On Knowing What We Like: Music, 'Best Opinion' and Evaluative Warrant

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Abstract:

In this essay I suggest that certain ways of thinking about music – about the ontology of musical works, the nature of musical response, and the issue of truth or validity in musical judgement – can offer useful guidance in other regions of philosophical debate. More specifically, such thinking can help to focus attention on the main points at issue between realist and anti-realist approaches in epistemology and philosophy of mathematics, logic, and the formal sciences. Thus, for instance, it brings out the problems with any middle-ground stance – like that adopted by response-dependence theorists – which stops short of an objectivist, i.e., recognition-transcendent conception of truth and appeals to the assent of well-placed, competent subjects under normal, standard, or (at the limit) ideal epistemic conditions. Here I put the case that philosophy of music has to negotiate a path between two, seemingly opposed but jointly indispensable modes of thought. On the one hand is the Platonist conception of musical works as objectively existent (though abstract or supra-sensuous) entities whose structures, properties and salient features fix the truth-value of our various statements and judgements concerning them. On the other is the basically phenomenological (rather than downright subjectivist) approach that makes due allowance for the involvement of human perceptual and cognitive responses in any properly musical experience. Thus my essay takes music as a highly problematic but, for just that reason, a revealing test-case with regard to the current debate as to whether truth can be conceived as always potentially transcending the scope and limits of attainable knowledge or accredited best judgement.

I

What I want to explore in this essay is the notion of response-dependence – or of response-dispositional attributes and qualities – as applied to our experience, knowledge, and judgement of musical works. I go on to put the case for a qualified Platonist approach to philosophy of music which I think does better justice to our standing intuitions in this regard and also faces up more squarely to the very real problems involved rather than taking refuge in any such attempted compromise or middle-ground position. Moreover this approach has significant implications for our thinking about wider issues in ontology, epistemology, and philosophy of mind.

Up to now the debate around response-dependence in the analytic (i.e., mainstream Anglo-American philosophical) literature has been focused chiefly on issues in these areas.[1] It has sought to provide the conceptual groundwork for a theory of knowledge that would somehow avoid both the Scylla of full-fledged antirealism, or a conception of truth as always epistemically constrained, and the Charybdis of a hard-line (objectivist) realism which – so it is argued – ends up by placing truth beyond our utmost epistemic reach and hence falling prey to the ravages of sceptical doubt. This it claims to do, in brief, by striking a middle-ground stance according to which the criteria for certain kinds of statement can be specified in terms of whether or not those statements would normally elicit assent from well-placed respondents with properly

functioning sensory equipment or cognitive faculties when exposed to the relevant kinds of stimulus under the right sorts of ambient condition. On this account, so advocates claim, one can have both an adequate measure of objectivity – adequate for any but the hard-line realist or his shadow self, the hard-line sceptic – and a decent, even 'realistic' allowance for those various factors that promote or hinder the quest for knowledge and truth. It then becomes a matter of testing just how far the theory might extend beyond its paradigm case, i.e., that of sensory perception as regards the Lockean 'secondary qualities' of colour, sound, taste and smell to other, on the face of it less amenable (since more objective) areas of discourse such as mathematics, the natural sciences, or – arguably – morals.[2]

In these latter instances there is much disagreement concerning the relevance or applicability of a response-dispositional approach to statements whose truth-conditions would appear to demand a more robustly realist (non-epistemic or recognition-transcendent) mode of specification. Still it is often held that the approach can be tweaked – suitably adapted or adjusted – by building in various further refinements or provisos so as to stop short of full-fledged objectivism about truth while meeting the realist more than halfway on the need to explain why those other discourses cannot be response-dependent to the same degree or in quite the same way. Crispin Wright has done most to promote this adaptive strategy through his introduction of epistemically beefed-up terms such as 'cognitive command' and 'superassertibility' as a kind of full-stretch anti-realist concession to the weight of realist counterarguments.[3] These are intended to capture – or at least to accommodate – our stubborn realist intuitions with respect to certain areas of discourse which seem to demand such treatment without, in the process, going so far as to embrace an outlook of full-strength ontological realism and thereby invite (as the anti-realist would have it) the standard sceptical riposte. However, and to just this extent, they fail to meet the realist's main objection: that unless we endorse her conception of truth as objective, recognition-transcendent, or epistemically unconstrained we shall have no means of accounting for the possibility of error and hence, by the same token, no means of explaining or justifying our knowledge or the growth of knowledge.[4] For once truth is conceived as subject to the scope and limits of human cognitive grasp – whether on the strict antirealist view or the more flexible kinds of approach adopted by Wright and the response-dependence theorists – it then becomes impossible to square the circle by restoring that dimension of objectivity that realism takes as the *sine qua non* of knowledge as distinct from certainty or epistemically warranted belief. In which case these purported third-way alternatives fail to offer an escape-route from the realist/anti-realist dispute or the chronic oscillation between objectivism and scepticism that antirealists are fond of remarking – justifiably or not – in their opponents' position.

All the same the response-dependence thesis does have a certain *prima facie* plausibility when applied to issues on its original home ground, i.e., those having to do with the criteria for correct ascription of sensory attributes or Lockean 'secondary qualities'. Thus for instance, in the case of colour perception one can truly assert that an object is red just so long as that assertion would be borne out by the response of any observer whose eyesight was unimpaired, whose optical cortex was likewise in good working order, and who viewed the object clearly during daylight hours in the absence of any proximate light-source which might exert a distorting effect on their powers of accurate perception. More technically: one can always construct a

quantified biconditional statement to the effect: '"*x* is red" is true if and only if *x* is reliably perceived as red by any normal observer under normal conditions', where what counts as 'normal' in both respects is given a substantive rather than a vague or all-purpose, 'whatever-it-takes' specification. Yet its proponents also claim – problematically, I would argue – that this approach comes up with an answer to the realism/anti-realism issue by combining that substantive specification with a force of *a priori* self-evidence which derives from the impossibility of doubting the truth of the duly provisoed and quantified biconditional. That is to say, we must take it as intrinsic to the very nature of colour-perception – and likewise for the other secondary qualities – that what counts as an accurate description, response, or statement concerning them *just is* what any normal and well-placed perceiver would assent to, or again, that the validity-conditions for such reports just *cannot come apart* from the consensus of judgement amongst those best qualified to judge. However, as I have said, there is a problem here in so far as the theorist can't have it both ways, on the one hand claiming the kind of *a priori* warrant that could only apply to analytic statements or tautologous truths-of-definition while on the other purporting to fill out the biconditional with a range of informative or non-trivial specifications. Indeed what seems to operate here is a kind of inverse-proportional relationship whereby the formula gains such content only at the cost of losing its *a priori* status while retaining that status of logical self-evidence only at the cost of foregoing any claim to genuine, substantive content.

II

I shall now put the case that a suitably modified version of the response-dependence thesis has more to offer when applied to issues in philosophy of music than it does when applied – as by most of its present-day advocates – to issues concerning the truth-conditions or standards of assertoric warrant for statements about basic, i.e., purely sensory modes of cognition. In the latter case, to repeat, the argument works out as a trivial thesis to the effect that, for any given area of discourse, those standards equate with the deliverance of best judgement or optimised response under ideal epistemic conditions and discounting for any localised sources of perceptual interference. In the case of music, conversely, any adequate statement of just what is required in order for some given work to warrant a certain kind of response or for some given mode of response to be warranted in relation to this or that work will need to provide much more by way of detailed specification. A bare-bones response-dispositional account might perhaps take the form: 'work *x* has property or quality *y* if and only if that judgement is such as would gain the assent of any subject with sufficiently acute and well-developed musical responses, when listening under suitable (non-distracting or attention-conducive) conditions, and in the absence of any psychological or cultural factors that might create interference'. However this tells us precisely nothing about what constitutes *either* the property/quality in question *or* the particular kind of responsiveness, i.e., the aptitude or proven capacity for sensitive listening and musically-informed judgement that qualifies some (and not other) subjects as authorities in this regard. That is to say, the biconditional amounts to just a roundabout or needlessly complicated way of asserting the empty (tautological) claim that property *x* is correctly attributed to work *y* just so long as it would be so attributed by someone ideally (or infallibly) placed to pronounce on the matter.

Such is at any rate the standard take on the Lockean *topos* of secondary qualities amongst those – chiefly the response-dependence theorists – who would claim to derive a more general lesson as regards other areas of discourse, such as morals or even mathematics, where the realist versus anti-realist dispute has run into something of a brick wall.[5] It is also the conclusion reached by some of these same thinkers on the basis of Plato's 'Euthyphro contrast', that is to say, the issue as to whether certain acts are pious in virtue of the gods' deeming them so, or whether the gods are constrained so to deem them on account of their own, infallibly truth-tracking powers of moral judgement.[6] Here again the advocates of response-dependence think that there is some insight to be had – or epistemological mileage to be gained – by remarking that the class of pious acts is coextensive or numerically identical in each case. There is no difference, in this regard at least, between the realist account which takes best judgement as *responsive to* what is truly and objectively virtuous and the response-dependent account according to which best judgement is in some sense *constitutive of* what counts as a virtuous act. Thus the Lockean and Platonist analogies serve as a handy way of putting the case for their proposed *via media* between the two scepticism-inducing extremes of a realist conception that places truth forever beyond epistemic reach and – in stark reaction to that – a Dummett-type anti-realist approach that reduces truth to the compass of human evidential, epistemic, or assertoric warrant.[7] However, as we have seen, this is a 'solution' that in fact solves nothing since it works out either as a straightforward (truth-preserving but vacuous) tautology or else as a more substantive (more adequately specified) set of provisos on the right-hand of the quantified biconditional which *for that very reason* carries nothing like the requisite force of *a priori* self-evidence.

My point is that this whole debate around response-dependence has been slung between the poles of a drastic dichotomy whose terms are dictated by the fixed idea that one cannot have *both* objectivist (i.e., recognition-transcendent) truth *and* humanly attainable knowledge, at least on any definition of 'knowledge' that meets the classical specification of justified true belief. Hence what will seem, on the face of it, an odd or even quite absurd suggestion: that taking music as a test-case instance (rather than colour-perception or the other standard Lockean *topoi*) might help to point the way through and beyond these epistemological perplexities. After all, could one seriously wish to maintain that such deep-laid problems might find their answer in an area of discourse where value-judgements are as prone to dispute – or to the vagaries of subjective response – as is often the case with musical appreciation, or even with the more technical varieties of music analysis? Or again: why abandon the (relatively) safe ground of those widely-shared basic perceptual responses – the Lockean secondary qualities of colour, sound, taste, and smell – only to venture much farther afield into areas of phenomenological enquiry that offer no such reliable hold for normative standards of epistemic warrant or widespread consensual judgement? However this is just my point: that by raising these issues in a different, more problematical context but one less prone to various kinds of reductive or trivialising approaches we may then be placed to address them more productively in other (standard or familiar) contexts of debate.

Thus the question with regard to music, its ontological status or mode of existence *vis-à-vis* the register of normalised or optimised listener-response, is one that strongly resists any treatment purporting to resolve it in any of the three main directions (realist, anti-realist, or response-dispositional) which currently dominate the

philosophic field. Rather, it requires that these issues be tested *both* against our given musical intuitions *and* against our standing philosophical concepts, not only as regards their applicability to the case in hand but also – crucially – as regards their pertinence (or lack of it) to other areas of discourse. What the instance of music brings out to particularly striking effect is the necessity of drawing a clear-cut distinction between areas such as mathematics, logic, and the formal sciences where an objectivist (even Platonist) account is at any rate a plausible contender and areas such as the human and social sciences where it applies, if at all, only when subject to certain crucial provisos and qualifications.[8] At the same time it may sharpen the debate by avoiding the sorts of fuzzy compromise 'solution' – like the response-dependence thesis in its more generalised, less discriminate forms – that purport to achieve a *modus vivendi* between realism and antirealism by extending those provisos and qualifications well beyond their appropriate sphere.[9] Thus music, or the discourse on music, would seem a *prima facie* eligible candidate for treatment in response-dispositional terms in so far as it self-evidently does involve certain modes of more-or-less sensitive, refined, or competent listener-response. Yet it also leaves room – arguably at least – for the Platonist claim that there exist certain intrinsically valuable modes of musical experience and certain correlative features, structures, or attributes of the musical work that might always transcend or elude the grasp of even the most responsive, well-equipped listener.[10]

The special interest of music in this regard is that it offers useful grounds for comparison with other topics or areas of discourse that either lay a stronger claim to treatment in realist (objectivist) terms or else give no adequate hold for any such treatment. So, for instance, it would strain the case for musical Platonism if one pressed too hard on the analogy between music and mathematics and argued – perhaps with Bach primarily in mind – that the greatest works should be thought of as discovered, not created, since they exhibit a kind of formal autonomy or structural objectivity that is otherwise found only in the realm of mathematical truth. As concerns Bach, this notion has been most powerfully challenged by Adorno who sees in it not only a failure to grasp the music's dynamic and expressive qualities but also another melancholy sign of the reifying grip exerted on its present-day reception through the near=universal dominance of late-capitalist commodity culture.[11] Still it would be wrong – a reactive swing in the opposite, so to speak 'consumerist' (or subjectivist) direction – to deny that Bach's music does gain much of that same expressive power from its extraordinary sense of formal perfection and the quasi-mathematical working-out of possibilities somehow latent or inherent in its basic thematic material.

What gives the analogy an added force is the fact that anti-realists are apt to put their case in terms of the metaphorical contrast between knowledge conceived as resulting from the exploration of hitherto uncharted but none the less real or topographically objective terrain and knowledge as the outcome of a process which, more like the artist, shapes or re-fashions a landscape in accordance with certain creative-imaginative ends. Thus, on Dummett's account, any talk of 'discovery' in connection (say) with some new mathematical proof or some striking development in number-theory should be abandoned in favour of the antirealist (or intuitionist) view that mathematical 'truths' exist only in so far as we are able to specify their formal validity-conditions.[12] Rather than conceive such truths as awaiting discovery in a timeless Platonist or Fregean realm of absolute ideal objectivity we should think of

them as subject to a constant process of invention or creative elaboration which may indeed involve the highest standards of formal rigour but only in so far as those standards are set by the proof-procedures in question. So it is wrong – just the product of a misconceived ontology – to take mathematics as a paradigm instance of the realist/objectivist claim that truth can always come apart from knowledge, or again (more precisely) that veridical knowledge can always come apart from the deliverance of present-best or even future-best-possible judgement. For this is to assert (nonsensically, Dummett believes) that we can somehow have legitimate or rational grounds for claiming that a certain class of statements – the 'disputed class' – can be known to possess an objective truth-value despite our lacking any adequate proof-procedure or means of resolving the issue either way. Such is the realist's basic supposition that well-formed yet unproven theorems (such as Goldbach's conjecture that every even number greater than 2 is the sum of two primes) are either true or false – objectively so – even though we don't yet, and indeed might never, be able to supply the requisite formal proof. On the contrary, Dummett maintains: it is strictly unintelligible that truth-values should exceed our best capacities of proof or verification since *ex hypothesi* we should then be in no position to acquire, manifest, or recognise the truth-conditions for any statement, conjecture, or theorem concerning them.

It is on these grounds that Dummett prefers the analogy between mathematics and painting (or the creative arts in general) to that between mathematical discovery and the explorer who ventures into unknown country and notes the location of various lakes, mountains, forests, and other such topographical features. For the realist, conversely, Dummett's line of argument runs up against insuperable problems, among them – not least – its failure to explain how longstanding issues (like the truth or falsehood of Fermat's Last Theorem, or the possibility/impossibility of its ever being proved) may at last gain a passport out of the 'disputed class' through some dramatic new advance in the scope and methods of formal proof.[13] Besides, so the realist will claim, there is something highly counter-intuitive – even absurd – about any theory which limits the other (i.e., truth/falsehood-apt) class of statements to those in respect of which there happens to exist some humanly achievable means of ascertainment. Such a claim can only strike the realist as a straightforward instance of the anthropocentric fallacy, one that equates the limits of truth with the limits of attainable knowledge, and these in turn with the highly restricted range statements that are plausibly up for verification by our best epistemic, conceptual, or investigative lights.[14]

My main interest here – with a view to its bearing on issues of musical ontology – is in Dummett's anti-realist approach to mathematics, logic, and the formal sciences. However it is worth noting that he extends this approach to empirically-based disciplines or areas of discourse such as that of historiography where it works out as a flat denial that we could ever have grounds for asserting the objective truth or falsehood of statements that we – or the community of expert historians – are in no position to verify or falsify. Thus any 'gaps in our knowledge' must also be thought of as 'gaps in reality', regions whose *epistemically* inaccessible character deprives them of any determinate features onto which our statements or hypotheses could possibly latch, and thereby consigns them to a limbo of unreal (since to us unknowable) 'facts' or 'events'.[15] The same applies to well-formed though unverifiable scientific conjectures – such as 'there exists a solar system with a planet inhabited by organic

life-forms in some remote (radio-telescopically invisible) region of the expanding universe' – which must likewise be viewed as failing to meet the standard for meaningful, truth-apt or warrantable statements and hence as revealing not only a lacuna in our knowledge but also a 'gap in reality'.[16] That is to say, if one accepts the logic of Dummett's antirealist case then there is simply no escaping the ultimate conclusion (as realists would have it: the ultimate *reductio ad absurdum*) that the scope and limits of human knowledge are also, and by very definition, the scope and limits of truth as concerns every aspect of physical reality.

III

It is here precisely that philosophical reflection on music – on its mode of existence *vis-à-vis* the capacities of human perceptual and cognitive grasp – might offer some help in sorting out these epistemological issues. On the one hand there is clearly a whole dimension of musical experience that belongs to the phenomenology of human responsive powers and capacities, and which therefore finds no place in any purely objectivist (response-independent) ontology of musical works. Hence the disanalogy – the sense of a false or misleading comparison – between music and mathematics, or the sense of 'invention' that would seem most aptly to describe what occurs in the process of musical composition and the sense of that term which applies to mathematical proof-procedures or other such formal, no matter how 'inventive' (i.e., resourceful and conceptually ground-breaking) modes of thought. On the other hand this comparison does have a certain force, especially when set against the prevailing wisdom in various circles of present-day 'advanced' musicological theory. Such is the claim that any talk of musical value – or even of 'the work' as somehow existing quite apart from the various ups and downs of its cultural reception-history – is best explained (or explained away) entirely in terms of that same history.[17] My point is that we sell music short *either* by espousing a pure-bred Platonist (or formalist) doctrine that would lift it clear of any involvement with the contingencies of culturally inflected listener-response *or* by adopting one of those current (e.g., deconstructive or New-Historicist) approaches that would treat music as nothing more than a product of certain ideologically determined 'discourses' or mindsets.[18]

The tendency to swing between drastically opposed positions of this sort is a prominent feature of much recent thought across a range of disciplines, from epistemology and cognitive science to philosophy of language and logic. It is most pronounced in those areas of philosophic thought where the problems with old-style logical empiricism – especially in the wake of Quine's celebrated attack – gave rise to various, equally problematic attempts to close the gap between concepts and sensuous intuitions, or logical structure and empirical content.[19] The latest such attempts very often involve a 'naturalised' version of Kantianism which claims to deliver the epistemological goods – i.e., to explain how knowledge comes about or how precisely that gap might be closed – without any appeal to the transcendental subject and other such 'metaphysical' excrescences.[20] Response-dependence theory is very much a product of this same conjuncture, one that seeks salvation more directly from the Lockean empiricist than the Kantian idealist quarter, but which none the less draws (in company with thinkers like John McDowell) on the notion of a *via media* between all the vexing dualisms of subject and object, mind and world, or internalist and externalist accounts of knowledge-acquisition.[21] It is here, to repeat, that philosophical reflection on music – on its distinctive ontology as well as its

epistemological aspects – might well have something of importance to contribute. More specifically, it raises the issue as to just where music stands in relation to those other 'areas of discourse' that have figured centrally in recent debate. What sets music decisively apart from mathematics on the one hand and the vagaries of purely subjective experience on the other is the fact that any adequate theory of music involves an irreducibly phenomenological component – an appeal to the register of normalised (or maybe optimised) listener-response – but also, beyond that, a presumed grounding in formal or structural features of the work which cannot be reduced without remainder to any such response-dependent account.

Thus music provides the most striking since hard-to-categorise instance of an ontological domain whose very elusiveness requires that we define just how and where it differs from those other object-domains or areas of discourse. All the more so, I would suggest, since the sorts of confusion which often arise in that particular case are closely akin to the sorts that arise elsewhere in the philosophic literature. This is evident when Dummett recommends, in keeping with his anti-realist outlook, that we should change our view of so-called mathematical 'discoveries' and treat them as something more closely analogous to the process of artistic creation than to the process of geographical exploration. One possible line of response to Dummett is that artworks themselves have an aspect of discovery – of 'invention' in the other, etymological sense of the term – which renders his comparison doubly problematic. That is, it can be seen both to over-estimate the kinship between mathematics and art, taken (as Dummett clearly intends) by way of a riposte to the claims of mathematical realism, and at the same time to under-estimate the strength of art's claim – albeit in a different way – to discover certain kinds of hitherto unrecognised formal, structural, or expressive possibility. The difference here of course has to do with the last of these aspects, i.e., the expressive dimension of art and its relation to those formal structures with which it is closely bound up at every level but which tends very often to elude the grasp of analysis in formal or structural terms. This issue has been central to aesthetic debate since Plato and Aristotle, and has lately been pressed with particular force by those – Derrida among them – who find it posed most sharply in the conflict of priorities between phenomenology and structuralism. Thus, according to Derrida, what is here being played out is an issue of the utmost consequence not only for aesthetics but also for epistemology and the philosophy of logic, mathematics, and language.

This is not the place for a detailed exposition of Derrida's remarkably subtle and acute early readings of Husserl where he pursues the various deep-laid aporias that emerge through the latter's intensive engagement with foundational issues in each of these disciplines.[22] Sufficient to say that they result from the strict impossibility of resolving those issues and from the fact that any rigorous enquiring-back – such as Husserl undertakes – into the grounds and history of the formal sciences will always, at some point, encounter this aporetic moment. With respect to mathematics (and, in particular, to Husserl's late text on 'The Origin of Geometry') it takes the form of a constant oscillation between the claims of *a priori* knowledge or 'absolute ideal objectivity' on the one hand and, on the other, those of a genetic account that would make room for the progressive unfolding of geometrical thought through its various historical stages of development.[23] Hence the antinomy of 'structure' and 'genesis' that Derrida finds everywhere present in Husserl's project, and which he treats not so much as a defect or failing but rather as a sure sign of the analytic rigour – the

exemplary willingness to think these issues through with the greatest conceptual precision – that Husserl brings to bear in the course of his logico-mathematical investigations.[24]

At this point I should like to cite two rather lengthy passages from Derrida's essay '"Genesis and Structure" and Phenomenology', since they bring out not only the aspects of Husserl's thinking that Derrida wishes to emphasise but also the precise character of his (Derrida's) critical engagement and – beyond that – their bearing on those issues in analytic philosophy of logic, mathematics and language that have been my main focus of discussion so far. Thus:

> [i]f Husserl gives up the psychological route when confronted by all the difficulties of accounting for a structure of ideal meaning on the basis of a factual genesis, he no less rejects the logicizing conclusion with which his critics wished to corner him. Whether in the then current Platonic or Kantian style, this logicism was preoccupied above all with the autonomy of logical ideality as concerns all consciousness in general, or all concrete and non-formal consciousness. Husserl, for his part, seeks to maintain simultaneously the normative autonomy of logical or mathematical ideality as concerns all factual consciousness, and its original dependence in relation to a subjectivity in general; in general, but concretely. Thus he had to navigate between the Scylla and Charybdis of logicizing structuralism and psychologistic geneticism (even in the subtle and pernicious form of the 'transcendental psychologism' attributed to Kant). He had to open up a new direction of philosophical attention and permit the discovery of a concrete, but non-empirical, intentionality, a 'transcendental experience' which would be 'constitutive', that is, like all intentionality, simultaneously productive and revelatory, active and passive . . . . Husserl will attempt to prepare an access to this common radicality through the diverse 'reductions', which are presented initially as neutralizations of psychological genesis and even of every factual genesis in general. The first phase of phenomenology, in its style and its objects, is structuralist, because first and foremost it seeks to stay clear of psychologism and historicism. But it is not genetic description in general which is disqualified, but only the genetic description which borrows its schemas from naturalism and causalism, and depends upon a science of 'facts' and therefore on an empiricism; and therefore, concludes Husserl, depends upon a relativism incapable of insuring its own truth; therefore, on a scepticism. The transition to the phenomenological attitude is made necessary, thus, by the impotence or philosophical fragility of geneticism when the latter, by means of a positivism which does not understand itself, believes itself capable of enclosure by a 'science-of-facts', whether this be a natural science or a science of the mind. The expression 'worldly genesis' covers the domain of these sciences.[25]

I must forego any detailed commentary on this passage and content myself with just a few remarks concerning its relevance to the topic in hand. Perhaps most striking – *à propos* the realism/antirealism debate – is Derrida's insistence (following Husserl, though pressing somewhat harder on the various antinomies here opened up) that one cannot resolve the structure/genesis problem by straightforwardly endorsing one approach and declaring the other irrelevant, unworkable, or philosophically off-

bounds. Thus a twin necessity imposes itself: that of acknowledging (*contra* anti-realists like Dummett) the claims of mathematics, logic, and the formal sciences to be concerned with a realm of objective, verification-transcendent truth quite aside from the various episodes that have marked their development to date, while none the less allowing that those disciplines *do* have a history – a 'genetic' aspect – which cannot be ignored or bracketed out since it constitutes the very condition of possibility for grasping that development along with its latest (present-day) stage of advance.

The second passage from 'Genesis and Structure' may help to clarify what is involved here. Thus, as Derrida reads Husserl:

> an eidetic descriptive science, such as phenomenology, may be rigorous, but it is necessarily inexact - I would rather say 'anexact' - due to no failure on its part. Exactitude is always a product derived from an operation of 'idealisation' and 'transition to the limit' which can only concern an abstract moment, an abstract eidetic element (spatiality, for example) of a thing materially determined as an objective body, setting aside, precisely, the other eidetic elements of a body in general. This is why geometry is a 'material' and 'abstract' science. It follows that a 'geometry of experience', a 'mathematics of phenomena' is impossible: this is an 'attempt doomed to miscarry'. This means in particular, for what concerns us here, that the essences of consciousness, and therefore the essences of 'phenomena' in general, cannot belong to a structure or 'multiplicity' of the mathematical type. Now what is it that characterizes such a multiplicity for Husserl, and at this time? In a word, the possibility of closure . . . . What Husserl seeks to underline by means of this comparison between an exact and a morphological science, and what we must retain here, is the principled, essential, and structural impossibility of closing a structural phenomenology.[26]

It should be evident that Derrida is here broaching, by way of Husserl, a range of ontological, epistemological, and (not least) metaphysical issues that have likewise preoccupied philosophers in the analytic tradition from Frege and Russell to the present day. Chief among them is the issue – most provocatively raised by Dummett – as to whether certain statements belonging to the 'disputed class', i.e., statements that are well-formed and (apparently) meaningful yet for which we possess no formal proof-procedure or means of empirical verification can none the less be thought of as true or false (objectively so) just in virtue of the way things stand in reality and quite aside from any such epistemic considerations. For the realist about truth the answer is plainly 'yes'; for the Dummettian anti-realist 'no', perhaps hedged about by some qualifying clauses with respect to how far the verification-principle might be stretched to accommodate various conceivable but so far unachieved methods of proof; and for stakers-out of a middle-ground, e.g., response-dispositional approach a suitably provisoed 'yes/no' according to the area of discourse in question and its presumed degree of truth-aptitude.[27]

Then again, for a Kantian revisionist such as McDowell – one who proposes a 'naturalised' reading of Kant shorn of the whole transcendental apparatus but retaining the idea of an active reciprocity between mind and world or knowledge and the objects of knowledge – the answer would seem to be another 'yes/no', but more to the effect that this problem simply doesn't arise so long as we refuse to mount the

dualist seesaw.[28] However it is scarcely resolved by McDowell's claim that we can best avoid the residual dualism in Kant's talk of sensuous intuitions that must somehow be 'brought under' concepts of understanding through the simple expedient of switching to Kant's alternative idiom of 'receptivity' and 'spontaneity', these latter envisaged as powers of mind whose mutual inter-involvement prevents any such dichotomy from getting a hold. For it is clear from the problems that McDowell has in striving to maintain this position – from the often tortuous phraseology and signs of extreme conceptual strain – that the switch is more a matter of cosmetic appearance than a genuine working solution.[29]

IV

The point of my above brief detour *via* Derrida on Husserl was to signal the existence of another approach to the realism/anti-realism issue that avoids the kinds of unproductive deadlock or evasive middle-ground solution produced by a great deal of current analytical (or 'post-analytical') debate. What Derrida brings out most forcefully in his readings of Husserl is the necessity of thinking these issues through to the point where 'a certain structuralism' can be seen as 'philosophy's most spontaneous gesture', while none the less acknowledging that this project meets its limit in 'the principled, essential, and structural impossibility of closing a structural phenomenology'.[30]

It would not be hard to show, given time, that analytical debate on these matters has been hobbled by the turn it took through Frege's rejection of Husserlian phenomenology as just another species of thinly-disguised psychologism.[31] This view was further reinforced by Gilbert Ryle's dramatic change of mind – from a well-developed interest in Husserl's work to a dismissal of it on similar grounds – and again (most recently) by Dummett's rather grudging concession that there might be something of interest in Husserl though only to the extent that his thinking bore limited comparison with Frege's altogether more adequate approach.[32] The result has been precisely that drastic polarisation of views according to which one can either espouse a notion of objective and recognition-transcendent (hence unknowable) truth or else make do with a scaled-down conception of Dummettian warranted assertibility or 'truth' as epistemically constrained. What Derrida's readings of Husserl hold out is the prospect of steering a critical course between these poles that would neither accept the terms of that putative dilemma nor seek to defuse it by adopting some middle-ground approach which finally reduces to the trivial thesis whereby truth equates with whatever counts as such according to normalised or optimised best judgement. The above-cited passages should make it clear that Derrida is far from rejecting the Platonist view, i.e., the basic realist premise that there exists a vast range of unproven or perhaps unprovable statements and theorems in mathematics, logic, and the formal sciences that must be thought of as objectively true or false despite our inability to settle the issue either way. Yet at the same time Derrida is keenly aware – like Husserl before him – of the need to take account of those various epochal stages of advancement or knowledge-acquisition that constitute not only the background history but (in some sense) the enabling context and prior condition of possibility for any further such advances.

Other commentators – Follesdal and Mohanty among them – have argued that the problems confronted by post- Fregean philosophy of mathematics and logic, in

particular its having given rise to these intractable dilemmas, might well have been avoided were it not for that unfortunate parting-ofthe- ways between the two traditions.[33] More specifically: it might not have witnessed the emergence of a strongly reactive movement of thought which took the problems with Fregean objectivism (i.e., its purportedly placing truth beyond the utmost reach of attainable knowledge) as a pretext for adopting the kinds of extreme or more moderate anti-realist approach exemplified by Dummett and the advocates of response-dependence. To be sure, Dummett never goes quite so far as L.E.J. Brouwer, the most influential philosopher of mathematics to have espoused an intuitionist approach that rejects the idea of objective (recognition-transcendent) truth in favour of equating truth with knowledge, knowledge with provability, and the latter with just those sorts of construction that strike the enquirer as possessing intuitive conviction or plausibility. Thus, according to Brouwer, it is wrong to suppose that 'mathematics, when it is made less formal, will pay for it by a loss of "exactness", i.e., of mathematical "truth"'. On the contrary, '[f]or me, "truth" is a general emotional phenomenon, which by way of "Begleiterscheinung" [accompanying phenomenon] can be coupled or not with the formalistic study of mathematics'.[34] Yet Dummett is well within hailing distance of this *echt*-intuitionist approach – albeit treated with a decent measure of British reserve as regards such extravagant talk – if one considers his clearly stated preference for the analogy between mathematical thought and artistic creativity as against the Platonist/Fregean analogy between mathematics and the exploration of a pre-existent (i.e., objective or mind-independent) conceptual domain.34

What is most characteristic of these debates is a curious loss of ontological bearings, a tendency to confuse 'areas of discourse' – or the kinds of criteria that properly apply in this or that area – so that even mathematical truth seems in danger of floating off into some realm of ultimate unknowability unless brought back within human grasp through a response-dependent or 'humanised Platonist' approach.[35] Hence the idea that any progress in these matters will have to start out by conceding the logic of the anti-realist case – that objectivist truth and attainable knowledge just don't mix – and then work out some viable or face-saving solution along just such conciliatory lines. Hence also, I would suggest, the strange way in which discourses like that of mathematics that would appear prime candidates for treatment in Platonist (or verification-transcendent) terms are subject to a kind of analogical transfer or metaphoric displacement whereby such treatment is made to seem inappropriate, misconceived, or philosophically downright absurd. Thus when Dummett invites us to consider the business of proving a mathematical theorem as more like an act of artistic creation than a geographical discovery – or when Alex Miller proposes his 'humanised Platonist' idea as a reasonable middle-ground stance – it is clear that, for many present-day thinkers, antirealism is the default option and realism one for which the best, perhaps only credible line of defence is a fallback to some such quasi--realist or compromise solution.[36]

No doubt this situation has come about very largely in consequence of various problems in mathematics and philosophy of mathematics over the past century and more. These will be familiar enough to most readers and require only a brief rehearsal here. Among them are the advent of non- Euclidean geometries which dealt a sizeable blow to the Kantian idea of synthetic *a priori* knowledge and to aprioristic truth-claims of whatever kind; the later emergence of non-classical, i.e., many-valued or

'deviant' logics; the paradoxes of classical set-theory as first revealed by Russell; Gödel's incompleteness-theorem along with its wider, likewise unsettling implications for mathematics, logic, and the formal sciences; and the various problems with regard to our knowledge of a (supposedly) objective real-world domain thrown up by quantum mechanics on the orthodox (Copenhagen) interpretation.[37] Yet if one thing is equally clear it is the fact that mathematics has long served *both* as the paradigm instance of objective, recognition-transcendent truth *and* – from the time of Galileo up to and including the quantum revolution – as a chief source of knowledge or better understanding as regards physical reality. So it is very much a case of putting the philosophic cart before the scientific horse when sceptical or anti-realist doctrines purport to show that these beliefs are ungrounded or that truth and knowledge cannot both be had except on pain of manifest selfcontradiction.[38]

Thus, as David Lewis pointedly remarks, '[i]t's too bad for epistemologists if mathematics in its present form baffles them, but it would be hubris to take that as any reason to reform mathematics . . . . Our knowledge of mathematics is ever so much more secure than our knowledge of the epistemology that seeks to cast doubt on mathematics'.[39] And again: '[c]ausal accounts of knowledge are all very well in their place, but if they are put forward as general theories, then mathematics refutes them'.[40] What Lewis here has in mind is the sort of 'reliabilist' or causally-based epistemology which requires that all legitimate claims to knowledge be grounded either in perceptual acquaintance with the objects or states of affairs concerned or else in some unbroken and reliably informative chain of transmission with a good (i.e., truth-preserving) pedigree. By these lights any Platonist (or realist) philosophy of mathematics, logic, or the formal sciences is *ipso facto* a non-starter since it cannot explain how we could ever have the right kind of causal contact with abstract entities such as numbers, sets, truth-functions, propositional contents, and so forth. To which Lewis responds, once again, that in that case we had better junk the causal theory of knowledge-acquisition at least with regard to those areas of discourse – chief among them mathematics and logic – where it clearly doesn't apply. No doubt there are deep, philosophically recalcitrant questions as to why and how such abstract entities should have proven to possess 38 so impressive a degree of descriptive, predictive, and even explanatory power in the development of the physical sciences. Hence Eugene Wigner's expression of wondering puzzlement at the 'unreasonable effectiveness' of mathematics as a strictly indispensable source of knowledge concerning real-world objects and events on every micro- to macro-physical scale.[41] However there is something distinctly perverse about raising that puzzlement to a high point of doctrine and then declaring either, like the anti-realists, that we are faced with a flat, non-negotiable choice between mathematical truth and mathematical knowledge or else – the currently favoured line – that the only way out of this impasse is to opt for some middle-ground (e.g., response-dependent or 'humanised Platonist') approach.

Jerrold Katz puts the case for mathematical realism in a passage that will bear citing in extenso for its clarity and force

> [t]he entire idea that our knowledge of abstract objects might be based on perceptual contact is misguided, since, even if we had contact with abstract objects, the information we could obtain from such contact wouldn't help us in trying to justify our beliefs about them . . . . In virtue of being a perfect number, six must be a perfect number; in virtue of being the only even prime,

> two must be the only even prime. Since the epistemic role of contact is to provide us with the information needed to select among the different ways something might be, and since perceptual contact cannot provide information about how something must be, contact has no point in relation to abstract objects. It cannot ground beliefs about them.[42]

The importance of getting things right with regard to such ontological distinctions may be gauged from some of the more *outré* consequences when this kind of realism as applied to abstract entities or the object-domain of mathematics and the formal sciences is carried across into other, very different areas of discourse. Thus Lewis has a larger quarry in view when he argues that the objectivity of mathematical truth – and the security of our knowledge concerning it – will always trump any challenge brought by the sceptic or the advocate of a causal-reliabilist approach to epistemology. In brief, his purpose is to put the case for an outlook of uncompromising realism with respect to all those 'possible worlds' or counterfactual scenarios that modal logicians are wont to invoke as a matter of descriptive or explanatory convenience, but which Lewis holds to be fully as real as those which we inhabit in our everyday lives, only nonactual in so far as they occupy some other (to us epistemically inaccessible) region of the modal multiverse.[43] So, for instance, when historians or scientists routinely deploy counterfactual-conditional modes of reasoning – 'had event *x* not occurred, then neither would event *y*' – in order to explain why event *y* did in fact occur, they had better accept his modal-realist account since otherwise they are trading on a false licence and have no right to draw such often farreaching explanatory consequences from merely suppositious or fictive premises. Moreover, should it be objected by exponents of a this-world (actualist) or causal-realist approach that Lewis has created a wildly profligate ontology replete with objects and events that must, by very definition, lie utterly beyond our epistemic ken he can always come back – as in the above-cited passages – with the argument-by-analogy from mathematics.

Thus Lewis's trump-card is again to remark that abstract entities such as numbers, sets, and classes are likewise both causally inert and beyond any means of sensory-perceptual acquaintance and yet – perhaps for that very reason – have a strong claim to count among our surest items of *a priori* knowledge. In which case, he concludes, actualists about modal logic – those who take possible-worlds talk as just that, a convenient *façon de parler* for explicating notions of possibility and necessity – are merely trying to have their cake and eat it.[44] Were it not for their perverse refusal to accept the logic of their own arguments they would perforce come to see that it entailed the reality (i.e., the non-actual but objective existence) of all those counterfactual situations, or might-have-been-otherwise turns of event, which alone give genuine explanatory content to talk about causes, necessary conditions, decisive historical conjunctures, and so forth. Yet clearly this involves a pretty massive conflation of distinct ontological domains, among them – crucially – the trans-world necessary truths of logic and mathematics and the various contingent or world-relative, whether actual or unactualised states of affairs that concern historians and (arguably) most if not all physical scientists. Thus it is hard to conceive how Lewis can extract his mind-boggling range of 'really' existent possibilia from the analogy with a discourse – that of mathematics – whose object-domain on the realist (Platonist) view is defined precisely by its abstract nature, its character of absolute

ideal objectivity. and therefore its utter remoteness from any such contingent order of events.

Hence the widespread resistance to Lewis's ideas, not only amongst thinkers who stress the relevance of modal logic to issues in epistemology and philosophy of science, but also amongst philosophers of mathematics who acknowledge – like Katz in the passage cited above – that any adequate account of mathematical truth will need to respect its autonomy as well as its singular effectiveness in physics and the other sciences. After all, this is the only plausible answer to proponents of a hard-line causal epistemology who argue that, since we cannot have perceptual contact with intangible 'objects' such as numbers and sets, therefore those objects must either be thought of as inherently unknowable or else brought back within the compass of knowledge by treating them as so many constructs out of our various methods of proof or well-established formal procedures.[45] Thus Katz might seem in agreement with Lewis as regards the basic modal-realist claim that there exists a vast range of objective though abstract realia whose properties – along with the truth-value of any statement concerning them – have nothing whatever to do with our state of knowledge, let alone with our somehow (impossibly) being able to access them via some kind of perceptual 'contact'. However this agreement runs out at the point where Katz makes his cardinal claim: that what distinguishes logic, mathematics and the formal sciences from other (say historical, natural-scientific, or everyday-investigative) fields of enquiry is their concern with an order of necessary truths whose character of absolute ideal objectivity places them forever and intrinsically beyond reach of empirical disconfirmation. That is to say, *contra Lewis*, they cannot provide a legitimate basis for arguments concerning the reality of alternative, non-actual 'possible worlds' since these must surely be similar to our own at least in so far as they contain all manner of strictly contingent (i.e., trans-world variable) happenings, histories, and turns of event, as well as a great range of likewise contingent physical objects along with their various world-relative properties, dispositions, causal powers, and so forth. Indeed it is the point most forcefully made by 'this-world' realists like Saul Kripke and Hilary Putnam that modal logic is a useful means of picking out just those essential properties – e.g., subatomic, molecular, or genetic-chromosomal structure – that distinguish various intramundane natural kinds such as 'gold', 'acid', 'water', or 'tiger'.

Hence Putnam's famous series of 'twin-earth' thought experiments, designed to bring out its crucial relevance to issues in metaphysics and epistemology as well as in philosophy of logic and philosophical semantics.[46] Thus if twin-earth 'gold' looked and behaved very much like its earthian counterpart but turned out not to be the metal with atomic number 79, or if twin-earth 'acids' were not proton-donors, or if twin-earth 'water' had the molecular composition XYZ rather than H2O, or if twin-earth 'tigers' were found to have an entirely different genetic constitution then any visitor from earth, when confronted with the evidence, would surely conclude that these were *not* in fact genuine (as opposed to like-seeming) samples of the kind in question. Moreover, the process of finding this out would involve the same sorts of investigation or the same techniques for looking beyond surface appearances that have typified the conduct of this-world scientific enquiry, such as that which led from 'gold = yellow, ductile metal soluble in *aqua regia*' (thus failing to 40 distinguish it from 'fool's gold', or iron pyrites) to 'gold = metallic element with atomic number 79', and likewise *mutatis mutandis* for my other examples. What Kripke and Putnam

deduce from all this is that such discoveries have to do with an order of *a posteriori* necessary truths, that is to say, truths which are clearly not *a priori* (self-evident to reason) but which none the less obtain as a matter of necessity in this world and all other close-by possible worlds whose constituent kinds are compatible with ours in the relevant physical (e.g., microstructural or genetic-chromosomal) respects.[47] As I have said, this puts them squarely at odds with that other, ontologically profligate form of modal realism propounded by Lewis according to which it is merely a sign of parochial prejudice to treat the world that we 'actually' inhabit as any more 'real' than the numberless counterpart worlds wherein things have worked out differently across the entire range of alternative (logically conceivable) possibilities. For there could then be no arguing, in Kripke/Putnam mode, from certain distinctive features of the way that our language picks out natural kinds along with their essential properties, structures, or attributes to a metaphysical-realist worldview wherein they set the truth-conditions for our various statements, theories or hypotheses concerning them.[48]

Thus 'actualism' is not so much the product of some drastically restricted ontological purview as a necessary means of drawing the line between issues properly amenable to treatment from a philosophical or scientific standpoint and issues that belong more to the realm of science fiction or the possible worlds of a writer like Jorge Luis Borges. This is the sort of objection to Lewis's argument that is apt to count strongly with the realist about matters of empirical fact or natural-scientific truth. However there is a kindred objection to be raised from the mathematical-realist quarter since a further consequence of that argument is to blur the ontological distinction between trans-world necessary truths (those that pertain to logic, mathematics, and the formal sciences) and the kinds of contingent truth that pertain in our own and other (to us non-actual but to their denizens actual and in any case equally real) possible worlds. That is to say, Lewis's case for his ontologically extravagant variety of modal realism is one that involves a confusion of properly distinct ontological domains and which hence falls plump within the sights of a sceptical or anti-realist approach. For, as we have seen, a chief plank in many such arguments is the claim that truth cannot possibly exceed the bounds of attainable knowledge while this must involve some kind of perceptual or quasi-perceptual contact between knower and known. Katz once again provides a succinct explanation of why this idea is philosophically so wide of the mark. Thus:

> [t]he epistemological function of perceptual contact is to provide information about which possibilities are actualities. Perceptual contact thus has a point in the case of empirical propositions. Because natural objects can be otherwise than they actually are (non obstante their essential properties), contact is necessary in order to discover how they actually are . . . . Not so with abstract objects. They could not be otherwise than they are . . . . Hence there is no question of which mathematical possibilities are actual possibilities.[49] All of which suggests that getting straight about these modal distinctions – as between the actual, the possible, and the necessary – is important not only for philosophy of language, mathematics and science but also for other disciplines where ontological issues have a real bearing on our sense of what counts as a defensible truth-claim or evaluative judgement.

V

Now it is time – well past time, the reader may be thinking – to bring these various lines of argument together and explain just how they might relate to questions of musical ontology. I propose to put the case for a 'qualified Platonist' approach that would treat some (not all) musical works as being comparable in some (not all) respects to the kinds of abstract entity such as numbers, sets, propositions, logical functions, and so forth, that make up the object-domain of the formal sciences. Where this comparison hits the mark, I suggest, is in the sense that these works are best thought of as discovered rather than created, or at least as involving more in the way of access to certain standing possibilities of musical expression, form and development than finds any room on commonly received – especially romantic and post-romantic – accounts.

This is not to say that all music aspires to the condition of mathematics, or that the best music – prototypically that of J.S. Bach – is the kind that most readily lends itself to quasi-mathematical or ultra-formalist ideas of structure and development. For one thing, that conception ignores the most basic difference between music and mathematics: that whereas mathematics, at least on the Platonist view, has to do with abstract or ideal entities that inherently elude the utmost reach of human perceptual grasp, music must by its very nature involve our sensory-perceptual responses before we can make a start with the business of formal or structural analysis. Thus any such analysis will have to meet the test of matching (even if it also deepens and refines) the intuitions of a competent listener, just as – in a different though related field – any theory of grammar, no matter how technically advanced, will have to chime with the standing intuitions of competent native speakers. In the case of music that requirement is all the more difficult to satisfy since musical responses are subject to a far greater range of variation from one listener to the next, so that what counts as 'competence' in this regard – as providing the relevant standard for assessment – is that much harder to specify. This is another reason why any Platonist approach to issues of musical ontology and value has to be qualified by the caveat that it cannot do more than approximate the sorts of truth-condition that apply to statements about mathematics, logic, or the formal sciences. Still the qualification need not involve falling back to some equivocal midway stance, such as that adopted by the theorists of response-dependence or by the advocates of a scaled-down 'humanised' Platonism which amounts to much the same thing under a different, more robust-sounding description.[50] Rather it is just to acknowledge – as can scarcely be denied – that whatever statements we make about music in the hope, belief, or presumption of their holding good will have to do not only with certain salient features of the work itself but also with our competent (musically-informed) perception of them or the kinds of response that they *can and should* evoke in a sufficiently keen-eared listener.

Still it may asked: what is the difference between this kind of qualified Platonist approach in the case of music and the kinds of accommodationist thinking – the various attempts to strike a compromise stance between realism and anti-realism – that I have criticised above? After all, it is hard to see how this difference could amount to very much if musical 'Platonism' is so defined as to admit the crucial role of listener-response (no matter how perceptive and intelligent) when it comes to deciding just which elements of form, structure, thematic development, tonal progression, etc., should count as intrinsic to the work 'itself', that is to say, the work platonically conceived as transcending any such merely subjective or response-dependent dimension. Thus, here as with mathematics and the formal sciences,

Platonism would seem *prima facie* downright incompatible with a theory that acknowledges the extent to which truth must be conceived as subject to the scope of competent, normal, or optimised human judgement. Yet it is just this basic ontological distinction between music and mathematics – that the former, unlike the latter, involves an irreducible appeal to the register of human cognitive-appreciative powers – which can serve as a useful means of explaining what is wrong with any form of the response-dispositional or 'humanised Platonist' approach when extended to regions of enquiry beyond its proper remit. That is to say, it brings out both the fallacy involved in reducing mathematical or logical truth to the compass of human epistemic warrant, and the opposite fallacy of treating music - by analogy with mathematics – as *purely and simply* an affair of formal, objectively existent structures. For this is to ignore the realist case that well-formed (i.e., truth-apt) mathematical statements, theorems, or hypotheses have their truth-value fixed irrespective of whatever we may know or be able to establish concerning them. And it is also to ignore the fact that any competent, perceptive and well-informed 42 judgement about music will involve a phenomenological aspect – an appeal to the register of normal or optimal listener-response – which cannot be discounted in the quest for objectivity or analytic rigour.

This is why, as I have suggested, the instance of music may help to clarify some of the issues that arise in other fields of enquiry, among them philosophy of mathematics, logic, and the natural sciences. What it shows up by way of contrast is the fact that these latter – albeit for different, case-specific reasons – neither need nor admit any qualification of the realist-objectivist standpoint in order to make adequate room for the contribution of human perceptual responses or powers of cognitive judgement. In the former case, conversely, it is clear that analysis cannot produce any valid, musically convincing results except in so far as they fall square with the response of a competent listener under suitable conditions, i.e., when exposed to a likewise competent performance of the given work and in the absence of any distorting factors (whether ambient or cultural) that might get in the way of that response. Thus the question *what counts* as a valid claim or a truth-apt statement in the context of music analysis might perhaps find an answer of the kind proposed by the response-dependence theorists, namely a quantified biconditional linking the statement to a more-or-less detailed specification of the various requirements that have to be met in order for that to be the case.

One could then come up with a wide range of such biconditional formulas, from the most basic and nearly tautologous ('piece *x* is in classical sonata-form if it would reliably be recognised as such under normal acoustic conditions by any competent, attentive listener with an adequate grasp of the relevant structural features') to other, more elaborately specified instances ('it is true that "work *y* exhibits a striking pattern of major/minor harmonic alternations together with shifts from triple to quadruple metric patterns" just so long as that statement would be endorsed by any tonally and rhythmically sensitive listener with the ability to recognise such complex interactions'). Or again, the biconditional might include certain kinds of evaluative as well as structural-descriptive predicate, always with reference to normalised or idealised listener-response as a validating ground of judgement. Thus the left-hand clause might read: 'composer z's Third Symphony is the finest of his eight works in this genre since it is here that his music most fully achieves those distinctive qualities – of rhythmic drive, harmonic dynamism, sweeping tonal progression – which the others strive for but never bring off to such compelling effect'. In which case the

right-hand (conditional) clause would have to specify that this claim was true, or warranted in descriptive and evaluative terms, just so long as it was such as to command the assent of listeners properly qualified to judge of its various component parts. That is to say, its truth-conditions would derive from – or depend upon – its answerability to certain well-defined standards of musical appreciation, understanding, and judgement which in turn drew their adjudicative warrant from a detailed specification of the particular responsive capacities involved. So, for instance, in the two last-mentioned cases – where (as it happens) the composers I had in mind were the Czech Bohuslav Martinu and the American Roy Harris – the claims would count as veridical just on condition that the various melodic, rhythmic, tonal and dynamic attributes to which those statements refer would indeed be picked out as salient, distinctive, or characteristic by any well qualified (musically informed) listener with a good knowledge of the works in question. However, as I have argued above, the main drawback of response-dispositional 'solutions' to the realism/anti-realism issue is that they tend to work out either as merely tautologous (where the right-hand side of the biconditional amounts to a kind of all-purpose, 'whatever-ittakes' clause) or else as a more substantive and specific but *to just that extent* far from self-evident or uncontroversial specification of the relevant responsive capacities. In other words, it can look very much like a case of attempting to have one's cake and eat it but managing to do neither since the cake has crumbled away in the meantime.

It seems to me that one reason for this difficulty with response-dependent approaches to epistemology is their grounding in, and constant allusion to, the Lockean *topos* of secondary qualities. On the one hand these are clearly prime candidates for treatment in this manner since they involve a strictly irreducible reference to qualitative aspects of human sensory or perceptual experience which cannot be fully cashed out in physical-scientific terms, i.e., through some putative explanation deriving (in the case of colour) from optics, reflectance theory, quantum electrodynamics, the neurophysiology of vision, etc. Such is the well-known problem of qualia – of the gap between third-person scientific and first-person phenomenological (or 'what it's like') modes of thought – which philosophers have often claimed to resolve, but which continues to divide them along various fault-lines of entrenched presupposition.[51] On the other hand response-dependence theories pay for their ability to make this problem look misconceived – just an error brought about by seeking scientific explanations where such explanations are out of place – with their failure to provide any adequate (non-circular) account of how the truth-predicate functions when applied *either* in mathematical-scientific *or* in phenomenological contexts of debate. For in the one case they tend to collapse the idea of objective, i.e., recognition-transcendent truth into a question of what counts as such amongst those presumptively best qualified to judge while in the other they treat all modes of perceptual experience (or statements concerning them) as subject to assessment only in terms of an equation – the quantified biconditional – which amounts to no more than a thinly disguised or verbally spun-out tautology.

This criticism has lately been brought against the theory by Mark Johnson, one of its earlier proponents, in terms of what he calls the 'missing explanation' argument.[52] Briefly stated, it runs that response-dependent accounts of secondary qualities must always be deficient in explanatory power unless they include some causal component along with the (otherwise tautologous) formula. This would be an extra clause to the

effect: 'quality *x* is truly perceived as such by perceiver *y* just so long as the requirements are met (i.e., the perceiver is up to the mark and the ambient conditions are truth-conducive) *and also* there is some adequately specified causal relation between *x*'s perceiving *y* as an instance of just that quality and *y*'s actually possessing that quality as a matter of perceiver-related but not entirely perceiver-dependent fact'. (I am paraphrasing Johnson rather freely here but take this to capture the gist of his argument accurately enough.) The point of such objections is that any attempt to resolve or circumvent the realism/anti-realism dispute by recourse to response-dependence theory in however qualified a form can only escape a vicious (or at any rate disabling) circularity if it goes so far toward conceding the force of opposed, e.g., causal-explanatory arguments as to leave its own thesis either redundant or downright false. That is to say, it would allow scientific realists to argue that this denouement is best regarded as a classic *reductio* not only of response-dependence theory in its current form but of any approach – from Locke on down – which has recourse to a realm of subjective (no matter how widely shared or communally warranted) perceptions and judgements. Moreover, the same objection would apply to 'humanised Platonist' accounts of mathematics and the formal sciences since here also – from a realist (or *echt*-Platonist) standpoint – what is lost by such concessions to the adversary camp is not merely, as Alex Miller would have it, a 'metaphysical' or 'sublimated' conception of realism but the single most basic commitment of any realism worthy the name.[53] For whatever its attractions as a middle-ground stance or a hedge against reactive sceptical doctrines there is still a clear sense in which any proposal of this sort involves the idea of truth as epistemically constrained, i.e., as a matter of optimised assertoric warrant or of best judgement among those 44 deemed fittest to judge. In which case it is not so much a good working compromise – one that should keep the realists happy while fending off the usual range of anti-realist objections – as a rather shuffling and evasive form of anti-realism which concedes the main point (the existence of objective, recognition-transcendent truths) and thus lets the argument go pretty much by default.

VI

This is why I have suggested that reflection on music, on its ontological status and the criteria for various kinds of judgement about it may provide a better, more helpful guide to some of these issues than reflection on the standard Lockean topos of secondary qualities. Music is a highly structured and hence – albeit in varying degrees – a cognitively more complex and articulated mode of perceptual experience which, unlike the range of everyday sonorous or acoustic phenomena, gives a hold for much subtler discriminations of normal, adequate, or optimal listener-response. Thus it doesn't leave room for the kind of tautologous or blandly uninformative biconditional ('sound *x* is loud/soft/piercing/discordant, etc., if and only if perceived as such by any subject with properly functioning auditory apparatus under normal acoustic conditions') that typifies the discourse of response-dependence. Rather, it shows how trivially circular such formulas are if applied in the case of music and in hope of establishing anything of interest with regard either to the work in question or to the question what should count as a valid, competent, or musically informed judgement concerning it.

This is also to say that such judgements, if truth-apt, must be thought of as more or less responsive (and responsible) to standards of attentiveness, perceptual acuity, and

long-range structural grasp which *can* be spelled out in substantive terms and *cannot* be reduced to just another variant on the biconditional theme. From which it follows that there is always a further, phenomenological dimension – a reference to aspects of the work as they strike a duly perceptive and appreciative listener – that goes beyond anything accountable in terms of generalised 'best judgement'. That is, music poses a particular challenge to response-dispositional theories in so far as it involves a range of attributes (tonal, thematic, rhythmic, structural etc.) which are not – or not solely – listener-dependent but also, and by no means incompatibly with that, a capacity to call forth complex and highly specific kinds of listener-response that exceed any such vague, all-purpose mode of specification. In which case there is always a question whether listeners, analysts, philosophers of music, or even those engaged – like myself at present – in a kind of meta-philosophical address to these issues have got things right or wrong (quite aside from their own or other people's best judgement) in relation to musical works. Thus the standing possibility of error must always be allowed unless it is ruled out through some such stipulative error-excluding device as the quantified biconditional which makes it, quite simply, an *a priori* truth that best judgement necessarily, by very definition equates with what's there in the music. Otherwise we shall have to make terms with the fact – borne out with depressing regularity by the record of musical criticism to date – that it can often go very badly wrong unless defined in counterfactual terms as that upon which all judges would be sure to converge at the limit of optimal response.

As I have said, this should not be taken as an argument for assimilating music to the kind of full-fledged Platonist approach that would treat it on a par with mathematics and the formal sciences. That analogy breaks down on the problem of explaining how musical perception, understanding, and evaluation could be held accountable to standards – like those of mathematical or logical proof – whose validity-conditions are in no way involved with the register of human responsive or phenomenological capacities. Hence, as I have said, the error of supposing that the kinds of extreme contrapuntal and structural complexity exhibited by works such as Bach's *Musical Offering* or *Art of Fugue* give reason to think that the greatest music somehow aspires to the condition of pure mathematics. For if this were the case then analysis of those works – or indeed of any music that qualified for treatment on similar terms – could best take the form of a proof-theoretic demonstration that certain thematic, harmonic, and tonal problems were posed and resolved through a process of thought whose validity had nothing whatever to do with the work's expressive or communicative power. A good deal of present-day music analysis does seem to work on this mistaken supposition, that is, the idea that mathematical techniques such as pitch-class set analysis are somehow guaranteed to reveal what is most significant about the music's structural or even its phenomenological character as perceived by a listener duly instructed in these or kindred technicalities.[54] Moreover, that idea might be said to have exerted a strong and (arguably) a malign influence not only on certain ultra-formalist trends in academic musicology but also on the way that such thinking is mirrored in a line of creative-compositional development running from middle-late period (i.e., twelve-tone serial) Schoenberg, *via* Anton Webern, to the Darmstadt School and their few remaining followers. Here we have another striking case of how analysis can sometimes risk losing touch with the deeper-laid sources of musical expressivity. Undoubtedly these have much to do with the various structural (e.g., thematic, harmonic, and rhythmic) traits revealed by a sharpeared analytical approach. However the latter needs to be enhanced – guided and informed – by a prior sense of

their musical significance as realised through a full and appreciative listener-response. Otherwise analysis will tend to overemphasise those elements or aspects of the work that lend themselves most readily to treatment on formalist, structuralist or (quasi--)mathematical terms whilst under-valuing – even ignoring – those other, more elusive yet phenomenologically salient aspects that resist such treatment.

For much the same reason, if philosophy of music presses too far toward a full-fledged objectivist Platonism of the sort that finds its most frequent (if strongly disputed) application in mathematics, logic and the formal sciences then this may have a similar distorting effect. That is, it may prevent them from acknowledging the extent to which musical works exist in and though their ongoing reception-history and the responsive capacities of those – performers, listeners, and analysts alike – who seek to realise their structural as well as expressive qualities. Thus the trouble with an unqualified Platonist approach is, as one might expect, just the opposite of that which afflicts any view of music as a matter of purely subjective or (in the widest, i.e., non-rigorous and un- Husserlian sense of the term) phenomenological response. And again, it is the opposite of that which arises with response-dispositional theories wherein music would figure as a topic of discourse subject to truth-values or conditions of warranted assertibility that can always be can be cashed out through a circular appeal to 'whatever it takes' for work *x* to possess quality *y* just so long as the listener likewise possesses 'whatever it takes' to recognise *y* in *x* under normal (or optimal) conditions. For if pure-bred Platonism captures the idea that musical works must in some sense be thought of as transcending the various contingent aspects of their reception-history to date then it does so only at the cost of failing to explain how listeners, no matter how responsive, could ever gain access to the experience of music, as distinct from its abstract representation. (One is reminded here of Hermann Hesse's novel *The Glass- Bead Game* where a mandarin cultural elite is concerned with nothing so vulgar as musical composition or performance but spends all its time in devising elaborate mathematical permutations on existing works.[55]) However this gives no reason to swing right across to the opposite extreme of a downright anti-Platonist, subjectivist, or response-dependent approach that would deny the very possibility of music's possessing a mode of existence beyond its various transient realisations or beyond how it strikes the community of those presently deemed fittest to judge.

These issues are posed with particular force in the case of music – more so, I have argued, than when raised with reference to Locke on secondary qualities – since music occupies a kind of contested zone where philosophy will have to find room for some *prima facie* sharply conflicting but none the less jointly binding conditions on any adequate approach. This is why I have drawn attention to Derrida's treatment of the various deep-laid antinomies that emerge throughout Husserl's project of transcendental phenomenology.[56] Although he (Derrida) has nothing to say directly about music he does raise the question, more generally, of how 'a certain' structuralism nowadays inherits the Platonist commitment to values of recognition-transcendent truth or 'absolute ideal objectivity', and also of how this commitment relates to the phenomenological concern with intuitive acts of understanding, judgement, and 46 conceptual-investigative grasp. I have argued elsewhere that analytic philosophy over the past half-century and more has been driven into a series of dead-ends – of ultimately sterile rather than productive or thought-provoking aporias – through its steadfast refusal (with just a few, mostly short-lived exceptions)

to engage with issues that have typically preoccupied thinkers in the 'continental' line of descent after Husserl.[57] Here also the case of music has a special pertinence and diagnostic force. For it is hard to escape the impression that much analytical philosophy of music – and Anglophone aesthetic philosophy more generally – has long been in thrall to a narrow agenda of agreed-upon topics for debate which have to do mainly with issues of linguistic, conceptual or logico-semantic analysis, and has thereby avoided any deeper engagement with the kinds of issue taken up amongst thinkers in the 'other', mainland-European tradition. Yet in shying away from those questions it has tended to veer between the opposite extremes of an objectivist indifference to phenomenological concerns – stigmatised since Frege as mere 'psychologism' – and a series of reactive retreats into various sharply opposed (e.g., emotivist, projectivist, or other such non-cognitivist) positions.

Hence the strenuous but, it seems to me, the unavailing efforts of thinkers like McDowell to dismount from this violently oscillating seesaw or damp down its movements to the point of restoring a state of equilibrium no longer disturbed by such contrary pushes and pulls. What emerges from McDowell's claims to this effect, as likewise from the response-dependence literature, is the curious way that such attempts to occupy a sensible, middle-ground position between realism and anti-realism end up by producing yet more complex and roundabout versions of the same old subject/object or mind/world dualism. Thus, according to McDowell,

> what we find in Kant is precisely the picture I have been recommending: a picture in which reality is not located outside a boundary that encloses the conceptual sphere . . . . The fact that experience involves receptivity ensures the required constraint from outside thinking and judging. But since the deliverances of receptivity already draw on capacities that belong to spontaneity, we can coherently suppose that the constraint is rational; that is how the picture avoids the pitfall of the Given.[58]

The tortuous, chinese-box-like phrasing of this passage – the notion of reality as somehow no less 'real' for *not* being 'located outside a boundary that encloses the conceptual sphere' – is evidence enough that McDowell is still wrestling with problems that Kant bequeathed most directly to his heirs in the German idealist line of descent, whether 'subjective idealists' like Fichte or 'objective idealists' like Schelling.[59] But it is also the kind of quandary that has typified a great deal of debate in the mainstream analytic tradition, from logical positivism down. That is to say, it results from that same Kantian problem of how one could ever reconcile two such intrinsically disparate or non-communicating realms as those of sensuous (phenomenal) intuition and objective (noumenal or mind-independent) reality.

I should not wish to claim – far from it – that I have here succeeded in putting together what just about every development in post-Kantian epistemology has somehow managed to drive asunder, most often (as with McDowell) despite and against its professed intent. On the other hand I do hope to have shown that this problem has a complex genealogy, one that has received a more adequate, historically informed, and – be it said – philosophically sophisticated treatment in post-Husserlian continental than in mainstream analytic debate. One reason is that continental thinkers – even those (like Habermas and Derrida) who have little to say expressly on the subject of music – are none the less heirs to a history of speculative thought

concerning the relationship between truth, knowledge and experience where issues of aesthetics have been central, rather than marginal, and where music has often figured as the greatest challenge to philosophy's self-image and powers of conceptualisation. Nowhere is this more apparent than in the writings of a thinker like Adorno for whom that challenge was a matter of music's stubbornly autonomous formal character – its holding out against the lures of commodified mass-culture – yet also, paradoxically, of its capacity to reflect (albeit in a highly oblique or mediated fashion) the various forces at work in its social contexts of production and reception.

I can scarcely cite Adorno as a straightforward source of philosophical support for the kind of phenomenologically qualified Platonist approach to the ontology of music that I have proposed in the course of this essay. After all, some of his most powerful and sustained critiques were directed toward the project of Husserlian transcendental phenomenology and also toward what he saw as the self-deluding and ideologically complicitous idea that one could somehow subsume the unique particulars of musical (or indeed everyday) experience under the rubric of an abstract, hence reified general ontology.[60] Yet it is clear that Adorno's negative-dialectical approach to the sociology of music cannot do without the enabling premise that works have a certain structural autonomy, that is to say, an ontological status beyond whatever meaning or value is imputed to them by this or that (however well-attuned) listener in this or that (however favourable) context of reception. It is equally clear, despite his animadversions on Husserl, that Adorno's relentless critique of conceptual abstraction and his defence of the particular against the encroachments of system and method cannot but have recourse, at crucial points, to a phenomenology of musical and other perceptually-based modes of experience. For there could otherwise be no explaining how certain works – those that elicit Adorno's dialectically hard-won approval – are such as to challenge our acculturated, ideologically conditioned habits of response. This is where Adorno's thinking comes closest to Derrida's deconstructive analyses of the various tensions in Husserl's project or the 'principled, essential and structural impossibility', as he puts it, 'of closing a structural phenomenology'.[61] It is also where reflection on the nature of music, its ontological status and relation to the range of our perceptual-cognitive capacities has most to offer by way of suggestive analogy in the context of current epistemological debate.

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[1] On the topic of response-dependence, see Mark Johnston, 'How to Speak of the Colours', *Philosophical Studies*, Vol. 68 (1992), pp. 221-63, and 'Objectivity Refigured', in J. Haldane and C. Wright (eds.), *Realism, Representation and Projection* (Oxford: Oxford University Press, 1993), pp. 85- 130; Christopher Norris, *Truth Matters: realism, anti-realism and response-dependence* (Edinburgh: Edinburgh University Press, 2002); Philip Pettit, 'Realism and Response Dependence', *Mind*, Vol. 100 (1991), pp. 597-626; Mark Powell, 'Realism or Response- Dependence?', *European Review of Philosophy*, Vol. 3 (1998), pp. 1-13; Ralph Wedgwood, 'The Essence of Response-Dependence', *European Review of Philosophy*, Vol. 3 (1998), pp. 31-54; Crispin Wright, 'Euthyphronism and the Physicality of Colour', *European Review of Philosophy*, Vol. 3 (1998), pp. 15-30 and *Truth and Objectivity* (Cambridge, MA: Harvard University Press, 1992).

[2] See especially Peter Railton, 'Red, Bittter, Good', *European Review of Philosophy*, Vol. 3 (1998), pp. 67- 84 and Crispin Wright, 'Moral Values, Projection, and Secondary Qualities', *Proceedings of the Aristotelian Society*, Supplementary Vol. 62 (1988), pp. 1-26

[3] Wright, *Truth and Objectivity* (op. cit.).

[4] See Norris, *Truth Matters* (op. cit.); also J.L. Aronson, 'Testing for Convergent Realism', *British Journal for the Philosophy of* 48 *Science*, Vol. 40 (1989), pp. 255-60; J. Aronson, R. Harré and E. Way, *Realism Rescued: how scientific progress is possible* (London: Duckworth, 1994); Richard Boyd, 'The Current Status of Scientific Realism', in Jarrett Leplin (ed.), *Scientific Realism* (Berkeley & Los Angeles: University of California Press, 1984), pp. 41-82; Michael Devitt, *Realism and Truth*, 2nd edn. (Oxford: Blackwell, 1986); Gilbert Harman, 'Inference to the Best Explanation', *Philosophical Review*, Vol. 74 (1965), pp. 88-95; Peter Lipton, *Inference to the Best Explanation* (London: Routledge, 1993); Stathis Psillos, *Scientific Realism: how science tracks truth* (London: Routledge, 1999); Wesley C. Salmon, *Scientific Explanation and the Causal Structure of the World* (Princeton, NJ: Princeton University Press, 1984).

[5] See Notes 1 and 2, above; also Norris, 'Response-Dependence: what's in it for the realist?', in *Epistemology: key concepts in philosophy* (London: Continuum, 2005), pp. 99-128.

[6] Plato, Euthyphro, in *The Dialogues of Plato*, Vol. 1, trans. R.E. Allen (New Haven: Yale University Press, 1984); also Wright, *Truth and Objectivity* (op. cit.).

[7] See Michael Dummett, *Truth and Other Enigmas* (London: Duckworth, 1978), *The Logical Basis of Metaphysics* (Duckworth, 1991), and *The Seas of Language* (Oxford: Clarendon Press, 1993); also Michael Luntley, *Language, Logic and Experience: the case for anti-realism* (Duckworth, 1988); Neil Tennant, *Anti-Realism and Logic* (Oxford: Clarendon Press, 1987) and *The Taming of the True* (Oxford: Oxford University Press, 1997).

[8] For a range of views, see Hartry Field, *Realism, Mathematics and Modality* (Oxford: Blackwell, 1989); Bob Hale, *Abstract Objects* (Blackwell, 1987) and 'Is Platonism Epistemologically Bankrupt?', *Philosophical Review*, Vol. 103 (1994), pp. 299-325; Jerrold J. Katz, *Realistic Rationalism* (Cambridge, Mass.: M.I.T. Press, 1998); Hilary Putnam, *Mathematics, Matter and Method* (Cambridge University Press, 1975); Scott Soames, *Understanding Truth* (Oxford: Oxford University Press, 1999); Crispin Wright, *Frege's Conception of Numbers as Objects* (Aberdeen: Aberdeen University Press, 1983).

[9] For further argument to this effect, see Norris, *Truth Matters* (op. cit.).

[10] For a range of views on this issue, see Ben Caplan and Carl Matheson, 'Can a Musical Work be Created?', *British Journal of Aesthetics*, Vol. 44 (2004), pp. 113-34; Gregory Currie, *An Ontology of Art* (London: Macmillan, 1989); Julian Dodd, 'Musical Works as Eternal Types', *The British Journal of Aesthetics*, Vol.40 (2000), pp. 424-40; 'Defending Musical Platonism', *The British Journal of Aesthetics*, Vol. 42 (2002), 380-402; 'Types, Continuants, and the Ontology of Music', *British Journal of Aesthetics*, Vol. 44 (2004), pp. 342- 60; Peter Kivy, 'Platonism in Music: a kind of defense' and 'Platonism in Music: another kind of defence', in *The Fine Art of Repetition* (Cambridge: Cambridge University Press, 1993), pp. 35-58 and 59-74; Jerrold Levinson, 'What a Musical Work Is' and 'What a Musical Work Is, Again', in *Music, Art and Metaphysics: essays in philosophical aesthetics* (Ithaca, NY: Cornell University Press, 1990), pp. 63-88 and 215-63; Robert A. Sharpe, 'Music, Platonism and Performance: some ontological strains', *British Journal of Aesthetics*, Vol. 35 (1995), pp. 38- 48; Nicholas Wolterstorff, *Works and Worlds of Art* (Oxford: Clarendon Press, 1980).

[11] T.W. Adorno, 'Bach Defended Against His Devotees', in *Prisms*, trans. Samuel and Shierry Weber (London: Spearman, 1967), pp. 133-146.

[12] See Dummett, *Truth and Other Enigmas* (op. cit.); also *Elements of Intuitionism* (Oxford: Oxford University Press, 1977).

[13] This debate is taken up by Field, Hale, Katz, Soames and others (see Note 8, above).

[14] See Note 4, above.

[15] Dummett, *Truth and Other Enigmas* (op. cit.).

[16] I take this very apt example from Soames, *Understanding Truth* (op. cit.).

[17] For various, more-or-less qualified statements of this view, see Katherine Bergeron and Philip V. Bohlman (eds.), *Disciplining Music: musicology and its canons* (Chicago: University of Chicago Press, 1992); Marcia J. Citron, *Gender and the Musical Canon* (Cambridge: Cambridge University Press, 1993); Nicholas Cook and Mark Everist (eds.), *Re-Thinking Music* (Oxford: Oxford University Press, 1999); Lydia Goehr, *The Imaginary Museum of Musical Works: an essay in the philosophy of music* (Oxford: Clarendon Press, 1992); Joseph Kerman, 'How we got into analysis, and how to get out', *Critical Inquiry*, Vol. 7 (1980), pp. 311-31; Lawrence Kramer, *Classical Music and Postmodern Knowledge* (Berkeley & Los Angeles: University of California Press, 1995); Judy Lochhead and

Joseph Auner (eds.), *Postmodern Music/Postmodern Thought* (New York & London: Garland, 2002); Susan McClary, *Feminine Endings: music, gender, and sexuality* (Minneapolis: University of Minnesota Press, 1981) and *Conventional Wisdom: the content of musical form* (U. California P., 2000); Ruth A. Solie (ed.), *Musicology and Difference* (U. California P., 1993); Robert Stradling and Meirion Hughes, *The English Musical Renaissance, 1860 – 1940: construction and deconstruction* (London: Routledge, 1993).

[18] See Note 17, above; also Rose Rosengard Subotnick, *Developing Variations: style and ideology in Western music* (Minneapolis: University of Minnesota Press, 1991) and *Deconstructive Variations: music and reason in Western society* (U. Minnesota P., 1996).

[19] W.V.O. Quine, 'Two Dogmas of Empiricism', in *From a Logical Point of View*, 2nd edn. (Cambridge, MA: Harvard University Press, 1961), pp. 20-46.

[20] See especially John McDowell, *Mind and World* (Cambridge, MA: Harvard University Press, 1994).

[21] McDowell, *Mind and World* (op. cit.); also Christopher Norris, 'McDowell on Kant: redrawing the bounds of sense' and 'The Limits of Naturalism: further thoughts on McDowell's *Mind and World*', in *Minding the Gap: epistemology and philosophy of science in the two traditions* (Amherst, MA: University of Massachusetts Press, 2000), pp. 172-96 and 197-230.

[22] Jacques Derrida, '"Genesis and Structure" and Phenomenology', in *Writing and Difference*, trans. Alan Bass (London: Routledge & Kegan Paul, 1978), pp. 154-68; *Edmund Husserl's 'Origin of Geometry': an introduction*, trans. John P. Leavey (Pittsburgh: Duquesne University Press, 1978); *La problème de la genèse dans la philosophie de Husserl* (Paris: Presses Universitaires de France, 1990); also *'Speech and Phenomena' and Other Essays on Husserl's Theory of Signs*, trans. David B. Allison (Evanston, IL: Northwestern University Press, 1973).

[23] Derrida, *Edmund Husserl's 'Origin of Geometry'* (op. cit.).

[24] See Notes 7 and 12, above.

[25] Derrida, 'Genesis and Structure' (op. cit.), pp. 158-9.

[26] Ibid, p. 162.

[27] See Norris, *Truth Matters* (op. cit.).

[28] See Notes 20 and 21, above.

[29] See Notes 1, 4, 7 and 8, above.

[30] Derrida, 'Structure and Genesis' (op. cit.), p. 160.

[31] Gottlob Frege, review of Edmund Husserl's *Philosophie der Arithmetik*, translated by E.-H. W. Kluge, *Mind*, Vol. LXXXI (1972), pp. 321-37; also Gilbert Ryle, 'Phenomenology', 'Review of Martin Farber, *The Foundations of Phenomenology'*, and 'Phenomenology versus *The Concept of Mind*', in Ryle, *Collected Papers*, Vol. 1 (London: Hutchinson, 1971), pp. 167-78, 215-24 & 179-96

[32] See Dummett, *The Origins of Analytic Philosophy* (London: Duckworth, 1993).

[33] Dagfinn Follesdal, 'Husserl and Frege: a contribution to elucidating the origins of phenomenological philosophy', in Leila Haaparanta (ed.), *Mind, Meaning and Mathematics: essays on the philosophical views of Husserl and Frege* (Dordrecht & Boston: Kluwer, 1994), pp. 3-47; J.N. Mohanty, *Transcendental Phenomenology: an analytic account* (Oxford: Blackwell, 1989); also Johanna Maria Tito, *Logic in the Husserlian Context* (Evanston, IL: Northwestern University Press, 1990).

[34] L.E.J. Brouwer, *Collected Works*, Vol. 1, *Philosophy and Foundations of Mathematics*, ed. A. Heyting (Amsterdam: North-Holland, 1975), p. 134.

[35] See Norris, *Truth Matters* (op. cit.); also John Divers and Alexander Miller, 'Arithmetical Platonism: reliability and judgementdependence', *Philosophical Studies*, Vol. 95 (1999), pp. 277- 310 and Miller, 'Rule-Following, Response-Dependence, and McDowell's Debate with Anti- Realism', *European Review of Philosophy*, Vol. 3 (1998), pp. 175- 97.

[36] See Note 35, above.

[37] See especially J. Alberto Coffa, *The Semantic Tradition from Kant to Carnap: to the Vienna Station* (Cambridge: Cambridge University Press, 1991); also Hilary Putnam, *Realism and Reason* (Cambridge U.P., 1983).

[38] See Devitt, *Realism and Truth* (op. cit.) for some strong arguments to this effect.

[39] David Lewis, *The Plurality of Worlds* (Oxford: Blackwell, 1986), p. 109.

[40] Ibid, p. 109.

[41] Eugene Wigner, 'The Unreasonable Effectiveness of Mathematics in the Physical Sciences', in *Symmetries and Reflections* (Cambridge, MA: MIT Press, 1960), pp. 222-37; p. 237.

[42] Katz, *Realistic Rationalism* (op. cit.), pp. 36-7.

[43] Lewis, *On the Plurality of Worlds* (op. cit.); see also Norris, 'Will the Real Saul Kripke Please Stand Up? fiction, philosophy and possible worlds', *Textual Practice*, Vol. 17, No. 1 (2003), pp. 225-251.

[44] See Raymond Bradley and Norman Swartz, *Possible Worlds: an introduction to logic and its philosophy* (Oxford: Blackwell, 1979); Jerome S. Bruner, *Actual Minds, Possible Worlds* (Cambridge, MA: Harvard University Press, 1986); Charles S. Chihara, *The Worlds of Possibility: modal realism and the semantics of modal logic* (Oxford: Clarendon Press, 2001); Rod Gierle, *Possible Worlds* (Chesham: Acumen, 2002); M. Loux (ed.), *The Possible and the Actual: readings in the metaphysics of modality* (Ithaca, NY: Cornell University Press, 1979).

[45] For further discussion of these issues, see Notes 8 and 35, above; also Paul Benacerraf, 'What Numbers Could Not Be', in Paul Benacerraf and Hilary Putnam (eds.), *The Philosophy of Mathematics: selected essays*, 2nd edn. (Cambridge: Cambridge University Press, 1983), pp. 272- 94; Hartry Field, *Realism, Mathematics and Modality* (Oxford: Blackwell, 1989); Kurt Gödel, 'What Is Cantor's Continuum Problem?', in Benacerraf and Putnam (eds.), *Philosophy of Mathematics* (op. cit.), pp. 470-85; Hilary Putnam, *Mathematics, Matter and Method* (Cambridge U.P., 1975).

[46] See especially Hilary Putnam, 'Is Semantics Possible?', 'The Meaning of "Meaning"', and 'Language and Reality', in *Mind, Language and Reality* (Cambridge: Cambridge University Press, 1975), pp. 139- 52, 215-71, and 272-90.

[47] Putnam, *Mind, Language and Reality* (op. cit.); also Saul A. Kripke, *Naming and Necessity* (Oxford: Blackwell, 1980).

[48] See Leonard Linsky (ed.), *Reference and Modality* (Oxford: Oxford University Press, 1971); Stephen Schwartz (ed.), *Naming, Necessity, and Natural Kinds* (Ithaca, NY: Cornell University Press, 1977); David Wiggins, *Sameness and Substance* (Oxford: Blackwell, 1980).

[49] Katz, *Realistic Rationalism* (op. cit.), p. 37.

[50] See Note 35, above.

[51] See for instance David Chalmers, *The Conscious Mind* (Oxford: Oxford University Press, 1996); Frank Jackson, 'Epiphenomenal Qualia', *Philosophical Quarterly*, Vol. 32 (1982), pp. 127-136); William Lycan, *Consciousness and Experience* (Cambridge, MA: MIT Press, 1996); Lycan (ed.), *Mind and Cognition: a reader* (Oxford: Blackwell, 1990); Thomas Nagel, 'What is it Like to be a Bat?', *Philosophical Review*, Vol. 83 (1974), pp. 435-456; J. O'Leary- Hawthorne and M. Michael (eds.), *Philosophy of Mind* (Dordrecht: Kluwer Books, 1993); Galen Strawson, *Mental Reality* (MIT Press, 1994).

[52] Mark Johnston, 'Are Manifest Qualities Response-Dependent?', *The Monist*, Vol. 81 (1998), pp. 3-43; see also Alex Miller, 'The Missing-Explanation Argument Revisited', *Analysis*, Vol. 61 (2001), pp. 76-86 and 'More Responses to the Missing-Explanation Argument', *Philosophia*, Vol. 25 (1997), pp. 331-49; Peter Menzies and Philip Pettit, 'Found: the missing explanation', *Analysis*, Vol. 53 (1993), pp. 100-109.

[53] See Note 35, above.

[54] For two pioneering essays in this vein, see Allen Forte, 'New Approaches to Linear Analysis', *Journal of the American Musicological Society* Vol. 41, No.2 (1988), pp. 315-48 and 'Pitch- Class Set Genera and the Origin of the Modern Harmonic Species', *Journal of Music Theory*, Vol. 32, No. 2 (1988), pp. 187-270.

[55] Hermann Hesse, *The Glass-Bead Game* (New York: Vintage, 1967).

[56] See Note 22, above.

[57] Norris, *Minding the Gap* (op. cit.)

[58] McDowell, *Mind and World* (op. cit.), p. 41.

[59] For further discussion, see Norrris, *Minding the Gap* (op. cit.).

[60] See especially T.W. Adorno, *Against Epistemology: a metacritique*, trans. Willis Domingo (Cambridge, MA: MIT Press, 1982); also *Negative Dialectics*, trans. E.B. Ashton (London: Routledge & Kegan Paul, 1974).

[61] Derrida, 'Genesis and Structure' (op. cit.), p. 162.