because the loose account endorses a traditional account of Platonism. That is, *metaphysically* speaking,

music natures are abstract and understood as sempitemporal. Therefore, any sort of doppelganger cases are merely composers exemplifying or instantiating an object that has always exists eternally. In the *physical* sense, the performances of Stephan's *2nd Symphony* in 1821 and Gary's *22nd Symphony* in 2021 would just be two instances of the former. Furthermore, they would be the same instance even if Stephan's symphony was performed by acoustic instruments, while Gary's used electric instruments (this is contrary to instrumentalist accounts that individuate based on the instruments being implemented).[196] However, there is a divergence between both accounts. Indeed, for the strict account, *if* the *2nd Symphony* was composed in the key of C and the *22nd Symphony* in the key of D, then these would be different works entirely. Conversely, the loose account would view the two works as being the same.

With this somewhat loose account, there is no ontological vagueness. Instead, there is an account of identity that provides plausible responses toward transposing, doppelganger cases, and sound discrepancies. Naturally, there is more to say both for and against this view. It could well be the case that some may challenge my view of the loose approach of identity. Regardless, this is merely an option for the music nature advocate to endorse or omit in terms of individuation. If the loose account is not obtainable, then retreating to the strict account may be a metaphysically clean approach to support.

5 Conclusion

In sum, this chapter has elucidated an ontological account that satisfied the Platonist conception of property-theory. First, I unpacked the motivations for admitting abstract objects into a realist ontology. Second, I described the category of structures from a Platonist conception. That is, there are two varieties of structures: concrete and non-concrete. Third, I presented a musical ontology that I

[196] This response is counter to Levinson's account, which is a sort of instrumentalist account of individuation. While my taxonomy would classify Levinson as a musical realist, he differs from the rest of the musical Platonists, who hold to a formalist type of account of identity and individuation. For instance, the strict and loose accounts provided by music nature apologists would basically agree with the sonicism accounts proposed by type theorists.

labeled the music nature account. Under this account, musical works are understood as abstract structural universals. Lastly, I presented possible questions (and their rejoinders) regarding endorsing musical Platonism and a music nature account. While music natures are new to musical realism, the account achieves what other Platonists have stayed silent on. Namely, it explains the complexity of sound structures and what they instantiate from a Platonist vantage point. If successful, this seems to be a more suitable alternative for musical Platonists. If unsuccessful, there would be enough content for the realist to modify or adjust a property-theory of musical works that adheres to Platonism.

Chapter Four: The Role of The Musical Score

To a musician, the score is one of the tools of the trade. It contains information needed for composing, learning, and performing a piece. While an explanation of the normative role of the score will be an important element of this chapter, I would essentially like to identify what role the score plays in the enforcement of genuine instances. In other words, certain works are sounds made by people; some of those sounds belong to the work, while others do not. The role of the score could be one possible reason for this being the case. In comparison, the same can be said with a literary work being identified by the type. Various sounds produced by people or many written inscriptions can be instances of the work while others are not. One plausible thing to say (but perhaps not eventually viable) is that the instances of the work could be written or documented by the author. Likewise, with music, one needs some account of certain notes to be instances of a given work. One response from a certain nominalist stripe would say the identity of the work is "defined" by its score.[197] Namely, the physical score (i.e., notes on paper) is *essential*. Without it, then the identity of the work is at best problematic. A realist response could be that the written score is *non-essential* for the work, because the work can be communicated through other means. Of course, it might be too difficult to aptly convey the 3rd movement of Beethoven's "Moonlight Sonata" only by talking. Thus, in cases such as these, the score can still be thought of as practically necessary for enforcing genuine instances, even if the written score is in principle not essential to the existence of the musical work itself.

This chapter aims to analyze what a score is and how it can be used ontologically. To achieve this aim, I will first provide a historical development of scores by unpacking how they were implemented throughout certain musical time periods. Second, I will focus on the primary function of the score—namely, what degree of descriptive and prescriptive force the score has on the performance. Lastly, I will investigate Goodman's nominalist account and explain why the end result of his theory of notation leads to certain difficulties. The ontology of

[197] Nelson Goodman, *Languages of Art*, 128.

musical works was never up for discussion until the publication of Goodman's well-known book, *Languages of Art*, in the mid-1970s. In several chapters relating to notation and the musical score, Goodman categorized and identified musical works as concrete particulars, which were their written scores. Today, sympathizers of Goodman, such as Predelli, have both contributed to and modified the Goodmanian approach of scores and their performances. Both Goodman and Predelli will be analyzed and assessed to see if their accounts are plausible options for the nominalist.

1.1 The Development of the Musical Score

I understand the music score to be the "written or printed notation that displays the various parts of an ensemble."[198] The notation of the score helps inform or direct the conductor and musician(s) to perform a piece of music from start to finish. Another way to understand a musical score is as a complex symbol system. The conductor has the entire score containing each separate part, while the musician might have the individual printed part they are assigned (although the musician may occasionally also have the full score). As simplistic as the musical score might be, composers and musicians throughout history have thought about scores differently.

If we were to bracket ourselves within the Western musical tradition,[199] one of the earliest attempts of documenting a score can be traced back to the seventh century.[200] These early scores consisted of a notational system comprising of several notes referring to certain pitches, as well as symbols, to signify onset, articulation, and the loudness of a given note. Compared to the ways scores are now more commonly used, these early scores served more as a "mnemonic

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[198] Willi Apel and Ralph T. Daniel, *The Harvard Brief Dictionary of Music* (Cambridge, MA: Harvard University Press, 1960), 265.

[199] Due to the length and aim of my project, I will not mention the Eastern music tradition and the role the score attributes to the musician or philosopher. Despite the fact that there might be some overlap between Eastern and Western traditions, focusing primarily on the latter seems to more closely fit the discussion.

[200] Stephen Davies. "Notation," In *The Routledge Companion to Philosophy and Music,* ed. Theodore Gracyk and Andrew Kania, (New York, NY: Routledge, 2011), 70.

device."[201] In other words, the score was used as a cue, hint, or prompt that helped the musician bring to mind the details and intricacies of the piece. The musician, in this case, has prior knowledge of the piece and uses the score merely as a reminder if they lose track in direction or placing. A fitting comparison of comprehending what is called "mnemonic scores" is understanding mnemonic outlines. For some, outlines in areas such as speeches, presentations, and written exams are useful for separating main themes from the details.

There are two prerequisites for mnemonic scores. The first (mentioned above), is that there needs to be some prior understanding of the musical work. This understanding in the musician's mind could stem from retaining the original note-for-note score or retaining the work from oral or instrumental tradition. Likewise, if someone were to implement a mnemonic outline for a presentation, they would first need to know the content of what they are presenting.

It could be contended that this first prerequisite is not necessary if one is to follow/implement mnemonic scores. For instance, the composer may intend to write a mnemonic score that allows the musician the freedom to fill in (i.e., improvise) the unspecified musical sections. In such an instance, I would respond that this would not be a mnemonic score. My reasoning here is that anything that is "mnemonic" is meant as a memory aid, and to remember is to call to mind something that was previously retained.

The second prerequisite has an added caveat. That is, performers employing mnemonic scores of any variety should not follow/perform the written notation note-for-note. If a performer were to do so without adding whatever was retained beforehand, then it would *not* be an instantiation or genuine performance of that given work. Rather, it would be an instance of something entirely different. Such a performer would not be using the mnemonic score in the *way it was intended*[202]

[201] Davies rightly makes this distinction that early scores and notations served more as mnemonics in their implementation, rather than being prescriptive in nature. Ibid. 76.
[202] Failure to use the mnemonic score as it was intended does not mean that they would fail to instantiate a work *per se*. There would still be a genuine instance of a work, however, it would differ from what the mnemonic score is referring to.

because the content retained by memory would not be presented in the written score. Of course, following a musical score verbatim by today's standards is something that is by no means unusual, which leads us to the next evolution of scores.

From the thirteenth century to the present, the majority of scores gradually evolved from mnemonic devices to a specification of every minute note-for-note detail. With the implementation of the five-lined staff with musical symbols, this notational system became the standard way of documenting scores in the West. Not only is there a standard way to write a score, but there is also a standard way of grouping instrumentation from top to bottom (e.g., woodwinds, brass, percussion, strings). Compared to a mnemonic score, the musician needs no prior knowledge of the musical work, but rather prior knowledge of the conventions of the notation written in this tradition. Moreover, these variety of scores (unlike mnemonic scores) encode information *sufficient to realize the music* (i.e., a computer can "play" it). From this point, I will refer to these variety of scores as *standard scores*.

Within standard scores, there are varying degrees of constitutive details that the composer could write down. These varying degrees of notation could range from being thick or thin—which is mostly dependent on what the composer wants to specify. I shall understand thick scores as notations written note-for-note. Additionally, scores can have various degrees of thickness. They can also include articulation, phrasing, finger positioning, and dynamics. Thin scores, on the other hand, have far fewer notes that could allow improvisation or artistic freedom for the performer. In other words, thin scores may only highlight sparse notations essential for the structure of the work, which are far more important than, say, articulation, timbre, vibrato, etc. Consequently, the more details, the thicker the score. The fewer details, the thinner the score becomes. However, it is worth emphasizing that *a thin standard score is not a mnemonic score*.

Though the standard score presented from the thirteenth century onward is the popular option for most composers, I think it is also worth mentioning another

variety: *graphic scores*. Developed in the 1950s, these graphic scores are different from standard scores with five-lined staffs indicating a pitch for each line and each space. Instead, the graphic score fuses conventional and unconventional uses of notation, and adds pictorial elements. Avant-garde/experimental composer John Cage implemented graphic scores that incorporated scribbles, shapes, and pictures (e.g., "Aria" and "Water Music"). Additionally, Cage thought that graphic scores could be used for more than simply representing information to help direct the musician and conductor. Instead, the score could be an object in itself, independent of any musician's usage. The pictorial elements, in particular, is a unique feature of graphic scores. Thus, one could say that these scores are not only objects used to interpret a piece of music, but also have an aesthetic characteristic.

To conclude this section, what seems to be clear when understanding the historical context of the musical score is that they are documented, whether it is written, drawn, or printed. Moreover, it seems clear that scores are used to help inform musicians and conductors, regardless of whether they are acquainted with the work or not. What is less clear, however, is how one is to understand the primary function of the score. Next, we will look at the descriptive and prescriptive nature of the score, and to what degree should a performer comply with it.

2 Primary Function of the Score

Granted, there are several functions that scores may serve (e.g., teaching, pictorial, and historical significance). My main concern is understanding the descriptive and prescriptive force of the score from the perspective of the "musically inclined."[203] Therefore, I would like to say the following:

> (*Des*) The function of the score is *descriptive* when the "musical translator" strives to translate into a notation (a standard score) the music performed by the musician(s).

[203] By "musically inclined," I am referring to a broad range of people, including musicians, composers, conductors, or listeners.

(*Pre*) The function of the score is *prescriptive* when the performer(s) strives to comply with the notational content written by the composer.

It could be argued that this wording may seem intuitively suspect, yet what is imperative is that scores can be viewed as being either descriptive or prescriptive. The descriptive function of notations is the documentation of a music event. Once more, I take a music event to be the phenomenon that combines sounds and relations that structure what we know as an instance of a musical work. What I call the "musical translator" in the descriptive definition is someone who listens to (usually) a single performance (live, recorded, etc.) and documents by writing what was performed. These translators are, if you will, the scribes of the musical realm. What I mean by the prescriptive is that the score has a set of rules in its notation that is taught, and sometimes enforced, so that the musician(s) will perform the work in a specific way. The prescriptive force amounts to score's being a criterion of correctness for the musical work: deviation from it is incorrect. The prescriptive definition functions as something of a "call-to-action," whereby the conductor and musicians act in response to whatever is written on the score.

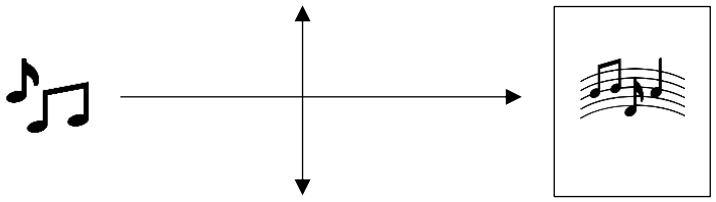
2.1 Degrees of Determinacy

Importantly, the relation of descriptions and prescriptions varies. At one end, there can be minimal descriptions/prescriptions, whereas there can be maximal descriptions/prescriptions at the other. In between of these extremes is the degree of determinacy, which depends on the notational content of the performance on the one hand, and the score on the other.

Degree of Determinacy from the Descriptive Case

Minimal Descriptions (thin)

Performance

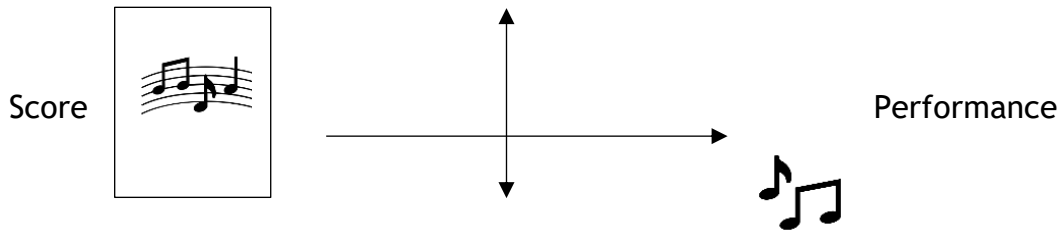


Score

Maximal Descriptions (thick)

Degree of Determinacy from the Prescriptive Case

Minimal Prescriptions (thin)



Maximal Prescriptions (thick)

fig. 5.1

Comparing the degree of determinacy in the descriptive case shown at the top of Figure 5.1 can also be seen in court reporting. Court reports are written/typed transcripts whereby a stenographer attains the verbal testimonies for a particular proceeding or hearing. Moreover, depending on the stenographer's method of transposing the verbal testimonies (i.e., written or typed), there can be varying degrees of descriptions. For instance, maximally thick descriptions are when the operator transcribes spoken or recorded speech in a written, word-for-word from. Conversely, there are court reports that have minimally thin descriptions, such as a stenographer who records and merely summarizes the main, relevant points. The content, in this case, would more closely resemble thin or mnemonic scores.

The degree of determinacy in the prescriptive case, however, can be compared to the way scripts or screenplays are implemented in film. Screenplays that are maximally thick prescriptions are written in a word-for-word form for the actor(s) to match verbatim when filmed. For example, the director Quentin Tarantino writes his screenplays with every minute detail and (at times) requires their actors to read and perform what is written. On the other side of spectrum, there are screenplays that have minimally thin prescriptions, such as those written by Terrance Mallick. Mallick, in particular, is notorious for giving actors either one

line of script or no script at all. His rationale for giving minimal prescriptions is twofold. First, it provides actors with the freedom to ad-lib or improvise during filming. Second, having minimal prescriptions, for Mallick, results in the actors performing in an "authentic," not contrived, manner.

Like court reports and screenplays, striving to comply to the score can vary depending on the notational content given. Allowing these varying degrees of notational content in the descriptive and prescriptive case seems acceptable for two intuitive reasons. First, every system of musical notation, whether thick or thin in content, would classify as a score. Though intuitive, there are, however, other accounts that would be more exclusive in their requirements (which we will see when we come to Goodman). Second, scores would be understood as a *tool* of the trade, rather than as the work itself. This seems intuitive because it places scores as something that used to help the musician perform an instance of the musical work. Much like the painter who uses different brushes, the musician can use different scores to achieve certain works.

2.2 The Compliance of the Performer

If we focus on the prescriptive case shown at the bottom of Figure 5.1, the point of view of the performer plays an important part in the compliance of the score. In *Pre*, I referred to the musician as a "performer." Now, if we were to think about the word "performer" in the general sense, it would not be exclusive to music. For instance, there are performers in plays, films, dance, and other art mediums. Similarly, what classifies these artists as performers is that their activities are highlighted along with the work they are bringing forth. (What I am trying to say here is that the performers in the musical sense are important for the implementation of the score. They are also on display in a live setting for the audience members to enjoy. What I am not trying to say is that the performer is essential for the metaphysical makeup of a musical work). Dissimilarly (for the most part), there are other artists, such as painters and sculptors, whose performance is not on display because only the final product of the artwork is highlighted and desired.

In the musical sense, the performer is someone or something (a machine, for instance) that is capable of reading and complying with the notational content of the musical score. In other words, it is necessary for the performer to have prior knowledge of the conventions of the musical grammar in which the score is written (mnemonic, standard, graphic). Moreover, it is sufficient for the performer to have prior knowledge of the work before they comply with the score. For example, in mnemonic scores, the performer has to have some kind of prior knowledge in order to properly produce a genuine instance of the work. However, sufficiency is not necessity; for standard scores, the performer does not need this prior knowledge of the work in order to produce a genuine instance. This is because the notational content of standard scores is written in a manner that is closer to note-for-note.

The degree of prescriptive compliance varies depending on the score. In the thick case, the performer could hold, or be held, to a standard in the strict or rigid sense, where every note must be played as indicated by the score. For mnemonic scores, on the other hand, prior knowledge of the general structure of the musical work is an essential condition because the notational content is nothing more than a helpful outline. For that matter, performing a genuine instance of a musical work that implements a thin score of any kind (mnemonic, standard, or graphic) is dependent on the performer's ability to recall what is stored in their memory (either knowledge of the work itself, or knowledge of general performative conventions). Complying to minimal prescriptions can nevertheless allow for artistic freedom with which to interpret or improvise what is not indicated in the written piece. For example, they could add different fingering positions, articulations and dynamics, as well as more radical elements. Since the degree of determinacy varies depending on the score, the performer's compliance of a score should vary as well.

2.3 Content in a Score

While the score's descriptive force varies depending on the notational content, it is worth noting what type of content is included within a score—indeed, does the content act akin to the way natural languages act with a script? Let us continue to use the script and score by way of an example. If we were to write a line for a script, we would write out sentences formed from a mixture of words in accordance with grammatical conventions. A line of musical notation works in the same way where the line (let us say four bars) has a mixture of notes or chords that follow or accord with the conventions of the "musical grammar." Similarly, like the lines of a script form a larger, plot-furthering discourse, the lines of a score form the musical theme that serves, say, a symphony. This commonality should be recognized as some sort of syntactic scheme where scripts, as well as scores, have a grammar they must abide by. Both the script and the score implement formal symbols, whether in words (scripts) or notes/melodies (scores). These formal symbols are just syntactical objects with a certain vocabulary to help generate the content.

The crux of the issue lies in whether or not the scores' syntactical objects/vocabulary bring about some sort of semantics. In the case of scripts and scores, this is where there is a point of departure. While the script's vocabulary embodies along with grammatical rules some sort of semantics, the musical score does not. Instead, if there is any meaning attached at all, it is only stipulated arbitrarily to the syntactical scheme of the score.[204] In other words, referential meaning is what is lacking. However, music does have expressive meaning—but not as a conventional matter set up between symbols and sounds. Whilst the meaning might depend on the system of the written notation, it does not establish that system itself. Take, for example, the distinction between a sentence and a musical phrase that has a question-and-answer structure. For the sentence, the semantic content is determined by what the sentence is customarily used to express. With a musical phrase, there is nothing analogous to the referential content of a

[204] Stephen Davies, *Musical Meaning and Expression*. (Ithaca, NY: Cornell University Press, 1994), 34; 39-49.

sentence. If the composer somehow stipulates meaning to a musical phrase, it is done so arbitrarily.

Consider the Picardy 3rd—a note that raises the minor third of the chord to a major 3rd of the last note from a piece in the minor key. Composer *x* may write the Picardy 3rd at the end of the last line in their score to express a sense of hope. Such an example allows three points to be distinguished. First, both scores and scripts depend on rules for moving from written symbols to sounds. The character of such rules is that they are fully "arbitrary," or "conventional." By "arbitrary," I mean that symbols to sounds is not determined by reason or a system, but is instead a random choice or personal whim. By "conventional," I mean that symbol to sounds is based on, or in accordance with, what is generally done or held. Second, scripts, but not scores, embody referential meaning or semantics (e.g., "Fido" means Fido). Referential meaning is arbitrary or conventional. Third, scores (and possibly scripts, though we shall set them aside for now) are at least correlated with expressive content, but this is not generally arbitrary or conventional, but a causal matter. However, one must allow that conventional factors may enter in some musical expression, such as the feeling of anticipation at bar 12 of a 12-bar blues; but this is not matter of the score.

2.4 Concluding the Function of the Score

In this section, I have not attempted to accomplish anything philosophically profound or robust. Rather, I have sought to comprehend the function of a score from the perspective of the musically inclined. I believe that understanding this point of view is often overlooked in some philosophically robust accounts (as we shall see with Goodman). Generally, what I have described is that the musical translator and performer's compliance to the notational content varies depending on what is translated or instructed. Since scores can vary from thin to thick, there are degrees of determinacy that must be acknowledged by the performer when interpreting the written notation. While a score can indicate so much notation and detail, the instructions for a written piece can only go so far.

3 Works of Music as Written Scores

In *Languages of Art*, Goodman went to great lengths to describe the function, requirements, and role of a musical score. The reason for his detail is that he argued that musical works are "defined" by their scores. In his words, the score "has as a primary function the authoritative identification of a work from the performances to performance."[205] Thus, the primary function of a score that Goodman endorses has certain conditions that are required. First, the score must determine the class of performances that follow and align with it.

Second, the score must be recoverable. For Goodman, these conditions must be rigid and strict because of his adherence to a version of musical nominalism, whereby musical works exist as collections of concrete particulars. Again, by nominalism I mean that particulars fall under predicates without the involvement of universals (properties, types). Since musical works, under this view, are not transcendent universals that exist in some Platonic realm or immanent universal, the score becomes *essential* for any musical ontologist that holds to a Goodmanian framework. In what follows, I will assess Goodman's score and elucidate why his view seems unappealing.

3.1 Nelson Goodman's Score

Autographic and Allographic Distinction:
Before we start, I would like to explain why Goodman described music differently to other artforms, such as paintings. In the third chapter of *Languages of Art*, he posed a problem concerning the authenticity of a work of music. Contrary to a painting, there is no such thing as a forgery when it comes to music.[206] Posing this issue allowed Goodman to mark a distinction between (what he termed) *autographic* art and *allographic* art. A work of art is *autographic*, "if and only if the distinction between the original and the forgery of it is significant; or better, if and only if even the most exact duplication of it does not thereby count as

[205] Nelson Goodman, *Languages of Art*, 121.
[206] Ibid. 112.

genuine."[207] *Allographic* art, on the other hand, cannot be forged, and thereby each instance, if performed correctly, is genuine. Alternatively, in Goodman's words regarding music: "Thus, paintings are autographic, music nonautographic, or allographic."[208] What distinguishes allographic art is there being a definitive test of compliance which, in the case for music, is a performance complying to the notation of the score. Additionally, instances of allographic artworks do not demand a historical or causal criterion. For Goodman, there is "no historical information concerning the production of the performance can affect the result. Hence deception as to the facts of production is irrelevant…"[209] Therefore, what determines genuineness of an instance is that it is notationally identifiable to the score.

Requirements:

In light of distinguishing music as allographic, Goodman's main ontological query centered on the relationship between the work and its performances. The relation between a score and a performance, for his view, is only tenable because scores are "characters in a notational system."[210] These notational systems consist of characters devised as classes of utterances, inscriptions, or marks. In order to comprehend what Goodman classed as a notational system, five requirements must be met. Two are syntactic by nature—*disjointedness* and *finite differentiation* (also described as *articulation*)—and three are semantic conditions—*unambiguity*, *disjointedness*, and *semantic finite differentiation*. The syntactic requirement *disjointedness* means that no notational mark may be a part of more than one mark, while *finite differentiation* helps regulate, for any mark, whether it is a part to one, rather than to another character. Simply put, the two syntactic requirements are met when the notational mark belongs to one and only one character—when the object of inscription complies with its compliant.

While the first two requirements are syntactic, a notational system must also comply with the three semantic criteria. First, the system should be

[207] Ibid. 113.
[208] Ibid.
[209] Nelson Goodman, *Languages of Art*, 118.
[210] Ibid. 177.

unambiguous, meaning that the compliance classes should have no inscriptions that make them distinct. Additionally, "no characters may have inscriptions associated to distinct compliance classes."[211] Second, if these compliance classes have two different characters, they must be *disjointed*. Third, any object must have a *finite differentiation* to establish whether it complies with one or another character. That is, the procedure of determining whether or not an object complies with a given character must terminate in a finite number of steps. As such, beyond a certain point, there is no further information to be discovered.

Meeting these five requirements provides us with an exact understanding of a Goodmanian notational system that makes up a musical score. For example, tempo (e.g., *allegretto*) and dynamics (e.g., forte "*f*") would not be notational, thus failing two requirements because they are ambiguous and not finitely differentiated. Moreover, certain ornament symbols which act like contractions, such as mordents, turns, and trills (*tr*), would also be non-notational because they do not stipulate how many notes should be performed. Lastly, certain musical systems would not classify as scores under Goodman's requirements. In his fifth chapter, Goodman cited Erhardt Karkoschka's four types of systems of notation to assess whether they qualified as notational.[212] The first two systems—precise notation (what I call thick standard scores) and range notation (only the limits of ranges of notes are set)—seem more likely to qualify as notational for Goodman. However, the other two—suggestive notation (what I label mnemonic and thin standard scores) and musical graphics (also known as graphic scores)—would more likely fail to be notational because of their lack of syntactic and semantic *articulation.*[213] Consequently, the two latter systems could be more aptly viewed as autographic arts because they would lack any genuine duplications, while the former would have an increased probability of being classified as allographic.

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[211] Stefano Predelli, "Goodman and the Wrong Note Paradox," *British Journal of Aesthetics* 39, no. 4 (1999): 5.
[212] Nelson Goodman, *Languages of Art*, 191.
[213] Ibid. 192.

Goodman's Understanding of Performance:

In order to determine what instance belongs to a given work, Goodman writes:

> "Complete compliance with the score is the only requirement for a genuine instance of the work, the most miserable performance without actual mistakes does count as an instance, while the most brilliant performance with a single wrong note does not."[214]

He also adds:

> "If we allow the least deviation, all work-preservation and score-preservation is lost; for the by a series of one-note errors of omission, addition, or modification, we can go all the way from Beethoven's *Fifth Symphony* to 'Three Blind Mice.'"[215]

Goodman's relationship between the score and its instances seems perplexing because the performance is required to have note-by-note conformity. This criterion is so demanding that a performance in which one note is either misplayed or omitted fails as an instance of the work. While this might seem contrary to any pre-theoretical intuitions, Goodman argued that the one note error, far from being problematic, is instead a justifiable outcome. In his assessment of Goodman's performances, Predelli aptly coined this stringent criterion as the "wrong note paradox."[216] While the wrong note paradox seems to be an inevitable result of Goodman's view, it leads one to question his stance on the matter.

The reasoning seems to be twofold. First, it seems to relate to his prior ontological commitments of nominalism. If one does not ground the character of musical performances by appealing to universals, then one would instead need to find a physical object which would do so. Goodman argued for grounding the character of musical works by appealing to scores. The second reason concerns identity. For Goodman, musical works are allographic entities, then identity must be strict. Goodman seems indifferent regarding whether the wrong notes are performed accidentally or deliberately because, regardless of intentions, their

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[214] Ibid. 186.
[215] Ibid. 187.
[216] Stefano Predelli, "Goodman and the Wrong Note Paradox," 368-371.

imperfect performance results in his falling into a slippery slope fashioned by the transitivity of identity. While this may seem unintuitive to the musically inclined, it does however alleviate any vagueness when it comes to individuating between performances. In the next section, we will further explore the unintuitive consequences of Goodman's account.

3.2 Issues with Goodman's Account

Goodman's conclusion of what a musical work is, and what a performance entails, has driven a wealth of opposition on several fronts. In this section, I will only focus on two of the issues. The first has been directed toward Goodman's account being counterintuitive. Specifically, this issue exposes how his theory is counterintuitive to anyone who has ever played, or indeed listened to, a piece of music.[217] The second issue focuses on the wrong note paradox. I will also discuss Predelli's modification which tries to salvage a Goodmanian account. Generally speaking, the section intends to focus on these two issues and show that Goodman's theory should be either abandoned or modified in some way.

3.2.1 Counterintuitive Worries

There are five[218] worries in Goodman's theory that seem to go against our central intuitions regarding musical scores. Through their exposition, I am not presenting any knock-down argument against Goodman's view, but rather inducing an "incredulous stare" toward his conclusions.

First, I think it safe to say that some musical works do not have any written scores. Either these types of works were never written down to begin with, or they were destroyed and retained only through oral tradition. As an example, let us imagine if Hilary Putnam wrote a musical work (in standard score) named "Blue Grue," which notated four whole notes (C_4, F_4, G_4, C_4) designated to one bar each

[217] Aaron Ridley, "Against Musical Ontology," 204.
[218] This list is not exhaustive. There could be more worries that go against the commonsense notion of the Goodmanian score.

(i.e., four bars total). The written score of "Blue Grue," which complies with Goodman's five desiderata, goes on to have many performances that count as genuine instances. "Blue Grue" then becomes a highly successful piece of music, and musicians and composers alike know the so called "ins-and-outs" of the notational content. The impact of "Blue Grue" is so significant that it compels historians and musicologists to preserve Putnam's original score as well as every single written/printed score by placing them in the Getty Museum in Los Angeles California.

Sadly, and unfortunately during the driest part of the season, a fire engulfs the Getty and every copy—including the original of the score. After the fire was eventually put out months later, no musical translator ever bothered to rewrite Putnam's score due to the fact that all musicians and composers alike had the instructions of "Blue Grue" retained and engrained in their memories. Therefore, when it came to recalling and performing this piece post-fire, musicians were still able to perform, some would say, genuine instances of the work. Thus, "Blue Grue" continues to live on, but only in performance form.

This thus raises the question of why Goodman insists the *score* is necessary for the work's existence and identity? If someone played the four notes, exclaiming "this is 'Blue Grue,'" then why is it not sufficient for another performance of the same piece that a musician intends when playing "Blue Grue" with the correct notes? This would still be nominalistic because Goodman wants a non-sociological, non-intentional account that is able to ground the character of musical performances. Moreover, since all the written/printed scores (the objects that ground character for performances) were destroyed, there can be no correct or incorrect instances of "Blue Grue." Thus, if there is no written score of "Blue Grue," there can be no performances thereof.

To press this sort of consequence even further, let us imagine that there were also recordings of "Blue Grue" pre-fire at time *t1*, (and let us further assume that these recordings were genuine performances that match verbatim with the notational content written on Putnam's score). Accordingly, at time *t1*, Goodman

would aptly say that these recordings count as correct/genuine instances of "Blue Grue" because the recordings (i.e., recorded performances) comply note-for-note with the written score. However, what are we to say about these recorded performances at time *t1* being played post-fire at time *t2*? Here, Goodman would have to say that these recordings (which were recorded prior to the fire) no longer count as genuine instances of "Blue Grue" in *t2*. The reason for this is that these recordings can no longer comply with any score, since all written records were lost in the fire. Thus, if one endorses scores to ground the character of performances, then one would need to accept the counterintuitive consequence of thinking performances are only genuine if there is a score to which they comply.

Second, if one were to embrace Goodmanian scores, one would need to accept the counterintuitive notion that scores are more than a practical aid or set of instructions. In other words, if a score is the character grounder for performances, then the score is the musical work itself. Goodman claimed that comprehending "the score as a practical aid or instructions misses the fundamental theoretical role of the score."[219] For Goodman, the score is the artefact, not the tool. On the other hand, if you take the intuitive claim that scores are just a set of instructions or outlines, then they are no longer the character grounders of performances. This intuition, for most, seems accurate. For instance, let us think of other artforms, such as cooking and dance. It would seem erroneous to identify the Beef Wellington to its recipe or Salsa dancing to its written choreography.

Third, if a work of music is the written score, then it would be impossible to hear the work itself. For instance, if someone remarked that they enjoyed listening to the new work performed by Philip Glass, it would seem counterintuitive to tell them that they had not actually heard the work, but rather only a performance that accurately complied with that work. Furthermore, it would seem puzzling to tell that person that, if they really want to have any perceptual experience of the work, they need only see the written score displayed

[219] Nelson Goodman, *Languages of Arts*, 127-128.

on top of Glass's piano. In other words, someone's visual perception becomes the only mode in which you can experience the musical work.[220]

Fourth, it seems counterintuitive to regard one notational system as the gold standard for what a score is. If we look back at the development of the score section, most musical traditions have scores. Jean Charles Francois aptly identified this exclusivity in claiming that "Goodman's precepts have been exemplified in one notational system, which is already historically marked and associated with the modern era and confined to European culture."[221] Accordingly, Goodman is relegating his score to the Western tradition—as well as a certain musical time period within it. Thus, anything else that is described as "musical score" outside of his account is mistaken and in error.

Lastly, the five requirements necessary for a notational system run counter to the basic intuitions of notating. Tempo, under his view, would not count as part of the notational system, which seems to be alarming for anyone trying to interpret a score. Removing such markings would be worrisome in gauging a genuine performance, because if the musical work is played as fast or slow as possible, it would be unrecognizable.[222] I also mentioned earlier that such ornaments as mordents, trills, and turns would not be notational because they do not specify how many notes should be played. Davies also noted this worry and wittily replied that a performance of Guiseppe Tartini's "Devil's Trill Sonata" would only be a genuine instance for Goodman if it contained no trills.[223]

3.2.2 The Wrong Note Issue

Goodman's strict identity leaves him in an interesting area in terms of individuation. For one, his strict identity conditions for musical works are

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[220] Of course, this sort of charge could also be leveled against the musical realist. If so, then the nominalist could employ a sort of indirect listening response (i.e., two things are occurring when one hears: the performance and the performance thereof).
[221] Jean Charles Francois, "Writing without Representation, and Unreadable Notation," *Perspectives of New Music* 30, no. 1 (1992): 12.
[222] Stephen Davies, "Notation," In *The Routledge Companion to Philosophy and Music*, 78.
[223] Ibid.

relatively clean and straightforward due to their ability to sidestep any issues relating to metaphysical vagueness, which other musical ontologies seem to possess (e.g., accounts that endorse some normative aspect to musical works). It is straightforward individuation-wise because the musical score (that follows the five desiderata) defines the musical work. Thus, any genuine or correct instance of the musical work is one that complies with the score note-for-note.

However, this clean and straightforward approach leaves Goodman in an extreme position concerning the requirement for genuine performance (i.e., not one note can be missing or out of place). Indeed, so extreme is this position that sympathizers, such as Predelli, have felt the need to correct this glaring error in Goodman's account. Since we have discussed what counts as a performance, I would like to focus specifically on Predelli's modification to the wrong note paradox. While Predelli sought to salvage what he could, I will also explain why his modification still leaves plenty to be desired.

3.2.2.1 Predelli's Modification to the Wrong Note Paradox

Predelli focused on Goodman's theory by showing the simplicity of his use of sound-sequences. For Goodman, performances can only be correct sound-sequences that match the notation of the score. In other words, the performance of the piece becomes rigid and excludes the intention of the performer(s). In so doing, Goodman seems unconcerned with the way inaccuracies occur, whether intentional or unintentional. Predelli, on the other hand, touched on this notion by presenting sound-sequence*, which differs in one or two notes. A sound-sequence* usually occurs when the musician intends to comply with every note written on the score but, when performed, one or two notes are unintentionally played incorrectly.

For Goodman, any sort of sound-sequence* would fail at being a genuine performance of a musical work unless there is a written score that addresses the incorrect, omitted, or modified notes (if this were the case, then sound-sequence* would just be what Goodman considers a sound-sequence). Thus, Goodman's

scores become prescriptions to match rather than instructions to follow. With this simplistic interpretation of performances as mere sound-sequences, Predelli's solution tries to salvage Goodman's nominalist approach.

In section four of his article, Predelli's modification to Goodman embraces the following:

> *(4)* "the relevant aspects in a performance include not only the sound-sequence that is actually being produced, but also the sequence-type which the performer aimed at instantiating; (ii) a performance complies with a score if and only if its target sequence is determined by the score (provided that the actual sequence is not dramatically different from instances of the target sequence)."[224]

Predelli first prescribed *sequence-types*, which are potential groupings of sound-sequences with relevant musical properties. These classes of sound-sequences are performances that musicians aim at instantiating. Importantly, these types are determined by the score.[225] By holding to sequence-types, Predelli's second move was to distinguish between the *actual* and *targeted sequences*. The former is the sounds generated by the performers, while the latter refers to the aim of the sequence-type.

Generally speaking, Predelli's solution allows the intention of the performer to produce or match an instance of a given sequence-type. Permitting the performer's intention to produce certain sounds, as well as allowing for the capacity to conform to that intention, affords the instance of the piece a certain degree of leeway. What I mean by "leeway" is what Predelli termed the "permissibility degree,"[226] whereby a performance can have one or a few note discrepancies and still be a genuine instance of said work. Thus, Predelli's modification avoids the wrong note paradox and strengthens the Goodmanian approach to musical works.

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[224] Stefano Predelli, "Goodman and the Wrong Note Paradox," 374.
[225] Ibid. 373.
[226] Ibid.

3.2.2.2 The Musical Telephone Worry

Similar to the childhood game of telephone wherein a message is initially given only for it to change (often unrecognizably) by the end, Predelli's modification seems to have drastically altered. The main issue that induces what I call *musical telephone* lies in the way performers and the audience experience music.[227] To clarify this idea, let us consider Predelli's example of score *s*, which consists of C_4-G_4-C_4, and the two performances (*per1 and per2*) that aim to instantiate the score. *Per1* sound-sequence complies C_4-G_4-C_4 with *s*, while *per2* aims to be a correct instance that complies with *s*, and yet it sounds a $G\#_4$ instead of the G_4 indicated by *s*. Under Predelli's modification, *per2* would be understood as sound-sequence* that is also a genuine instance of work *s*.

However, what would happen if *per2* was performed to an audience with no awareness to *s* or a sound-sequence that conforms note-for-note to *s*? Additionally, what would happen if one of the audience members was a musician (*m1*) that tried to replicate that same performance? In order to replicate *per2*, *m1* decides to be a musical translator and writes a score from that performance. They are thus able to retain and comply with what they originally heard. At this point, one could say that there are now two different scores, *s* notated C_4-G_4-C_4 and *s** notated C_4-$G\#_4$-C_4. Still unaware of *s* and a sound-sequence that complies note-for-note, *m1* eventually performs *per2* to an audience with the intention of complying note-for-note to *s**. However, in aiming to perform *per2*, they instead perform *per3*, which sounds like a $C\#_4$ instead of a C_4 as indicated by *s**, and so-on-and-so-forth. Ultimately, the musical telephone ensues.

Predelli could reply by saying that the musical translator has simply got it wrong. They thought *s** was the score *m1* aimed to instantiate, where really it was *s*. Thus, *s** would simply be a new musical work. If so, then there seems to be a disconnect with sound-sequence* and third-person auditory experience. That is, if an audience member (*m2*) hears a performance of *s**, then their auditory experience of that instance does not perfectly match the identity of *s*. Instead,

[227] This sort of worry is similar to Goodman's issue of "Three Blind Mice."

m2's auditory experience of the performance they heard matches a score identified as *s**. Accordingly, to say that *m2* is wrong seems somewhat suspect, especially with performances that sound different from what the score specifies. On the other hand, Predelli could just bite the bullet and embrace the disconnect with third-person auditory experience. However, doing so would result in a plethora of sorites issues, which Goodman was determined to avoid (e.g., Beethoven's *Fifth Symphony*→Three Blind Mice).

One way to make Predelli's modification look much more satisfactory is to say the following: intuitively speaking, *s** can differ from *s* by a certain amount. One could set a relatively strict limit, such as allowing only one note to be missing, but not two or more. By limiting in this way, *s** and *s* will be scores of the same piece. In other words, one need only refine the degrees of permissibility to side-step any issues of sorites.[228] While there is a lot more to say on this matter that is worth investigating, I will instead press on and revisit the way I think the role of the score is assumed.

4 The Role of Score Revisited and Final Thoughts

In sum, this chapter has aimed to exhibit the role of the musical score by appealing to historical and philosophical explananda. Historically speaking, I landscaped some of the different ways in which the score has been conceived and implemented regarding its descriptive and prescriptive force. Philosophically speaking, I considered an argument that the role of the score (i.e., a particular kind of score) is the object that grounds the character of audible performances; without the score, under this view, there could be no genuine instances of musical works.

While such nominalists as Goodman have argued for the musical work being defined by the score, most musical ontologists (nominalists and realists) have resisted the role of score being the character grounding object of performances.

[228] I am unsure whether it escapes any sorites issues or not. For instance, I could introduce *s*** that differs from *s** by one note, and from *s* by two notes. Since I am unsure, I will set this to one side.

Instead, musical ontologists define the score's role as nothing more than instructions or a tool with which to bring about the musical work. Simply put, the score is not the work itself, but rather the linguistic counterpart of an actual work.

If a written or printed score is merely the linguistic counterpart used as a tool, a more suitable solution to understanding the score is to see it as *non-essential* for the work. A score is non-essential because a musical work can be transmitted through other means, such as oral tradition or memory. Even if we were to take complex compositions, such as Frédéric Chopin's "Prelude op. 28 no. 16," the score can still be thought of as enforcing a genuine instance of the work, despite it being, in principle, non-essential to the existence of the work itself. This sort of non-essential result may be troublesome for Goodman. However, other nominalists (and realists) have no issue omitting scores as the object that defines musical works. Thus, nominalists of this stripe would instead allow entry to other concrete particulars as their character grounders.

Now, if a score were to be understood as a non-essential tool that only helps administer genuine performances of a musical work, what would make the score a score of the right work? This could be answered that a score is an historical fact, as Kripke's theory of proper names has it.[229] The causal/historical theory states that proper names refer in virtue of being associated with causal chains of use, leading back to the "dubbing" or "baptism" of the referent. A straightforward application to our case would be that there is an initial baptism or naming of a musical work, whereby the composer introduces or assigns a name ("Mad Rush," *Fifth Symphony*, etc.). Here, the way in which the composer initially refers to a piece of music could be done demonstratively or descriptively, but this does not give the meaning of the name; it only fixes the referent. However, when we think about a work's score rather than its name, the musical score typically fixes the referent *description*. The description, of course, is the notational content that is written in the score. Thus, the way in which one can comprehend which score is a

[229] Specifically, I am referring to the way in which Kripke discussed historical connection or chains of communication. Saul Kripke, *Naming and Necessity* (Malden, MA: Wiley-Blackwell, 1981), 91-97.

score of the right work depends on the notational content that describes the work, not by its historical origin.

Relating this to my view of music-natures, this view of scores seems to harmonize rather suitably—specifically, scores being assimilated not to proper names, but to descriptions. This makes it conceivable that two scores from different periods, if note-for-note identical, would be copies of the same score in that they would have the same music-nature as the object which they denote. Of course, this is a feature, not a bug.

Now, if we were to examine the intuitive view that scores are non-essential for the musical work, could more be said about their function? It would seem that the only thing left to say is how the score can resemble other modes of producing genuine instances. For instance, I think we could say that each score's existence—whether written in detail, passed down orally, or memorized—comes from a place of description. Where the notion of "description" is broadened to include non-linguistic forms of representation, any reliable encoding of the information will serve. Moreover, if the notion of description were broadened to include other non-linguistic forms that enable the encoding of information, then the role of musical scribe/translator broadens as well. In other words, this sort of transcribing is *not exclusive* to one hearing a performance, but also applies to the composer who is mentally formulating a musical piece. While the audible performance is an *external* event being translated by a musical scribe, the description from the composer mind is an *internal* concept or memory that is not audible to anyone—the composer included. By "mental concept," I am referring to an internal version or memory of the music itself. Therefore, I think it seems appropriate to add the following between there being an external and internal distinction to description:

> (*External Des*) The function of the score is *externally descriptive* when the "musical translator" strives to translate the notational content performed by the musician(s).
>
> (*Internal Des*) The function of the score-like-object is *internally descriptive* when the "composer" strives to translate the notational content thought about by the composer.

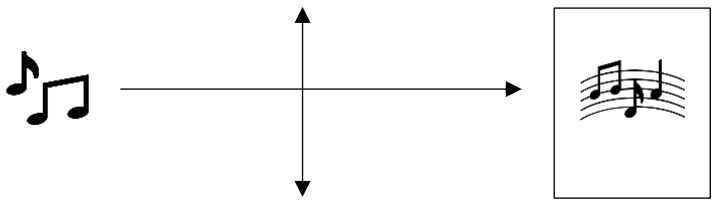
Since I have explained what the external description entails, I would like to briefly focus on the internal description. Specifically, I want to start by focusing on the term "score-like-object." I use this term in a neutral sense because it could apply to various ontologies. For instance, this score-like-object could be concrete, like a mental object, or it could be an abstract object whereby the composer gains some sort of admission or prior knowledge of the piece of music (i.e., appealing to intuition, science, or plentitudinism), or perhaps something else entirely. Regardless of which metaphysical hill one is willing to defend, this does not affect how the composer is trying to translate the work from their mental concepts.

Second, the internal description is akin to its external counterpart in that there are varying degrees of determinacy that take place with the composer. For instance, a composer, let us say The Beach Boy's Brian Wilson, could have an elaborate concept of an entire work in his "mind's eye," and yet, when he translates that concept to either a written score, recording, or performance, he might have varying degrees of thickness or thinness for executing his mental concept. Thus, there is an added distinction to be made with the degrees of determinacy in the descriptive sense. One being external and the other being internal, which I illustrate here:

Degree of Determinacy from the External Descriptive Case

Minimal Descriptions (thin)

Performance



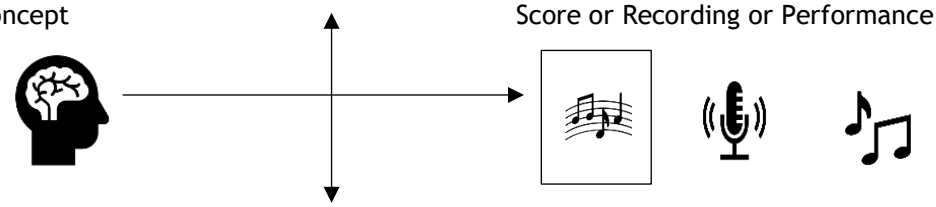
Score

Maximal Descriptions (thick)

Degree of Determinacy from the Internal Descriptive Case

Minimal Descriptions (thin)

Composer's Mental Concept



Score or Recording or Performance

Maximal Descriptions (thick)

fig. 5.2

If there is a case for the function of the score being externally and internally descriptive, one could also argue there to be a correlation with the function of the score being externally and internally prescriptive. Nonetheless, I believe that such a maneuver would be erroneous for two reasons. First, it may be an error to find a parallel between the use of the terms "internal" and "external." I have already unpacked the descriptive use of these terms. In terms of prescription, I can grant that there could be compliance that happens "externally" in performance and "internally" in the performer(s) mind. For instance, a performer could comply with the score in their mind (internal) prior to the performance. However, when it comes to executing the score in the actual performance (external), they unintentionally fail to comply with the score by missing several notes. Yet, my use of "external" and "internal" is different because the descriptive function can be internal if there are such things as "score-like-objects." The addition of score-like-objects shows there can be an internal route for a musical scribe to translate and write down a score. On the other hand, there is no requirement for any internal prescriptions for "score-like-objects." To say that there was (which could be the case) would change our discourse surrounding the functioning role of the score.

The second reason, which follows from the first, is related to the degrees of determinacy for prescriptive cases. Namely, there seems to be *no* differentiation that can be made for determinacy of internal and external prescriptions. Compared to descriptive cases that could be internal or external due to the addition of score-like-objects, prescriptive cases only have scores to comply with.

Thus, if there were varying degrees in the prescriptive case relating to score-like-objects (which could be the case), then this seems to veer us away from contemplating the role of the score.

To conclude this chapter, the following should be made explicit:

(1) Scores are not essential to the existence of the works of which they are the scores, although (of course) they are practically necessary for learning, playing, communication, etc.;

(2) It follows that unwritten music is not categorically a different sort of thing from written music.

The role of the score has taken on many formulations throughout its conception. Nevertheless, the score's implementation seems to be a constant here. That is to say, the role of the score has universally had some descriptive and prescriptive force in its function. These functions are predominantly the main rationale for most musical ontologists (and musicologists, composers, and musicians) to believe that the score is nothing but a useful tool/instruction/outline to administer genuine instances of musical works. While most embrace this way of thinking about the score, I have also spent time outlining a certain brand of nominalism that transforms the tool into the artefact. However, whatever musical ontology one wishes to defend, the role of the score seems to be a component in musical discourse that must be elucidated.

Chapter Five: An Argument for Discovery: Artificial Intelligence Compositions

If musical works exist, and music natures are the right entity to ground the character of concrete audible performances (i.e., sound events), should those works be regarded as objects of creation or of discovery? Put differently, does a composer create or discover their musical piece? In everyday discourse, musicians, composers, and music-lovers alike assume (for the most part) that music (and art in general) are objects of creation. That is, a musical creation results from compositional activity that occurs within the composer, resulting in the production of a musical piece. In philosophical discourses surrounding musical ontology, there also seems to be (for the most part) a rooted conditional that claims musical works are brought into existence by their creators. That is, there seems to be some temporal existential asymmetry to the temporal profile of musical works. Moreover, the best way to alleviate such asymmetry is to appeal to some sort of creation claim.

If we were to consider this question on metaphysical grounds, there seems to be some sort of explanandum for musical works being regarded as creations. Most notably, Levinson, who endorsed musical works as creations from a realist vantagepoint, argued that the composer's "godlike activity" is a *creatability* requirement (*Cre*) for elucidating what a musical work is. He established his requirement thusly:

> (*Cre*) "Musical works must be such that they do not exist prior to the composer's compositional activity but are *brought into* existence by that activity."[230]

Like Levinson, other musical ontologists and theorists (nominalists and some realists) have advocated this requirement (or something similar to it) for explicating objects that are to be understood as musical.

At any rate, *Cre*, or similar requirements, have only been challenged by musical realists that endorse some variety of Platonism. According to musical

[230] Jerrold Levinson, *Music, Art, and Metaphysics*, 9.

Platonism, if musical works are categorized as abstract objects, then these works have existed eternally. Thus, if works existed eternally, then they are best understood as objects of discovery. While discovery seems plausible within a Platonist framework, other musical ontologies have had visceral reactions to it. Moreover, although Platonists have tried to alleviate the claim that a composer is a discoverer, there is still a repudiation which stems back to the firmly entrenched belief that musical works need creators.

Platonists have tried to alleviate their account by rejecting the premise that works are created by their composers. However, and perhaps somewhat fortunately, there is one option at the Platonists disposal that has largely been left unpursued. Predelli touched upon this option:

> "…claim that our beliefs about creatability clash with even stronger intuitions, that is, present an argument from such immoveable intuitions to the conclusion that musical works are not created."[231]

Presenting an argument that is able to conclude that musical works are not created is a highly challenging task, especially as it would need to appeal to something that is tangible and less opaque from previous responses. The Platonist would need to present a tangible case where they could remove the musical work from any sort of creation claims.

Surprisingly enough, such a case can be made thanks to the advancements in AI technology. In particular, what caught my attention happened in late 2016, when Google's project *Magenta*[232] developed an AI unit that composed a ninety-second piece of music. This unit began composing (some would say) a musical work started from a programmer inputting four musical notes into the unit. From these notes, the AI was able to produce and pattern an aesthetically pleasing (some would argue) melody on its own. Whilst this process seems somewhat reminiscent

[231] Stefano Predelli, "Musical Ontology and The Argument from Creation," 281.
[232] "AI Composition," Magenta, accessed October 1, 2019, https://magenta.tensorflow.org.

to *musical dice games* developed in the early-eighteenth century,[233] the AI, in this case, seemed to be doing something a little bit more sophisticated than being reduced to something *aleatoric*. Specifically, this technological breakthrough could lead one to question whether AI can satisfy a creatability requirement. If so, explication is wanting. If not, then the commonsense notion of musical works as creations seems to be an error. Thus, the aim of this chapter is to argue for the latter option. Namely, that AI does *not* fulfill *Cre*, thereby rendering musical works as being objects of discovery.

To achieve this aim, I shall proceed as follows. First, I shall provide a brief description between creation and discovery. Once done, I will present four conditions that are individually necessary, but jointly sufficient, for creation. Additionally, I will also explain how Levinson's *Cre* satisfies all four of these conditions. In so doing, I can reference either to *Cre* or the four conditions individually. Moreover, presenting a criterion for creation will help distinguish what "discovery" entails. Second, I will examine project *Magenta's* AI and its composition, and assess whether it can satisfy the conditions for creation. To do this, I will assess the role or function of the programmer(s) and the AI unit. Lastly, I will present the discoverability requirement from a Platonist perspective and argue that, if AI works are not creations, then they are objects of discovery. The goal in this section is to dispel any preconceived notions leveled against musical Platonism (i.e., rejecting the ontology based on works of music being discovered). If successful in these three sections, my hope is to enhance musical Platonism and encourage further discussion on the matter.

1.1 Create versus Discover

Providing descriptions for such processes as "create" and "discover" may seem to be a daunting task, which could involve admitting necessary and sufficient conditions for the term. Of course, some would find defining to be philosophically

[233] "Musical dice game" is a variety of aleatoric music (Latin: *alea*, meaning "dice"), which consists of a couple of people, dice, multiple fragments of written notation, and an instrument of some sort.

unvirtuous, or reject it in terms of necessary and sufficient conditions. However, I think it is vital to specify these terms as such because, more often than not, entertainment lawyers, artists, and philosophers use "create" and "discover" in different, incoherent, or vague manners. Additionally, to move forward, we will also need to clear some debris that might be complicating the overall aim. In order to do so, I will focus my attention on creation and propose some individually necessary (but jointly sufficient). After that, I will briefly shift our focus to discovery, and examine some of the conditions that are shared and unshared with the criterion of creation.

1.2 "Create," "Creating," and "Creation"

Historically speaking, there have been two ways of comprehending the particular process of creation. The first is known in Latin as *creatio ex nihilo* (which means "creation from nothing"). The implication of describing the process of creating in this way is that there was no pre-existing material made available, and whatever creation occurred was brought into existence from nothing. *Creatio ex nihilo* is mainly attributed theologically to a divine being(s) that is able to create all of space-time out of nothing. While theologians in their theological discourse may express this process of creating, non-theologians tend not to. If *creatio ex nihilo* is not what people are referring to when they use the word "create," then we must concentrate primarily on the second way.

The second way is *creatio ex materia* (which means "creation from material"). *Creatio ex-materia* seems to be what most people refer to in their discourse when using the word "create." This sort of description implies that there are pre-existing materials available that allow individuals to form, arrange, rearrange, or modify something completely new. For example, Raphael's painting, *School of Athens*, could be seen as a paradigm of creation *ex materia*. When one observes Raphael's painting, one does not tend to visualize Raphael snapping his fingers to bring a completed painting into existence out of nothing. Instead, we think of the various techniques, paints, and brushes he used to accomplish the piece. When it comes to music, one could think of Philip Glass'

"Mad Rush" as being created *ex materia*, because a work of music of any sort depends on pre-existing material, such as a collection of musical sounds. If those musical sounds, such as musical pitches/notes C, D, E, F, etc., are not available, then the creation of a work of music could not be possible.

At the same time, historically speaking, there have has been foils of creation (i.e., objects that are not regarded as creations). One example could be the painting palette Raphael used whilst creating *School of Athens*. The palette may resemble something modern or abstract in today's standards, yet it was nothing more than an unintended biproduct. Another foil is what I term a "half-baked" production. Imagine, if you will, that Raphael initially painted a different "school," which he planned to call *School of Antioch*. However, midway through painting, he stopped and decided Athens had a better ring to it, as well as more illustrious thinkers to illustrate. From that point, he decided to scrap *School of Antioch* altogether and instead begin to paint what we now know as *School of Athens*. This so-called *School of Antioch* would not constitute an object of creation because there was no final result or end product, since it was destroyed. Furthermore, this unfinished painting does not count as an object of creation because there is no object to be called *School of Antioch*. Lastly, if Donatello attempted to re-create *School of Athens*, for example, this too would not constitute a creation, because you cannot create an existing work anew.

1.2.1 Creation Criterion

Now, if we were to grant the process of *creatio ex materia* as being the ideal description of how "create" is used in our everyday discourse, what would be some of the necessary conditions for understanding what objects of creation do and do not entail? To answer this question, let us begin with the condition of pre-existing material. In order for there to be any creations, material must first be available. These materials could be seen as the foundational "building blocks," if you will, that help bring about something new. Anything concrete from paint, clay, wood, classes of sounds, ingredients, and so on, could be regarded as pre-existing material. In the case of *School of Athens*, the pre-existing material used

was the various colors of paints. Moreover, it is also plausible to think of non-concrete objects as fulfilling the pre-existing material condition. Thus, the material condition can be described as follows:

(***O***) *x* is a creation only if *x* depends on pre-existing material.

The second condition is creatorship. In order for something to be created, there must be a creator behind the creation. This creator (or creators) is an individual(s) with both the aptitude and capacity to bring something new into existence. In other words, the creator must be an individual who has intentionality, which is the capacity the mind has to represent objects and states of affairs. Further, an individual satisfies the creatorship condition if they are sentient. By sentient, I am referring to an individual that is able to perceive and show some awareness. Accordingly, Raphael would be the creator of *School of Athens* (creation). The creatorship condition could be described as follows:

(C) *x* is a creation only if *x* is brought into existence by some creator.

The third condition for creation is the process of creating—or what I also refer to as the intentional action(s) of the creator. This sort of intentional action is the *process* the creator takes in arranging, re-arranging, or modifying the given material for a specific reason. Once again, the process of creating or the intentional act would be the mind's capacity to represent objects and states of affairs for a specific reason. Levinson would call this sort of process the compositional activity of the creator. Therefore, one could say that, without a mind behind the process of creating, there would be no object of creation.

If intentional actions or compositional activity is needed, then unintended secondary products should be ruled out. For example, hair clippings that form the image of a cat on the barbershop floor is not the intention of the barber, and should thus be swept up and thrown away. Additionally, the intentional action of the creator involves arranging, rearranging, and manipulating material in a certain way, which would also rule out natural occurring objects, such as penguins and icebergs. Using *School of Athens* as an example, the process would be anything from Raphael painting a certain style, incorporating particular colors,

and adding certain figures and backgrounds. This intentional act (which I will call *process*) is usually what people mean when they describe the "creating process" of a certain artifact. This third condition can be described as:

> (***Pr***) *x* is a creation only if *x* has some intentional action made by a creator(s).

The last condition is the final product or outcome of the creation. If there is no final product, then it merely becomes what is known as scrap (or, half-baked productions). For instance, if the electronic music duo Daft Punk were to play a melody on a synth, program a house drumbeat, add a bass line, but never finish the composition, then it ceases to be a creation and would be discarded to the digital trashcan.

Another aspect of this condition is that the final product has a place of origin. Glass' "Mad Rush," for instance, did not exist in 1879; it was brought into existence in 1979. This temporal genesis is the lynchpin of creation claims. Namely, there seems to be an asymmetry to the temporal profile of an artwork, and the only way to alleviate said asymmetry is to appeal to some form of creation claims. For example, the existence of "Mad Rush" in the concrete realm occurred in 1979. That is, at one time, "Mad Rush" did not exist, but did in 1979.

If the final product has a timestamp of origin, then there is a case to be made for the final product also being locatable. For instance, *School of Athens* was completed between approximately 1509–1511 and *is located* at the Apostolic Palace in the Vatican. "Mad Rush" was completed in 1979 and *was located* in New York. With the two examples I provided, it is important to note that location can differ depending on the medium. If we use Goodman's terminology, autographic artworks are understood as being one-of-a-kind and could only be located in a single location. Allographic artworks, however, can be located in many locations at different times. Therefore, whether the artwork is located in one area or several, the finalizing outcome of any artwork (i.e., the first tokening, instantiation, manifestation, etc.) can only (or initially) take place in one given

location. That said, the overall final product condition can be described as follows:

> (***F***) *x* is a creation only if there is a time *t* such that *x* is finalized by a creator and that final product exemplifies newness.

An important note with the final product condition is that it should exemplify newness. This may be challenging as a distinction must be made between the narrow and broad sense of understanding "new." The narrow sense of the term could be characterized by viewing a work as new in that it has never been instantiated or tokened in the concrete realm, and yet it is not new in a theoretical or abstract realm. In the broader sense of the term, new can be viewed as quantifying both the concrete and theoretical/abstract realm. For the musical nominalist, newness is something of the narrower sort due to the denial of a theoretical or abstract realm. For musical realists, newness could be understood in a broader context due to their (general[234]) admission of both the concrete and the abstract realm in their metaphysics. If this distinction holds any weight to the discussion, let us adopt "newness" in the broader conception. That way, there is no metaphysical flexibility for the nominalist and the realist to retreat to.

1.2.2 Levinson's Creatability Requirement

With the criterion of creation conveyed, we can now return to musical works and Levinson's creatability requirement. With *Cre*, we can see that the three conditions I mentioned are in the requirement, namely, *C*, *Pr*, and *F*. First, we can say that Levinson required a composer (creator) and stated that musical composers should be regarded as the "true creators"[235] of their musical works. Second, Levinson endorsed there being compositional activity (the creating process). Indeed, the creation process is, for Levinson, a "godlike activity"[236] in which the creator brings about something that they intended. Third, *Cre* requires that a work did not exist prior, which implies the finished product condition. One can see

[234] Realists that endorse some Aristotelianism would deny there being an abstract realm. Thus, the Aristotelian would presumably deny there being a broader scope of new.
[235] Jerrold Levinson, "What a Musical Work Is," 9.
[236] Ibid. 8.

condition *F* when Levinson explicates the "newness" of a musical composition by rejecting the Ecclesiastical account that "there is nothing new under the sun."[237] Moreover, for something to be new under a creation account, it would also need to be completed or finished.

Levinson seems to have omitted the condition of pre-existing material, *O*, from the creation criterion. However, he did so because *O* is already implied by *Cre*. Particularly, Levinson presupposed pre-existing material that composers use as "building blocks" to create their works. Specifically, the material that composers use is what Levinson termed "implicit types," which are collections of abstract sound structures. These structures are "implicit" in that they have no creator or compositional activity. Accordingly, for Levinson, musical works should *not* be understood as implicit types. Rather, implicit types are merely the non-concrete pre-existing material that composers use to bring about musical works.[238]

With *Cre* meeting all of the abovementioned conditions, I will either refer to *Cre* or to the individual conditions *O*, *C*, *Pr*, and *F*. Doing so will help us assess whether an AI's musical work can fulfill the criterion of creation/*Cre*.

1.3 "Discover," "Discovering," and "Discovery"

To elucidate the process of "discover," one could look at the similarities and dissimilarities between processes of creation. "Discover" or "discovering" has been mostly described as finding, uncovering or revealing something that is unknown. For instance, finding unknown locations, archeological artifacts, scientific breakthroughs, or mathematical proofs (some would say) are paradigms of discovery. As it relates to similarities and dissimilarities between the process of creation and discovery, the condition they seem to share is *O*. Like creation, in order for anything to be discovered, there must first be pre-existing objects. For a concrete example, when Columbus (or Erik the Red, or whoever indeed it first was) discovered the Americas, the Americas needed to exist prior. For a non-

[237] Ibid.
[238] Ibid. 6.

concrete example, in order for Euclid to discover the infinitude of primes, numbers and mathematical symbols must have existed prior. Thus, *ex materia* in this case would apply to both terms.

There are, however, some caveats in terms of objects of discovery satisfying condition *O*. First, pre-existing material can be regarded as objects themselves. In other words, those objects of discovery are not regarded or initially used as "building blocks" for a created object. This sort of caveat, for example, stands in contrast to Levinson's notion of implicit types being abstract sound structures that are used as musical "building blocks" for initiated types (i.e., created musical works). Instead, implicit types would just be musical works themselves. Likewise, all discoveries are nothing more than pre-existing material.

The second caveat is that the word "material" in the discovery case must be able to encapsulate both the concrete and abstract realms. Usually, when the word "material" is thrown around in everyday discourse, it is to refer to something that resides in the concrete realm. For example, paint, wood, and clay are art materials that exist in the concrete realm. Furthermore, thinking, or having a mental concept or idea, would also be regarded as being located in the concrete realm (i.e., mental concepts are concrete, not abstract). However, for objects of discovery, pre-existing material could reside in the abstract realm. For instance, mathematical formulas have predominantly been regarded as objects that reside in the abstract realm.[239] Indeed, if formulas are regarded as abstract, then the functions, operators, etc. that a given formula contains must also exist abstractly. Therefore, it seems possible for there to be pre-existing *abstract* materials when it comes to contemplating objects of discoveries that reside in the abstract realm.[240]

While both terms share the similar condition of *O*, discovery, however, is dissimilar to the rest of the creation criterion. For one, creatorship is neither

[239] Granted, this is a contentious area in the philosophy of mathematics. However, I will side with the popular view that numbers, theorems, formulas, etc. are abstract objects of some sort.
[240] Using "material" in this way might be controversial or possibly an error on my part. All I am trying to say here is that the pre-existing objects could reside in the concrete or abstract realm. I am content if one's nomenclature prefers to use "objects" or "entities" instead.

important nor necessary for discovering a certain object because an individual is not a creator who uniquely brings something into existence. Rather, they are merely discoverers who find something that other individuals could have also discovered. Furthermore, uncovering or finding something unknown does not warrant any creator present. For example, all the territories and locations that have been explored on Mars have been discovered by autonomous motor vehicles (e.g., NASA's rover *Curiosity*). Although it was NASA professionals who realized what rover's like *Curiosity* found, one should not infer that these NASA employees were the ones who did the actual discovering. Thus, it seems possible that a creator does not need to be present in the discovering process.

Furthermore, I should add that living organisms capable of "realizing," "recording," or "comprehending" what was discovered is not necessary either. For example, I can conceive of a world in which there are no living organisms, but populated exclusively by autonomous rovers that unearth all sorts of geographical regions. These geographical finds would, under my realist vantagepoint, still be understood as discoveries. Whether there is an organic mind to realize what regions are being discovered is a secondary issue unrelated to the discovery itself.

Now, if creatorship is not necessary to discover an object, then we can also rule out *P*. The process of discovering, for instance, could be an intentional act, such as discovering a mathematical proof, or an unintentional act like *Curiosity*'s explorations. With intentional acts—like those made in the natural sciences and mathematics—the process of discovering is more akin to becoming aware of some state of affairs or facts that was, up to a certain point, unknown. For unintentional acts, there are instances of discovering that can take place, such as certain geographical discoveries or archeological artifacts. For instance, the farmer who discovered three *Terracotta Warriors* whilst digging for a well did so unintentionally. While the digging itself was intentional, the act of making a well led him to unintentionally discover the sculptures. Thus, it seems that the process of discovering could be accomplished both intentionally and unintentionally.

Lastly, discovery does not need a final product condition, *F*. An object of discovery does not need to be finalized by someone or something at a time *t*. For discoveries, a creator is not finalizing their discovery, but rather revealing or unearthing what they found. For instance, revealing a discovery can be either its part or its entirety. Examples of discoveries being revealed in its entirety can occur in archeological digs, mathematics, or the hard sciences. While the entirety of an object being discovered at time *t1* does not mean that the genesis of that object began to exist at time *t1*. Returning to Columbus discovering the Americas; the *Niña*, the *Pinta*, and the *Santa Maria* did not arrive on land that was not there two hours prior, but rather beached on land that had been there since the Pangea split.

If we grant that certain discoveries can be discovered or unearthed in their entirety, then there could very well be the feature of newness in the narrow sense. If the narrow sense relegates newness to the concrete realm, then discoveries can come across as being something that is new. For instance, one could say that Einstein's discovery of the theory of special relativity was something new in the realm of physics. No one before Einstein had instantiated the mental concept or described what special relativity entailed. Therefore, physicists of the time would have viewed his theory as being a "new" breakthrough.

However, the theory of relativity itself would not be new if one where to think of it as existing in the abstract/theoretical realm. This is due to abstract objects (or what have you) being understood as eternal, non-spatial, causally inert, and independent of minds. Therefore, if the theory of special relativity exists abstractly, then it is hard to contemplate how something eternal can be regarded as new in the broad sense.[241]

Now, if we were to assume there to be a concrete realm as well as an abstract realm, there seems to be an explanation of how the former could be new,

[241] Of course, one could argue that the abstract realm does not exist, thereby ridding any consideration of the narrow or broad sense of "new." If so, then newness would only apply to the concrete realm. Nevertheless, the rejection of the abstract realm does not hinder viewing discoveries as something new, since the narrow sense only grants newness in the concrete world.

while the latter could not be. Specifically, this explanation gets to the crux of the temporal existential asymmetry implied by creation claims. Namely, creation claims say that, at time *t1*, the object does not exist, but does at time *t2*. Therefore, when it comes to the temporal profile of an object, there seems to be something that can be regarded as new in the narrow sense. However, if one claims that there is an abstract realm, then creation claims seem to be misplaced because claiming there being nothing prior is the result of an implicit domain restriction. This means that the time at which something is discovered does not indicate the existence of the object, but rather that the object was not available in that domain at a certain time. If this follows, then one could make the argument that certain findings which existed prior to their discovery could be viewed as being new in the narrow sense, but not in the broad sense. For example, let us return to Einstein's theory of special relativity. For one, this theory may have always existed (maybe sempitemporally), however, its first instantiation or exemplification that took place in 1916 may be viewed as being new. One could apply a domain restriction to Einstein's theory in the following way: "There was no general relativity in 1805, but there was in 1905." What this proposition entails is that the theory of special relativity was not available in the concrete realm of 1805, but was in the concrete realm of 1905, i.e., maybe the first instance or token was made possible. Applying such domain restrictions to discoveries seems to dismiss the temporal existential asymmetry implied by creation claims.

Point of Clarification for Discovery:

When describing objects of discovery, the examples I provided could come off as misleading. For instance, one could say that geographical and archeological discoveries are highly different to scientific and mathematical discoveries. The former deals with discoveries of distant lands and the uncovering of concrete artifacts that were unknown or lost to us. The latter deals with discoverable objects that are actual but unknown facts or becoming aware of certain states of affairs that were unknown to us. Thus, when we are trying to contemplate whether musical works are discoverable objects or not, there seems to be a disconnect of what type of discovery we are dealing with.

Granted, the discovery examples I provided may currently seem opaque, especially in terms of ascertaining whether works of music should be understood as objects of discovery. However, it should be noted that both descriptions of discovery seem to yield the same result that I presented above. Particularly, conditions *A*, *Pr*, and *F* of the creation criterion are not satisfied. Therefore, marking a distinction between the former or the latter will not particularly change or hinder how we think about distinguishing creation from discovery. Moreover, if I granted these two types of discoveries, then I would not find it problematic to say that musical works would fall more in line with the way mathematical theorems are discovered. That is, there are complex objects that are actual but are unknown to you and me (Section 3 will cover this in greater detail).

1.4 "Creativity" and "Invention"

I would like to briefly mention two other terms that seem to be parasitic to this discussion: "creativity" and "invention." The reasons for mentioning these terms are twofold. First, both terms are (for the most part) associated with objects of creation or discovery. The second reason is clarificatory. Occasionally in musical discourse, creativity and invention might be conflated with that which is a creation or a discovery. It is worth noting that I will be painting with broad strokes when it comes to both of these terms. The goal is to ensure that terms like creativity and invention do not harm, but rather enhance, our understanding of the musical works of AI.

Let us start with the term "creativity." Usually, "creativity" or "being creative" is used in our discourse to describe the mental ability/capacity an individual has with their work. For instance, it is common to hear someone say the following: "It was creative how Raphael used Leonardo da Vinci's face to illustrate Plato in *School of Athens*," or "Philip Glass is a creative composer," or "When it comes to physics, Albert Einstein had a very creative mind." What sentences like these demonstrate is that creativity is not directed toward the object, but rather how the individual was able to create or discover said object. For example, it would be odd if someone were to say that "the *School of Athens* is creative."

Additionally, creativity may seem to include a behavioral aspect. Namely, it seems that an individual cannot be bestowed as being creative unless others deem them so. For instance, art critics would not bestow "creative" to describe Raphael unless he had his paintings to show for it. This behavioral feature may seem plausible; however, it is not always needed. For example, I can conceive of a world where there is only one person that exists who is composing and performing complex musical pieces. While there is no observer to bestow the adjective "creative" upon the lone composer, the composer themself could use such a term to describe how they mentally arrived to achieve such works.

Another feature worth noting is that creativity seems essential for creation, and non-essential for discovery. It is essential for creating because of condition *A*. If we assume that creativity is a unique mental ability of some kind, then the only way to house such a term is to attribute it to a creator's mind. As for discovery, creativity is not always needed. For instance, intentional discoveries, such as a mathematician arriving at a certain mathematical theorem they were aiming for, could be viewed as creative discoveries. Dodd, in particular, has written at length about creative discoveries.[242] However, unintentional discoveries, such as those of the *Terracotta Warriors* and the areas explored on Mars, are examples of noncreative discoveries. The *Terracotta Warriors* discovery was not creative because the farmer had no idea of what he stumbled upon when digging for a well (nor did he have the intention to make such a discovery). As for the Mars case, *Curiosity* had no idea what it discovered because it lacks a mind.

Surprisingly enough, when it comes to the philosophy of AI art, the literature has tended to focus on whether machines are capable of being creative.[243] However, I find this dispute to be a secondary issue in terms of my own aims—especially if creativity is parsed as being something mental. If so, then AI (at this current moment) cannot be creative because it lacks a mind or something akin

[242] Julian Dodd, *Works of Music*, 112-121.
[243] The psychologist Margaret Boden offered an in-depth analysis of the concept of creativity. Boden, M. A., "What is creativity?" In *Dimensions of Creativity*, ed. Margaret Boden (Cambridge, MA: MIT Press, 1994), 75–117.

to it. Of course, one could instead cash out creativity as being behavioral, whereby the criterion is heavily weighted on human observation,[244] thereby allowing machines to be viewed as being creative. Nevertheless, I will set aside the behavioral description of creativity and submit to the dominant, non-behavioral position (i.e., some kind of mental ability/capacity).

The second term worth explaining is *invention*, which could be seen as a conflation or combination of the words "create" and "discover." Invention is an interesting term to unpack because it seems to be a method/system that involves, (some would argue) something novel and new. However, the term could also be understood as a process that involves discovery.

Kivy, in particular, interestingly contemplated how invention could be conceived. In his article, "Platonism in Music: A Kind of Defense," he claimed that "every invention is part discovery."[245] To comprehend this claim, Kivy gave his example of the Wright Brother's invention of the airplane. In order for the two brothers to invent the airplane, they needed to first discover certain aerodynamic principles.[246] This sort of example seems both apt and applicable in all paradigms of invention. An invention is part discovery, but not vice versa.

If we relate invention back to music, how would this term apply? First, it seems fitting that our everyday musical discourse would rule out pieces of music as being inventions themselves. For example, it would be odd to say that Arnold Schoenberg invented the musical work "Piano Concerto, Op. 42." Why is this? Well, invention is a sort of method/system that involves finding a way of doing or accomplishing something. Thus, viewing "Piano Concerto, Op. 42" as a method or system of doing something would seem to be an error. However, it would make more sense for someone to say that Schoenberg invented the 12-Tone System of composition. This may be due to the 12-Tone System being understood more as a way, method, or process of doing something (i.e., composing particular pieces of

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[244] Simon Colton and Geraint Wiggins, "Computational Creativity," *European Conference on Artificial Intelligence* (2012): 24.
[245] Peter Kivy, "Platonism in Music: A Kind of Defense," 112.
[246] Ibid.

music). For example, “Piano Concerto, Op. 42” is a particular composition that implements the 12-Tone System. Thus, inventing, in the musical context, seems to be a term that applies to musical systems or methods of composing musical works, and not being the works themselves.

1.5 Summary

To summarize Section 1, I laid out and described the four conditions of creation, which harmonize with Levinson’s *Cre*. The criterion can be written as follows:

> *x* is a creation if and only if the following four conditions hold of *x*:
>
> 1. *x* depends on pre-existing material (*O*);
> 2. there is a creator (*C*);
> 3. there is an intentional action made by a creator (*Pr*);
> 4. *x* is finalized by a creator at time *t* and that the final product exemplifies newness (*F*).

Next, I explained “discover” by contrasting the term against the creation criterion. The only condition that is satisfied between both terms is there being pre-existing material (*O*). Lastly, I briefly considered the terms creativity and invention to show their interaction with objects of creation and discovery. Having described these certain terms, and explored which conditions need to be met with creation (as well as discovery), I would like us to now focus our attention on AI compositions.

2 Responses and Assessments to AI Compositions

In order to assess AI-made works, I will assume them to be objects of creation. The rationale for doing this is the firmly entrenched belief that musical works are understood as creations. Thus, I will use Google’s *Magenta* as an example and argue the following:

> (1) If a programmer programs an AI unit with set *m*, where “*m*” denotes a class of musical notes, then the AI unit can *create* and perform a new piece of music that contains *m*.

(2) There are programmers that program AI units with *m*.

(3) Therefore, there are AI units that create and perform new pieces of music using *m*.

This sort of argument is deductively valid, although its soundness remains up for discussion. There are several areas of contention which I will explore further.

The first is the role of the programmer shown in (1) and (2). The second would be the role of the AI unit shown in (3). Whatever role one provides for the programmer and/or the AI unit will determine whether *Magenta's* AI unit is capable of satisfying each condition that comprises *Cre*. In order to do this, I will assess these roles by offering various responses one could make towards the programmer and the AI unit. In particular, these will address a specific question that corresponds to the argument at hand. Accordingly, let us begin with the responses one could give when it comes to the role of the programmer.

2.1 The Role of the Programmer

One could see the programmer in (1) and (2) as the creator of the AI unit. Namely, in their programming, the programmer developed a machine learning unit that is able to compute algorithmic compositions. Additionally, the programmers also inserted certain notes into the unit to work from and set the parameters of duration for that work.

If these preliminary steps are being attributed to the programmer, once could reasonably ask the following question:

Programmer Question: Should the creation of the musical work be attributed to the programmer(s) of the AI unit?

Response One:

One way of responding is by saying yes (in a strong sense), the programmer should get sole recognition for the work of music, whilst the AI unit should stand proxy as a tool or instrument used for that production. In other words, the unit is

reduced to a production tool or musical instrument used for accomplishing a composition. Let us call this the *reductionist response*.

While the reductionist response seems promising for attributing creatorship to the programmer(s), it does, however, seem problematic. Particularly, thinking of an AI unit as an instrument or tool seems to skirt the capabilities a machine learning unit possesses. To elaborate, let me use the musician Bob Dylan and his instrument, the guitar, as an example. When Dylan composed the song "Like a Rolling Stone," he used his guitar to help him map out and complete his work. This sort of process of composing does not seem out of the ordinary when one perceives a musician and his instrument. Now, let us envision a different scenario that seems more suited to the programmer and AI unit. Imagine, if you will, that Dylan took his guitar, played four notes and said in his sand and glue voice, "Hey guitar… write a song, that's two minutes long." Dylan then gets up and leaves his recording studio whilst the guitar proceeds to play a two-minute song with multiple verses and choruses. Who or what in this odd scenario is the composer of the song? Well, I think most would be pretty hard pressed to say that Dylan did anything to begin with, since he would not even have known how the two-minute song would sound. If anything, Dylan's guitar seemed to be both the composer and instrument. Of course, while there is current no magical guitar that could achieve this outcome, there are, however, different AI units on the market that have this capability. Namely, they are able to take four notes and, as Dylan said, "write a song that's two minutes long." Therefore, taking the reductionist stance by saying that the programmer(s) should be regarded as the creator is an error.

Response Two:

A second way of responding is by saying yes (in a weak sense), the programmer and AI unit collaborated on a musical work together. This means that creatorship of the musical work is partially given to the programmer, who stipulated the musical notes and duration, and the AI unit, who used those stipulations to produce and performed a piece of music. Let us call this the *collaborative response*.

Collaboration as it pertains to music is neither new nor novel. For instance, in hip-hop, there are many cases where a producer constructs and stipulates a beat with instrumentation for the musician to rap or sing over. Thus, in cases like these, one could say that creatorship is given to both the producer and the rapper. However, when it comes to the collaborative approach with the programmer and the AI unit, there seems to be a disconnect. To understand this disconnect, let me use my son and me as an example.

If I gave my son four different crayons and told him that he was only allowed to draw on an A3 size piece of paper for ninety seconds, should I get partial recognition for whatever he produces? Would I be perceived as a collaborator and co-creator just by being the one who provided certain materials and limitations? Most people would reasonably say no, because I would be unaware of the compositional process set out by my son, as well as what the final outcome of that artwork would be.[247]

Examples like this would also hold true for the AI unit and the programmer. Yet, one could argue that the programmer satisfies conditions *C* and *Pr* (intentionally stipulating notes and duration). Unfortunately, satisfying these conditions seems to be misplaced. That is, the programmer's status as a creator does not reward him authorship of the work. Furthermore, the condition of *Pr* seems misplaced because stipulating notes and duration appears to be disconnected from the compositional act. There is, in Levinson's terms, no "godlike activity" happening when stipulating certain limitations. Therefore, the programmer should not be rewarded as the creator in the weak sense.

Response Three:

The third and final way of responding to this question is by saying no, the programmer is not the creator of the work. Creatorship, or discovery-ship, belongs

[247]Someone could make another case by modifying my son's artwork example in a way where I am enforcing and providing more stipulations to what my son does. In doing this, there could be some flexibility for my own co-creatorship. For instance, I could take his hand and help him draw, and switch certain colors to achieve the artwork. Yet, enforcing and stipulating in this manner would lead us back to yes in the strong sense because my son would end up standing proxy for the outcome that I want to achieve.

to the AI unit that composed the ninety second piece of music. This response seems intuitive. Like the examples of Dylan's guitar and my son's artwork, the piece of music should only be attributed to the person or thing that exerted the effort in actually composing[248] the work. Whether the AI unit is capable of satisfying *Cre* or not is what we will examine next.

Although the programmer, under this response, may not have creatorship of the work, they do have ownership. Indeed, current AI has no say in the matter of what happens once their art has been produced. Ownership in this regard is transferred over to the builder of the AI unit. For example, in 2018, AI programmers sold an AI-generated artwork, *Edmond de Belamy*, at auction for £347,860; and I am pretty positive the AI that produced the artwork did not name[249] the piece (or, at least, the programmers claimed that it did not) nor saw one pence of its sale. The reason for the unit's lack of financial reward or critical acclaim is that it lacks the ability to receive or think upon those things. Additionally, the painting sold for such a high value because the auction's attendees were bidding on an artwork they believed to be produced by an AI-generated machine. In other words, there was no way in which these attendees had any inclination that the artwork was made by the programmers of the AI unit. Thus, it seems plausible, in cases like these, that AI units have sole recognition of any artworks they produce. Nevertheless, ownership of AI works is transferred to their programmer(s).

2.2 The Role of AI

Let us now examine what sort of AI is being described in (3). In order to properly examine the role, there needs to be some clarification on AI. Doing this will shed some light on whether the "I" in AI has the same intelligence as that of a human creator imposed by the criteria of creation. Particularly, this is a question has

[248] I am using the word "composing" in a neutral sense. That is, composing a musical work can be understood as creating or discovering something.
[249] In this case, the artwork *Edmond de Belamy* was not named by the AI unit. However, there are AI units that are used to generate product names.

been explored and written on. Most notably, John Searle[250] made a distinction between what is known as strong and weak AI. Strong AI describes a programmed computer or AI unit that completely resembles the intelligence of a human. This would entail having some sort of phenomenal consciousness or sentience. Weak AI, on the other hand, has narrow intelligence, in that it has a limited pre-defined range of inputs and outputs. It may lack self-awareness, but it "…enables us to formulate and test hypotheses in a more rigorous and precise fashion."[251] If we grant that Searle's distinctions are accurate, then *Magenta's* project, as well as *all* other varieties of AI units, are of the weaker sort. Its intelligence is narrow and only has limited pre-defined inputs and outputs. Thus, a sensible question to ask at this point would be the following:

AI Question: Can a weak AI unit have creatorship over a piece of music?

Response One:

One could say yes (in a strong sense), AI can create a new piece of music. This would mean that, despite the unit's narrow intelligence, it could still resemble that of a human composer. In other words, the unit could satisfy conditions *A, Pr,* and *F*. It satisfies the creator condition (*C*) because the unit has some sort of compositional activity (*Pr*) that was intentionally mapped out, whereby that compositional act rendered and finalized a completed work (*F*).

While there could be a case that AI satisfies condition *F*, it could not, however, satisfy conditions *C* and *Pr* due to the intelligence of the unit. To return to Searle, the thought is that, if AI is strong, then it would be a creator with intentions. As such, when it comes compositional activity, the unit (in this case) would have the ability to intentionally pick out musical notes and compose a piece of music. However, current AI intelligence prohibits the "godlike ability" of intentionally picking out certain notes for a given reason, which also means that AI

[250] John Searle, "Mind, Brains, and Programs," *Behavioral and Brain Science* 3, no. 3 (1980): 417-457.
[251] Ibid. 418.

cannot be granted the title of creatorship. Thus, to respond in the strong sense seems erroneous.

One could argue that arbitrarily picking out notes or simulating something that resembles a certain composer or artist does not mean that the unit cannot satisfy *C* and *Pr*. For instance, there are aleatoric compositions in which a composer arbitrarily picks out notes and composes a work. There are also examples of composers who have tried to resemble their musical influences by copying certain musical patterns or structures (e.g., Friedrich Nietzsche's aim to resemble Richard Wagner's musical works). This sort of argument seems to differ from that of the AI case because the aleatoric composer does so intentionally. Their compositional activity is to intentionally pick out notes arbitrarily for their work. Similarly, the composer influenced by their musical hero is intentionally patterning or structuring a musical work similar to that of their influence. AI units, on the other hand, are built in such a way as they either unintentionally or arbitrarily select notes for a work, or are built as flow machines that are fed certain bands or artists as input by the programmer(s). Thus, whether the former or the latter, the intentional composing process seems to be absent.

Response Two:

The second way of responding is by saying no (in a weak sense), the unit did not compose a piece of music. This response involves the limited capabilities AI possesses. For instance, to be a creator or have creatorship, conditions *C* and *P* must be satisfied. Unfortunately, *Magenta's* AI—and, indeed, all AI units—are unable to meet these conditions, which renders them as non-creators of any works. While this response seems both straightforward and sensible, it leaves the creatorship query in an awkward position. Namely, there seems to be no answer on who or what gets the moniker of "creator."

One route to alleviate the creatorship query (in the weak sense) is to argue for the programmer(s). This sort of approach would claim that all of the *Cre* conditions are met in terms of what the programmer did. For instance, the programmer is the creator (*C*) who intentionally built (*Pr*) an AI unit to make a

song doing so-and-so (*F*). Thus, the reductionist response is implemented once more.

However, as shown earlier, conflating the creation of the AI unit and the musical piece seems to be two different sentiments. Yes, one could argue that the programmer created the AI to have such-and-such doing so-and-so, but at the same time, did not arrange the musical piece to have certain notes here-or-there doing such-and-such. Conflating these two things would be comparable to confusing a professor's essay assignment to the written essays their students produced. Yes, the professor designed a class to include a 5,000-word paper with certain inclusion criteria, but no, the professor did not author the multiple 5,000-word papers that discussed and argued various points. The essays would be attributed to the students. Saying that the professor has authorship over their students' essays would seem to be an error (similar to Dylan's guitar example). Therefore, in this regard, it is plausible that AI did not create the piece of music, but housing conditions *C* and *Pr* are still wanting.

The second route for alleviating creatorship (if one endorses no in the weak sense) is to deny that what the AI unit produced is a musical work to begin with. This response seems plausible because it appeals to the fact that one needs *C* and *Pr* for there to be a creation of music. Moreover, since the AI unit does not satisfy those conditions, there must be an error in classifying the sound event coming from the unit as music. The machine's sound event, in this case, would be comparable to natural sound events, such as the wind whistling through the trees, or to machine sound events, such as police sirens. There may be some sort of sound event taking place, but it is not instantiating anything regarded as being musical. Thus, *Cre* is persevered by rejecting machine made compositions and performances.

Pursuing this route may seem promising, especially if one wishes to endorse musical works as objects of creation. Unfortunately, making such a claim would require one to alter or modify how one understands music. If alteration or modification is implemented, this could appear as being somewhat *ad hoc*.

Namely, the definition of music would have been altered in a specific way to exclude the possibility of there being any sound events produced by machines.

Additionally, another issue is that there would be some kind of bewilderment in claiming the audible instance of an AI composition is not music. This is due to the widespread dissension centered around the outliers of sound events (e.g., avant-garde, experimental, or natural occurring sounds). However, when we think about paradigmatic cases, such as The Beach Boys, Beethoven, or Bob Dylan's works, there seems to be a consensus between most communities to classify these instances as music. Where the consensus resides is that those structured sound events follow musical practices or traditions, and have melodies, rhythm, harmonies, etc. What such units as *Magenta* can produce are not mimicking anything avant-garde, rather they are producing something that could be understood as melodic that follows a musical standard that is correctly regarded as such by its programmer(s).

Response Three:

The third and final way response would be to say no (in a strong sense), AI does not create a piece of music, but rather discovers it. If the unit cannot satisfy *C* and *Pr*, then there must be an explanation of how the musical object came about. To consider such a response would entirely side-step the AI question. Namely, it rids the notion of there being some godlike activity that comes from a composer. Additionally, and importantly, it eschews the notion that musical works are objects of creation.

Now, if conditions *C* and *Pr* are not met, would this mean that conditions *O* and *F* would be absent as well? The answer would be no for condition *O* and yes for condition *F*. In terms of there being pre-existing material (*O*), an object of discovery must have some sort of material present. Whether this material is concrete or abstract remains up for debate, and I shall not pursue the matter here. Discoveries cannot satisfy the condition of final product (*F*). Once more, the reason for this is that there does not need to be a finalizing process at a certain time indicated by a creator.

Responding in the strong sense of no seems to be a promising alternative to the other way the initial argument was laid out. Thus, it seems appropriate to formulate a discovery argument. In so doing, we can explore what ontological ramifications musical works being discoveries may impose. The discovery formulation can be written as follow:

(1) If a programmer programs an AI unit with set *m*, where "*m*" denotes a class of musical notes, then the AI unit *discovers* and performs a piece of music that contains *m*.

(2) There are programmers that program AI units with *m*.

(3) Therefore, there are AI units that discover and perform pieces of music using *m*.

2.3 Summary

Describing the roles and various responses in Section 2 can be itemized as follows:

			Created	Discovered	Challenges
1.	Programmer as Creator	Programmer	Y	N	Dylan's Guitar Worry: Programmer(s) has no interaction with the musical process or outcome of the musical work. Conditions not met: C, *Pr*, *F*
		AI	N	N	
2.	AI as Creator	Programmer	N	N	Current AI is viewed as weak AI. Conditions not met: C, *Pr*
		AI	Y	N	
3.	Programmer and AI as Creators	Programmer	Y	N	Son's Painting and Creation worry: The programmer may set preliminary steps, but that does not equate to making music. Conditions not met (programmer): *Pr*, *F* Conditions not met (AI): C, *Pr*
		AI	Y	N	
4.	AI as Discoverer	Programmer	N	N	Counterintuitive to art being created. Disregards the argument for creation and endorses a discovery argument in its place. Conditions not met: C, *Pr*, *F*
		AI	N	Y	

fig. 6.1

First, we considered the role of the programmer to determine whether or not the creation of the musical piece can be attributed to the AI's designer. I presented three different types of responses, and the plausible conclusion was that the programmer had no role in the arrangement, process, or outcome of the musical piece. The only seemingly viable response available is that AI should receive sole attribution or credit for the work. Next, I examined the role of AI units and the function they play in the musical work. In order to yield a plausible conclusion, I briefly described the sort of intelligence an AI unit possesses (i.e., weak versus strong). Granting AI as weak (having narrow intelligence), the question that followed is whether or not AI has creatorship over the musical work. I presented three different types of responses and concluded that the AI cannot satisfy the necessary conditions for creatorship. Thus, the only plausible result is that AI can unintentionally discover a musical work. Although discovering a piece of music may seem plausible in cases of AI compositions, further explication is wanting.

3 Musical Works as Objects of Discovery

At this point, it seems conceivable to think that works of music could be understood as discoveries rather than creations—especially when considering AI compositions. Accordingly, if we were to assume that AI works are regarded as discoveries, let us go ahead and parse out the discovery argument from the vantagepoint of musical Platonism.[252] The discovery argument for AI works goes as follows:

> (1) If a programmer programs an AI unit with set *m*, where "*m*" denotes a class of musical notes, then the AI unit *discovers* and performs a piece of music that contains *m*.
>
> (2) There are programmers that program AI units with *m*.
>
> (3) Then, there are AI units that *discover* and perform pieces of music using *m*.

[252] There could be other ontologies capable of modifying their ontology to include a discovery account of musical works. For now, I will set these aside and focus solely on musical Platonism.

This sort of argument is deductively valid, however, whether it is sound is up for dispute. For the creation formulation, determining the soundness of that argument resided in the role or function of the programmer and AI unit. Now, with the roles of the programmer and AI unit unpacked, determining the soundness of the discovery argument concerns accounting for how AI is capable of discovering works, which is shown in (1). Thus, this section will address this area of contention by answering how an AI unit can discover musical compositions.

3.1 Discovery by Presupposing Musical Platonism

The first place to start is to determine which ontology can account for a discoverability thesis. Currently on the market, musical Platonism seems to be the only ontology with a rooted conditional of works being discovered. That is, if works exist and are categorized as abstract objects, then it would result in composers being discoverers of abstract musical works.

Though straightforward and intuitive within a Platonist framework, two treatments need to be distinguished. Namely, musical Platonism must explain how human *and* AI composers are able to discover. Currently, such Platonists as Dodd have provided a *desideratum* that is only applicable to human composers discovering works. He established the following requirements for the Platonist:

> "[The Discoverability Account] must explain the nature of the process of selection made by the composer; it must allow that this process is often highly creative; and finally, it must provide a plausible epistemology of discovery—that is, explain how a composer can understand an eternally existent, abstract [object]."[253]

These requirements seem appropriate for any Platonist to address—especially for explaining the composer's process as creativity in discovering musical works. The first requirement to address is the process or way the composer chooses certain sound properties and musical relations that formulate a work. The second requirement, which follows from the first, is to address the process of selection as being something that is creative. In other words, to discuss the unique ability of

[253] Julian Dodd, *Works of Music*, 112.

the composer's mind in terms of conceiving certain complex musical structures. The last requirement to address is epistemological. In particular, how does a human composer have epistemic access for discovering musical works that exist eternally in an abstract realm.

Whilst, Dodd's requirements seem appropriate for human discovery, there needs to be a modified *desideratum* for AI composers due to there being no explanation for creativity on the AI's part. This is especially so if the prevalent narrative of creativity is a unique mental ability of some kind. Thus, the AI requirements must be explained by the musical Platonist when it comes to the discoverability account for nontraditional composers, such as weak AI. These requirements—which will be the focus of the remainder of this section—must be able to explain the following:

> The discoverability account must explain the nature of the process of selection made by the AI composer and provide a satisfactory epistemology of discovery. That is, explain how a weak AI unit is able to have epistemic admission to eternally existent, abstract objects.

3.2 The Way AI Discovers Musical Works

The first requirement that needs to be expounded on is the process of selection for AI. As I stated in the beginning, AI units seem to be more sophisticated than aleatoric processes (e.g., musical dice games). That said, the process by which AI units select sounds and musical relations depends on how they are constructed and programmed.

Typically, the foundation of any AI unit starts with implementing artificial neural networks. These neural networks are understood as computing systems that are designed so as to resemble biological neural networks. (I will not here distinguish the similarities and dissimilarities between biological and artificial neural networks, but rather focus solely on artificial neural networks). The fundamental structure of artificial neural networks is constructed with three essential layers. These are the input layer, the hidden layer, and the output layer.

First, the input layer gathers data collected or fed from the outside world. The output layer signals how the AI unit returned the initial data provided. In between the input and output is the hidden layer, which forms the "intelligence," if you will, of the artificial neural network. The complexity of the artificial neural network depends on the number of hidden layers. Indeed, multiple hidden layers provide a deep neural network, whereas only one will yield a shallower or simpler network.

Regarding AI and music, the way in which the artificial neural network (e.g., AI unit) produces a musical composition is that the programmer(s) provides the AI unit with as much audio recordings or MIDI (music instrument digital interface) files they desire. From there, the neural network that constitutes the AI unit begins to compute (or some would say "learn") certain patterns that it finds within the data provided. This "learning" process occurs in the hidden layer of the neural network. Then, from the data provided, the AI unit outputs or produces a musical work on its own.

Now, what this computing, or "learning," on the AI's part is doing is identifying a musical syntax. By musical syntax, I mean the hidden layer of the neural network detects and distinguishes the rules of certain musical traditions or practices, as well as how composers construct musical works. From that syntax, the AI's outputs become what is known as probabilistic: what musical note is most likely to occur after this musical note, which musical chord after that musical chord, etc. What this probabilistic feature necessitates is that an AI composer outputs works that are solely based on the syntax it computed.

For example, a programmer who is a huge fan of The Ramones could feed an AI unit with every recorded song composed by the punk group, and nothing else. From that musical data, the AI unit would detect and distinguish a sort of Ramones style syntax. After identifying the punk syntax (as it were), the AI unit's probabilistic feature outputs/produces a musical work that resembles something *Ramonesque*. The musical work may resemble such songs as "I Want to Be

Sedated" or "Blitzkrieg Bop" because the punk programmer only provided Ramones songs to the AI unit's input layer.

With examples like these, this sort of process does not imply that any intentionality on the part of the AI. There was no intentional act or godlike activity, since there was no creatorship on the AI's part. Since AI is understood as weak, the only explanation left for explaining the AI composer's process is that it is unintentionally or probabilistically producing musical works. Therefore, if this process is unintentional, then AI works cannot be regarded as objects of creations. Thus, the only option available is to say that the process of selection the AI unit is discovering works unintentionally.

3.3 Epistemic Worry for AI?

If an AI composer discovers musical works, and those works are abstract objects, how does a machine have access to works that have always existed? Specifically, could an AI unit have epistemic admission to eternal objects? In Chapter Three, I highlighted some options a human composer could endorse when it comes to responding to the epistemic worry. However, answering this same worry in terms of AI units and musical works seems less complicated. The reason here is that an AI lacks a mind, which would immediately rule out appealing to intuition (the view that there is some sort of connection made between the mind and the abstract realm). Thus, if appealing to intuition is not plausible option, then what remains for providing a *non-ad-hoc* response for granting epistemic access of discoverable abstract musical works are certain non-causal options.

Since weak AI cannot have epistemic contact or transmission via intuition, then the only plausible approaches are the views that deny the mind having a connection with the abstract realm. While I will only highlight one option here, further details in the topic can be found in Section 3.4. The option I would like to submit here for addressing the epistemic worry is the appeal to plentitudinism. This view argues, as it pertains to musical works, that all abstract works that possibly could exist, and are internally consistent to the musical realm, do exist.

This means that, in order to gain access to abstract objects of any sort (e.g., musical works), all that the human and/or AI composer need do is come up with an internally consistent music theory/system. Moreover, if it is true that composers, musicologists, musicians, and programmers can generate an internally consistent music theory, then it is true that every consistent music theory describes part of the musical realm.[254]

Appealing to this view seems promising for the musical Platonist, especially for providing an explanation of AI accessing abstract objects. This is due to there being multiple music systems/structures/theories within the musical realm that seem internally consistent. There is no single-set theoretical hierarchy for music. Instead, one can have works which can, for example, abide within tonal or atonal theories. Therefore, when it comes to AI, its algorithm can attain and distinguish these music theories when the programmer inputs certain recordings or MIDI files. Additionally, by attaining and processing these standards and practices, it inadvertently accesses abstract objects.

To illuminate this point, let us think of a programmer who is an enormous fan of Arnold Schoenberg. Specifically, this programmer enjoys all of Schoenberg's atonal works. This programmer enjoys Schoenberg's works so much, that they decided to input their AI unit with every atonal work Schoenberg ever conducted. What happens next is the neural network of the AI composer starts to attain and distinguish musical structures or patterns of Schoenberg's works. In turn, what the AI is attaining from these musical works is what we know as the atonal theory of music. From attaining all of those recordings and MIDI files, the AI composer outputs/produces an atonal piece of music on its own.

Now, I am trying to highlight two distinct things with this example. First, the programmer feeding Schoenberg tunes to the unit and, second, the unit receiving Schoenberg tunes and produces works that are Schoenberg-like. The unit,

[254] Mark Balaguer endorses this sort of explanation in terms of having knowledge of abstract mathematical objects. Mark Balaguer, *Platonism and Anti-Platonism in Mathematics*, 51-52.

in this case, does not have a mind. Thus, when its hidden layer starts to compute the patterns of the Schoenberg pieces, it unconsciously and unintentionally gains information of the atonal musical system. Moreover, since the atonal musical system truly describes the musical realm, then the unit inadvertently taps into the abstract realm. The programmer, on the other hand, can perceptually comprehend what the unit has produced to be consistent within an atonal musical system, which grants the unit's works to be part of the musical realm.

To conclude the epistemological question, there is no real issue to address. AI units of all stripes lack minds, meaning that they do not have causal knowledge of abstract objects. However, we should not take this to mean that those units cannot discover abstract objects. Indeed, they do so unconsciously, inadvertently, and unintentionally. The information, facts, and patterns gained by the unit is dependent on the programmer feeding it. Since this information fed by the programmer is internally consistent, it truly describes the musical realm.

4 Conclusion

Technological advances can, at times, clear some debris when it comes to philosophical contemplation. At the same time, they can act as springboards leading to further consideration. Regarding AI and music compositions, it seems clear that our basic intuitions about art being creations does not go unchallenged. In the first section, I described what creation and discovery entail. The next section presented a creation argument for AI generated works to see if they satisfy a creation criterion. It seemed that AI could not satisfy the creation criterion, resulting in the argument being unsound. However, I could conclude that AI discover their works. To briefly explain this, I appealed to musical Platonism in my last section, which has a built-in rooted conditional of works being understood as discoverable objects. From there, I briefly presented several issues and their rejoinders. While I am only scratching the surface of this issue, my hope is that this can become a well-developed argument at the musical Platonist's disposal.

Chapter Six: Community-Relative Definition of Music

Rationale: Chapter six somewhat departs from the harmony of this project. Particularly, this chapter focuses on providing a definition (e.g., what is "music"?), rather than ontological inquiry (e.g., does musical works exist?). Though there could be dissonance between this chapter and the others, I still have some residual pull to provide it in this project. The main reason for leaving this chapter in is that definitions (for the most part) are developed from some ontological presupposition. That is, when one provides a definition, they are trying to express in statement form, the essential nature of something they believe to exist (or not exist). Thus, I think there could be some way to resolve this dissonance, especially if one is able to tie together the ontological presupposition they adopt.

Introduction: If a music event (i.e., a specific audible performance) is the right object to instantiate a music nature, then how do we define which audible/sound event counts as being "music?" Put differently, which sound events can we single out as being "music events?" Would such sound events as police sirens, babies crying, verbal political arguments, and song thrushes chirping be considered music? In the previous chapter, I concisely labeled two approaches/spirits for understanding instances of music: *poetic* and *prosaic*. Starting with the latter, the prosaic view claims that the list of objects that the term "music" describes are exclusive. Thus, providing a sense of the term will end up being narrow/restrictive. By narrow, I mean that definitions like these seek to rid any unwanted sound events that may be unsuitable for the definition (e.g., babies crying, tires screeching, etc.). Though definitions that harmonize with the prosaic view seem restrictive, they do have their merits, and could be endorsed by a music nature apologist (which I will set aside for the moment). Here are three notable definitions that harmonize with the prosaic view:

Andy Hamilton's definition

x is music = df "a practice involving skill or craft whose ends are essentially aesthetic, that especially rewards aesthetic attention – whose material is sound exhibiting tonal organization."[255]

Jerrold Levinson's definition

x is music = df "sounds temporally organized by a person for the purpose of enriching or intensifying experience through active engagement (e.g., listening, dancing, performing) with the sounds regarded primarily, or in significant measure, as sounds."[256]

Andrew Kania's definition

x is music = df "(1) any event intentionally produced or organized (2) to be heard, and (3) either (a) to have some basic musical features, such as pitch or rhythm, *or* (b) to be listened to for such features."[257]

As we can see, all three of these definitions embrace the basic idea of music as something that is audible. Despite this shared characteristic, each description contains key differences that distinguish each one. Hamilton, for example, defined music by focusing only on salient features (rejecting necessary conditions) that appeal to tonal/musical features (e.g., pitch, rhythm).[258] Levinson's definition focuses primarily on an aesthetic experience, whereby music is something that draws attention to itself. Kania's definition, on other hand, adds a disjunctive third condition that allows certain music to be devoid of any musical features, but can still be singled out as such due to the intentions of the composer.

These abovementioned definitions have their own advantages and disadvantages, which I will not fully discuss here. Instead, this chapter will be directed toward the poetic approach that holds to a broad conception, whereby

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[255] Andy Hamilton, *Aesthetics and Music* (New York, NY: Continuum International Publishing, 2007), 40.

[256] Jerrold Levinson, *Music, Art and Metaphysics*, 273.

[257] Andrew Kania, "Definition," In *The Routledge Companion to Philosophy of Music*, ed. Theodore Gracyk and Andrew Kania, (New York, NY: Routledge, 2011), 12.

[258] Andy Hamilton, *Aesthetics and Music* (New York, NY: Continuum International Publishing, 2007), 46.

every sound event could be understood and described as an instance of "music." In order to embrace the poetic approach, the relative definition proposed will not only try to capture the commonsense idea of music being an audible structured sound event, but also examine how each community could regard any sound event as an instance of music.The definition that I will be unpacking is the following:

x is Music in Community C = df *x* is a structured sound event that is correctly appreciated under a certain manner of regard *R* in community *C*.

I shall proceed as follows. First, I will set the scene by presenting two separate communities that can listen to, and differently define, the same sound event. Second, I will parse each component of the community-relative definition of music. Third, I will briefly discuss two advantageous insights to the definition. Lastly, I will respond to possible challenges this definition might face. By demonstrating each section, my aim is to show that grasping music in a poetic spirit can enhance an ever-growing artistic medium that is able to evolve over time.

Before I move forward, I want to clarify the relationship between the poetic view and relativism. When it comes to comprehending what "music" is, one could define in two ways or categories. One category is to provide an *extensional definition*, which seeks list every object that the term describes. The second category is to provide an *intensional definition*, which tries to give a sense of the term. The poetic view, for instance, seeks to provide an extensional definition of "music". That is, the poetic view explains how many objects (sound events) the term ("music") describes. Relativism (community-relative view), on the other hand, provides an intensional definition of "music". That is, the community-relative definition mentioned above seeks to specify the necessary and sufficient conditions of the term, "music". To grasp how the poetic view and relativism relate, let us think about how extensional and intensional definitions can harmonize together. Take for example the definition of the "solar system". "Solar system" can be defined extensionally by seeking to list every object the term describes (e.g., star, planets, dwarf planets, etc.). An intensional definition,

alternatively, would define “solar system” as a star that has a group of celestial bodies that are held by its gravitational attraction and orbit around it. Both of these definitional categories do not oppose each other, but rather provide a thick meaning of the term. Likewise, I comprehend the poetic view and the community-relative view harmonizing in the same manner when it comes to conceptualizing what music is.

1.1 Back to The Future: The Clashing of Two Communities

In Steven Spielberg’s 1985 movie, *Back to the Future*, Dr. Emmett Brown and his trusty young side-kick Marty McFly embark on several adventures in a DeLorean time machine. In one of those adventures, Marty fills in for a band, by playing the electric guitar for his parent’s 1955 high school dance. In this scene, Marty (who is from the 1980s) begins by playing the guitar part from The Penguin’s 1954 song, “Earth Angel.” Pleased by Marty’s performance, the band’s leader asks if he would like to play anything else. Marty accepts and proceeds to tell the audience and band that he is going to play an oldie, or at least an oldie where he is from. Before Marty plays what we know as Chuck Berry’s 1958 song, “Johnny B. Goode,” he turns around to tell the band that this song is a “blues riff in B,” and asks them to “keep up!” From here, Marty and the band begin to play the song. Familiar with “blues riff in B,” or what is known as a 12-bar blues form in B, the band easily, and enjoyably, follows along with Marty. The audience, also familiar with this sort of sounding structure, goes on to dance the night away. At this point, everything continues smoothly and everyone (Marty, band, and audience) seems to be enjoying themselves.

However, towards the end of the song, Marty does something on the guitar that is out of the ordinary—not necessarily for him, but certainly for the band and audience members. That is, Marty proceeds to play a 1980s hair metal guitar solo, which involves guitar tapping on the fret board and bending various guitar strings to a ridiculous amount. The audience stops dancing and looks on with confusion. At one point the camera cuts to the principal, Mr. Strickland holding his hands over his ears, because to Strickland, Marty’s guitar playing is not music, but loud noise.

The band, at the same time, stops playing with Marty because they have no idea of what he is playing or how to follow him musically. Marty, oblivious to the band and audience, proceeds to solo in a Van Halen-esque way. Once Marty finishes his solo, he finally realizes that everyone in the school auditorium is staring at him with bewilderment. This leads Marty to deliver one of the movie's most iconic lines: "I guess you guys aren't ready for that yet, but your kids are going to love it."

This scene represents a clash between two separate communities. The first, which we will call *A*, is represented by the high school audience and band. The second community, *B*, is represented by the character, Marty McFly. *A* is a community restricted by a given time, 1955. *B* is also restricted by a given time, the 1980s. What this means is that, for *B*, in terms of thinking about musical practices, traditions, standards, or prior songs in his community, his knowledge of what music is seems to surpass that of *A*. We can see this when Marty plays "Johnny B. Goode" to the audience. Marty knew the 12-bar blues form was popular and widely-implemented at the time (goes back at least to the 1900s), which allowed him to recall (performance-wise) Chuck Berry's 1958 American hit. *A* was able to follow along with the song due to both the audience and band having heard or understood the 12-bar musical form that structures "Johnny B. Goode." Unfortunately for Marty, toward the end of the song, he begins to slip back into his own community, which championed the hair metal of the '80s. Now, for community *B*, playing music that includes fast picking, extreme string bending, and finger tapping are common musical practices. For *A*, such a practice is unheard of because *A* is not privy to the common standards, musical practices, or prior songs of *B*. Thus, *A* does not recognize the sound event that occurs at the end of the song as music. Whilst, for *B*, such an event is recognizable. Thus, there is a clash between two communities.

2 Relative Definition of Music

If we were to grant a sort of communal dimension to music, then one could define music thusly:

x is Music in Community C = df *x* is a structured sound event that is correctly appreciated under a certain manner of regard *R* in community *C*.

I seek to provide a definition that could be understood in relativism as a type of co-variance style definition.[259] That is, there are two distinguishing parts: *x* is somehow dependent by some underlying independent variable *y*. The first part enables us to comprehend what object is relativized. In this case, the object or phenomenon is what I take to be the structured sound event. The second part seeks to comprehend to what domain, or frame of reference, the object is relativized. In this case, I would say that the object is relativized on the subjects that make up a community *C*.

To elucidate the contents of this community-relative definition, I will analyze the object, namely the sound event. Second, I will parse out the community. Third, I will unpack what exactly "ways of regarding" entails.

2.1 The Object

The general idea of music being an audible object is a necessary condition that seems to be universal in every community. That is to say, if an object is correctly regarded as music by community *C*, then that object or phenomenon *must* be an audible event of some sort.

"Object" or "phenomenon" here refers to objects that are sound events. A sound event is what I take to be a complex audible event that consists of a collection of sounds that stand in some relation to each other.[260] These sound events can also be understood as being concrete (not abstract), which signifies that they have the qualification of being temporally structured in some way.

[259] Baghramian, Maria and J. Adam Carter, "Relativism," *The Stanford Encyclopedia of Philosophy* (Spring 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/spr2021/entries/relativism/>.

[260] There is an ongoing debate in the philosophy of events which concerns understanding events as particulars (which I addressed briefly in 3.2). That said, I endorse Kim's account over Davidson's.

Now, in terms of taxonomic rank, one could think of sound events as the genus, which could have various audible species. Arguing with my parents about politics at dinner, police sirens, babies crying, the wind blowing through a willow tree, or a performance of Glass's "Mad Rush" could all be paradigms of sound events. And yet, each of these could be regarded (depending on the community) as different audible species that reside under the umbrella of sound events.

The provision of "structured" needs clarification. Namely, why not settle for the word "organized" instead of "structure?" If we think of an organized sound event, it appeals to the notion that organize implies there being an organizer. This organizer could be, for instance, the musical composer who intentionally takes certain sounds and organizes them in a specific way. For example, a genuine instance of "Mad Rush," is a particular sound event that was initially organized and composed by its organizer, Philip Glass. If we look at Levinson and Kania's definitions, a person that intentionally organizes sounds is a necessary qualifier for restricting the definition of music.

However, the use of "structure" is meant to be broader in scope, which appeals to the poetic notion that encompasses all organized and unorganized sound events. When I think of all sounds being "structured," I am quantifying *all* sound events as being structured in some way. This means that there could be no sound event that is unstructured. Of course, this broader conception might generate certain resistance. However, if one were to think of all sound events as being comprised by different audible pitches that stand in some relation (e.g., temporal) to each other, then it seems conceivable to think of these events as being structured in some way. But as will emerge, there is no reason to rule out a priori that music must be so structured.

While "organized" implies an "organizer," one could infer from "structured" that there is a plurality of different things, such as naturally occurring objects or machines, as the devices or causes of sound events. In other words, structured sound events can thus be intentional (by an organizer) or unintentional (by something that is not an organizer).

This broad scope of structure may initially seem unintuitive, especially when one grasps what music is. However, some examples serve to highlight certain unintentional sound events that have been regarded as music events. One growing reason to accept structure in its broader context is due to the advancements made in AI. Indeed, there are different AI units on the market that have the capabilities to compose what most (if not all) communities would understand as music. However, these machines lack creatorship and intentionality,[261] which seems to be a vital detail missing from Levinson and Kania's definitions. Another reason to accept the broad scope is that natural occurring objects, like bird song or the whistle of the wind, could produce a certain structured sound event that could be—and in some communities have been—regarded as music. For example, when visiting a Dinka tribe in Tonj, South Sudan, the Dinka people described to me a certain tree (which they called "Demon Tree") in their village that plays "music" at night when the winds pick up. While examples such as these are contentious, they do serve to exhibit that communities can, and do, regard natural occurring objects (as well as machines) as being the unintentional devices that produce structured sound events that can be regarded as "music."

2.2 The Community

What allows a sound event to be classified as music is determined by the subjects that form a given community. A community[262] is comprised of a grouping of individuals. Each individual in a given community can roughly be understood as a conscious being or subject. Additionally, these subjects must be able to audibly perceive (i.e., hear) sound events,[263] and have the capacity to correctly regard them.

[261] Chapter Five will dealt with this point in further depth.
[262] Of course, I am not going to offer let alone define a precise definition of a "community."
[263] The qualifier of hearing is in no way intended to demote subjects who cannot hear. All I am trying to say here is that, in order for a community to correctly regard sound events, the people in that community must have the capability to hear them.

There is no fixed set to how many communities may exist in the world. It could be the case that there is a plurality of communities. Indeed, the notion of a community is relative to the type of community: *x* and *y* be inside the same community (same tribe), but outside their respective communities (different social groups within the same tribe). Additionally, there could well be communities within communities. This intuition seems plausible, especially if we think of such examples as the community that regards according to Western standards of music, which has various communities residing within it. Likewise, the same can be said of the community that regards according to Eastern music standards. Lastly, there is no hierarchy of communities. There is not one community that resides over and above all others. Rather, I view communities to be rhizomic in nature, which is non-hierarchical, heterogeneous, and acentered.

Other than "ways of regarding," are there any other elements that differentiate communities from each other? I would argue in the affirmative, as each community is bound and tethered to a specific time. For instance, let us return to communities *A* and *B* in the *Back to The Future* example. The time or period *A* resided in dictated how that community regarded a particular sound event as non-music. While *B*, which resided at a different time, regarded that same sound event as music. Historically speaking, we can see how time periods can shape the way communities have made and regarded music (e.g., Baroque, Classical, Romantic, etc.).

2.3 "Ways of Regarding"

In brief, "ways of regarding" or "types of regarding" is how communities determine which sound events are music and which are non-music. A more detailed definition would be twofold. First, one must grasp what I mean by "correctly" in my definition. I use this term to signify what a given community conceives is in accordance with the truth. That is to say, the truth conditions of sentences or propositions that pertain to music is *community sensitive*. For instance, take the utterance of "that is music." The proposition expressed in "that is music" indicates the relative standards or regards that a particular community

complies with. Thus, to say a certain sound event is the "correct" sound event, that is, a music event, is community sensitive.

The second part to unpack is "regards." This term is used to denote the standards each community does, or might, abide by. I treat this term in a similar fashion to that found in Levinson's description, which is meant to include "more active modes, such as *taking*, *treatment*, *approach*, *engagement with*, so on."[264] Dissimilar to Levinson, however, is that the implementation of this term can take on many modes depending on the community. One community, for instance, could regard music according to the experience they have toward certain sound events. Namely, there is something about the sound event that draws attention to itself (makes them dance, tap their feet, perform, etc.). Another could regard according to the tonal features they ascribe to. That is, the sound event at hand must adhere to certain theories or practices held by that community. Alternatively, there could be a community that regards based on the composer's intention of the sound event. The sound event, for instance, must be organized by an organizer for that community. These sort of regards can be endorsed either collectively or in isolation, and are by no means exhaustive. I seek only to show that modes of regards can differ between communities. Examples of modes between communities could also look like the following: (1) mode of regard exemplified by the 19th century patrons of the Vienna Musikverein hearing Mozart; (2) by people in the mosh pit at a punk performance; (3) patrons of a swish dining establishment; (4) the attitude of the Dinka tribe; (5) after dinner, when Uncle Mark gets out his guitar, with the kids running in and out.

We should also note that the use of regards sets provenance within each community. "Provenance" here signifies some kind of historical documentation (whether written down or not) toward objects (sound events) that are accepted as music in a given community. This community has the ability, therefore, to recall past works that have been perhaps documented and understood as music. This

[264] Jerrold Levinson, *Music, Art and Metaphysics*, 39 fn.

historical device of provenance toward certain sound events sanctions a community to deliberate in a way that accords with the community's practices.

By way of an example, let us consider communities *A* and *B* in the *Back to The Future* case. On hearing "Johnny B. Goode," *A* could correctly regard that particular sound event, but not the Van Halen-esque guitar solo. Why is this? Well, with the former, this sound event followed a certain pattern (12-bar blues form) that was commonly used in *A*'s timeline. Thus, the band understood the theory behind "blues riff in B," whilst the audience's awareness was attuned to hearing similar sounding events of that sort. *A* could not correctly regard the Van Halen sounding event because there was no recognizable musical practice or form to be verified by the band. Likewise, there were no prior works which the audience could be attuned to. On the other hand, community *B* correctly regarded both sound events as music. This was due to *B* being able to comprehend both sound events as music because, in his community, "Jonny B. Goode" is regarded as such. Likewise, the second sound event would be correctly regarded because it follows certain musical practices and forms which were already sanctioned, as it were, in *B*'s timeline.

Summary:

This community-relative definition could be viewed in this way:

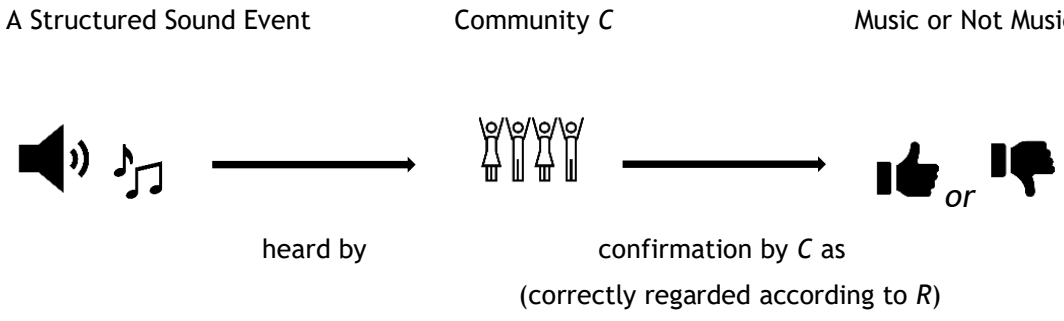

fig. 4.1

Figure 4.1 depicts a structured sound event as a complex structure that consists of sounds that stand in some relation to each other. These structured sound events

can be emitted by anything or anyone (human, machine, natural objects, etc.). What happens next is that the auditory or hearing process is perceived and picked out by the subjects. These subjects are connected to a community, which is a grouping of more than one subject. Hearing the sound event allows a sort of confirmation to occur, which is the regarding process in the subject or subject(s) according to some way *R*. Lastly, correctly regarding allows the subjects to express the proposition to a given sound event as "that is music" or "that is not music." Correctly regarded depending on the way of regarding *R* and is community-sensitive, which means there can be differing outcomes to the same sound event. Thus, defining a certain sound event as music is relative to the community in which a subject is tethered.

3 Benefits to Community-Relative Definitions

Specifically, there are two insights that I would like to briefly propose as benefits to the definition. Addressing these insights will help exhibit what facts the community-relative definition brings to light to provoke further reflection.

The first insight is that music could be an ever-evolving art medium. However, in this case, the process of evolution — assuming that modes of regards (R), are themselves static or unchanging — is solely based on how many modes of regards a given community is willing to admit. This seems plausible, especially if one thinks of certain communities have a recognizable avant-garde. For instance, the community that correctly regards the structured sound event of *4'33''* by John Cage would be more inclined to accept any sound events as music.

In contrast, it is also plausible to think of certain communities that are restrictive in their regards. For instance, some resided in a specific time period that restricted their regards to only particular sound events, thereby tending to stifle progress for that community. Unfortunately, restrictive communities either die out or are in the process of becoming extinct. Whereas, the communities that seem to last and evolve are those that seem to have a broader scope in their regards.

One could retort in this way: if the only communities that can persist tend to be those with broader scopes of correct regards, then should there come a time where there is only one unifying community (i.e., one universal definition of music)? Currently, this does not seem to be the case. The reason for this could be multifaceted, which I will not address here. However, I will say that, with the advancements in technology and information sharing (however one wants to parse that out), it could be plausible to have a unifying consensus of correct regards at some point in time.

The second insight is that the community-relative definition sidesteps any issues that seem to afflict the other proposed definitions. For example, Levinson's definition has the issue of rejecting sound events that do not draw attention to themselves (e.g., Musak). While Levinson did take a stand in saying that elevator sound events emitted from speakers should not be regarded as music, the relative definition would respond in a different manner. This response would be that Levinson's definition could be correctly regarded in one community (i.e., rejecting Musak), while simultaneously not to be correctly regarded in other communities that grant admission to Musak sounding events. Likewise, a definition that only appeals to tonal features, such as Hamilton's, seems to encounter the issue of particular sound events that lack certain tonal features (e.g., some avant-garde pieces) having been regarded as music. Once again, rather than continuing this a cost of the definition. However, the relativist can identify tonal feature-style definitions as the correct regards of certain communities, while admitting particular non-tonal featured sound events as music to others. This results in the community-relative definition being able to take any theorist's definition and relegate those definiens as correct regards to a given community, thus sidestepping any possible issues that could arise within those definitions.

4 Questions and Rejoinders

The community-relative definition, perhaps like all philosophical definitions, has apparent problems to address. Here, I will provide three different kind of

questions that might arise. The first deals with the scope or relativism. The second addresses epistemic contextualism versus epistemic relativism. The third is ontological, which pertains to sound events instantiating music natures.

4.1 Individual-Relative Definition?

Question:
If music is community-relative, could it be the case that music is just relative to the individual? Could one just reduce the scope of relativism to the individual and not the community? For example, composer John Cage held that any and all sounds could be listened to as if they were music; and if an individual directs their attention toward a sound event and has some sort of musical experience (whatever that might be), then there is music.[265] Thus, comprehending music is purely subjective and relative to the individual, not the community. Alternatively, as Robin Maconie simply put it, "for sound to be perceived as music to one listener may be noise to another."[266]

Answer:

I am sympathetic to a Cagean or Maconiean conception of music. For instance, there does seem to be weight behind the notion that music or art has been popularized by such phraseology as "art is subjective" or "in the eye of the beholder." Moreover, it seems that one could make sense of an individual-relative definition ontologically. That is, one could say that every sound event instantiates its music nature in some possible world. This is not implausible.

However, what seems to be misplaced with any individualistic definition is that explanation of correct regards seems to rely on whichever community said individual is tethered to. This seems similar to Aristotle's description of man as "by nature a political animal,"[267] which roughly means the mode of life for any

[265] Cage was allusive when it came to defining "music." Though allusive, there are interviews and writings that suggest this sort of exegete. Richard Kostelanetz and John Cage, "The Aesthetics of John Cage: A Composite Interview," *The Kenyon Review* 9, no. 4, (1987): 103,110.
[266] Robin Maconie, *The Concept of Music* (New York, NY: Oxford University Press, 1990), 11,12.
[267] Aristotle, *Politics*, trans. Harris Rackham (Cambridge, MA: Harvard University Press, 1932), bk. 1, 1253a.

person is shaped by the customs and institutions of the community to which they belong. Likewise, the same can be said for considering, or correctly regarding, sound events as music or non-music. When an individual claims a certain sound event as music, their ways of regards are shaped and developed by their community. Correctness is strictly speaking relative to the individual, but in fact social factors will bring about certain consistency within cultures. Just as the surrounding community sets the criteria of correctness for word-meaning, so it sets the criteria of correctness for modes of regard for music (i.e., for the correctness of *R*'s).

That said, what can I say of Mowgli or hermit-type cases where an individual lives in isolation from any community? Could such an individual correctly regard any sound event as music? Here, the responses would differ on a case-by-case basis. If one makes the case of a hermit who once lived in a certain community, then I would claim that said individual would be able to correctly regard (to a certain extent) sound events as music or not. I would make this claim due to the fact that the hermit, prior to their isolation, was shaped/raised/developed in a community that regarded certain sound events in a particular way. However, the longer the insolation, the greater the degree that this determining of correctness could dissipate. How long would it take for a hermit to stray from the correct regards of their previous community? Once again, this would be a multifaceted, case-by-case scenario, which I will set aside for now. If the case were to more closely resemble a Mowgli-esque scenario—wherein the individual was born and raised in isolation (by wolves, or what have you)—then this requires a different response. Particularly, Mowgli, or any similar individual, could not regard any sound event as music due to there being no prior works, treatments, engagement with, etc., that they could recall. In order to develop a mode of regard, one requires that a practice or institution exist. I am not in a position to say that this is impossible, but I think it will be granted that it is unlikely.

In sum, reducing the scope of relativism from a community to the individual seems to be misplaced. Generally speaking, individuals do not deliberate or correctly regard outside of the community to which they are tethered.

Furthermore, to correctly regard a sound event of any kind, there needs to be a community that has set a historical precedence of there being this-from-that. However, a relativist could firmly plant their feet and say that correctness is individual-sensitive and dependent on the individual's frame of reference. Nonetheless, I take my cue from Aristotle and reply that the community is prior in nature to each of us individually, and that the whole (community) must necessarily be prior to the part (individual).[268]

4.2 Community-Contextual Definition?

Question:
Why does this definition admit relativism, when it really endorses contextual definition? Is not what is being expressed by a music attribution "*x* is music" not depend partly on the attributor's music standards (i.e., correct regards)? If this is correct, then what is offered here is a community- contextual definition for "music." It would imply that the proposition expressed by the sentence in a given context can vary across others in which we vary the attributors music standards.[269]

Maybe the reason why this definition endorses contextualism because the explanation behaves like gradable adjectives. For example, the proposition expressed by the sentence "Caitlyn (my wife) is tall" might be true in the context where she is standing near my one-year-old son and his toddler companions, whereas it would be false if I used that same sentence in a context where she stood close to the *Portland Trailblazers* (an NBA team). Similarly, "music" acts like gradable adjectives in that the proposition expressed in the sentence "*x* is music" might be true when used in the context of one community, but not so in another.

Answer:

While the literature surrounding contextualism and relativism can be somewhat vague, I want to contend that my definition does not endorse

[268] This reference is how Aristotle describes the city-state, which he claims is prior in nature to the household and each of us individually. Aristotle, *Politics*, bk. 1.
[269] After discussing via email, this sort of question and its possible rejoinders were raised by Adam Carter and Brian Pickel.

community-contextualism. In order to explain why this definition adheres to relativism rather than contextualism, let us compare theories when we think of the concept of "tastiness." For these two theories, it would be appropriate for someone to say "steak pie is tasty" if and only if they like steak pie.[270]

For the community-contextualist definition, "tasty" is understood as an indexical. Specifically, if a speaker *S* utters a sentence in the form "*x* is tasty," what they asserted is the proposition that *S* likes *x*. Therefore, when my brother-in-law Gregor says, "steak pie is tasty," then Gregor has asserted that he likes steak pie. If I uttered "steak pie is tasty," I would assert that I like steak pie. Both of these propositions, for the contextualist, would be different.

For the community-relativist definition, "tasty" is not understood as an indexical, but rather a relative predicate. Accordingly, when Gregor and I utter the sentence "steak pie is tasty," we are both saying the same thing. We both say that steak pie is tasty, yet the proposition is not a true or false simpliciter. For the relativist, in terms of predicates of personal taste, Gregor's utterance has a truth value relative to his standards, and my utterance has a truth value relative to my own. Therefore, there is only one proposition, "steak pie is tasty," which is true relative to the context of assessment where Gregor's and Cody's tastes are operative, respectively.[271]

This relates to my definition in that "music" behaves like a relative predicate. Therefore, when one person in one community says, "*x* is music" and someone in a different community says, "*x* is music," they are both saying the same thing. The truth of "*x* is music" depends on the context of assessment[272] of any given community, which allows a single proposition to be true relative to the

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[270] Thanks to Brian Pickel (via email) for helping me respond in this fashion.

[271] Look specifically at "New Relativism" in Baghramian, Maria and J. Adam Carter, "Relativism," *The Stanford Encyclopedia of Philosophy* (Spring 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/spr2021/entries/relativism/>.

[272] "Context of assessment" could raise questions of the form, such as, "When is a person of a certain community permitted to assert '*x* is music' (and when they should retract it)?" For now, I will set such questions aside, since I do not think they hinder or enhance the semantic thesis of music.

context of assessment where the standards or regards of two communities are respectively operative.

Since a single proposition is not a true or false simpliciter, then there is something to be said about disagreement. For example, let us return to the *Back to the Future* example in which the same sound event is assessed differently. I use "assess/assessing" here to refer to the community regards of the sound event. For community *A*, an individual could say "*x* is not music," whereas in community *B*, Marty could say "*x* is music." This disagreement between both communities, under the relativist account, is *faultless*. It is faultless because the truth values of *A* and *B*'s utterances are relative to their respective regards. Therefore, when it comes to disagreement, there is not one community that is the arbiter of what sound events are and are not music.

To sum up, my definition does not commit me to a community-contextualist definition. For the contextualist, music attribution "*x* is music" depends on the attributor's music standards. This implies that the proposition expressed by the sentence (in a given context) of use would differ across contexts due to the variance in the attributor's music standards (i.e., having different propositions). On the other hand, my definition supports a relativist semantic that claims the proposition "*x* is music" is the same in every community but is simply not true or false. Thus, providing the definition "*x* is music in community *C*" is relative and sensitive to each community.

4.3 Every Sound Event Instantiates its Music Nature?

Question:
Metaphysically speaking, if musical Platonism and the community-relative definition are applied, would that mean that every sound event is instantiating its music nature? What would happen if there were a sound event (that instantiates its music nature) that no community regards as music? Would that sound event still be instantiating a merely possible music nature? If so, then what we have here is a

category fallacy, whereby every sound event does not belong to the category of music natures.

Answer:

To answer this challenge, let us begin with the first question. In brief, yes, every structured sound event, under musical Platonism, instantiates its abstract object. In other words, the abstract object (in my case music nature) grounds the character of every structured sound event. Thus, it seems that, for any Platonist, the music nature is what grounds the character of the structured sound event.

Regarding the second question, it might *actually* be the case where there are no communities that regard a particular structured sound event as music. Even if true, this would not negate the fact that the rejected sound event no community regards as "music" still instantiates its music nature. Moreover, this rejected sound event may not be regarded in the actual world as music, yet it would still be conceivable to think of a possible world in which it were. Continuing in modal jargon, it is also conceivable to think of a world where every sound event is not regarded by any community as music. Similarly, it is also conceivable to think of a world where there are sound events, but with no conscious beings present to correctly regard them as music.

To follow this line of thought, let us consider the sound event of a performance of Beethoven's *Fifth Symphony*. In the actual world, most (if not all) communities would regard this as music. Thus, contemplating this particular sound event instantiating its music nature seems plausible for the musical Platonist. However, there could be a possible world where the *Fifth Symphony* is not regarded by any community as music. Such communities may well regard the sound event as mere noise. Nonetheless, on my view, even though the sound event of the *Fifth Symphony* could be rejected by every community, that sound event would still instantiate its music nature.

What I am hoping to show here is that it would be possible that community rejected sound events in the actual world could be correctly regarded as music in

possible worlds (w_1, w_2, w_3…n), or *vice versa*. If there is even the slightest chance that it is possible to think in this manner, then saying music natures ground the character of every sound event is not a mistake in category. Instead, categorizing music natures as the character grounder for all sound events seems like a plausible account to adopt in the actual or possible world.

5 Conclusion

What I have proposed in this chapter may seem like too much of a departure from traditional definitions. It may well be the case that I could be charged with providing yet another subjective style definition. As a confession, this is exactly what I set out to provide. The added caveat, however, is the addition of the communal aspect of defining music. In so doing, comprehending which sound events are music is relative to whatever community you reside in. Accordingly, one community can correctly regard by appealing to intrinsic properties, aesthetic experiences, or intentional production, etc. Whatever the regards might be, I leave the assessment to the communities themselves.

To explain the community-relative definition, I illustrated the scene with a particular case, parsed my definition, offered certain benefits, and responded to several possible questions or issues. While my definition has some degree of plausibility, there could be certain areas that might have gone unaddressed. If successful, the music nature apologist can be poetic in spirit and apply this community-relative definition within their philosophy of music. If unsuccessful, then the music nature apologist could turn to other viable prosaic spirit-led definitions to apply to their theory.

Conclusion

The treatment of this section is meant to resemble a *fermata* (a musical notation to hold or pause) rather than a conclusion. Reasonably, to consider that this topic is concluded would be an error. This does not mean, however, that I have nothing to show for my endeavors. I am convinced that I do, but I simply do not believe that this dissertation can end with an outro. Of course, these sorts of things seem to be normal. Looking back at my abstract, I set out to advance our comprehension of musical ontology as it pertains to realism. This particular goal, unfortunately, is not the kind of project that allows finality. Rather, the aim was to enhance and provide certain areas within musical realism that have yet to be explored.

The primary component that I offered is a musical Platonist account that adheres to a property theory model of musical works, which I presented in Chapter Three: a work of music is a music nature, which is an abstract structural universal that consists of simple sound properties and sound relations. The two previous chapters aided this account: Chapter One landscaped all the popular options offered in musical ontology, ranging from realism, nominalism, arealism, and anti-realism. Chapter Two furnished two things: an understanding of property theory and how it differs from type/token theory; and an Aristotelian account of musical works that construes property theory under the guise of immanent properties. Particularly, Anthony Fisher's musical Aristotelian account of structural universals was highlighted as a viable option for the property theorist who adheres to immanent properties. The last three chapters applied my account of music natures in order to show how it could be advantageous. In Chapter Four, I focused on finding what role the score plays in the enforcement of genuine instances. Chapter Five, focused on introducing a new argument for musical discoveries by examining AI's musical compositions. Chapter Six, my last chapter, I entertained the definition of "music," and modestly presented a community-relative definition that appeals to the music nature advocate who is poetic in spirit toward all music natures grounding the character of all sound events.

Most of the content presented in this project is interesting in its own right. In particular, I believe advancing Philip Letts's property theory (see Chapters Two and Three) has shown to be the most fruitful because it provides a novel and simplified model that seems to be missing from musical realism. Moreover, since Letts seems neutral regarding the nature of properties, it opens up a wealth of accounts to flourish within the model. Namely, Fisher's stripe of musical Aristotelianism and my brand of musical Platonism that claims music natures.

Before the *fermata* occurs, I would like to examine one passage in Chapter Three that seems highly appropriate, "music is nothing more than math made audible." This sort of phrase, if any phrase can sum up the way I think about musical works, probably serves best. Surprisingly enough, I have used this sort of phraseology more than once when asked of what I have concluded in my dissertation. The reason for presenting it here is twofold. First, the relationship between music and math is unavoidable. For instance, the theory of music could not function or be properly studied without mathematics to help comprehend such elements as pitch, timing, chord progression, and the overall structuring of musical works. Moreover, while there is no axiomatic establishment in contemporary mathematics for music, Reginald Smith Brindle seems correct in stating that "mathematics is the bases of sound"[273] and "the nature of sound is dependent on mathematical principles."[274] If one attempts to escape this relationship, all one need do is take an introduction to music theory, and examine the beauty and simplicity that resides in the circle of fifths.

The second, and most important reason, is how Platonism has found a stronghold in mathematics. Some philosophers, such as William Lane Craig, have gone on to say that "the heart of contemporary debate over Platonism is to be found in the philosophy of mathematics."[275] Namely, comprehending mathematics as abstract objects has gone unscathed in the literature surrounding how one

[273] Reginald Smith Brindle, *The New Music: The Avant-Garde Since 1945* (Oxford, NY: Oxford University Press, 1987), 42.
[274] Ibid. fn.
[275] William Lane Craig, *God Over All: Divine Aseity and the Challenge to Platonism* (Oxford, NY: Oxford University Press, 2016), 44.

understands the existence of mathematics.[276] Thus, in terms of comprehending music and Platonism, the same sentiments should apply. One could say the following: if the relationship between math and music is unavoidable, and if mathematics and Platonism is unavoidable, then it is conceivable to think music and Platonism could also be unavoidable. This is by no means a knock-down argument, but rather a confession on my part.

I believe that my dissertation, and more precisely my account, helps us understand and discuss this manifesto and its applications. The music nature account (under the umbrella of musical realism) has a healthy and intuitive comprehension of how the written score functions, as well as an interesting (some might even say intuitive) way of understanding AI compositions. Lastly, the account can admit and modify any kind of definition of "music" one wants to grant, whether broad or refined in its definiens.

Here, I have tried to propel conceptual tools in order to form a dialogue that only scratches the surface, and this project does not provide the final words on the topic. This is why this section is a *fermata* and not a conclusion. It is merely a pause or hold whereby either I, or someone else, acts as a conductor to hopefully resume and say something profitable.

[276] Of course, there are other anti-Platonist accounts that would say otherwise. However, it would not be erroneous to claim that Platonism is the predominant view.

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