The Musical Representation

Meaning, Ontology, and Emotion

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1 General Introduction: What Is a Naturalistic Philosophical Theory of Musical Representation?

1.1 Introduction and Chapter Conspectus

If we are to unravel the riddle of musical experience, we need a thread on which to tug. Construing music as representational, as a symbolic system that carries extramusical content, I hope to persuade you, exposes such a thread. This will require showing (1) that music *can* be representational, that is, that musical events are physically *capable* of performing representational functions; and (2) that musical events *are* representational, that is, that they are used to represent by their producers and consumers. In the preface, I asserted that for the philosophical naturalist, the solution to the riddle of musical experience is to be found in the collusion between the physics of sound and the organization of the human body and mind–brain. But what exactly is philosophical naturalism? What are representations, and what, specifically, are musical representations? What, indeed, is a philosophical theory? In this general introduction, I attempt to outline what I take a naturalistic philosophical theory of musical representation to be and what such a theory might be expected to accomplish. Readers unconcerned with these philosophical framework issues may skip over the next three sections and go directly to section 1.5, perhaps opting to return to the omitted sections at some later juncture.

Section 1.2 presents a dialectically organized sketch of the version of naturalism I endorse. A naturalist must develop a view concerning the integration of scientific description and philosophical analysis, and a developed view on this matter is indispensable to the task of clarifying the explanatory strategy of any philosophical work that avows naturalist commitments. The treatment of representation in a naturalistic setting is a case in point. How does a naturalist reconcile naturalism with the normative requirements, expressed as correctness conditions, of meaning and content? Section 1.2 endorses a physicalist functionalist approach: a representation (or representational token) is construed as a physical (or physically implemented) item that is used by an interpreter to carry out one or more representational functions. Although interpretation need not be anything as sophisticated or explicit as the metalevel paraphrase

discussed in section 1.3 below, it will minimally involve the extraction of informational content from informational vehicles and the subsequent internal representation of that content, which is an implicit mode of paraphrase. Without pretending to an exhaustive treatment of representational function, a task that extends beyond the scope of a book directed specifically at musical representation, I provide in section 1.2 an account of what these representational functions are and what sense of ''function'' will be in play.

Section 1.3 opens with a discussion of representation and metarepresentation, or the representation of representation. There are two reasons for this. First, the argument of the book relies, though not in an entirely uncritical way, on the generative theory of musical understanding proposed by Lerdahl and Jackendoff (1983). I argue in section 1.3 that generative theories both of language and music are fundamentally metarepresentational because their subject matter consists of representations and rules. Second, metarepresentation is central to the conception of philosophical activity I endorse. In section 1.4, I ally myself with those who see philosophy as an ongoing attempt to elucidate, or make explicit, normative principles implicitly in force in a range of venues and to bring principle and judgment of cases into reflective equilibrium. Making explicit is a mode of interpretation, and interpretation is a mode of metarepresentation.

One such venue of making explicit is Western tonal art music since 1650. This musical tradition, I shall argue, is a norm-governed, representational practice. A naturalistic philosophical theory of musical representation, then, will be a theory that attempts to make normative principles of musical representation explicit and bring them into reflective equilibrium with the intuitions of competent listeners concerning a specified range of musical experience, while respecting a specific set of naturalistic commitments. By ''competent listeners'' I mean, first, those who are familiar with the stylistic conventions of Western tonal art music, but who are not necessarily technically trained in performance or music theory. Second, these are listeners who actually have a body of experience to call upon, listeners who have an interest in and have spent some significant amount of time interacting with music of this style. The aim is to specify what such music is supposed to be doing for such listeners. Section 1.5 completes the general introduction with a conspectus of the entire book.

1.2 Naturalism

''Naturalism'' is a multiply ambiguous term. In epistemology alone, where, owing to Quine's pioneering efforts, contemporary naturalism first stimulated significant interest, a variety of distinct naturalistic positions can be discerned. We shall be taking up these and other niceties presently. According to my usage, a philosophical naturalist will (minimally) be committed to three theses:

1. The *ontological* thesis: pending future developments in basic science, nothing exists, including representational tokens themselves, that is not some form of physical mass-energy falling under the principle of the conservation of energy (which is not to deny that complex physical systems may possess emergent properties, including intentionality and other mental properties, not present in simpler arrangements of mass-energy).
2. The *metaphysical* thesis: all existing entities are enmeshed in the causal order of the physical universe and as such fall under the counterfactual-supporting causal laws of the basic sciences of physics and chemistry, or the successors of such laws (which is not to make the reductivist claim that these laws are sufficient to explain satisfactorily the origins and behavior of all complex emergent phenomena, including biological, mental, and social phenomena).
3. The *epistemological* thesis: all material descriptive knowledge claims must in principle be empirically testable, that is, evaluable before the tribunal of sensory experience, and that any such claim must cohere with (minimally, be consistent with) evolving scientific theory (which is not to subscribe to a verificationist criterion of meaningfulness or to a falsificationist principle for demarcating science from nonscience; nor is it to deny that observation is theory laden and that some version of confirmation holism may be tenable; nor is it to insist that all scientific-theoretical entities at various levels of functional and structural abstraction be in principle observable).

The expression ''material descriptive knowledge claims'' is meant to exclude

1. formal (mathematical and logical) knowledge;
2. knowing how;
3. the knowledge of behavioral norms and rules; and
4. the knowledge (i.e., the understanding) of meanings.

None of these modes of knowledge is empirically evaluable in the way putative material descriptive knowledge claims are. For the naturalist, therefore, they will all be subject to different modes of evaluation.

The first two exclusions are, I think, not very contentious. So consider just the third and the fourth. Knowledge of behavioral norms and rules is best seen as competency, or a mode of knowing how. Such knowledge tends not to be manifested verbally, although, of course, it may be; rather, it tends to be manifested in action. If knowledge of behavioral norms is manifested verbally at all, it is expressed by stating or paraphrasing rules. Knowledge of rules is rarely expressed by describing them, and even when it is, the description will contain a quotation of the rule or a paraphrase of the content of the rule: ''The rule that . . .''. Knowledge of behavioral norms is characteristically evaluated not by judging the correctness of any verbal expression of rules, but by judging the correctness of behavior.

Knowledge of meanings is a mode of knowledge of norms that apply to behavior and thus also a mode of knowing how. A speaker may know that a word has a certain

meaning, but this knowledge is metalinguistic, and the speaker must be able to use the words in the metalanguage in which this knowledge is stated. Denying that knowledge of meanings is a mode of knowing how thus threatens a regress. Meanings, however, are not disembodied; they are carried by representations. But what exactly is a representation? Representations, I shall argue, are families of representational tokens, and a representational token, on the view I shall recommend in this book, is a physical (or physically implemented) item that acquires meaning or content by being used by an interpreter in one of two fundamental ways: (1) to derive information from an object (or objects), or (2) to guide action directed toward an object (or objects) by exploiting a link between the representational item and those objects. These two functions are not mutually exclusive, but rather complementary; and "guiding action" must be understood broadly enough to include the directing of attention. A representational token is linked with an object either by its being connected causally with it, or by correlating reliably with it, or by being linked with its object by habit or association, or by convention or stipulation. The object of a representation, moreover, may be another representation or even itself. In these cases the linkage between representation and metarepresentation will be conventional when the representations in question are external. Internal metarepresentational tokens may be linked with their objects causally or by reliable correlation or association. In addition, representations that have attained a certain level of logical sophistication may be inferentially linked with other representations.

Nothing, then, means anything unless and until it is pressed into representational service by an interpreter (or a community of interpreters).[1] This makes it possible both to misuse a representation and to use it in a "conniving" or fictional way with the awareness that its object is only virtual. With the possibility of misuse come correctness conditions, and with these, normative standards. So meanings themselves are normatively constrained. Because the use of certain types of representational tokens will exploit causal relationships between representational tokens and the world, the meanings of such token-types will have an externalist component that cannot be eliminated. But contrary to purely externalist causal-informational accounts of meaning and content, on this view causal relations on their own are incapable of fixing meanings. Any representation has many causal antecedents, both proximal and distal; and referentially vacuous representations lacking distal causal antecedents are not necessarily meaningless. To be in a representational state with a specific causal provenance, therefore, is not to have knowledge of meanings. To know the meaning of a representational item is to know how to use it correctly, to be competent to use it according to implicit or explicit norms, including inferential norms. Representation use, therefore, is also subject to sanctions, and knowledge of meaning is also evaluated by judging behavior, which in the central case is verbal behavior.

The three minimalist naturalist theses enunciated above are obviously philosophical theses. But are they descriptive knowledge claims? If so, are they material claims, or are they something else? To address these questions we cannot avoid considering what a naturalist should say about the relationship between generally empirical knowledge, science, and philosophy. Confining our attention for the moment to epistemology, we may distinguish five distinct versions of naturalism, ordered here from the least to the most radical (see Haack 1993, 118–119, for this formulation):

1. an extension of the term ''epistemology'' to refer not only to the philosophical theory of knowledge, but also to natural-scientific studies of cognition;
2. the proposal that epistemology be reconstrued as the philosophical component of a joint enterprise with the sciences of cognition, in which the questions about human knowledge tackled by philosophy will be extended to include new problem areas suggested by natural-scientific work;
3. the thesis that traditional problems of epistemology can be resolved a posteriori, within the web of empirical belief;
3′. the thesis that results from the sciences of cognition may be relevant to, and may legitimately be used in the resolution of, traditional philosophical problems, either
(a) all the traditional problems; or
(b) some of the traditional problems;
4. the thesis that traditional problems of epistemology can be resolved by the natural sciences of cognition, either
(a) all the traditional problems; or
(b) some of the traditional problems;
5. the thesis that traditional problems of epistemology are illegitimate or misconceived, and should be abandoned, to be replaced by natural-scientific questions about human cognition, either
(a) all the traditional problems; or
(b) some of the traditional problems.

The (a) and (b) variants of (3), (4), and (5) are termed, respectively, ''broad'' and ''narrow.'' Where (1) and (2) are ''expansionist'' but still ''a priorist'' versions of naturalized epistemology, (3), (4), and (5) are all ''a posteriorist.'' In addition, where (3) and (4) are ''reformist,'' (4) and (5) are ''scientistic.'' Finally, (5) is ''revolutionary'' because it adopts an eliminativist position regarding the traditional problems of epistemology.

Quine's adversions to the continuity of science and philosophy might suggest that he is committed to a variant of (3). But he then makes two covert moves, first a shift from (3) to (4), and, from there, a shift to (5). The first shift is abetted by an ambiguity in the meaning of the word ''science,'' which supports both narrower and broader construals. Interpreted narrowly, ''science'' refers to a specific set of disciplines; but

interpreted broadly, it refers to the entire web of empirical belief (Haack 1993, 122). Quine's first shift is the direct result of an unacknowledged slide from the broader to the narrower usage of the word "science," a transition from the claim that epistemology is continuous with the web of empirical belief to the claim that goals of epistemology may be entirely realized using the methods of the empirical sciences of cognition. But (4) is an inherently unstable position. Among the "traditional problems" of epistemology are the normative issues of establishing standards for justification of belief and the appraisal of evidence: like logic and ethics, traditional epistemology is a normative, prescriptive discipline. Since the empirical sciences (narrowly construed) are in the business of description and explanation, and not of prescription, they are ill equipped to address these normative questions, and therefore unable to realize the goals of traditional epistemology. Version (4) thus tends to collapse into (5), which solves the difficulty by simply eliminating the concerns of traditional epistemology. (5) replaces norms of epistemic evaluation with descriptive notions like reliability (a reliable cognitive procedure is one that, as a matter of fact, produces true beliefs with a relative frequency of 50 percent or better) or biological proper function (the proper function of cognitive mechanisms present in modern humans is to produce true beliefs because, as a matter of fact, homologues of these mechanisms produced true beliefs in ancestral forms enough of the time to contribute to the differential reproductive success of those organisms, which is why the mechanisms are present in us, the modern forms). Essentially, (5) puts normative epistemology out of business, a less than desirable result.

One Quinean response to this is to assert that the normative concerns of traditional epistemology are not tossed aside, but reconfigured in revolutionary naturalized epistemology as a set of "engineering problems": the questions, "What is knowledge?" and "How do we justify knowledge claims and evaluate evidence?" give way to the question "How do we build an effective epistemic engine?" (see also Churchland 1979, ch. 5). But an effective epistemic engine is, for Quine, a successful predictor or, somewhat less cautiously (Quine 1986, 664–665), a discoverer of truth. I shall pass over the normative issues of how predictive success (empirical adequacy) and truth (the proportion of true beliefs to false ones) are to be weighted against other theoretical virtues such as systematicity, consilience, and entrenchment of predicates. Suppose we did engineer an effective epistemic engine. It might be a classically computational design like Thagard's PI (an acronym, pronounced like the Greek letter, for the LISP program "processes of induction" [1988]) or like Pollack's computational robot Oscar III (Pollack and Cruz 1999); or it might be a trained-up connectionist network able to categorize novel objects not belonging to its training set (Churchland 1989, 1995). To predict successfully is, in part, to categorize properly, to project appropriate, and not grue-like,[2] predicates (or their connectionist functional equivalents). To the extent such a system was successful, it would be doing these things right and not wrong, and we would also have an explanation of how it was doing so: after all, we built it. Right and wrong,

however, are determined according to our norms of logic and epistemology. We, the engineers, evaluate the system, albeit from the outside. We may, however, also explain our own successful cognitive activity. And when we do, Quine would suggest, we will have naturalized epistemology simply by explaining how we human cognizers get from stimulus to science.

But explaining *how* we get things right says nothing about why what we do *is* right. What exactly is unscientific or illegitimate about grue-like predicates? After all, they are empirically adequate, and the sentences in which they occur are, as far as we can tell, true, assuming the definitions of the grue predicates. Perhaps, then, there is something amiss in the definitions of these predicates. Perhaps, the answer might go, legitimate predicates are legitimate because they correspond to natural-kind categories (or at least track them: ''is green'' is not a natural-kind predicate). Natural-kind categories are stuffs or classes of entities whose causal powers (due to microstructure or causal-functional organization) maintain rich clusters of inductively projectible properties like the property of being green. But what is the status of this metalevel claim about predicates, the claim that the genuine predicates track natural kinds? The metalevel claim is a philosophical one: it has a normative flavor, since it seems to lay down criteria for legitimate predicates. For a revolutionary naturalist, however, the claim must be a scientific one. But of what sort? Perhaps a functional evolutionary-biological claim. One of Quine's responses (1969a, 126) hints at the type of evolutionary story later developed in sophisticated detail by Millikan (1984): genuine predicates track natural kinds because it is their direct and derived[3] proper functions to do so.

The problem with this approach is that evolution, because it is not an intelligent engineer but a satisficer, doesn't ''care about'' engineering effective epistemic engines per se. It cares about empirical adequacy, truth, and ''genuine'' natural-kind predicates only to the extent that they enhance fitness. As it happens, tracking some natural kinds is important to natural selection, while tracking others is not. It is important for living things to track hydrogen hydroxide and to distinguish it from hydrogen peroxide, but unimportant to distinguish jadeite from nephrite. Evolutionary considerations, while placing important constraints on any adequate version of naturalized epistemology, or, for that matter, on any adequate naturalized theory of representation, cannot by themselves vindicate any epistemological norm that places unqualified value on the tracking of natural kinds. Quine also has recourse to a rather different empirical claim about natural-kind predicates, the Goodman proposal that the genuine predicates are just the ones that are entrenched in established usage (1969a, 129). But this seems hardly more promising than the pure evolutionary approach: what endows past practice with normative force? We shall return to the issue of entrenchment later in this introduction, and to the evolutionary issues in chapter 4.

Since the integration of a genuinely normative epistemology with robust naturalistic commitments is her aim, it will come as no surprise that Haack endorses (3) and/or

(3′), ''a narrow, reformist, aposteriorist naturalism'' in epistemology. I shall be taking a similar line with regard to the philosophical theory of representation, an area where similar tensions between the descriptive and the normative appear. But the adoption of such a position levies certain demands. If one adopts a narrow version, it follows that only *some* of the traditional philosophical issues in the area in question can be resolved, using results from the sciences of cognition, within the web of empirical belief. But which ones, and how are the remaining issues resolved *without* using these results? Will the philosophical theory in question, be it epistemology or a theory of representation, rely on any material a priori principles either analytic or synthetic, that is, on any a priori principles other than formal truths of logic and set theory? If so, what is *their* epistemic warrant and how can we integrate our epistemic access to them with the naturalistic framework within which we, as natural cognizers, are included? If not—if the philosophical principles are one and all a posteriori—what makes them specifically philosophical? How are they distinguished from the results of the sciences of cognition? Are they to be held immune from empirical pressure, and if so, how? If, on the other hand, one adopts, as I am inclined to, the broad version of (3′), which holds that results from empirical science are relevant to all *legitimate*, that is, *nonchimerical*, traditional philosophical issues and which (in effect) denies the legitimacy of material a priori principles across the board, then the logical and the epistemological status of the specifically *philosophical* sentences of the theory and the role they play in ''the web of empirical belief'' both remain unclear. It is to these and related questions in the philosophical theory of representation that we now turn.

1.3 Representation, Metarepresentation, and Generative Theories of Language and Music

Whatever a theory of representation is, this much is clear: the sentences that constitute the theory will be metarepresentational, precisely because they are about representations or take representations as their objects. But there are, for the naturalist, two available modes of metarepresentation, the first descriptive and causally explanatory, the second interpretive and normative. The first mode explains the behaviors of representational tokens, both internal (''in the head'') and external (public), in part by describing the causal roles they play in the behaviors of representational systems. The second mode elucidates the *meanings* of representational tokens by paraphrasing them. Tabling for the moment the second, interpretive mode, consider the first, causal-explanatory one. This mode sits well with functionalist approaches in the philosophy of mind that individuate representational mental states in terms of their causal roles in the economy of a cognitive system. Internal representations function as causal intermediaries between the input (stimulation) and output (behavior). The causal-explanatory mode also sits well with purely externalist informational-semantic theories

(e.g., Fodor 1987, 1998), which attempt to individuate mental contents by invoking nomic causal relations between distal objects and tokens of types of mental representations. Finally, it is consonant with externalist natural teleological accounts of mental content (e.g., Millikan 1984), as well as with Darwinian selectionist (e.g., Dawkins 1976; Hull 1982; Durham 1991; Plotkin 1993; Blackmore 1999; Aunger 2002) and epidemiological (e.g., Sperber 1996) accounts of the replication and proliferation of cultural representations, both internal and external.

Subject to a caveat to be introduced presently, internal representational tokens considered descriptively may be said to instantiate a high-level natural functional kind, namely *natural representation*. External representations, also considered descriptively, instantiate (assuming they are conventional) a high-level artifactual-functional kind, namely *artifactual representation*. This suggests a parallel with evolutionary biology. Whereas biological species these days are generally regarded as historical individuals and not as natural kinds because terms designating species do not appear in any unrestricted evolutionary laws, high-level functional kinds like *predator* and *prey* or *host* and *parasite* are natural-kind candidates. *Predator* and *prey* or *host* and *parasite* are kinds of populations interacting in a state of equilibrium. Unrestricted, if only statistical, evolutionary laws concerning these high-level biological kinds can be formulated, laws that are empirically testable using species populations that instantiate these kinds, say, wolves and caribou (see, e.g., Rosenberg 1985, 145–146, 212–225). Artifacts like chairs, on the other hand, constitute artifactual functional kinds. If *natural* and *artifactual representation* are functional kinds, then they, like *predator* and *prey*, are kinds on a high level of functional abstraction; and if the universally quantified (but still obviously statistical) causal ''law of the epidemiology of representations'' propounded by anthropologist Dan Sperber (1996, 74)[4] is true, it is to instances of these kinds that this law applies.

But here is the caveat: the instances of the representational kinds are not the tokens themselves, but rather ''strains or families of concrete representations related both by causal relationships and by similarity of content'' (Sperber 1996, 83). These causally related families of concrete representations, as I shall be arguing in chapter 4, are types considered as tokens-of-a-type. Putting aside for the moment Sperber's claim of similarity of content, the parallel with biology remains close: biological species are also strains or families of ''concrete'' particulars (organisms) related by causal-historical relationships; and species, not individual organisms, instantiate the high-level biological functional kinds that are the referents of any unrestricted laws of evolutionary biology. The natural and artifactual representational functional kinds themselves, moreover, realize a three-place logical relation: a representational token (I have assumed, with only minimal argument so far) is a physical item used by an interpreter to stand for or to stand *in* for something else.[5] In this descriptive, causal-explanatory usage, ''representation'' is a theoretical term at home in the natural sciences of representation: cognitive

psychology, evolutionary biology, and causal-explanatory as opposed to interpretive anthropology like the epidemiological theory proposed by Sperber. Thus although an epidemiological theory of the production, replication, and proliferation of representations in cultural environments is fundamentally Darwinian in inspiration, it differs, or is held by Sperber to differ, from a strictly Darwinian selectionist explanatory model in certain important ways. This is also a topic we shall take up in detail in chapter 4.

Let us now recur to the second, interpretive mode of metarepresentation. Back in 1996, it seems, Sperber did not regard the sort of descriptive-explanatory theorizing about representations characterized above as metarepresentational at all. At that time all metarepresentation was, for him, interpretive:

> humans have a meta-representational, or *interpretive*, ability. That is, they can construct not only *descriptions*—that is representations of states of affairs—but also *interpretations*—that is, representations of representations. Now, humans use this interpretive ability to represent meanings, intentions, beliefs, opinions, theories and so on, whether or not they share them. (1996, 87, emphases in original)

Sperber now seems to be willing to allow for representation of representation that is not interpretive (2000, 117). But this representation of representation is still not (for him) metarepresentation ''in the relevant sense''; metarepresentation ''in any useful sense'' (118) concerns the representation of the *contents* of representations: ''In order to represent the content of a representation''—in order to metarepresent the representation (in the relevant or useful sense)—''we use another representation with a similar content. We don't describe the content of a representation; we paraphrase it, translate it, summarize it, expand on it—in a nutshell, we intepret it'' (1996, 34). The paradigmatic metarepresentation, for Sperber, is a metalevel sentence, such as ''The claim that *John is a creationist* is slanderous'' (2000, 120), that embeds a first-order sentence and translates or otherwise comments on the semantic content of the embedded sentence. It is true that some metarepresentations do embed and comment on the semantic content of first-order representations, as Tarskian T-sentences or the second-order sentences of indirect discourse do; but surely this is not the only appropriate or ''useful'' sense of the expression ''metarepresentation.'' In what follows, I shall regard any representation of representations, descriptive-explanatory or interpretive, as metarepresentational. Descriptive-explanatory metarepresentation (the ''causal metavocabulary'') is no less metarepresentational than is interpretive metarepresentation (the ''vocabulary metavocabulary'') (Brandom 2000).

It is evident that for Sperber, interpretation and translation live in the same neighborhood. But this means that interpretation requires something that descriptive metarepresentation either largely ignores (as in the case of purely externalist semantic theories) or presupposes (recall Sperber's adversion to ''families of representations related by *similar content*'' [emphasis mine]): interpretation requires the interpreter to

take into account the norms governing the *correct* use of the representations being metarepresented.[6] A field linguist who attempts radical translation of an alien language, for example, must regard certain noises and marks not merely as items in the physical causal order, but also as tokens of types to which syntactic (formation) and semantic (truth) rules apply, including rules of truth-preserving inference and material exclusion. Not all these rules need be made explicit by the field linguist; but it seems clear that when we translate we are doing something distinguishable from giving the sort of causal explanation of the behaviors of representational tokens and their users offered by a pure functionalist, a pure informational, or a selectionist/epidemiological theory of representation replication and proliferation.

Throughout the process of translation, the metarepresented representations may remain unendorsed and embedded in the referentially opaque expressions of indirect discourse, such as "... means that ...," "... believes that ..."; or they may be endorsed and held as true, thereby becoming first-order descriptive representations to which the translator is or becomes committed. This is the distinction between interpretation *de dicto* and interpretation *de re* (Brandom 2002). Suppose, now, that a linguistic interpreter undertakes the further task of making explicit, as far as he is able, the rules of the object language. Such an interpreter would be engaged in a mode of metarepresentation rather different from that of the original field linguist, a mode of metarepresentation that might be termed "meta*interpretation*." As a metainterpreter, such a theorist would be attempting to metarepresent the *implicit rules of the object language*, not just translate the linguistic expressions that *fall under* the rules. Translation (a variety of Sperber's metarepresentation) requires use of the rules implicit in the object language; metainterpretation requires *mention* of these rules: it makes these implicit rules explicit by (meta)representing them. Still another interpreter, say an ethnographer (an interpretive anthropologist), might not limit metainterpretation to *linguistic* rules but extend consideration to other norm-governed practices of the object culture, say adult initiation rites or religious ritual. For this ethnographer, however, issues of endorsement and commitment still apply. The alien rules are likely to remain unendorsed by the ethnographer and embedded in metarepresentational sentences. If they were to be endorsed, these previously embedded rules would become *acknowledged norms*, rather than metainterpretive claims.

The case of linguistic metainterpretation, however, differs from ethnographic metainterpretation in two important ways. First, if we assume a version of the principle of charity, some of the rules that are presumed to govern the interpreted language, namely the rules of formal logic (noncontradiction, truth-preserving inference rules), will be endorsed by the interpreter and will perforce apply to the interpreting metalanguage as well. Second, if the metainterpreting linguist has cognitivist ambitions and subscribes to generative principles, as most cognitive linguists these days seem to do,[7] certain universal grammatical rules that constrain the grammar of the interpreted

language will also constrain the interpreting language.[8] In the case of the linguistic metainterpreter, that is, many of the metarepresented rules will also apply at home. Because of the metainterpreter's endorsement of and commitment to grammatical rules applying to the alien language, then, at issue here will also be the achievement by the metainterpreter of something like "reflective equilibrium" between judgments of grammatical correctness, semantic meaningfulness, and inferential validity ("speaker-hearer intuitions"), on the one hand, and *his own* logical and grammatical governing rules, on the other.

"Reflective equilibrium" is, of course, a Rawlsian expression (1971) that concerns the process of reciprocal adjustment between moral principle and judgment of specific morally relevant cases. As such, the role of reflective equilibrium in moral philosophy bears some analogy to the integration of observation and descriptive-explanatory theory, sometimes referred to as the "interpretation" of data. Strictly speaking, however, reflective equilibrium apples only to the adjustment of *normative*, not descriptive, principle and specific judgments of correctness. But the notion of reflective equilibrium has broader application even with regard to normative principle, having been derived, as Rawls acknowledges, from Goodman's (1983) discussion of the reciprocal adjustment between specific judgments of inferential correctness and inferential principle in both deductive and inductive logic: "*A rule is amended if it yields an inference we are unwilling to accept; an inference is rejected if it violates a rule we are unwilling to amend*" (Goodman 1983, 64, emphasis original).

It is not uncommon to see metainterpretation by the ethnographer or the linguist referred to as "description": the ethnographer *describes*, but does not evaluate, the rules of the practices he studies; the linguist *describes*, but does not evaluate, the grammar of the object language he studies. The nonevaluative ethnographical metainterpretation that goes under the rubric of "description" is, however, fundamentally a mode of interpretation—a mode of interpretation subject only to conditions of very "narrow" reflective equilibrium, narrow because the interpreted normative principles are held isolated and deliberately not evaluated by being brought by the anthropologist into reflective equilibrium with his own principles; nor are his own evaluated with respect to the alien principles. The interpretation remains strictly *de dicto*. The rules of the alien practices are individuated by their contents; but, as Sperber says, we don't describe contents, we *interpret* them. Still, although the rules do express norms but do not, strictly speaking, carry truth values, they may also, insofar as they remain strictly *de dicto*, be taken to be descriptive *of the alien practices*: they both describe (for the interpreter) what is done and prescribe (for the interpretees) what is to be done.

Cognitive-linguistic metainterpretation, however, differs from ethnological metainterpretation not only because its rules must be evaluated (since they apply at home), but also because the rules of generative linguistics are supposed to be not merely "observationally" or "descriptively" adequate, but "explanatorily" adequate. A gram-

mar of a language is observationally adequate if it ''correctly predicts which sentences are (and are not) syntactically, semantically, and phonologically well-formed in the language'' (Radford 1981). That is, it correctly predicts which sentences *will be judged* to be well formed by native speakers. A grammar is descriptively adequate if it ''*also* correctly describes the . . . structure of sentences in the language in such a way as to provide a principled account of the native speaker's intuitions about this structure'' (ibid.). Like the metainterpreted normative principles of ethnography, a descriptively adequate grammar is both prescriptive and descriptive: it both *prescribes* (provides ''a principled account of the native speaker's intuitions about [sentence] structure'') and *describes* the structure of the correct sentences. Observationally and descriptively adequate grammars, I submit, are products of metainterpretive activity, the metarepresentation of the contents of implicit grammatical rules. Recall, we interpret contents; we don't describe them. Finally, a grammar attains explanatory adequacy if it accurately predicts, correctly describes, and ''also does so in terms of a highly restricted set of optimally simple, universal, maximally general principles which represent psychologically plausible natural principles of mental computation, and are 'learnable' by the child in a limited period of time, and given access to limited data'' (ibid., 25–26). Generative linguists take themselves to be explaining language acquisition by hypothesizing universal principles internal to the mind–brain, much as physicists explain light emissions of the sun by hypothesizing thermonuclear reactions in the sun's interior (Chomsky 1980, 191). They attempt to make a shift, not always explicitly acknowledged, from the vocabulary metavocabulary to the causal metavocabulary and then to apply the latter to the vocabulary of grammatical principles.

Notice, though, what is required to support this analogy between physics and linguistics. The grammatical principles as stated can be nothing other than metainterpretations of implicit, indeed unconsciously followed, task-level internal rules: they ''*represent* [metarepresent] psychologically plausible natural principles of mental computation.'' In order for these task-level internal principles to be scientifically explanatory, however, they (or their tokens) must be shown to be ''psychologically real,'' that is, causally efficacious in the mental economy. The standard strategy is to prescind from the semantics of the grammatical principles and to focus on their computational syntax in functionally defined areas of the brain, considered as a classically computational language-acquisition device. As a result of this move, the generative theorist in search of psychological reality faces an explanatory burden the physicist does not face. Whereas on any realist interpretation of physics, the processes *described* by physical law are certainly physically real, the physicist need not show the laws themselves to be ''physically real'' (whatever that might mean), short of accepting recent and controversial cosmological views that construe the physical universe itself as a computational entity.

In *Knowledge of Language*, Chomsky (1986, 27, 48n15, 239) reiterates his commitment to methodological parity among the empirical sciences, placing the explanations

provided by physics on all fours with computational explanations of psychology and linguistics. But there is, again, this difference: where the human visual and language acquisition systems arguably are computational devices, the physical universe most likely is not. Chomsky asks (ibid., 256), ''Would it have been reasonable to ask nineteenth-century chemists to state explicitly the conditions that would justify their saying that the entities they postulate [valences, benzene rings] are 'represented' in physical mechanisms?'' No, but that's just the point: such postulated ''entities'' are *not* representations, whereas classically computational principles are. If the language-acquisition device is not classically computational, however, then the principles that adequately *describe* human linguistic competence might not *cause* competent performance (see Schwartz 1978; Feagin 1997).

But they *may* cause it; and there are, it seems, only two ways to show this. Either one devises specific experimental tests designed to yield determinate answers, and then, depending on what these answers are, mounts an argument to the best explanation for the psychological reality of appropriate internal representational structures; or one argues on the basis of an indirect ''how else'' argument that grammatical competence cannot be explained without hypothesizing internal principles that compute over the syntactically structured representations in a language of thought.[9] Explanatory adequacy can also be bolstered by adducing an ''existence proof'': a biologically plausible computational design that implements these rules and is able to distinguish grammatical and ungrammatical sentences of an E-language, as Marr's computational theory of vision (1982) relies on a biologically plausible computational model that is able to construct representations of three-dimensional physical objects by extracting information from two-dimensional arrays.

Although experimental evidence for generative linguistics has been hard to come by, it is not entirely unavailable. A ''trace'' is a gap in the surface structure of a sentence that becomes filled when a category is moved by transformation (Chomsky 1986, 66). Consider the sentence ''The policeman saw the boy that the crowd at the party accused (trace) of the crime.'' After transformation, ''the boy'' is placed in the position of the trace as the direct object of the verb ''accused'' in the deep structure of the sentence.[10] When parsing the sentence, a hearer must hold ''the boy'' in memory until the appropriate insertion point arrives. Experimental tests have shown that carrying out this task imposes a cognitive load: speakers detect extraneous signals more slowly and EEGs show effects of this cognitive strain (Pinker 1994, 219–220). There are, in addition, empirical data concerning so-called garden path sentences, sentences that motivate a structural hypothesis that turns out to be wrong. Generative theory hypothesizes that readers begin to process a sentence using a single structural hypothesis. If the hypothesis fails, a new one is tried. In the sentence ''The student forgot the solution was in the back of the book,'' one is first inclined to read ''the solution'' incorrectly as the direct object of ''forgot,'' not as the subject of an embedded clause. Recorded eye move-

ments show that readers go back to the beginning of the sentence when they hit the word ''was,'' just at the point at which the generative phrase-structure tree predicts they will (Pinker 1994, 235). The generative principles and tree structures can, then, be inferred by way of inference to the best explanation of these psychological and neurological phenomena.

Indirect ''how else'' arguments are not as compelling as empirical arguments to the best explanation; but they are not worthless either. In this case, however, success depends on establishing (or rendering plausible) a strong negative universal modal claim, namely, that no biologically plausible mental representations other than the rules of a language of thought *could* account for human grammatical competence. The problem with such modal arguments is that they are only as good as the conceptual repertoire they employ, and in this case the concepts are empirical: what seems impossible may turn out to be possible after all. In addition, connectionists have mounted arguments that grammatical competence is possible without the rules of a language of thought, indeed without a language of thought at all (see, e.g., Clark 1989, 1997; Cussins 1990; Bechtel 1994). Elman's (1992) connectionist sentence parser might be thought to provide an existence proof that actualizes this possibility. As a result, ''how else'' arguments in favor of the language of thought hypothesis are not decisive. This may be why some critics, much to Chomsky's continued annoyance (1980, 189ff; 1986, 245ff), persist in denying the psychological reality of the principles of generative grammar.

Generative theory does, however, advance compelling explanatory hypotheses of a more general nature as well. By postulating innate mechanisms similar to mechanisms that support other functions like vision, hearing, and motor control, it explains, as behaviorism utterly fails to explain, how children are able to learn the complex grammar of a spoken language as effectively as they do from very limited and degraded inputs. This proposal coheres with and motivates neuroscientific research, yielding testable hypotheses concerning specific areas of the brain, including Wernicke's and Broca's areas, that are thought to support linguistic functions. The proposal also coheres with developmental neuroscience and with what is known about the evolutionary history of the brain. Although Chomsky himself has expressed considerable skepticism concerning the usefulness of such interdisciplinary parallels, the postulated hierarchical structure of linguistic trees coheres with explanatory structures postulated in other branches of cognitive neuroscience, especially those concerned with the functional organization of the motor system (see Lashley 1951; Miller et al. 1960; Jackendoff 1987). We shall take up the functional organization of the motor system in more detail in chapter 2.

The evidence for the psychological reality of the principles of generative grammar may not, then, be conclusive, but it is far from negligible. I have belabored this issue a bit here in the introduction not only in the interest of clarifying description,

explanation, interpretation, and metainterpretation, but also because I shall be relying in later chapters on the generative theory of tonal music advanced by Chomsky's former student and current intellectual ally, Ray Jackendoff, a theory that seems to be less well supported empirically than is generative linguistics and seems, therefore, to rely more heavily on reflective equilibrium between its principles and the intuitions of listeners. As a result, its credentials as a metarepresentational descriptive-explanatory theory, as opposed to a theory that is only metainterpretive, are a little weaker. But as we shall see, empirical evidence in its favor is also not entirely lacking.

According to Sperber's conventions, which I have adopted here and which, incidentally, are remarkably similar to Quine's, description is limited to the propositional representation of causally implicated physical entities, including representational tokens and their users. Description that is not embedded, explicitly or implicitly, in metarepresentational interpretive sentences carries with it existential commitment: a singular description can always be expressed as an existentially quantified variable with a predicate, and ''to be is to be the value of a variable.'' According to the naturalist ontological and metaphysical principles stated at the outset, nothing exists other than causally implicated forms of mass-energy. Interpretation, on the other hand, carries no existential import. Contents are objects of interpretation, not description; and rules, as treated by the ethnographer and by the cognitive linguist at the task level, are individuated by their contents. Meanings and contents, however, are not causally implicated physical entities. They are, therefore, not existents, but rule-constituted ''abstracta'':[11] they are constituted from implicitly rule-governed behaviors, in this case linguistic behaviors including utterances, inscriptions, and sanctions belonging to the social language game.[12]

1.4 Reflective Equilibrium, Socratic Reflection, and Naturalism

Typical of one sort of criticism inveterately brought against reflective equilibrium as a justificatory process is Siegel's essay, ''Justification by Balance'' (1992).[13] Goodman's account of justification, he argues (36–37),

> makes clear that principle can correct practice as readily as practice can correct principle. It is on his account the *mutual accommodation* of practice and principle that serves to justify both. But if practice can be criticized and corrected, then why is fit with practice justificatory? If practice can be criticized and improved, then justification cannot be a matter of fit with practice. For the relevant practice will have to be justified in terms of some independent criterion of justification—since fit with itself will hardly afford justification to some pattern of practice—in order for fit with that practice to afford justification to the principles which fit it.

Unfortunately, Siegel takes insufficient notice of two crucial words (italicized below) in the relevant passage from Goodman he himself quotes (28): ''Principles of deductive

inference are justified by their conformity with accepted deductive practice. Their validity depends upon accordance with the particular deductive inferences we actually make *and sanction*'' (Goodman 1983, 63, emphasis mine). Since actual deductive practice already includes sanctions, it is already (implicitly) normatively vetted, hence (provisionally) justified. ''Deductive principle'' merely makes the implicit norms explicit, thereby facilitating their evaluation in wider contexts, both logical and extralogical, and their inclusion in systems with wider reflective equilibrium. There can, on pain of infinite regress, be no explicit rules for achieving reflective equilibrium, precisely because it is within this process that explicit rules are codified. Any explicit rules *for* achieving reflective equilibrium would themselves have to be products of a process of achieving reflective equilibrium. For a naturalist, the problem is to explain how even implicit norms can emerge from the prenormative, merely behavioral ooze (cf. Rosen 1997, 170). I cannot claim to be in possession of such an account, which would anyway extend well beyond the scope of this book.[14] But I believe a convincing story could be told by way of a judicious use of evolutionary biology, psychology, and anthropology. A certain primitive version of normativity first appears in the natural world with the emergence of living forms that possess organ systems, even relatively simple and undifferentiated ones, with proper functions[15] accorded by natural design; a social species like *Homo sapiens* is an evolutionary product; and sanctions are socially significant behaviors.[16] Some hints as to how this story might go are provided in chapters 4 and 6.

As a mode of reflection on implicitly normative practices already up and running, and to the extent it charts a course between regulism (behavioral governance by explicit rules) and regularism (mere regularity of behavior), the process of effecting reflective equilibrium is a close relative of Brandom's ''reflectively rational Socratic practice,'' despite the fact that the modification of established normative principle in the face of recalcitrant cases that is an important aspect of effecting reflective equilibrium is only implicit in his common-law analogy.[17] Principles of inference, says Brandom (1994, 130),

> may be likened to the principles formulated by judges at common law, intended both to codify prior practice, as represented by precedent, expressing explicitly as a rule what was implicit therein, and to have regulative authority for subsequent practice. The expressive task of making material inferential commitments explicit plays an essential role in the reflectively rational Socratic practice of harmonizing our commitments.

With this, we have arrived at a second mode of metainterpretation, something that might be called *reflexive* metainterpretation. Suppose an interpreter undertakes the ambitious task of making explicit *all* the rules governing the central practices, both representational and otherwise, of his own cultural community, including scientific, legal, artistic, and religious practices, with the aim of bringing judgment of specific cases

and general principle into global reflective equilibrium, of ''harmonizing'' the implicit commitments of the members of his own community. Suppose, further, that this theorist attempts, as far as he is able, to include in the mix metainterpretations of normative principles governing all culturally alien practices he judges significant, both contemporary and historical. Some of these might be endorsed; others might remain unendorsed and embedded in metarepresentational discourse. Such a reflexive metainterpreter would be a philosopher—a philosopher, moreover, of Hegelian ambition. He would be engaged in a project of achieving wide, indeed the widest possible, reflective equilibrium between judgments of cases and principle. This mode of wide reflective equilibrium extends beyond the global commitments of the individual or the isolated group to the principles endorsed within a community in which a division of cognitive labor prevails, thus allowing deference (but also challenges) to experts. How these expert groups are identified is a difficult problem, raising complex issues of sociopolitical organization and of training, apprenticeship, testing, and qualification that I cannot explore here. Wide reflective equilibrium must also, like Brandom's common-law analogy, have a genuine diachronic dimension: what is justified now because it is in reflective equilibrium with current practice or principle may not remain so in the future.

A less ambitious reflexive metainterpreter might attempt to render explicit the implicit norms of some specific domestic cultural practice or other, as Rawls did with regard to liberal democracy, thereby facilitating a more narrow reflective equilibrium regarding some set of relevant normative commitments and judgments of cases. To attempt such a thing, provided the reflexive metainterpretation remains wide enough to extend beyond narrow disciplinary boundaries, is nothing other than to mount a philosophical treatment of that practice. A philosopher, whether more ambitious or less, is, I suggest, someone (a ''polypragmatic Socratic conversationalist''?) in the business of reflexive metainterpretation, someone who attempts to bring to awareness some set of norms, to make them explicit by codifying them as rules or principles, in the interest of facilitating reflective equilibrium with regard to a domestic norm-governed cultural practice;[18] and the specifically philosophical sentences of a theory are nothing other than *reflexive metainterpretative sentences*.

Western tonal art music since 1650 is an example of such a domestic norm-governed representational practice; and making our normative commitments explicit so as to achieve reflective equilibrium regarding principle and practice is the aim of this book. Accordingly, I shall provide throughout the book a number of well-known musical examples to serve as intuitive test cases. That Western tonal art music since 1650 is a norm-governed practice is beyond question: musical compositions of this genre and their performances are subject to critical evaluation.[19] That it is in any sense a *representational* practice is yet to be argued. But this much we can already say: musical passages

and compositions are intentionally produced structures that are susceptible to *misunderstanding* by performers and listeners. In such cases, we say they have missed the musical "sense." Intentionally produced, sense- or meaning-carrying items are, however, nothing other than representations. Saying what normative principles are violated by those who miss musical sense will be one task of the succeeding chapters.

Whatever the ambitions of the reflexive metainterpreter, however, the descriptive explanatory option remains: the representational tokens may be regarded as items in the natural causal order. And, if the metainterpreter is a naturalist, that is, if he subscribes to the three principles (ontological, metaphysical, and epistemological) enunciated above, the tokens must be so regarded. For whatever he may propose metainterpretively, this is what representations fundamentally *are*, both in themselves (ontologically and metaphysically) and as possible objects of descriptive knowledge (epistemologically), given commitment to these three principles. This serves to cool down breathless Goodmanesque irrealist longings, the temptation literally to impute "worldmaking" powers to representational (or "symbolic") activity. Interpretations of certain representational types[20] may be many; but we, the interpreting organisms, along with the representational tokens themselves, are physical particulars in this very physical world. *Norms and meanings* are not part of the causal fabric of the world, but *behaviors, including sanctioning behaviors*, are; and the interpretations of declarative sentences asserted by speakers, a special class of public representations, express commitment to unitary truth and may either be endorsed or negatively sanctioned by hearers within the social context. To assert a declarative sentence is to endorse it as true. Verbal commitment, endorsement, and sanctioning are behaviors that constrain interpretations of this special variety of representations.

The naturalist philosopher may say anything descriptively about his chosen set of representations or behaviors that he is prepared to endorse as true and may proffer any causal explanations he deems adequate. But any material descriptive claims or causal hypotheses advanced must be in principle empirically evaluable, even if not individually testable; inferences, both material and formal, and claims presented as logically true must fall under explicit rules of inferential practice or be brought into reflective equilibrium with those rules. Logically true statements may not be empirically testable; but even they (and the valid inference patterns they instantiate) are empirically *sensitive* to the extent they are subject to modification under conditions of (narrower or wider) reflective disequilibrium that is, to the extent they sanction (negatively) inferences we wish, in the interest of more virtuous theory, to make, or sanction (positively) any inferences that turn out, again in the interest of virtuous theory, to be unacceptable. Any empirical descriptions or explanatory hypotheses the naturalist philosopher employs must, moreover, cohere with theories of the descriptive sciences of representation and behavior, namely neuroscience, evolutionary biology, cognitive

psychology, and descriptive anthropology (and with the basic sciences of physics and chemistry).

Alternatively, while the naturalist philosopher will not pretend to be doing empirical science from the armchair, he will not hesitate to make use, including inferential use, of descriptions and explanations deriving from reputable scientific sources to the extent they further the overall reflexive metainterpretative project. The present project, once again, is to engage in the reflexive metainterpretation of Western tonal art music since 1650 as a representational practice so as to bring judgment concerning the meaning and significance of musical experience into reflective equilibrium with normative principle, while situating musical experience firmly within a descriptive, broadly Darwinian evolutionary theoretical framework. As a result, dialectical movement back and forth between description and interpretation will be considered a virtue and not a vice. Indeed, it will be considered a necessity. For one thing, such a project requires that the naturalist philosopher remain ever cognizant of scientific description and explanation if he is to keep to his ontological, metaphysical, and epistemological commitments. For another, since the acceptance of a broad, reformist, aposteriorist naturalism precludes the practice of traditional philosophical a priori analysis, representational types must be identified and described empirically if they are to be reflexively metainterpreted.

What, then, is the status of the three naturalistic principles enunciated at the outset of this introduction? The third, the epistemological principle, is clearly reflexively metainterpretational: it is the codification of an empiricist norm implicit in centrally important domestic cognitive practices like science and law for the evaluation of truth claims and explanatory hypotheses. The first two principles, the ontological and metaphysical principles, on the other hand, could be taken to be descriptive and explanatory themselves. If so, they would be, for the naturalist, very abstract, high-level empirical hypotheses, validated by inference to the best explanation, and not philosophical sentences at all. But they need not be taken this way, and perhaps they should not be. Both these principles have significant modal force: they limn the limits of the possible, and Quine taught us that the logical status of descriptive modal claims is problematic. It is not clear what such principles explain, nor what claim they have to be the best explanation of anything. Rather than wielding explanatory power, they may be taken as normative principles that *set* explanatory *parameters*: any explanation that violates these norms is counted (provisionally) as unacceptable. To take them this way is to construe them as prescriptive rather than descriptive, as regulative principles that codify a certain ''stance'' or set of pragmatic attitudes with regard to explanation (cf. van Fraassen 2002, 60–63). As such, they, too, are reflexive metainterpretational principles, the result of reflection on the norms implicit in current scientific practice. If taken as normative principles, not as descriptive doctrine, they could be seen as part of an ongoing attempt to ''harmonize'' (by Socratic reflection) principles of musical representation with scientific principle and the web of empirical belief.

1.5 Conspectus

The remainder of the book falls into five chapters, which present the following account of musical representation, meaning, ontology, and emotion.

Chapter 2: *The Musical Affordance: Three Varieties of Musical Representation*. Three modes of musical representation are identified, one external (the heard musical surface) and two internal (the hierarchical plan representations of the goal-directed structure of the music and the musical mental models constructed on the basis of these hierarchically organized representations). These constructed mental models, which are nonconceptual analog representations, represent virtual layouts and scenarios in an imaginary musical space in which the listener acts (off-line). Musical space is a joint product of the physical acoustics of sound, the physiology of the human ear and neural auditory system, and the motor systems of the human brain and body.

Chapter 3: *The Musical Utterance: How Music Means*. The musical performance is a public representational token that functions as a nonconceptual or gestural utterance. Extrinsic musical meaning arises by way of an exemplification relation (modeling by way of shared properties) between musical mental models constructed by the listener and the actual world of human experience, including human cognitive experience concerning abstract realms of thought. Such modeling occurs in two distinct modes. First, the musical surface contains an elaborate field structure that models the structure of lexical semantic fields. This mode of musical meaning I term *extramusical form*. The second mode of musical meaning I term *extramusical content*. The listener constructs models of layouts and scenarios in virtual musical space in which he moves in imagination. Because motor experience is strongly implicated in musical understanding, extramusical content arises on the basis of a ''body-in-the-mind'' metaphorical transference, following the theory proposed by George Lakoff and Mark Johnson.

Chapter 4: *The Musical Work*. Like biological species, musical works are best regarded as reproductively established families of tokens. In the case of species, the tokens or replicas are individual organisms; in the case of musical works, the tokens are performances. Musical works are neither discovered Platonic abstract objects nor merely invented artifactual types, but created historical entities. Unlike biological species and their traits, which may be said to be *inventions* of undirected natural design because they are relatively accessible in the space of possible designs at certain historical junctures, musical works are creations (albeit not creations *ex nihilo*) because they occupy relatively remote positions in a finite but still vast possibility space.

Chapter 5: *From Musical Representation to Musical Emotion*. Because human emotions are intentional mental states normally directed at definite objects and states of affairs, actual or fictional, and because, given problems of individuation and reidentification of objects and locations in musical space, there can be, strictly speaking, no virtual musical objects; musical emotions are problematic and may generally be more properly

characterized as affective feelings. Still, talk of musical emotion is not entirely inappropriate, in part because certain global emotional states, namely moods, lack definite intentional objects, in part because some emotions can take rather indefinite features of egocentric scenarios for their objects. Because internal musical representations have the structure of plans and activate the motor system off-line, musical experience also activates the motivational-emotional system, thereby giving rise to emotions and affective feelings. Because musical representation is nonconceptual, musical experience tends to weaken the metaphysical distinction between subject and object and the epistemological barrier between subject and subject. Objectification, the distinction between subject and object, requires the individuation and reidentification of independent objects, and that, in turn, requires conceptual abilities. Because of this, because of the touch-like aspects of musical sound, and because emotions are valent (i.e., evaluative) perceptions of scenarios or indefinite situations, the musical environment presents itself with a distinctively direct affective presence and intimacy.

Chapter 6: *Nausea and Contingency: Musical Emotion and Religious Emotion*. The intimacy of the musical environment and the thoroughgoing intentional determination of musical performance down to very densely ordered nuance properties appeal to human emotional needs and aspirations that are religious in character. Religion is, at least in part, an attempt to assuage the human horror of the contingent, the existential dread of the possibility that human existence is a mere accident of cosmic history and biological evolution, that human existence constitutes no drama of consequence concerning dispensation regarding any immortal soul, but is rather a pointless sequence of events significant to no conscious being other than human beings themselves. Owing, in part, to its origins in the ritual practices of the Upper Paleolithic Magdalenian era, musical experience derives some of its affective impact by evoking moods that are religious in character. The musical listener is temporarily immersed in a benignant virtual environment where contingency and brute, "superfluous" (*de trop*) material existence have been vanquished and where everything that happens, happens exactly as it ought.