

## Music Pluralism and Indifference Realism

### Abstract

According to pluralism about some concept, there are multiple non-equivalent, legitimate concepts pertaining to the (alleged) ontological category in question. It is an open question whether conceptual pluralism implies anti-realism about that category. In this talk, I argue that at least for the case of music, it does not. To undermine the move from pluralism about music concepts to anti-realism about the music category, then, I provide an argument in support of indifference realism about music, by appeal to music archaeological research, and via an analogy with indifference realism about species licensed by paleobiological research.

### 1. Conceptual pluralism about music

Philosophers have advanced monist analyses of ‘the’ concept of music in the traditional (i.e., unitary, essentialist) manner. According to Andrew Kania, ‘music (1) is any event intentionally produced or organized (2) to be heard, and (3) either (a) to have some basic musical feature, such as pitch or rhythm, or (b) to be listened to for such features’. According to Jerrold Levinson, something is music just in case it comprises ‘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’. Participants in the ongoing debate, unsurprisingly, point out counterexamples, aiming to show that these analyses of music are too broad, too narrow, or both. However, there are also reasons to think that the project—the search for an analysis of *the* concept of music—is misguided (or at least discouragingly problematic). For example, the role music concepts play in various research programs motivates conceptual pluralism about music. ‘Music’ is a polysemous term, and this polysemy belies a plurality of music concepts. An aesthetician might be interested in music as *art*, or as something with particular aesthetic qualities or value. A cultural anthropologist might be interested in music as an ethnographic phenomenon, eschewing any appeal to aesthetic considerations in determining what counts as music. A psychologist might be interested in music as a mental representation or auditory

sensation; an acoustician, physicist, or technician might be interested in music as longitudinal compression waves. And from a trans-cultural perspective, which events, objects or processes count as music according to one cultural framework might be very different from another. And this is the case both synchronically and diachronically. All this amounts to support for the proposition that there is no unitary ‘catch-all’ concept of *music*, or that if there were, it would be so bloated with disjunctive conditions and caveats that it would be preferable to give it up and admit a plurality of music concepts.

The conceptual pluralist, then, claims that there are multiple *non-equivalent, legitimate* music concepts. According to the *non-equivalency* thesis, there is more than one (legitimate) music concept on the table, and these concepts distinguish music from non-music in different ways. (That is, they entail distinct ontological categories and thus cannot be unified.) According to the *legitimacy* thesis, these concepts are ones that play significant—and plausibly ineliminable—roles in distinct, and legitimate, investigations or practices. Thus part of the justification for pluralism comes from *naturalized metaphysics*, according to which concepts about some ontological category are vindicated via their role in legitimate research/discourse about that category. In other words, questions about ontology can be settled at least partially by investigating concepts as they are used in legitimate investigations or practices. Moreover, taking conceptual pluralism about music seriously provides the framework for a fruitful research program in aesthetics/philosophy of music. Indeed, pluralism is not a conceptual ‘free for all’, and there is work to be done in identifying, evaluating, and engineering music concepts, in probing their legitimacy, and analysing the roles they play in scientific research programs and in cultural frameworks.

Although recently defended about *art*, conceptual pluralism is most often seen in scientific domains. There are at least 20 distinct *species* concepts (for example) discussed by scientists and philosophers, and many of these divvy up biological life in different ways; they result in different ‘ontological carvings’ of the many organisms on this planet. Yet, the argument goes, many of these non-equivalent concepts are legitimised by their role in scientific practice. The ‘biological species concept’ groups lineages bound by the process of interbreeding; the ‘phylogenetic species concept’ groups together organisms that share a common and unique ancestry; the ‘ecological species concept’ groups species together that are exposed to common sets of stabilising selection; the ‘phenetic species concept’ groups species together according to

morphological similarity. A species pluralist might claim that it is right to distinguish, say, two organisms qua species in some contexts (that the two are morphologically distinct enough for the research task at hand, or have diverged adequately from their common ancestor, might justify such a move), yet she might also claim that in other contexts it is right to lump them together (their ability to breed in captivity and produce fertile offspring might justify that move). A lion and a tiger, for example, could fit that schema.

In this talk it is not my aim herein to defend music pluralism *per se*, but to consider the question of whether one should adopt a realist or anti-realist stance towards the music category once one embraces (or were to embrace) pluralism.

## **2. From conceptual pluralism to ontological eliminativism: the case of *species***

According to conceptual pluralism about species, there is no single ‘fact of the matter’ regarding how organisms are lumped into species; that is, there are no species *simpliciter*. Rather, how we ought divide up biological life into species turns on the purpose for which we need to do the categorizing. However, there seems to be a tension between conceptual pluralism and realism about the ontological category in question. If the species category is not unified, then what justification could there be for realism about that category? This has led some theorists—Marc Ereshefsky being the most prominent among them—to argue that although the organisms that make up the target groupings of the various legitimate species concepts exist, the general category of species does not: ‘biological theory provides ample evidence that the tree of life is segmented by biological forces into different types of taxa. Consequently, there is no single unitary species category, but a heterogeneous collection of base taxa referred to by the term ‘species’); as Marc Ereshefsky argues, ‘the lack of consilience among various species concepts does not show that the taxa they pick out are not real. The taxa are real; they just do not fall under a single category (the species category)’. This line of reasoning is dubbed the *heterogeneity argument*. This is to say that there may be such things as (say) biological species, phylogenetic species, ecological species—but *no such thing as species*; that while we might be realists about specific taxa (*Homo sapiens*, *Canis familiaris*, etc.), given the lack of a common unifying feature we should be anti-realists about the general category specified by ‘species’.

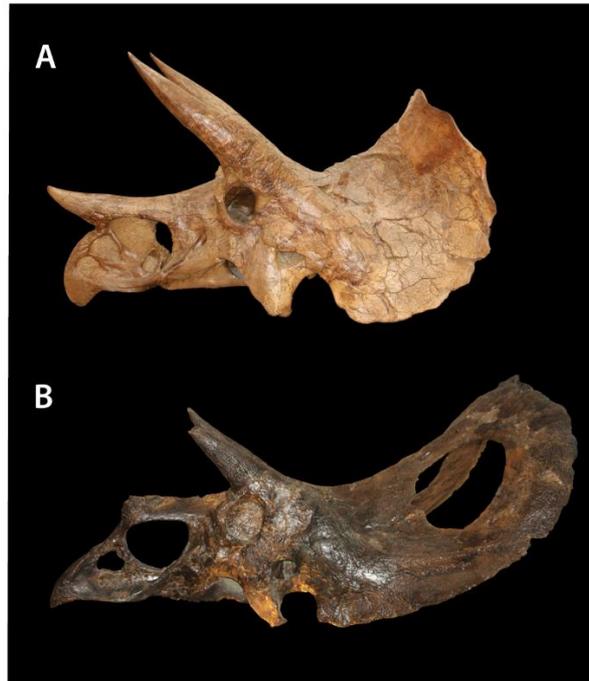
There are potential pluralistic strategies for resisting the move from concept-pluralism to ontological-eliminativism (which do not involve the search for a common unifying feature, as that would be the monistic option). One idea is that although we should be pluralists about species concepts, the general category survives as required for historical exposition. However, note that if the category ‘is real’ solely for this purpose, this admits only a very limited form of realism; de facto, anti-realists might agree with everything said of the ‘general category’ conceived as some *historical* construct or fictionalistic concept. If this is the only realism available to the pluralist, it looks like being a realist versus an anti-realist is a distinction without much of a difference. Second, according to species concept pluralists like Ingo Brigandt, the general species concept picks out an *investigative kind*—a ‘phenomenon’ to be investigated; the general species concept plays a useful and theoretically important role in biology and should not be eliminated.

### **3. Indifference realism about species: a sketch**

According to Adrian Currie, ‘The indifference realist argues that when legitimate investigation is indifferent to a plurality of concepts, we should be realists about the category those concepts pertain to’. Thus the indifference realist about some category *X* is a pluralist about *X*-concepts—she accepts the non-equivalency and legitimacy theses—yet she also holds that there is a legitimate inquiry or practice which is *indifferent* to these concepts, *ceteris paribus* licensing realism about the general category.

As presented by Currie, the idea is that the general category of species is vindicated (i.e., is made out to be real) by the lights of paleobiology. Paleobiologists establish new species (e.g., of dinosaur) by showing that differences between specimens which are possibly due to them being different evolutionary lineages ‘are not better explained by within-species variation’. Currie argues that this methodology is indifferent to the various species concepts legitimised by other research programs. If so, it ‘ranges over’ the different species concepts, licensing realism about the general category by way of the *indifference principle*: ‘when some legitimate investigation is indifferent in regards to some category, in a vindicatory sense, then we ought to be realists about that category’. Just as the species concept pluralist draws justification for various species concepts from the legitimacy of various scientific investigations, the species indifference realist draws

justification for the general species concept from legitimate investigation indifferent to the various legitimate specifications of ‘species’. Currie explains this indifference to species concepts via the recent paleobiological debate about *Triceratops* and *Torosaurus*.



(A) *Triceratops* (B) *Torosaurus*.

The skulls of *Triceratops* and *Torosaurus* specimens are morphologically distinct; for example, the two have different ‘frills’. But the relation between these dinosaurs has been the subject of debate. According to the ‘Toroceratops’ hypothesis, these specimens represent different life stages of the same dinosaur. According to the standard view, *Triceratops* and *Torosaurus* are different dinosaurs.

Some paleobiologists have argued that the skull of a *Triceratops* went through different developmental phases during its lifetime. These researchers identified four stages, each evinced by transformations of the skull. In very young *Triceratops*, their horns leaned backwards, towards the frill. Then by young adulthood, they had switched around. Since the skulls of *Triceratops* go through developmental stages, mistaking different species for different life stages of the same species is a live possibility. So some paleobiologists argued that *Torosaurus* were in fact mature, adult *Triceratops*. This hypothesis was supported further by research into the ages of the animals that left behind the skulls. One way to tell an

organism's age is by its cell tissue. Older animals have more condensed layers of bone tissue. Paleobiologists found that the horns on *Triceratops* skulls were more youthful than on any of the *Torosaurus* skulls.

There are some challenges to this hypothesis, however. Some paleobiologists doubt that it is plausible that over its life, a *Triceratops*'s frill would thin and develop holes as it grew into the final stages of maturity. In all other known Ceratopsidae, the dinosaurs with thin, holed frills are holed all the way from earliest known development. And some paleobiologists have created models of dinosaur development that seem to suggest (by their lights) that *Triceratops* and *Torosaurus* are distinct dinosaur lineages.

The debate is still open. However, notice that paleobiological taxonomic identification turns on explanations of morphological patterns in the material record. In paleobiology, researchers group specimens into the same species not by some species *concept*, but on explanatory grounds: by showing that within-species variation explains the differences across specimens. Conversely, paleobiologists divvy up species not by a specific species concept, but by showing that within-species variation is not a good explanation for the differences across specimens. In sum, here the discussion does not turn on *which species concept* is best for the job, but it does turn on something real. And it does not undermine the legitimacy of specific species concepts utilized by researchers in other research programs.

If the preceding establishes the point that paleobiological research is indifferent to species concepts, then, following Currie, we can be indifference realists about species *despite the disunity of the category*. The next question to consider, then, is what, exactly, is an indifference realist about species *a realist about*? Species indifference realism is realism about *what*? After all, different species concepts would 'carve up' dinosaur lineages differently and cannot be unified (hence, pluralism). For example, the biological-species concept will group interbreeding lineages together and exclude any asexual lineages. The phylogenetic-species concept will group together lineages that form unique phylogenetic branches. And so on. So what exactly is the species category that paleobiological research allegedly 'ranges over'? Currie's suggestion is that 'species' ranges over the *maximally consistent conjunction* of the various legitimate species concepts, pointing readers to an analogous move in David Lewis's 'Truth in fiction' .

#### 4. Indifference realism about music

Are there legitimate research programs that are indifferent to a plurality of music concepts? I think there are, and thus, if the methodology underlying indifference realism is acceptable, then we can be realists about the general music category despite being music concept pluralists.

I propose that music archaeology is one such research program. Although archaeologists, prehistorians, and evolutionary anthropologists might operate with music concepts, idiosyncratic or otherwise, I suggest that determining the musical status of purported musical instruments, as well as asking whether or not our Neanderthal cousins were musical (and other such questions), ‘ranges over’ multiple legitimate music concepts.

Music archaeology is a rich, cutting edge field of inquiry. The musical artefacts left behind by ancient hominids—and purported musical artefacts including ones whose anthropogenic status is unclear—preserved through time and discovered (and pieced together) by archaeologists comprise a key line of evidence. Archaeologists have found bird-bone and mammoth-ivory flutes that date back to 40,000 years ago. Reconstructions have been made, enabling adept flutists to experiment and explore the capabilities and limitations of the ancient instruments. According to archaeologists Nicholas Conard and Maria Malina, these reconstruction experiments, at least in part, establish the ancient flutes as ‘fully developed musical instruments’.



Replica of an Upper Palaeolithic flute from Geißenklösterle.

In order to establish indifference realism about music, I point to recent debate over the question of Neanderthal music; specifically, the debate over the musical status of the Divje babe I ‘Neanderthal flute’, currently housed at the National Museum of Slovenia.

In the mid-1990s, an intriguing object was found in a European cave (Divje babe I). The object is intriguing because it looks very much like a flute. It is also intriguing because, due to its age and location (i.e., 55,000 years old; present-day western Slovenia), it would be associated not with *Homo sapiens* but with the Neanderthals, were it to be a flute. And although Neanderthals made personal ornaments and bone tools, there is no other evidence for Neanderthal musicality in the archaeological record. (That said, there are no barriers, anatomical or otherwise, to basic musicality being part of the Neanderthal social package.) So if this object is a flute, it would be the sole trace of a musical culture otherwise unrepresented in the material record. A lot could hang on this, given debate about the cognitive, symbolic and affective capacities of Neanderthals and hypotheses about their extinction/assimilation.



So-called ‘Neanderthal bone flute’ found in 1995 in Divje babe.

So, is this bone a *musical object*? At first, archaeologists interpreted the object as part of a flute made by a Neanderthal—and they pointed out many of the object’s musical qualities, discovered experimentally via playing replicas. Since then, many researchers have argued that it is not a musical instrument—that it is the product of non-hominid animal activity instead. The bone is a juvenile cave bear femur, and indeed most of the bones that accumulated in that cave are cave bear bones. Researchers compared the ‘flute’ with other bones that had been chewed by carnivores that had left very similar circular holes. As Steven Mithen tells it, researchers ‘submitted these and the ‘flute’ to a microscopic study. Telltale microscopic pittings and scorings surrounding the holes confirmed that they had been made by the canines of carnivores rather than stone tools, which would have left quite different traces. Moreover, there were clear tooth impressions on the face of the bone immediately opposite the holes, showing how the bone had been gripped within carnivore jaws... the bone’s resemblance to a flute is simply one of chance’.

Not everyone was convinced. The National Museum of Slovenia’s Peter Turk, for one, suggests that it could have been chewed after being discarded or lost. The Museum’s website labels the object a ‘Neanderthal flute’ and ‘the oldest musical instrument in the world’.

Renewed interest in the object and its musical status sparked further experiments and debate. Tuniz and colleagues report a reconstruction experiment that demonstrates that the object could ‘achieve two and a half octaves in a tune sequence of a 12-tone scale. If overblowing is taken into account, its range is more than three octaves. In musical jargon, it is possible to perform legato, staccato, frullato, glissando, decomposed chords, interval leaps and melodic sequences from the lowest to the highest pitch. The dynamic musical capabilities range from piano to forte, as in the case of modern flutes’. Just as Conard and Malina thought that reconstruction experiments in part demonstrate that the Upper Palaeolithic flutes of 40,000 years ago were fully-developed musical instruments, one might think the same reasoning is applicable here. And Tuniz et al. performed X-ray computed micro-tomography on the object; according to their analysis, ‘there were originally four holes, possibly made with pointed stones and bone tools. Most surface modifications near the holes, previously interpreted as effects of carnivore gnawing, are post-depositional marks. Furthermore, a thin layer has been removed around one of the complete holes, producing a flat surface, possibly to facilitate perforation’. These researchers argue that it is not reasonable to conclude that all of the

features of the object were produced by non-hominid activity; ‘Neanderthals could have picked up the bone, already slightly modified at the distal ends by a carnivore, and changed it into a musical instrument’.

The debate continues. Cajus Diedrich argues that the bone is not a musical object, but the result of hyena scavenging activity. Turk et al. argue against this interpretation. Turk et al. explicitly call the bone a ‘musical instrument’ and marshal together the results of interdisciplinary analyses of the bone as well as its chronostratigraphic, palaeo-environmental and archaeological circumstances, arguing that the bone should indeed be interpreted as a musical instrument. With great detail these authors discuss what they take to be flaws with various carnivore-themed suggestions of how the bone got its shape, and experimental archaeological results that establish how the holes might have been made by the kinds of tools associated with the hominins that made use of the caves without ‘leaving behind any conventional manufacture marks (i.e. evident cuts and striations of stone tools)’. Moreover, they claim that the strongest argument for the view that the object is a musical instrument is its playability, established by musical exploration on replicas, in particular that of professional musician Ljuben Dimkaroski. They claim that the lack of conventional manufacture marks is the main obstacle for considering the object a musical instrument, and explain the object’s lack of marks as the result of corrosion/weathering and humidity.

Now, whether the object is or isn’t a musical instrument is not what is at stake here. What is of interest is how researchers have gone about coming up with answers: researchers have, *inter alia*, (a) analysed the object using X-ray micro-tomography, (b) compared different ways of producing the exact structure of the holes using the kinds of tools associated with Neanderthals, (c) attempted to vindicate or rule out other possible causes (e.g., by analysing the biomechanics of carnivore teeth and assessing whether or not the marks on the object line up with examples of carnivore damage, and by establishing whether or not a particular species made use of the cave at the time, etc.), (d) reconstructed replicas of the object from the same material (juvenile cave bear femur) and tested for expressive acoustic qualities. Researchers then inferred to the best (by their lights) explanation; they formed an empirically-constrained hypothesis concerning the object’s musical status, one way or the other. So, in short, the debate over whether Neanderthals had music—and more specifically, whether *this particular object* is a musical object—does not turn on some music concept. Archaeological methods of delineating evidence for music from non-music are

not effected by differing concepts of music. The classification of the object as musical turns on that being a better explanation of the otherwise puzzling features of the bone (e.g., the holes) than its not being musical (e.g., being simply a carnivored cave bear femur). Distinguishing the latter hypothesis from the former does not depend on the former being understood according to any particular music concept. Although researchers might operate with some concept of music, the research program is *indifferent* to a plurality of music concepts; their criteria is equally applicable on any legitimate music concept.

Addressing the musical status of this object and asking whether Neanderthals had music plausibly ‘ranges over’ different music concepts. It is indifferent to the anthropologist’s, and the psychologist’s concepts of music (concepts of music as an ethnographic phenomenon and thus instantiated in the external world, and music as a psychological phenomenon and thus instantiated in the mind), for example. And it is indifferent to whether music is defined in terms of intrinsic properties or as a part of a lineage of practices. Participants to the debate who see this object as a flute might associate Neanderthal music with hunting, or leisure, or sexual selection in their evolutionary framework (and thus they might have differing concepts of music as tool, music as entertainment, music as mate attraction behaviour, etc.), but in answering the question about the musical status of the bone, one may remain indifferent about such functional hypotheses.

## **Conclusion**

Conceptual pluralism about music is a motivated, plausible position, and I hope to have convinced you that it does not necessarily lead to anti-realism about music. I have argued that a path to realism is available for the music concept pluralist—*indifference realism*. I have suggested that indifference realism about music is vindicated by music archaeological research and practice. Exploring other inroads to indifference realism about music are priorities for future research and for progress in understanding music in its many guises—and for progress in the philosophy of music, generally. And outside of philosophy of music, it is important to see whether philosophical discussions in the scientific domain can inform the social/cultural domain; further probing is another priority for future research.