REFORMING INDICATED TYPE THEORIES

John Dilworth

There is some intuitive plausibility to the idea that composers create musical works by indicating sonic types in a historical context. But the idea is technically indefensible as it stands, requiring a thorough representational reform that also eliminates the type-theoretic commitments of current versions. On the reformed account, musical 'indication' is an operation of high level *representational interpretation* of concrete sounds, that can both explain the creativity of composers, and the often successful interpretations of their listeners. This approach also bypasses contentious issues regarding the status of both indicated and 'initiated' types, as extensively discussed in the BJA.

Indicated type theories of music have, at least in rough and initial intuitive outlines, the right sort of structure and function potentially to provide an effective contextualized account of musical works. Nevertheless, as currently described and constituted they are demonstrably indefensible, as will shortly be shown with the aid of some novel considerations. Hence a fundamental reconstitution or *reforming* of such theories is required to restore them to the full health of their initial intuitive promise. Such a reconstitution is undertaken here.

As a preliminary, contextualist theories of art should be discussed. An auxiliary concept of the '*provenance*' of an artwork A may be defined, as including any of the social or contextual factors that are relevant to its identity, including such factors as the society within which A was produced, prevalent artistic conventions, facts about the individual artist and her A-related actions, and so on. Then a central claim of broadly *contextualist*

theories of art is that some such provenance-related factors are, via artwork A's relations

to them, *essential* characteristics of A, either because A cannot be identified as such

independently of its having those relational properties, such as the authorship of a

symphony, or because those factors in some manner endow A itself with intrinsic, non-

relational properties that are essential to its identity, and which it would not otherwise

possess, such as the sublime properties of some technically difficult passages in

Beethoven.[1] Thus contextualist theories of art claim that artworks have some essential

provenance-dependent properties, whether of a relational or non-relational kind.

It follows from such a contextualist view that artworks cannot be identical with ordinary

physical objects, since such objects lack an *essential* provenance, in that their contextual

properties may be explained entirely in terms of their contingent causal relations to other

objects. As a paradigm case of such a contextualist view, Arthur Danto argues, in effect,

that 'mere real things' such as concrete paintings, which as physical objects have their

relational properties only contingently, cannot be identical with their corresponding

interpreted artworks, whose contextual or provenance-related properties are necessarily

possessed by them.[2]

It also follows from contextualist principles that artworks cannot be identical with pure

structural types either, since, though as types all of their intrinsic properties are necessary

ones, they equally do not include any provenance-related factors. Hence such

contextualist views have proved awkward to articulate clearly in the case of *musical*

works, whose non-contextual structural elements play such a significant role in their

individuation. The main problem is that of how to satisfactorily link the necessary contextual properties, concerning such matters as a relevant musical tradition, instrumental resources, and a composer's own musical style and creative intentions, with the relevant low level abstract sonic structure of a musical piece, whose properties presumably are purely intrinsic and timeless ones.

One well-known kind of attempt to combine both contextual and structural elements in an integrated musical theory relies heavily on a concept of *indication* of sonic *types*. It is by *indicating* a sonic type that a composer creatively produces a resultant structure that combines both necessary relations to contextual elements, and pure plus contextually transformed structural elements.

Proponents of such *indicated type* (IT) theories also claim that the composer's act of indication is able ontologically to produce an '*initiated*' type T+, consisting of an 'eternal-type-T-as-indicated-at-time-t', which initiated type can come into existence at a particular time, unlike the eternal type T that was indicated during the ontological construction or creation of T+ by the composer. Hence it is also claimed that an IT theory can explain how it is possible genuinely to *create* a musical work, rather than merely discover it, as would be the case for an eternal type such as T alone.[3]

A third function of the concept of indication in contextualist IT theories is to enable us to distinguish different musical works M1 and M2, that involve the same structural type T, but which result from distinct acts of indication of type T by different composers. Thus

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different acts of indication cannot be mere formal acts of pointing or referring to type T, but instead somehow each act must differentially *constitute* or *construct* the relevant distinct musical works M1 and M2 out of type T.

To be sure, there are also various criticisms of indicated type (IT) theories, such as that they involve obscure or confused concepts, such as those of indication and initiated types, or that they do not really explain how musical works could be created.[4]

But nevertheless, it seems to me that, because of the importance of the contextualist view of artworks generally, it is well worth attempting to reconstruct or reconstitute IT theories of music in a manner which preserves at least the main intuitive outlines of an IT theory, while yet replacing the dubious concepts of 'indication' and 'indicated types' with clearer and more plausible substitutes. The result will be a reformed, and more specifically a *representational* indicated type (RIT) theory, that will no longer strictly be a type theory at all, hence also avoiding generic criticisms of type theories, but whose outlines will still fit the initial, intuitively attractive contextualist IT theory picture.

I. Low Level Sonic Events Versus Higher Level Musical Structures

In an initial reconstitution of indicated type (IT) theories, it will be convenient to use a translated, and possibly somewhat simplified or extreme, form of Danto's contextualist distinction between 'mere real things' and artworks.[5] As applied to sonic types, the idea

would be that tokens of a pure sonic type are '*mere real sonic events*', as described in the basic scientific concepts of physics and mathematics. Arguably the initial, non-indicated eternal types as considered in IT theories are all pure intrinsic types of such a kind, all of whose properties are lowest level structural sonic properties, with none being higher level, specifically musical structural properties.

Here is a contextualist argument for this view. First, the initial, lowest level, strictly scientific and mathematical descriptions of intrinsic properties of a sound event are independent of cultural preferences or values, since they would be correctly applicable to sounds in any culture, and hence be free of contextualist dependencies. However, any legitimate higher level structural descriptions whatsoever of such sonic events, using concepts whose application to the events involves culture-specific values or practices, must themselves owe their legitimacy to the results of culturally sanctioned *acts of indication* by composers or other musical practitioners, and hence it is higher level indicated entities, rather than low level pure sonic types, which provide the ontological correlates for such higher level descriptions.

Two examples will now be given, showing the validity of this point from a contextualist, IT theory point of view. First, a *flute-like* sound event is a token of a pure low level sonic type, since to call it 'flute-like' is only to provide a roughly equivalent description for some scientific description of it in terms of frequency distributions etc. But the same sound *correctly heard as being played by a flute* in a musical piece must be a token of a higher level *indicated* musical type, such that the sound must have been produced by a

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flute, as required by the composer of the work in an act of indication of that passage of the music--which indicated type is culturally specific, since in some other culture that same low level sound might *not* be correctly interpretable as having been played by a flute.[6]

Or as a second example, hearing a piece of music as being in its large scale architecture an example of *sonata form* is also a culturally specific, higher level indicated structural description, since in other, non-Western or non-Earth cultures such a description might be at best unused and unsanctioned, if not actually prohibited, and likely also such that putative tokens of it would be psychologically unrecognizable in any case, given the absence of appropriate cultural practices related to its proper application. Thus a Martian piece of music, whose sonic tokens are identical with those of an Earth symphony, could fail to exemplify sonata form, even though the Earth symphony tokens do exemplify sonata form--because sonata form is a higher level, indicated and culture-specific structural form, which is not reducible to or entailed by the low level structure of the relevant sonic tokens.

To be sure, the contextualist theory sketched above is of a somewhat extreme variety, in that according to it all but the lowest level sonic structures--as tokened by temporally extended, raw sound events--are the result of acts of contextually defined musical indication. Even an apparently innocuous procedure, such as the splitting up of a temporally extended sonic event into a sequence of notes, would be judged to be an act of musical contextualization by this standard, since the relevant concept of distinct musical

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notes is a culturally specific one.[7]   But the analysis does have the virtue of simplicity,

and it does serve to highlight the fundamental contextualist point that acts of indication as

such must be ontologically transformative acts, so that even apparently minor

transformations, such as sequencing decisions, are unavoidably transformative.[8]

Thus it is clear that any adequate reconstruction of an indicated type (IT) theory of music

must, whatever else it does, at least explain exactly how acts of indication are able to

ontologically transform pure low level sonic types into higher level indicated, specifically

musical entities. It is a significant failing of recent discussions of indicated types that this

fundamental required function of a concept of indication in a contextualist IT theory has

not been explicitly addressed, which has also lead to its conflation with related, though

admittedly also important, issues concerning the creativity of composers. But before

embarking on a reconstruction, it will be useful to motivate the need for it by providing

some novel reasons as to why current IT theories are indefensible as they stand.

II. IT Theories Refuted: The Type Specification Problem

There is a fatal hidden problem in standard indicated type (IT) theories--at least as

applied to a performing art such as that of music--that apparently has never been

adequately addressed, or perhaps even recognized as such. (I provide a possible reason

for this lack of recognition in Section 9). It could be labeled the *type specification*

problem.

An indicated type theory claims that a composer creates a musical work M by indicating a pure, low level sonic type T. But precisely *which* low level pure type T is indicated or specified by a composer? If more than one were indicated, or if it turned out to be trivial or arbitrary which one was, then indication of a particular type as such would be explanatorily irrelevant to the logical and ontological issues concerning the creation and individuation of musical works. I shall show this to be so for standard IT theories.

The problem has two parts. The first concerns a simple solution, identifying the type T as one whose sonic tokens are events *qualitatively identical* with each other. On this account, a composer indicates a particular pure type T with complete determinateness, via a concrete act of indication as applied to a particular sonic event token T', since the class of tokens of the type T, which constitute the extension of the type, is definable by the rule that they consist of all and only those tokens sonically identical with token T' itself.

However, as part of a definition of a musical work M, involving creation of an indicated type T+ via indication of type T, this fully determinate pure type indication has a fatal flaw, namely that, since all of the tokens of T are sonically identical, then so also will be all of the tokens of the indicated type T+ itself. But this would mean that any attempted performance of musical work M that differed in even the slightest qualitative respect from the original token T' could not be a performance of work M.

Clearly this kind of extreme rigidity or brittleness of musical creation is unacceptable, in that it amounts to the conflation of a musical *work* with a particular *kind of performance* of a work. Thus at best such a simplistic indicative creation would define a type of musical performance as such, without any ontological provision for that performance being a performance of a distinct, underlying musical work capable of having differing sonic performances.

A related flaw in this simplistic view is that it is overly sensitive to which particular sonic event token T' happens to be chosen by a composer as the proximate object of her compositional act of indication. Presumably it is supposed to be an explanatory strength of type theories of the arts generally, including music, that they abstract away from merely contingent features of particular tokens of a type, but the current simplistic cases merely define types that are 'token-dominated' by features of a particular token that was itself merely arbitrarily chosen, so that even supporters of IT theories should view such a procedure as theoretically unacceptable, quite apart from the disastrous conflation of performances with works as previously described.

The second main kind of problem arises when pure types are considered, *not* all of whose sonic tokens are qualitatively identical. The previous simple case in fact only seemed simple, because the requirement of qualitative identity *in every respect* hid the fact that any given concrete sound event is a token of an *indefinitely large* range of distinct pure types, one for each 'respect' or property that is involved in a fully complete and correct description of the token. Thus the 'one type' indicated was in fact made up of an

indefinite number of all of those relevant types, since each token is indifferently a token of any one of them.

But once tokens are allowed to vary in their properties--and hence in some of the types they token--whether in timbre, precise pitch, tempo and so on--then immediately there is no longer any *one* pure type, or *single* unified collection of types, that could count as *the* pure type indicated by the composer. According to Levinson, "Typically, this indication is effected by producing an exemplar of the structure involved, or a blueprint of it".[9]

But if indication of a type may indeed be carried out simply by "producing an exemplar of the structure involved", the problem is that any pure type whatsoever that is tokened by the currently produced token or exemplar would presumably count as *a* type thus indicated by the composer--and since they are pure *sonic* types rather than specifically *musical* types, any choice between them, or arbitrary collections of them, must be *musically* completely arbitrary.

Now one might hope to cut down on the range of relevant types by considering, not just the current token, but the complete set of correct performance tokens for the relevant musical work M to be composed by the composer. The idea would be to select whichever type, or group of types, is such that its extension, or joint extension, *most closely matches* the set of correct performance tokens of the work. But this approach could not work, for at least two related reasons. First, by hypothesis, prior to an act of indication by the composer, the putative chosen pure type (or group of types) has not yet

been transformed into an indicated type that would have such correct performance instances as its tokens; so no relevant set of even possible such tokens yet exists, with which to compare the actual extension of a candidate pure type or group.

And second, also by hypothesis, there can be distinct acts of indication of the same pure type T that produce distinct musical works M1, M2, ..., so the actual extension of pure type T, as compared with correct tokens of any *one* of those musical works, cannot give any information whatsoever about how closely the *combined* extensions of *all possible* such musical works M1, M2, ... might match the extension of a candidate pure type or group. Hence, in sum, the *type specification problem* is a completely intractable one, both logically and ontologically, and so standard indicated type (IT) theories must be abandoned as conceptually confused in a fundamental way.

In order to reinforce this conclusion, one possible response by IT supporters should also be considered. In several places Levinson claims that indication is an *intentional* relation between a composer and a type,[10] hence perhaps leaving open the possibility that the issue of which pure type is *the* type to be indicated is simply a matter of which one the composer *intended* to indicate. But now a dilemma may be proposed for this response. Either it makes a difference to the identity of the resulting indicated type T+ which pure type T was intended by the composer, or it does not.

Suppose it does make a difference. Now on any reasonable epistemic and explanatory construal of the resulting ontological situation, a composer's intentional relation to her

intended pure type T1 must also encompass a closely related intentional relation to her thus-created musical work M, which work is identical with the resultant indicated type T1+. Specifically, the composer must not only know which pure type T1 she intended to indicate, but also have knowledge, concerning her resultant, indicatively-created work M, that M r*esulted from her indication of type T1* rather than of some other type T2.

Or, to put the matter in more minimal and impersonal epistemic and social terms, for an IT theory to be genuinely explanatory of how type T1+ came to exist with its actual characteristics, publicly accessible evidence identifying T1 itself, and distinguishing it from other types as the *only* type relevant to the existence of type T1+, must be *as* available to a musical audience as evidence identifying the created type T1+ itself.[11] For without satisfaction of this epistemic requirement, there would be no adequate reason for members of the musical public to believe that T1+ has the characteristics it has *because of* the composer's indication of type T1, rather than of some other type or types, or of no types at all.

But then it follows that any fundamental lack of access to evidence as to which pure type was indicated by a composer must equally impugn any evidence as to which *indicated* type, i.e., which musical work, he composed. For example, since there was an indefinite range of possible types that might have been indicated by Beethoven during the composition of his fifth symphony, and since we do not have adequate evidence as to which of them he intended to indicate during his composition of the work, then we cannot have adequate evidence as to the nature of his fifth symphony itself either. But since we

clearly do have adequate evidence concerning the nature of such a standard musical work, independently of knowledge of Beethoven's pure-sonic-type preoccupations, if any, this fork of the dilemma must be rejected.

Hence as a result it must instead be the case that it makes *no* difference to the identity of a resulting work T+ which type T, out of the indefinite possible range of types T1, T2, ... tokened by a composer's chosen exemplar, is intended to be 'the' type T indicated by her. But now, as in the previous cases considered, it is completely arbitrary, and ontologically irrelevant, which particular type the composer indicates--in this case, via her intending to indicate it--and hence for reasons similar to those given before, standard indicated type theories must be abandoned.

Also, one clear lesson to be learned from all the above failures is that, if sense is to be made of the concept of indication at all, it must be indication *as applied to some concrete sound token* that should be taken as a paradigm case, independently of specifically type-theoretic issues or factors as such, owing to the radical explanatory failures of type-based IT theories as demonstrated here.[12]

III. Reconstituting Indicated Type Theories

Having shown that standard indicated type (IT) theories are indefensible, the promised reconstitution can now proceed. My approach will involve an initial specification of some

cognitive and perceptual concepts that roughly track the discredited ontological distinction between low level sonic types and higher level indicated types. In perceptual terms, perception of tokens of low level sonic types may naturally be regarded as involving only low level, non-conceptualized sonic data or 'raw sounds', whereas perception of tokens of higher level indicated types instead may naturally be regarded as involving higher level, more conceptualized or interpreted perceptual sonic contents.

Two auxiliary concepts will be useful, namely a concept of a *representational interpretation* of a concrete object or event, and a broader concept of '*conceptualized*' perception of objects or events. As mentioned above, it will be assumed that pure sonic types as such, and their tokens, are uninterpreted and non-conceptualized in the relevant senses, so that it is the general function of a concept of indication in an IT theory somehow to transform the multitude of uninterpreted eternal sonic types, as embodied in their physical tokens, into contextually interpreted and musically conceptualized works of art. Or, to explain the relevant indicative function in more directly experiential or perceptual terms, its task is to find some way in which low level, purely sonic perceptual contents can somehow be *interpreted*, via acts of 'indication', as musically conceptualized and essentially contextualized structures of higher level perceptible musical sounds, having some objective or at least intersubjective validity as musical artworks.

In defense of this broadly cognitive approach to indication, it seems unavoidable that if, as IT theorists claim, 'indication' is an *act* performed by composers upon a relevant low level type, then there must be at least closely associated, relevant cognitive factors

involved in such acts. Thus I claim that there is an important *cognitive constraint* on any adequate account of indication and initiated types, requiring discussants to explain how their accounts are consistent with actual cognitive implementation mechanisms--so that if IT theory supporters find the current account objectionable, they owe us an alternative cognitive account.

However, once the issue of the nature of indication is presented in such specifically cognitive or perceptual terms, rather than in the starkly ontological terms of more standard discussions of IT theories, it is not hard to form a preliminary hypothesis about what kind of concept is needed to analyze or replace the obscure concept of indication. Perception is a broadly *representational* activity, which even in non-artistic cases involves at least two levels or grades, starting with unconceptualized, low level sensory representations and concluding in high level, conceptualized and fully interpreted representations of the world.

Presumably the two levels are also hierarchically related, with a high level of representation being achieved by further interpretation and conceptualization of a low level sensory representation of some worldly state of affairs. Or, otherwise described, high level perception is achieved by a *representational reinterpretation* of low level sensory data.

But by now it is hard to avoid a preliminary hypothesis that an act of indication must *itself* be, or at least be closely correlated with, an act of representational reinterpretation,

whose cognitive function is that of switching from a lower to a higher representational

level of interpretation of the relevant low level sensory data (or more strictly, of the low

level concrete sonic event which is represented by that data). Or, to put the matter in

experiential terms, the composer's act of 'indication' must be a high level act of

representing the concrete sonic event *as being* high level musical sounds and structure.

Or more simply put, indicating is representationally interpreting raw sounds as music.[13]

IV. Ontological Grounding of Cognitive Indication Favors RIT Over IT Theories

As noted above, at least as a first approximation it seems that indication must be, or at

least be closely correlated with, some species of high level representation achieved via

use of low level concrete sounds. For convenience, the term '*interpretation*' will

henceforth be used, when unqualified, to refer to this kind of high level representation of

low level sonic events--so that as a first approximation, music (i.e., a musical work) is

what results from musical *interpretations* of sounds.

Nevertheless, arguably that concept of interpretation is too cognitively and epistemically

specific to serve as a genuinely ontological musical concept. An account of how a person

interprets sounds as music is important, but it does not directly address what music itself

is, for after all some concrete sounds might wrongly be interpreted as music even though

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they are not a case of music. What is needed is a closely correlated concept of what

music *itself* is, when the associated sounds are *correctly* interpreted as being music.

A useful analogy at this stage is that of a representational artwork, such as a painting of a

lake. A correct artistic interpretation of the physical painting would interpret it as being a

painting of a lake, or in other words, the low level physical data derived from the design

of the painting would be correctly interpreted via an 'indication' or high level cognitive

representation of the lake. But what makes the painting an artwork, by usual standards, is

that *it itself* represents the lake, not that a high level cognitive representation of it as

representing a lake is correct--a subtle distinction, perhaps, but of prime ontological

import nevertheless.

My suggestion is that the same distinction needs to be made for music too. It is the fact

that a low level sonic event does *itself* represent a musical work that ontologically

grounds a correct high level representation--i.e., an 'interpretation'--of that sonic event as

representing the relevant musical work. From this ontic perspective, a composer's act of

indication or interpretation is a kind of representational recognition by her that a low

level sonic event does indeed itself represent the desired musical work, with her initial

evidential base for this recognition or acceptance being provided by her own ability, plus

that of other people, readily and repeatedly to interpret the event thus.

To be sure, in a broader perspective it may be desirable to explain the apparently

objective representational capacities of such sonic events etc. as in some general way

being dependent on the intentional capacities of cognitive agents, so that the agents have 'original' intentionality while concrete objects and events have only derived intentionality.

Also, clearly in some sense it is cultural norms and expectations, as embodied in normal interpretations of sonic tokens, that determine what a sonic token may correctly be taken to represent in our culture, so that, epistemically speaking, our *knowledge* of the nature of musical works, as thus represented by sonic tokens, depends primarily on such contextualist factors. But that point is quite consistent with also holding that music ontology as such is primarily concerned with the representational capacities of those concrete sonic tokens themselves, independently of how the tokens acquired those capacities.

As a further point, the possibility of such an ontic representational grounding of 'indicative' acts of interpretation is vitally important in a comparison of the potential theoretical viability of indicated type (IT) theories versus reformed or representational IT (RIT) theories. RIT theories can provide the necessary ontic grounding, but a standard IT theory could not successfully make a parallel claim, namely that the relevant interpretation was ontologically grounded by the low level token actually being a token of an *indicated* type, since by hypothesis the low level sonic token is not literally or genuinely a token of an indicatively transformed, fully interpreted or musically conceptualized type, even if there were such types.

Or, otherwise put, the conditions for a low level token merely to *represent* a high level musical work are much less stringent or demanding than those for it actually to be an *instance* of such a musical work. And this difference allows an RIT theory to be theoretically viable, in explaining how indication can transform or enrich a low level token of a type, while at the same time preventing a standard IT theory from offering a parallel explanation.

This point is also important in undercutting, or at least making irrelevant, the fundamental claim of IT theorists that it is possible to create, via a composer's act of indication, an *initiated* type consisting of an 'eternal-type-T-as-indicated-at-time-t', which initiated type, unlike eternal type T itself, can come into existence at a particular time and hence genuinely be created. For if the present account of the cognitive basis of the concept of indication is correct, no *ontological*, as opposed to merely epistemic, mechanism is available by which to transform type T itself into such a temporally initiated type, even if there could be such types as created in some other way. Hence the present argument against specifically *indicative* creation of 'initiated types' holds whether or not there could be such entities as initiated types.

V. How an RIT Theory can Satisfy Generality and Distinctness Requirements

Now that some initial clarity has been achieved on the topic of indication, it will briefly

be shown how a reconstituted indicated type (RIT) theory can at match an IT theory in

two important theoretical respects. The *generality* requirement for an adequate theory of

music is that it should be able theoretically to accommodate the possibility of there being

many distinct performances or copies of a single musical work, while the *distinctness*

requirement is that it should be possible for more than one distinct musical work to

involve a given low level type.

As for the *generality* requirement, an important similarity between a standard indicated

type (IT) theory and a reformed indicated type (RIT) theory of the kind being proposed is

as follows. In both cases, tokens of the relevant types are not themselves identical with,

nor even parts of, the relevant musical work. Thus a standard IT theory identifies a work

with an indicated type, which remains a type-like rather than a token-like entity even

after indication, in that there can be many different performances of it according to the IT

theory, and which indicated type is hence neither identical with, nor does it include as a

part, any of its tokens. Correspondingly, a reconstituted IT (RIT) theory holds that the

only role of the relevant tokens is that of *representing* the relevant musical work, so that

the tokens themselves are again neither identical with, nor included as parts in, the

musical work.

Arguably this non-token-inclusion feature of both IT and RIT theories is an essential

element in their joint capacity to explain the inherent generality in 'allographic' art forms

such as music or literature, in which there can be many distinct but equally legitimate

performances or copies of a single artwork--explained by an RIT theory in terms of there being many equally legitimate concrete *representations* of a single artwork.

This theoretical separation of tokens from musical works by both IT and RIT theories may be contrasted with a Danto-style theory of visual artworks, according to which an artwork is to be identified with an interpreted concrete object or event, on which view concrete objects or tokens are themselves included in the relevant artworks. As applied to music, such a view would be unable to explain the sense in which all musical performances of a work are performances of a single identical musical work, and hence its theoretical viability is limited at best to the explanation of non-multiple autographic artworks, such as particular paintings or drawings.[14]

Next it will be shown how an RIT theory could explain, at least as well as an IT theory, the *distinctness* requirement, namely that it should be possible for distinct musical works M1 and M2 to be creatable from a single pure type T.[15] On an IT theory the claim is that M1 and M2 are themselves separate indicated types, created by two distinct acts of indication, presumably by different composers at different times, of that same pure or low level type T. The RIT theory equivalent of this objective is that of explaining how it is possible for two such composers, who produce distinct tokens T1' and T2' of a single type T at different times, to thereby *represent* distinct works M1 and M2 with the aid of those tokens.

As an initial non-musical analogy showing how this could be possible, consider the well known Cervantes/Menard example as provided by Borges,[16] in which distinct literary works result from two texts that are nevertheless word for word identical, i.e., so that tokens of each work are tokens of the same textual type. The aesthetic differences that Borges finds in the two works could readily be explained as resulting from tokens of each work *representing* two different literary works having such different aesthetic features, since it is clear enough in any case that literary works written in natural languages must be broadly representational in nature and function. Thus the specific differences in provenance and context of each work are sufficient to explain how tokens of each work are legitimately taken to represent distinct works, and there is no reason why closely similar contextualist considerations should not be sufficient representationally to distinguish musical works as well.

As for specifically musical examples, a single fresh illustrative case will suffice.[17] In some other, e.g. Martian, culture the sound combination produced by a violin and a flute being played simultaneously might instead be produced by a special instrument, a 'vioflut', with simultaneous playings of normal violins and flutes being culturally prohibited. Thus the very same sound token event T', that in our earthly culture represents musical work M1 with normal instrumental violin+flute means IM1, would in that alternative culture represent a distinct piece of music M2 with distinct instrumental vioflut means IM2, even though both pieces of music M1 and M2 share the same type T and have common tokens T'.

Nevertheless, the mere availability of such plausible contextualist examples and arguments, showing that musical works must be regarded as including performance means etc. among their identity conditions, does not itself show precisely *how*, ontologically speaking, the performance means etc. should be included in the music. In particular, my concern is that IT theorists have not specifically shown how *indication* of a type, as a supposed ontological operation that supposedly produces a new type-like entity, an 'indicated type', can actually produce a novel musical entity satisfying such contextualist criteria. Both the mechanism, and results, of the supposed ontological change remain completely obscure.

On the other hand, an RIT theory does not inherit the same problem of relating logical requirements to ontology, because our intuitive logical criteria for musical identity of works directly affect *how* we interpret, i.e., represent at a high level, the relevant low level sonic tokens, and hence they also directly affect the nature of the musical works that such tokens thereby count as representing.

In the above case of our earthly hearing of the sound T' of a violin and flute played simultaneously, our natural and culturally correct interpretation of it is as a simultaneous playing of the two separate instruments. Hence we normally interpret it thus, and therefore the sonic token T' *represents,* in our earthly culture, a musical work M1 satisfying those criteria. But in the Martian culture different performance standards prevail, so that they interpret the same low level sound T' as being played by a single instrument, the vioflut, rather than by two separate instruments, and hence they correctly

interpret T' as representing a distinct musical piece M2 having different performance means.

VI. The Creative Interaction of Structure and Indication/Interpretation

Some initial issues about creativity will now be addressed, since a prime task for either a standard or a reformed indicated type (IT) theory is to explain how artistic creativity is possible, and what it consists in. To begin, it is important to avoid a certain kind of static model of the interaction of indication and structure, which would view creativity as merely taking a fixed, already discovered rather than created structure, and somehow breathing creative artistic life into it by an act of indication. That model is as hopeless for a reformed, representational indicated type (RIT) theory as for a more standard IT theory. For on the present account, a given token of a structure, such as a low level sonic event, already either does or does not represent a musical work M, and already it either is correctly, or incorrectly, interpreted as (representing) musical work M. So all the creative work, if any, in producing musical work M is over by the time a token of the relevant structure is determined or fixed upon by the composer.

What is needed instead is a more dynamic, gradualist model of the interaction of indication and structure, where the composer's act or acts of compositional indication or interpretation *themselves* involve a determination of the precise structure that her musical work M is to have. Here is a traditional intentionalist account, in outline form, of such a

gradualist model. Initially a composer has a schematic musical idea, accompanied with some sketchy ideas as to what tokens of initial concrete structures might best embody or represent that idea. The composer then experiments with tokened sample specific structures, to see how well each of them embodies or represents her musical idea, and in doing so discovers new representational possibilities--representing a more developed musical work--that enrich and make more specific her developing interpretation of her desired work. These new interpretive possibilities prompt further rethinking and ideas, along with searches for even more appropriate structures adequately to represent the developing interpretation, and so on, until some completely specific tokened structure is settled on as the one that best represents the composer's most comprehensive overall interpretation of her work.

Here is a summary of the two main creative aspects of this gradualist account. First, the composer creates *tokens* of any structures being investigated, whether indirectly via musical notation or directly by playing an instrument or conducting an orchestra, and typically her compositional activity will end with her creating a comprehensive token structure that best represents her whole work. Second, though by hypothesis the composer cannot herself influence or change what a particular structure (or more precisely, a structural token) musically represents, she can select and modify tokens of structures, and by that means she is also able to select and modify what is musically represented by the relevant tokens. Thus in this manner the composer has complete creative freedom to compose any kind of music that she wishes.

To be sure, on this account the composer's activities are necessarily intermixed with non-creative discoveries about tokens of structures, such as when composer discovers what a given token of a structure S musically represents by playing such a token of the structure for herself. But her creative freedom consists in her ability to select, reject or modify the music that she has thus discovered to be represented by a token of structure S, by appropriately selecting, rejecting or modifying such tokens.

To clarify the role of musical structures in this discussion, the relevant structural types are not themselves what is indicated by a composer, as in standard IT theories. Instead, the composer seeks to discover structural--such as notational or sonic--types whose tokens would best represent her musical work, or which would more indirectly do so by providing instructions to performers as to how to concretely represent the work. Indeed, the initial choice or use of sonic types could be completely arbitrary, as when a composer hums a theme before playing it at the keyboard, prior to notating it for full orchestra.

More broadly, compositional creativity also involves making value choices. Even beginning compositional students can create simple musical works by such gradualist procedures, but great, highly creative composers reject such simple results in favor of bolder or more significant works, whose creation involves much more searching discoveries and re-evaluations about the representational possibilities of various structures. Thus artistic creativity of any kind, even of the highest kinds, must proceed hand in hand with such relevant non-creative, investigative discoveries.

VII. The 'Cosmic Supermarket' Objection to Creativity

However, a familiar kind of objection to the above--or to any--account of compositional creativity must now be considered. The objection is that types or structures, whether simple or indicated types, are eternal objects, so that, no matter what the details may be of the gradualist procedure by which a composer arrives at the final structure of her work, that structure has not itself been created by the composer, but instead she has merely *discovered* it, as an item in a kind of ontic 'cosmic supermarket' which is pre-stocked with all possible structures for her choice. Thus, though admittedly the composer may nominally transform a musical work into a work of her own, via 'purchasing' it from the supermarket so that it becomes one of her possessions, the work itself remains an off-the-shelf item that she did not create, even if others concede her current ownership of it.

To be sure, the gradualist account of the compositional process in Section 3 does support a claim that that a composer can be creatively original in her indicative or interpretive compositional *procedures*, at least, insofar as she intelligently adapts sound methods to the unique circumstances of her initial ideas plus her development of them. But again, as far as genuine artistic creativity goes, such procedures merely qualify her as a 'smart shopper' in the cosmic supermarket, who may hope to have unusual success in tracking

down personally favored 'best buys' by use of her own characteristic techniques, but who still cannot claim credit for *creating* her resulting 'finds'.

Assuming general agreement that composers are in fact artistically genuinely creative, the current objection is fatal to either pure or indicated type theories of music, since it has already been argued in Section 2 that indication of types by itself cannot create temporally contingent 'initiated types' that could be used to escape the current objection, even if there were any initiated types.

Nevertheless, the current kind of representationally reformed indicated type (RIT) theory can overcome the objection as follows. Initially it might be thought that an RIT theory is no better off with respect to the objection than an IT theory, for on the present view there is always a fact of the matter as to what is represented by a given token of a type T, so it might be thought that represented works eternally exist or pre-exist in the cosmic supermarket to just the same extent as do those types themselves.

However, the crucial difference between IT and RIT theories is that *tokens* of types play a vital role in an RIT theory, though there is no parallel role for them in an IT theory. An RIT theory claims that it is only *concrete tokens* of a type T that are capable of representing anything, so that the type T as such has no representational characteristics at all, with the result that represented musical works are entirely absent from the cosmic repository of types.

Hence there is nothing to prevent a composer from genuinely creating such a musical work M *by* creating a concrete token T' of a given type T, which token represents M. For since such tokens T' are themselves concrete physical objects or events, rather than their being abstract types or indicated types, it is unproblematic that they can fail to exist at a time t, then come into existence at some later time t+1, and hence be genuinely created by a composer.

On an RIT account, the first creation of such a token not only provides the first case of epistemic access to work M, but it also establishes whatever ontic status work M has, once it has thus been represented. Whereas on an IT theory, creating a token of even an indicated type--assuming that there could be such entities--would at best create a performance of a pre-existing work rather than create the work itself.

VIII. More on an RIT Approach to Work Creation

The position arrived at on the artistic creativity problem will now be summarized and extended in RIT theory terms. An RIT theory has two salient conceptual differences from an IT theory, either of which could potentially enable it to avoid or resolve the creativity problem. The first is that an RIT theory is committed to no positive theory about the ontological nature of musical works, beyond a very minimal assumption that they are capable of being represented by appropriate concrete tokens. Hence in particular it is not committed to their being type-like, timeless abstract entities that exist eternally

and which hence could not be created. Thus its musical ontology is at least flexible or open enough, prior to further investigations of it, to be consistent with the possibility that musical works could be genuinely created. However, since investigations of this ontological flexibility would lead us too far afield currently, this particular creativity possibility will be reserved for some future discussion (beyond some indirect points about it in the discussion below).

The other salient conceptual difference of an RIT from an IT theory centers on the fact that it is concrete tokens T' that are taken to represent a musical work M. Since such tokens T' are themselves concrete physical objects or events, rather than their being abstract types or indicated types, it is unproblematic, as already pointed out, that they can fail to exist at a time t, then come into existence at some later time t+1, and hence be genuinely created by a composer. A reformed indicated type (RIT) theory could hence postulate that the initial locus of a composer's creativity lies in her creation of an *initial copy* of her *score* for her musical work, which copy, on an RIT theory, would itself be a concrete, specifically linguistic and hence conventional representation of the relevant musical work M.[18]

To be sure, on this particular RIT proposal it is strictly a concrete representation of a musical work M, rather than musical work M itself, which is initially created by the composer of work M. But there are several potentially satisfactory ways of integrating this kind of concrete-token compositional creativity into a general theory of artistic creativity, two possible versions of which will now be outlined.

The first possible overall RIT theory of musical creativity--an *'integrative'* theory--could postulate that the musical work M itself is in some way co-created by the composer at the same time as that at which she creates her concrete representation T' of M, and indeed that the two kinds of creation are integrally related in some fashion. For example,[19] a traditional mentalistic view of artworks and their creation, such as that of R. G. Collingwood, according to which a musical composition is initially a series of tunes in the composer's head, might somehow be combined with a more recent cognitive science account in terms of cognitive representation of such a mental musical event, with each of them simultaneously coming into existence as a result of the composer's creative musical thinking. On such an account, then, creation of the musical work would go hand in hand with creation of a representation of it.

A second possible overall RIT theory of musical creativity to be considered--an *'irrealist'* theory--would draw on a further feature of RIT theories, namely their use of the concept of representation. A basic feature of the concept is that it is possible to represent *entities that do not exist*--such as Santa Claus, in a picture of that mythical person. Thus a nominalistically inclined, ontologically parsimonious RIT theory could postulate that strictly speaking, artworks such as a musical work M do not exist either, but that this does not prevent a composer from creating a concrete *representation* of such a work M, which representation will be just as aesthetically satisfying to listen to, under normal conditions of cognitive interpretation of the sonic token, as if M itself did actually exist. Hence this account--of an *irrealist* RIT, or IRIT theory--can explain our actual experiences of

artworks, and their initial appearances at particular times in our cultural history, just as well as can a more traditional realist theory, and hence its account of artistic creativity is equally satisfactory.

Thus on such a revisionary, broadly irrealist view of musical composition, the legitimate sense in which composers do create, rather than merely discover, their composed works would be explained in terms of their genuine creation, at a particular time, of a concrete representation of a work, which work can then be musically experienced for the first time by its hearers. But since the work itself, strictly speaking, does not exist on such an irrealist view, there is no remaining ontological problem of how a composer manages *also* to bring such a work into existence--because, of course, on this account the work itself never does exist.

Such an irrealist view should be distinguished from a more extreme eliminativist view of musical works, which would deny any legitimacy whatsoever to references to, or experiences of, the relevant work. For example, on one such view one never hears a musical work as such, but only performances of a work.[20] But on the current more moderate irrealist view, such references to or experiences of works are just as legitimate as those to, or of, fictional characters or mythological entities as experienced in novels, films and so on.

To be sure, an irrealist view requires at least a minimal commitment to the availability as objects of reference or experience of such broadly fictional entities, and to that extent

internal issues about creation versus discovery of such fictional entities by authors or composers could also be raised. For example, a composer may create a score for a work of hers, and then *discover* on performing it that it has certain unintended but serendipitously interesting aesthetic properties. But of course this is not, on the current IRIT view, the discovery of properties of some entity that timelessly exists independently of the composer's creative activities, and hence such internal discoveries about fictional entities lack the ontological implications or urgency of more standard concerns about artistic creation versus discovery. Also, as discussed in Section 4, in any case one would expect some such discoveries to be an integral part of the creative process, no matter what one's view is of the ontology of artworks.

Here is a summary of the advantages of an irrealist RIT (IRIT) theory. First, it involves only minimal ontological assumptions, while yet still having the full structure of an RIT theory. Second, the initial analysis of contextualist IT theories made it clear that all of the ontological 'heavy lifting' provided by an IT theory would have to be somehow concentrated into its concept of indication, since the only legitimate or genuine contextually independent types available for any theory are low level types having concrete physical events as their tokens, which somehow have to be elevated both into novel high level, and into distinct, musical artworks via distinctive cases of 'indication' of the relevant type.

But an IRIT theory provides, in its specific use of the concept of representation, a directly equivalent 'heavy lifting' concept, in that on an IRIT theory all of the genuine creativity

of musical composition is concentrated into the creation of a token representation of a musical work, so that it is the logic and ontological possibilities of the concept of representation alone, and not of some independent investigation or presumption concerning the ontology of musical works as such, which explains the four main issues, namely 1) the contextualist requirement that artworks must be ontologically distinct from low level tokens; 2) the related but distinct sense in which musical works can be created, 3) their ontological status, and 4) the possibility of there being distinct musical works that result from different representational uses of tokens of the same type of event. In addition, an IRIT theory is more cognitively realistic than an IT theory, and its concept of representation is much more familiar and well-understood than the mysterious 'type-indication' concept of standard IT theories.

IX. The Role of Musical Culture

There is an important aspect of an adequate contextualist theory of music that has not yet been mentioned, which may also serve to explain the confidence (or rather, over-confidence) of supporters of IT theories that their theories are adequate. It is an oversimplification to regard all musical indication or contextualization as taking place solely during actual compositional acts by composers, because the general musical culture in a society, as created and carried forward by composers, performers, teachers, students and audiences, also has an integral part to play in determining the representational capacities of low level sonic types. In particular, it must not be forgotten

that music itself has a lower level, broadly linguistic or symbolic structure of standardized notes, scales, score notations, performance conventions, and so on.

Such a musical culture supports lower level representational conventions for individual notes, such that, for example, a relatively narrow range of pure sonic tokens of a given frequency are culturally taken to *represent the note* middle C on a piano. That single note as such--heard as a *piano-played middle C*--is just as much a contextualized creation of a musical culture as are the full-blown musical works that more comprehensively exploit the representational capacities of the underlying pure sound tokens. (Analogously, a word token in a language is used as a symbol that in a broad sense conventionally represents its associated meaning or reference.)

Thus composers do not compose in a vacuum, creating music out of pure low level sounds. Instead they make use of lower or mid-range musical conventions that supply pre-created or pre-represented notes, scales, tempos and so on for their further development. Or in other words, a more comprehensive or realistic view of the kind of overall interpretation that a composer applies to a pure sound sequence is that it is mediated by at least one, and probably several, intermediate layers of representational processing, with the composer's necessary abilities to recognize and use elements in such layers in producing her higher level representation presumably having been learnt by the composer during her student days in music school etc.

Thus a likely reason for the general confidence that one can precisely identify a single

pure sonic type as *the* type indicated by a composer during composition of a work M is

probably based on a conflation of a pure low level sample token of a putative work--

which, as pointed out in Section 2, tokens an indefinite range of distinct sonic types, none

of which are musical as such--with such a lower or mid-level range of thoroughly

regimented and pre-contextualized represented musical elements.[21]

Or to put the matter another way, there is a genuine single abstract entity that may be

regarded as being indicated here, but it is not a pure low level sonic type, but instead an

abstract mathematical object or structure of those mid-range represented musical

elements themselves--which structure is *not* a type having tokens. Thus, for example, the

score for a work M could be regarded either comprehensively as a conventional

representation of musical work M, or more analytically as a piece-wise conventional

representation of elements in the relevant mid-range structure of represented musical

elements. Part of the intuitive attractiveness of IT theories doubtless comes from these

closely related dual functions of scores--and of performances, which may also be studied

analytically.

To conclude, here is an explicit statement, in case one still seems needed, of the sense in

which the RIT theory presented is appropriately regarded as a reconstituted version of an

intuitive contextualist IT theory. The general contextualist theoretical problem is that of

how to produce a musical work that both has a certain pure low level structure, as

roughly or intuitively conceived, but which also is a unique high level musical work with

necessary contextualist properties. The initial intuitive attraction of IT theories is that

they seem to promise such a solution. But their specific theoretical claims that it is *types*

as such that are indicated, and that it is *novel types* as such that result from such

indication, turn out to be proverbial millstones--involving an unstable conflation of pure

uncontextualized and transformed indicated types--that must be discarded in any

cognitively adequate account of the musical creativity of composers. Nevertheless, on

the present RIT view composers do create musical works by, among other things,

indicating typical examples of sonic types, and so those aspects of an intuitive IT view

are preserved, while yet avoiding the crippling type-related theoretical drawbacks of

standard IT theories.[22]

John Dilworth, Department of Philosophy, Western Michigan University, Kalamazoo,

Michigan 49008, USA. Email: dilworth@wmich.edu

Notes

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[1] E.g., see Jerrold Levinson, *Music, Art, and Metaphysics* (Ithaca, N.Y.: Cornell UP, 1990), pp. 76-77, on such qualities in the Hammerklavier sonata.

[2] E.g., see his book *The Transfiguration of the Commonplace* (Cambridge: Harvard University Press, 1981).

[3] E.g., Levinson ibid, Chs. 4 and 10; Robert Howell, 'Types, Indicated and Initiated', *British Journal of Aesthetics* vol. 42 (2002), pp. 105-127.

[4] See, e.g., two recent papers by Julian Dodd for arguments and references: 'Musical Works as Eternal Types', *British Journal of Aesthetics* vol. 40 (2000), pp. 424-440, and 'Defending Musical Platonism', *British Journal of Aesthetics* vol. 42 (2002), pp. 380-402. Independently of those issues, there are also sundry arguments against type-based theories of music in general, whether or not they involve indication, though these will also be circumvented here by avoiding proposal of a type-based theory.

[5] Danto, ibid.

[6] Levinson instead treats the performance means or instrumentation of a piece as itself being a pure structure, combinable with a sound in an "S/PM" structure (eg. Levinson, ibid. p. 86), that exists prior to indication. But arguably here he is conflating a contextual or provenance-related factor as such--namely a flute, or the playing of a flute--with a

relevant relational property of the pure sonic token, namely that of *its having been played by a flute,* which relational property it is part of the function of an act of indication to transform into a *necessary* relational property of the corresponding *musical* note, according to an adequate contextualist theory.

[7] See Section 9 for an application of this point, and fn. 21 for its relevance to Levinson's views.

[8] As with pregnancy, one cannot be 'a little bit' transformative: it is an all-or-nothing matter.

[9] Levinson, ibid. p.81.

[10] Eg, p. 81 ibid., "...*initiated* types..are so called because they begin to exist only when they are initiated by an intentional human act of some kind."

[11] Or, in Levinson's words, "..although a musical work is *more* than a sound structure, it most definitely *includes* a sound structure.", ibid. p. 79, fn. 25, so that, e.g., identifying the relevant sound structure is a necessary condition of identifying the musical work.

[12] The type specification problem is a form of the 'qua' problem, that is endemic in attempts to specify types from their instances. See Amie Thomasson, 'The Ontology of

Art', in ed. Peter Kivy*, The Blackwell Guide to Aesthetics* (Oxford: Blackwell, 2004), pp. 85-88.

[13] Which is not to deny that indication might also be more indirect, such as when a composer mentally simulates some sounds before notating them in a score.

[14] Elsewhere I have shown how an RIT-style representational theory can be extended to apply to artworks generally, including to apparently concrete artworks such as paintings. E.g., see my forthcoming book *The Double Content of Art* (New York: Prometheus Books, 2004).

[15] Though the general possibility of satisfying the distinctness requirement is arguably at least implicit in any theory capable of implementing the contextualist points discussed in Section 1.

[16] J.L. Borges, 'Pierre Menard, Author of the *Quixote,*' in his *Labyrinths* (Harmondsworth, Middx.: Penguin, 1985).

[17] There are plenty of good cases in the literature, e.g. in Levinson ibid, and Stephen Davies, *Musical Works and Performances* (Oxford: Clarendon Press, 2001).

[18] Which is not to deny that the main function of a score is to provide performance directions to players, as emphasized by Davies, ibid.

[19] But only as an example--I do not endorse this approach.

[20] For discussion and references see Davies, ibid. Ch. 1.

[21] For example, Levinson, ibid. p. 78, describes a sound structure as "...a sequence of sounds qualitatively defined," which suggests an already musically contextualized sequence of sounds, while also saying in additional fn. 2, p. 88, that "...by *sound structure* ...I did not mean anything more abstract than 'this complex sound followed by this one...'", hence also supporting a pure sonic event type view. But then he reverts to some sort of already-contextualized view by adding "My 'structures' are the highly particular on-the-surface patterns that are directly determined by the score and its associated conventions of interpretation." Strictly speaking, only *indicated*, not pure, structures could be "directly determined by the score" etc.

[22] Thanks to the editor, Peter Lamarque, and to Stephen Davies for very helpful comments.