

The Future of Theory

Editor's Introduction.

Graduate students ask questions. They seek a place in a field with which they are coming to terms. Graduate students connect their familiar extra-theoretical worlds with their newly-chosen discipline. They develop a collegial unity not only from common interests but also through shared situations and the transitional aspect of their circumstance. And graduate students are willing to take risks, to try out new territory without knowing what lies out there.

The following article came about from the ideas of graduate students in music theory at Indiana University. Current topics at our noon-time forums (brown-bag lunches in the shared office) in January 1990 included popular predictions, not only for the new year but also for the new decade and impending new century. It was a logical step to wonder about the forecast for music theory. We decided to take our musings beyond our graduate student life and ask our more experienced colleagues in the field for their forecasts.

Our list was compiled of prominent theorists known for their publications and reflecting a range of ages and interests. (Our own excellent theory faculty was excluded from the list to increase the available space. Those faculty members consulted during the planning of this project approved of our decision.) The Editorial Board decided to ask more rather than fewer theorists as we did not know how many would have time or inclination to respond. The letter sent to these theorists requested their opinions of the "future and course of music theory." Respondents were told not to be limited to that subject if other topics were on their minds. Our suggested length of 1/2 page to 2 pages was made so that our request would not be an imposition on their time. The request allowed for a variety of tones, from serious to whimsical.

19 theorists responded to our letter. These responses cover a wide range of areas—indeed the fact that we have such diversity seems to be the unifying element in the comments. Not all are predictions; instead, some assess the current state of affairs and offer advice. We provide no interpretation of the responses here. Rather, we leave that to you and invite you to write *ITR* about your views on the future of theory.

The statements are presented in alphabetical order by authors' names. Several authors gave working titles to their submissions. We decided to include these as the titles seemed part of the statements. The only editing done is for standardiza-

tion of spelling and style. In the cases where individuality of style is a manifestation of an author's ideas, the style has been left intact.

We graduate students find the responses stimulating, challenging, and encouraging in the acknowledgment of new directions. Our own response will take many forms—including discussion and the variety of future research. It is valuable to be in the practice of asking questions, but as graduate students, we must move toward answers to our questions. After all, we will not be graduate students for ever. In fact, we will not be graduate students for much longer.

—Rebecca Jemian

V. Kofi Agawu
Cornell University

I am not a prophet, although I have often wished that I could prophesy. In accepting *ITR*'s invitation to speculate on "the future and course of the music theory field" in the next century, therefore, I am making nothing short of a non-professional debut.

What happens in our field will depend on who is in power. Current developments suggest that it will be a century of *pluralism*. Those who have long harbored a suspicion or resentment of the Schenkerian and set-theoretical hegemonies will hold nightly parties to celebrate the onset of pluralism. Those who have long lamented the inward-looking discourses of music theorists will have fewer and fewer reasons to complain. Pluralism will continue to pull in the "isms" that are already leaving traces on music-theoretical activity: poststructuralism (in its deconstructive guise) and feminism.

Pluralism comes at a great cost, however. First, it gives the impression that it is liberal and free. But is it? Who decides that we should be pluralistic in the first place? Surely that is an ideological position that is propped up by a certain distribution of power. Second, one side-effect of pluralism will be to shift the course of music theory from "hard" to "soft" theory. Try explaining the intricacies of middleground arpeggiations ("hard" theory) to somebody in the history department, and you will see how difficult it is. By contrast, broad aesthetic claims about beauty and even profundity ("soft" theory) easily find allies, especially when such claims remain assertions rather than demonstrations. But who says

that we should make our work accessible to those outside? Isn't it *they* who should learn our language?

Third, pluralism will most likely lead to the reinvention of wheels. Scanning the contents of recent issues of certain journals, I am struck by the return (with a vengeance) of a certain mode of writing that we associate with the 19th century—now given a four-syllable name beginning with "h." Perhaps Curt Sachs was right in his claim that music history—or, for our purposes, writing about music—moves in waves. Fourth, although it does not follow logically, pluralism will also mean a lessening of rigor. But what is rigor and why is it important? And more important, what is rigor when it comes to understanding an art? Somebody somewhere is bound to argue that to privilege rigor is to take an ideological position different from his or her own! Fifth and finally, pluralism will make it difficult for us to define our purposes as music theorists. Some of us will of course love this, for we can go around deluding ourselves into thinking that we are all right—at the same time! It is here that we will not want to forget history, specifically the still small voice of the history of music theory, reminding us of how important it is not to lose the *motivation to theorize*. And as more and more people learn to cultivate this motivation, pluralism will come under a sustained attack. Some will even long for the hegemonies of the good old days. By then the century may well be approaching its end, and it will be time for a fresh set of predictions from a more competent prophet.

Elaine Barkin
University of California, Los Angeles

For those of us, and I consider myself one of those, who have chosen — or have been destined — to spend our lives in and with music, who have chosen the medium of sound as our way of saying — or whom the medium chose —, and who have chosen to experience our sounding ways in the company of others, the disparity, the

contrast of the completeness of our reflection of our world & ourselves IN sound when 'translated' into another expressive - language medium, in particular our obsession — its "naturalness" notwithstanding — to find ways to talk, to speak, to 'put into words' precisely that which we have chosen to conceive and perceive not in words, continue to perplex and torment us;

... furthermore,

since cultural contexts and continents continually shift, why fuss with future and field when present and world are where we're in;

... nonetheless,

if to music theorize were to engage us in deep soundthought, our music fully filling our minds, spirits, & bodies, until that moment of bursting whereupon our want & need to interpersonalize & discourse with one another become compellingly irresistible, and thus —liberated from xenophobia & fragmentation— we so purposefully do, under any & all nourishing & advantageous auspices & ambiances with concerned & dedicated others,

then a salutary future for music & music theory seems conceivable;

... since,

being in hot pursuit of a(ny) theory of a(ny) music that could enable (any) others, collectively or solitarily, to benefit —particularly, meaningfully, and seriously— from firsthand or trans-, inter-, or cross-media experiences of/with/in music, is surely an advocative quest;

... however,

all too often, exclusion precedes inclusion and the reflections of our various and divergent realities get muddied over or watered down, and

all too often, once past that initial headyflush of original thought and joy of discovery, drudgery substitutes for exuberance, requirements of a realm wholly detached from one's own genuine interests intervene, offtrack misconceived obligation replaces or gets to be mistaken for ontrack pursuance of our deepest concerns and all too often

our music gets hopelessly dispossessed or entangled out of earshot;

... so,

let's get our own and our music's priorities straight ... now and then.

Nicholas Cook
University of Southampton, Great Britain

Music theory, as we know it, resulted from an alliance between people who thought music was basically like language, and people who thought it was basically like literature. What brought these groups together was their common opposition to a musicology that seemed at best unable to come to grips with the individual qualities of musical works, and at worst oblivious to them—what Joseph Kerman characterized, long after the event, as positivist musicology. It was a polemical intention, not a unified intellectual program, that gave music theory its sense of identity in post-war America (and the story of music theory is essentially an American story). In 1990, this polemical intention appears dated, even quaint, and so it is not surprising that the intellectual programs of the music-as-language theorists and the music-as-literature theorists have diverged to the point that it becomes questionable whether one can usefully talk about "music theory" at all—let alone its future.

The polemical intention I spoke of is most obvious in the case of music-as-language theory, that is to say the type of theory that stresses music's synchronic and syntactical properties, and thus its autonomy in the face of historical interpretation. In 1990, reading the Boretz of the 60s requires the same effort of historical reconstruction as listening to the Stockhausen of the 50s; we have to understand each as a reaction against then current thinking, an attempt to wipe the slate clean and start again from first principles. An intellectual movement becomes historical at the point that it is

revived; Brown and Dempster's (1989) rehabilitation of Boretzian formalism marks the moment at which such thinking could no longer be classed as contemporary. Today's formalism owes much of its credibility to a quite different paradigm, one whose influence on music theory is much more recent: artificial intelligence. I can best express this autobiographically. When Lerdahl and Jackendoff's book first came out, I could see that was a major technical achievement, but I couldn't see what its formalizations allowed me to do that I couldn't already do with Schenker's or Meyer's analytical techniques. Seven years down the line, the importance of the book's contribution to the cognitive psychology of music is evident; work like Michael Baker's (1989a, b) suggests—I don't think one can as yet use a stronger word—the role which this and other kinds of formalization may play in the future development of intelligent musical instruments/workstations, and the way in which these may redefine the nature of musical thinking. Issues like musical data representation and neural networks are as central to this type of music theory as prolongation structure and set theory, and articles on these topics are beginning to appear in the mainstream theory journals. Work of this sort combines formalism with creativity, and forms the natural successor to the ideal epitomized by the typical 1970s job description—Assis. Prof., teach undergrad/grad comp/theory, dist. rec. comp. and/or publ. And it is empirical in precisely the same sense as composition: what counts is results. Speculation is validated through application.

Such a position is unacceptably reductionist from the point of view of music-as-literature theory. This began as a New Critical reaction against historical interpretation; even in 1990, the underlying framework of much theoretical writing is still a cozy, Leavis-like appreciation of acknowledged masterworks. (This is where theory merges into a certain style of pedagogy.) But of course music theorists have responded to the convulsive upheavals that have taken place in literary theory since the New Critics. And what one might call "critical music theory"—critical in Adorno's sense rather than Leavis's—has not only undermined the distinction between work and commentary that is fundamental to music appreciation, but also brought into question the validity of the entire music-theoretical enterprise as currently instituted. The theory of music is the theory

of *autonomous* music; it abstracts music from social, economic, and political context not simply as a explanatory mechanism, but in the defence of an ideology of artistic transcendence that dates back to the 19th century. I have suggested elsewhere (1989) that Schenker can be read as an apologist for Hanslick; so, too, can Forte, and Lerdaahl and Jackendoff, and even Nattiez. And it is precisely this ideology of autonomy that is the object of the deconstructionist critique. What I am calling critical music theory, then, erodes the very identity of music theory as a discipline. It holds out the promise, rather, of a musicology that is more generously conceived than the narrow abstraction of Kerman's caricature.

What I mean by this is a musicology that is critical in the sense of being aware of its own ideological status, of positing its own role in the cultural process. This sounds very vague, so let me illustrate it by reference to Schenkerian studies. Much published (and even more unpublished) Schenkerian analysis works on the assumption that the aim is to demonstrate the manner in which musical objects are unified. We don't tend to perceive this as an ideologically motivated aim; we see fundamental structures as President Bush sees democracy, that is, as natural, self-evident, ideology-free. The Americanization of Schenker (to use Rothstein's term) involved forgetting the polemical origins of the idea of musical unity, in 18th- and 19th-century controversies over the emancipation of instrumental music and classicism vs. romanticism, just as it involved suppressing the political and ethical aspects of Schenker's *Weltanschauung*. Historical research into the sources of Schenkerian theory (which has been something of a growth industry recently, and will I think continue for some time) may not change the way we employ Schenkerian techniques, but it can help give us a critical awareness of the intellectual baggage that comes with them—and maybe also of the aesthetic motives and institutional structures that lead us to employ them in the first place.

But I want to go further and suggest that the assumption that Schenkerian analysis is about unity does a disservice to Schenker. Rather, I would maintain that it is predicated on the concept of unity (for Schenker, "structure" is a technical term meaning what in a piece of music can be modelled hierarchically, and so abstracted from context), but *about* tension, conflict, disunity. In a recent

paper, Richard Cohn (1990) teased out some of the internal contradictions of everyday Schenkerian discourse, showing how Alan Cadwallader's motivic parallelisms conflict with the principle that true structure comes only from the background, how Beach's reading of Mozart sacrifices hierarchical well-formedness to richness of interpretation. I would argue that, in each case, the contradiction is the central point round which the analysis revolves. Any motivic parallel across different structural levels must, by definition, involve the apparent similarity of formations that have different generative sources; hence motivic parallels don't impose unity, as has been generally assumed, but rather highlight the discrepancy between surface and structure. And the non-hierarchical properties of Beach's analysis of Mozart—or, for that matter, of practically anybody's analysis of anything—show how the music's hierarchical structure is experienced as being folded up and turned inside out, so to speak; the analysis traces the dialectic between the imaginative representation of music and the way it is heard. In each case, what is being demonstrated is not some abstract quality of musical unity, but rather the conflict and contradiction that animates the musical experience—"the tension of musical coherence", as Schenker himself expressed it (1979: 6). Maybe it has taken deconstructionism to sensitize us to phrases like this in Schenker's writings; I certainly don't remember them being there ten years ago!

The fixation on musical unity has been, up to now, the principal stumbling block in the development of an adequate theory of musical performance. It has resulted in lame approaches that see the performer's task as simply one of projecting structure, rather than also of animating or contradicting or neutralizing it; approaches that reduce music to text, rather than viewing it as the outcome of a dynamic interaction between text and context. We do not have anything like the type of performance analysis practiced by many ethnomusicologists (who themselves have adapted this approach from folklorists like Richard Bauman). Not that we would be satisfied if we did; ethnomusicologists' analyses of musical events rarely, if ever, measure up to the sophisticated modelling of musical structures that we take for granted in the analysis of western art music. But all this may change. If I am to risk an outright prediction—and at the worst I shall simply be wrong—then I foresee a

reconceptualization of musical performance that will result in a new accommodation between theory and musicology. Or maybe it will result in the distinction between theory and musicology becoming even more outmoded and unintelligible than it is today.

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To date, music theory, as taught by most in the profession, has been concerned with analysis based on deterministically applied rules. By nature, it is a general study of approaches toward pitch, function and rhythm (primarily) as well as dynamics, texture, orchestration and form (secondarily). And rightfully so. To teach

a university student the theoretical foundations of a single composer or of a few composers would be derelict. Such would be the study of specific cases and not generic theory.

Conversely, studies of what differentiates one style from another should not be ignored. The very nature of what constitutes musical style has a somewhat confused history, combining the rhetorics of aesthetics and "ology." Too few musicologists (and certainly too few theorists) have attempted to define, no less apply, their definitions of style in order to differentiate composers' works.

But, as we enter the 1990s, computers have allowed enormous strides in the understanding of idiosyncrasies that lead to the understanding of musical style. In my own work (EMI—see bibliography), for example, exceptions known as signatures verify individual styles within the less narrow aspects of tonality. These can identify characteristics of Baroque versus Classical styles, of German Baroque versus Italian Baroque compositions, of different kinds of German Baroque composers, of the distinguishing features of Bach versus Handel and of earlier Bach from late Bach and finally one Bach invention from another.

Such identification need not be used in place of broader definitions but in addition to them. It would seem unproductive to rely solely on generalizations of musical grammar rather than develop strategies for delineating one example of the application of such constraints from another. It is in fact, the differences between such applications that makes music interesting in the first place. Common-practice music, when taken as a body of general voice-leading rules, produces little other than correct realizations of those rules: not good music or musically good realizations. It is the exceptions to rules that provides insight into the theory and style of an individual composer.

Computers will also allow us to teach more realistically. Insights into why composers sound as they do and why they are different, one from the other, should progress significantly during the next century. Pattern-matching and other traditional artificial intelligence techniques will encourage more profound understanding of common-practice music. Comparisons of music to other disciplines such as linguistics should indicate its deeper structural implications.

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Music Theory and Experimental Science

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It is gratifying to observe that, over the last decade, music theorists have become increasingly interested in formulations that allow of experimental confirmation or disconfirmation. At the same time, investigators in related fields of experimental science (perceptual and cognitive psychology, neurophysiology, linguistics, and so on) are becoming increasingly interested in musical issues. This has led to rapidly increasing collaboration between the disciplines, as evidenced in the holding of conferences and workshops, in new interdisciplinary research programs, the teaching of interdisciplinary courses, and in the setting up of interdisciplinary centers and research units.

As is to be expected from a new and promising field, we are at present raising more questions than we have answered. I strongly anticipate that over the next few decades much new understanding will be gained from this approach.

A View Toward the Music-theoretic Future

David Epstein
Massachusetts Institute of Technology

I'm a rank failure at prognosticating. The basis for it feels uncertain, whether it springs from knowledge, from crystal-ball gazing, or from the secret code of the stars, of which I'm skeptical despite the endorsement by a recent First Lady.

I would tempt one prediction regarding music theory and the next century, however, if only because it stems from my own research bailiwick, which leaves me a bit more sure of its import. Further, it concerns a domain so inadequately explored to date, and so intrinsic to things musical, that future interest seems reasonable. This is the domain of time in music, an area with widely flung aspects that encroach upon all manner of other fields.

Interest in musical matters temporal has grown almost exponentially in recent decades. Still, our understanding of temporality is far from the seeming certitude with which we view other parameters of music—harmony and tonality, twelve-tone practice, other modes of pitch structure over the last century, the nature of pitch itself. By contrast, we might still have difficulty today getting two musicians to agree on what precisely rhythm means—not to mention issues of tempo, temporal control, articulation as it serves temporal demarcation and flow, musical motion and its relation to affect. The complexity, indeed the ineffability of some of these issues, has provoked current interest to such a degree that it seems certain they will be pursued well beyond this decade.

Further, we are ever more aware (as were 18th-century musicians like Quantz and Riepel) that our neurobiology is intrinsically entwined with our temporal sense of music, setting limits to its possibilities, determining in myriad ways its functions. To understand musical time and timing in their deeper dimensions, then, we must understand their neurophysiological correlates as well. Yet the biological sciences are far from a full knowledge of these areas, as witness the fact, among many others, that the human nervous system has yet to be completely mapped. Not that such completeness will answer our questions, for their complexity involves myriad intersections of modes physiological and musical, of sensory/cognitive processes and motor output, of neural impression and affective response.

Is this knowledge necessary for the practice of music? Yes and no. We have managed well for centuries with at best an intuitive sense of these matters. Times change, however. Performance standards, as a case in point, have reached general levels of competence formerly the province of a few great players. New standards create new demands: for control, for understanding—indeed, for precise understanding of the musical values to which such brilliant performing facility is to be put. These demands alone would seem to ensure that temporal research in music, in tandem with neurophysiological inquiry, will be with us for decades to come.

21st-Century Music Theory Study

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I believe that music theory study in the 21st century cannot prosper until it utilizes two rapidly developing technologies: electronic data processing and electronic sound processing.

While still developing their capabilities, contemporary data-processing devices such as computers, MIDI interfaces, data storage banks, and printers have already become versatile servants for musicians, from student to composer. They can instantly display (on screen) or sound (through MIDI) all the scales and modes in all the keys, all the possible chords, all the factual data of music theory. They can store and retrieve all the ranges, all the fingerings, all the mechanical attributes of all the instruments. They can print scores on screen or on paper, then play them back in any instrumental simulation at any speed in any key. In short, data-processing devices can be the accurate work-a-day servants of the musical mind. One wonders if Twenty-First Century music education will require its students to spend countless hours in rote memorization when all the facts lie just behind a computer screen.

While also still developing their capabilities, contemporary sound-processing devices like signal processors, waveform generators, sequencers, and samplers can already serve as sonic labs. They emulate standard sounds; they modify existing sounds; they generate new sounds. They invite musical exploration, then illustrate the results. In short, sound-processing devices can stimulate the musical imagination, then demonstrate its fruits.

Although single units (workstations) equipped with keyboards and containing interactive sound-processing and data-processing devices are currently available, they still find meager use in theory teaching. Yet the enthusiasm of their practitioners on both the student level and the faculty level forecasts their broader application. Even now in school electronic laboratories, students learn by guided doing, discover by guided exploring. They become apprentices to their teachers through creative projects.

Given the propensity of most present-day teachers to favor the safety of common practice theory over the dangers of experimentation, to favor the blackboard over the synthesizer, to favor established musical beauty over musical daring, I believe that comprehensive use of the new data-processing and sound-processing technologies might have to wait a while. I believe that any electronic learning revolution is not likely to occur until a majority of teachers demand state-of-the-art sound and data processing equipment. Failing this faculty action, the revolution could arrive through a

majority of students demanding hands-on experience with that same state-of-the-art equipment (given the impatience of modern youth, this might happen sooner than expected).

Because the twin technologies of data and sound processing are being continually upgraded, no one can accurately predict how deep their penetration into theory education might become. I believe, though, that as keyboard workstations they eventually will become the tools for combining our present compartmentalized theory curriculum into a single unified course, a learn-by-doing course, a course which reunites harmony, melody, rhythm, and timbre into their naturally related states. I believe that keyboard workstations will eventually convey the bulk of future theory instruction. I believe all this because keyboard workstations already can or soon will be able to program and demonstrate anything aural or written—any rhythm in any tempo and meter; any timbre or group of timbres in any pitch register; any melody or group of melodies in any harmonic setting.

Lastly, I believe that if music education ignores the potentials of data and sound processing, it will fail to attract a vast and growing number of potential computer-oriented students.

Robert Gjerdingen
SUNY-Stony Brook

It's a big world out there. And it's full of people who love music. At any moment of the day there are more ears turned toward music on the radio, in elevators, on television, in movie theaters, on cassette tapes, in dentists' offices, on records, and in concerts than heard Bach's or Mozart's music during their lifetimes. 18th-century composers lived in a society whose proud cities, kingdoms, and empires now look rather puny at two and a half centuries' distance. Then all of Europe from Lisbon to Moscow had fewer inhabitants than modern-day Indonesia. London, the great metropolis of the age, had only five percent the population of

today's Mexico City. The fact that many of humanity's ears still do turn toward the music of Bach or Mozart, Handel or Haydn, is a tribute to their awesome gifts as composers. But it is also a fact that most of humanity's ears turn toward something else. The world's billions love music. But they love music that the field of music theory largely chooses to ignore.

In the coming decade, music theory will flourish or stagnate to the extent that it redefines both its subject matter and its relationship to that subject matter. Research should not be limited to a narrow repertory of pieces or to the concerns of one small segment of society. By taking for its subject matter simply "music"—music of any type, any place, any time, any people—the field of music theory will shed itself of parochialism, attract a larger audience and a more diverse group of researchers, and place itself in a better position to differentiate its core methodologies from passing aesthetic doctrines and ideological dogmas. It's a big world out there. We ought to join in.

The Future of Music Theory: Achieving the Scope of a Humanistic Discipline

Robert Hatten
Pennsylvania State University

My forecast for the future course of music theory in this country is prescriptive. As a theory discipline, we must inevitably come to terms with the problems other theory disciplines in the humanities have already faced. These include the problem of style as both repository of structures and competencies in their interpretation, the problem of style change understood from its theoretical as well as its historical perspectives, and the problem of ambiguity in interpreting aesthetic works which are neither strictly formal nor systematic in their origins.

More specific to music, our theories must account for the role of expression in motivating musical structures and impelling stylistic growth and change. I believe that the same fundamental semiotic mechanism underlies both expression in musical works and growth in style, but the argument involves a theory of markedness that I cannot address in this short space.

Increasingly, I think we will find theorists incorporating both historical and expressive considerations into theory building and analysis. In turn, this will break down the artificial barriers between musicology and theory, returning us to the original conception of musicology as outlined by Guido Adler nearly a century ago, with its systematic and historical branches. But I would argue for a closer interaction between the two. Indeed, I would urge that approaches to structure always be informed by historical and expressive considerations: without the former, we have no way to link our synchronic studies, or to justify their origins in terms of the past; without the latter we risk relegating much of the significance of musical works for their composers (or their times) to the pale of "extramusical meaning" and we are left unable to account for our own humanistic or aesthetic responses to music we value. Of course, more is at stake than expression—no less than musical meaning at all levels, including semiotic construals of the syntactic. I believe that accounting for lower levels of, for example, tonal orientation and implication can profit from the same attention to signification as higher levels of expression. Whether or not one uses specifically semiotic terminology, a semiotic perspective in this sense is crucial to the reconstruction of all levels of musical significance, as well as to the reconstruction of those styles which constrain and coordinate musical significance.

We have long distinguished between theory and analysis, and Leonard Meyer has moved further toward refining that distinction as style analysis versus critical analysis. I would like to reframe the opposition as a methodological dialectic, a working back-and-forth (as in our governmental concept of checks and balances) between structuralist and hermeneutic approaches. By structuralist, I mean all that can be systematically worked out in a style, or in a work—and that includes the systems of oppositions that enable coherent interpretations of musical expressive meaning (usually at a rather

general level). By hermeneutic, I mean all that must be imaginatively interpreted—guided by stylistic competencies, to be sure, but reaching out to the whole cultural spectrum of a time in its casting for analogies and meanings, and (in the case of the theorist) drawing from all realms of relevant contemporaneous experience and evidence in hypothesizing further articulations of the general meanings provided by style. Thus can we cope with the more elusive and ambiguous and metaphorical aspects of musical meaning—and better understand the otherwise anomalous structures and forms that result from the pursuit of unique expressive designs.

But just as one must utilize both structuralist and hermeneutic strategies in one's reconstructions of style and interpretations of works, one must be both theorist and historian in explaining how styles grow and change, such that the same musical structure may have a different function, and thus a different meaning, in another style.

At Penn State I have guided the design of a masters degree that integrates theory and history. It features what I call "integrative seminars," to be team taught by a musicologist (read: historical musicologist) and theorist (read: theoretical musicologist). The joint seminar should help bridge the gap between our pursuits, and bring the various specialized skills of each field to bear on a common repertoire or problem. Such a rapprochement is not new, simply less and less frequent in our highly specialized degrees today.

One of the unfortunate tendencies in current curricular revisions of theory degrees has been the institutionalization of certain methods with which all theorists are expected to be proficient. I am thinking of Schenkerian analysis and the general field of set theoretical/serial analysis. Strikingly, each is a method designed for, and derived from, a particular style or limited set of styles, but neither addresses sufficiently the issues I have raised above: style growth and change, and the role of expression in musical understanding.

Recent cognitive developments, for all their importance and contribution at certain levels of understanding, have yet to convince me of their relevance for the pursuit of these two fundamental problems, which demand historical and semiotic abilities that current curricula have left little free space to develop.

History of theory is typically relegated to a survey of theories, with the rare opportunity (which I am grateful to have had at Indiana during my doctoral program) for theory building and speculation.

Thus, my prognosis would not be very positive were I to extrapolate from current trends in curricula. Fortunately, there are enough schools in the country, and enough flexibility among programs, and enough interest among young scholars, and enough conferences with an eye to new ideas, to allow for the development of theories along these lines. What is indeed unfortunate is the lack of coordination such efforts are likely to have, and the relatively weak preparation young scholars are likely to receive before launching their speculative crafts into troubled waters. But those have always been the risks of speculative theory. My forecast is based on the strong belief that the attractiveness of theoretical problems desperately in need of scholarly attention will inevitably counterbalance the conservative biases of the academy.

The Future of Music Theory: Predictions and Hopes

Jonathan D. Kramer
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Musical scholarship, like music itself (and most other arts), is passing from a modern to a postmodern phase. The logical positivist concern with structure and detail that has pervaded American theory for a generation has been pure and objective in the best tradition of modern thought. In contrast, the postmodern attitude in music theory, as in music composition, is eclectic and—dare we hope?—subjective. Theorists are at long last looking to other disciplines (linguistics, semiotics, narrative theory, phenomenology, and several others) for models, methods, and insights.

Since music theory came of age early this century, the overriding emphasis has been on developing theories that explain

bodies of music. Now we are beginning to seek broader contexts. In search of musical universals, we are looking beyond music itself—whether printed, performed, improvised, recorded, or imagined—to the workings of the musical mind. We are interested in musical processes as well as musical artifacts. And we are beginning to recognize the importance of cultural context to musical meaning. *Thus my first prediction is that both the psychology and the sociology of music will be increasingly important to music theory.*

We are becoming skeptical of theories purporting to explicate different kinds of music, when the models proposed have no similarity whatsoever. For example, how reasonable is it (as Fred Lerdahl has asked) for tonal and atonal theories to be as dissimilar as Schenkerian and set theory, while the same people using the same ears and the same minds are doing the listening? The incompatibility of theories has begun to suggest that we should look less exclusively to the stimulus and more to the response. Thus the increasing interest in music cognition. Theory should be concerned not only with what ought to be heard, or might ideally be heard, but also with what actually is heard. And theory should confront the issue of meaning, in the listener's cultural context as well as that of the composer. It is time to welcome aesthetics back into the realm of music theory and to link it to cognition. *My second prediction is that theories of listening and of meaning will become more critical to theories of music.*

If theory should be widening its horizons beyond the study of bodies of music to the study of musical process, it should narrow those horizons as well. The study of individual pieces—whether analytical, critical, or both—has long been with us, but it is not usually accorded the respect it deserves. While it is often practiced in the classroom, only occasionally do we encounter an article or book that studies a single piece, attempting to understand it as thoroughly as possible. Every work is unique. Yet its uniqueness is missed when we look for the commonalities between pieces in an attempt to establish a theory of a body of music. The study of single compositions for their own sake rather than for the sake of analytic methodology has been dismissed (most often by set theorists but by others as well) as *ad hoc* analysis. But it is precisely the *ad hoc* that needs to be encouraged, because of the individuality of

every work of art. Postmodern analysis needs to be eclectic, informed by—but also skeptical of—all relevant (and maybe even some irrelevant) theories. Whatever approach illuminates a piece is fair game, whether that approach is a rigorous existing theoretical system or a notion dreamed up contextually for use only in one particular passage or an idea imported from psychology, sociology, or aesthetics. *My third prediction—or at least my desire—is that analysis of pieces as unique entities will become a vital component of the theoretical endeavor, no longer merely a step in the construction or exemplification of theories.*

The idea of unity underlies most existing theories and analyses. We theorists and analysts are pleased when we believe we have demonstrated the consistency of a passage or piece or body of works. We are uncomfortable when we fail to find unifying factors or when we are confronted with a note or event that does not fit the system of unification we are discovering (or inventing). This quest for unity has been a major component of musical thinking for a long time. It pervades the search for similar motivic shapes (in Reti, for example) and the discovery of unifying tonalities (Schoenberg's monotonicity, for example). We look for the means of unity when we search for nexus sets or *Umlinien* or derived rows or patterns of multi-parameter serialization.

Yet there is more to music than unity. I do not deny that much music is unified and that the means are often subtle and impressive. But a lot of music (often the very same music) is also chaotic. In his 1965 book *Man's Rage for Chaos*, Morse Peckham presents the unsettling idea that works of art are about chaos, not order. Although the thinking of this brilliant literary critic was popular with avant garde artists for a while, I am amazed at how long it has taken the scholarly community to come to grips with his challenging propositions. Even today he is rarely quoted and apparently scarcely read. Yet, particularly with the birth of chaos theory in mathematics and its gradual spread to the humanities (consider, for example, N. Katherine Hayles' fascinating book *Chaos Bound: Orderly Disorder in Contemporary Literature and Science*), scholars are beginning to realize that the search for unity is both limited and limiting. Just as postmodern artists have embraced conflict and contradiction and have at times eschewed consistency

and unity, so postmodern music theory should no longer automatically value the unified over the diverse, the similar over the dissimilar.

Although the analytic systems by which theorists search for unity may be complicated, they emanate from the simple assumptions that unity is necessarily good, that the "best" music is profoundly unified, and that this essential unity is the most powerful aspect of structure. Because we analysts have valued *Urfurien*, set complexes, combinatorial rows, *Grundgestalten*, motivic patterns, proportional ratios, etc., we have searched for them until we have found them. I do not deny their existence (in theories, at least; whether they exist in music is more problematic), nor their importance, and I certainly admit that composers of the past placed extraordinary value on unity and organicism. But the very same music, viewed from a postmodern perspective, can suggest fundamentally different descriptions. The assumptions of musical unity must be questioned (although certainly not overthrown). We need theories of musical contrast, conflict, confrontation, chaos, and disunity, but I cannot imagine, much less predict, their nature. I do make one final prediction, however: that *music theory will depose from its position of false universality the obsessive quest for unity* (just as classical geometry's mania for symmetry is now discredited by fractal geometry).

Questions

Steve Larson
Temple University

The field of music theory relies on the art of asking questions. I view this journal's invitation to write about what I "see as the future and course of the music theory field" as an opportunity to discuss questions of potential interest. But because I am uncomfortable saying what I think others will or should do, I will limit myself to identifying questions that I would like to explore. These

questions fall into three categories: research, teaching, and meta-theory.

Research: Questions About Schenker, Questions About Jazz.

The ideas of Heinrich Schenker raise interesting questions about counterpoint and meter, metaphor and model, tonality and prolongation, perception and aesthetics, and dynamics and rubato. And some recorded modern-jazz performances raise interesting questions about structure, "displacement," and rhetoric in improvisation.

In his classic counterpoint text, *Gradus ad Parnassum* (translated by Alfred Mann as *The Study of Counterpoint* (New York: W. W. Norton, 1971)), Johann Joseph Fux mentions the possibility of exercises involving triple subdivision.

Ternary time has yet to be mentioned here; in this case, three notes are set against one. Since this is not a very difficult matter, and therefore of little significance, I think it is not necessary to trouble to arrange a special chapter dealing with it. (page 49)

Heinrich Schenker extended the counterpoint method of Fux by showing striking ways in which species exercises were like and unlike free composition. What justifications are there for extending both Schenker and Fux to include species in "ternary time?"

What roles do rhetorical metaphors and psychological models play in Schenker's writings? How does his use of metaphor and model help explain the development, influence on, influence of, significance, and power of his writing? How does attention to metaphor and model help explain the creation, experience, and understanding of music?

Joseph N. Straus' article, "The Problem of Prolongation in Post-Tonal Music" *Journal of Music Theory*, 31/1 (Spring 1987): 1-21, discusses the concept of prolongation.

It is important not to confuse prolongation with mere contextual reinforcement or repetition. Prolongation exists precisely when the prolonged object is *not* literally present. (page 2)

The article goes on to present four conditions for the use of the term "prolongation" ("the consonance-dissonance condition," "the scale degree condition," "the embellishment condition," and "the harmony/voice-leading condition"). While Straus' article is focused on post-tonal music, it makes a number of interesting assertions about tonal music. Are these conditions strict, or are they guidelines that admit exceptions or qualifications? Under what circumstances do these conditions hold? Is there a consistent definition of prolongation that requires these and only these conditions? Or is prolongation itself a pre-condition to some of these "conditions?"

Schenker described repetition as "the basis of music as art." His discoveries of the deeper levels of musical structure led him to speak of repetitions that are not immediately recognizable, calling these hidden repetitions "the prime carriers of synthesis." What are the advantages and disadvantages of regarding hidden repetition as a compositional technique? What is the perceptual and aesthetic significance of hidden repetition?

Schenker's article on "The Largo of J. S. Bach's Sonata No. 3 for Unaccompanied Violin [BWV 1005]" (trans. by John Rothgeb in *The Music Forum* 4 (New York: Columbia University Press, 1976), 141-59) discusses the art of performances.

Dynamics, like voice leading and diminution, are organized according to levels, genealogically, as it were. For each level of voice leading, background or foreground, and for each diminutional level, there is a corresponding dynamic level of the first order, second order, and so forth. (pages 156-157)

What principles govern the generation of dynamics at each level? How do recorded performances agree or disagree with such dynamics? Could a generative theory of tonal structure such as that developed by Lerdahl and Jackendoff be used to create a generative theory of dynamics or rubato?

The late jazz pianist Bill Evans used the term "displacement" to describe the rhythmic disposition of some of his improvised phrases. Although he did not offer a detailed description of exactly what he meant by it, he did demonstrate it during an interview on

"Marian McPartland's Piano Jazz." What is the best way to define this term? How is it created? How is it experienced? What does it have to do with the artistic content of Evans' improvisations?

Charlie Parker's saxophone improvisations have a distinctive and captivating rhetoric. What are the elements of this rhetoric?

Teaching: Questions About Skills and Analysis. A focus on asking questions tends to dissolve the line between research and teaching. It can raise interesting questions about teaching everything from basic musicianship to advanced analysis.

Gestalt psychology and cognitive science help us think about how we think; laws of perceptual organization and principles of internal representation are applicable to our experience of music. What do these studies have to offer the teacher of basic musicianship skills?

Schenker clarified the study of counterpoint by discussing its pedagogical intent. How can Schenker's ideas on the pedagogy of counterpoint be extended to the pedagogy of Schenkerian analysis?

How can we get students to ask good questions? I am particularly attracted to books like Lewis Rowell's *Thinking About Music: An Introduction to the Philosophy of Music* (Amherst: The University of Massachusetts Press, 1983). As A. David Franklin said (in a review in *Music Educators Journal*, quoted on the cover of *Thinking About Music*), "its value lies not so much in any answers it provides, but rather in its pointing the way to the proper questions."

Metatheory: Questions About Questions. To focus on questions may lead to asking questions about the art of asking questions.

Suzanne K. Langer, *Philosophy in a New Key: A Symbolism of Reason, Rite, and Art* (Cambridge, MA: Harvard University Press, 1942), discusses how the questions we ask influence the course of an inquiry.

The intellectual treatment of any datum, any experience, any subject, is determined by the nature of our questions, and only carried out in the answers. (page 4)

Perhaps this forum will help answer questions like "What are the guiding questions in music theory today?" and "What assumptions are contained in these questions?"

Questions about questions quickly expand the field of music theory. Why have certain questions attracted attention? Why do we consider them "good questions?" Can we practice the skill of asking "good questions?" What do the questions we ask about music teach us about how people think? Questions illuminate not only our study of music, but also our understanding of our selves.

Whither Music Theory?

Fred Lerdahl
University of Michigan

It is less easy to predict the future of music theory than to give my personal view of where it ought to go. But to do even that involves a critique of where the field is now.

The past decade has brought about the professionalization of music theory in American academic life. Along with the benefits of greater academic stature and increased scholarly production have come the inevitable by-products of conformism and isolation from related disciplines. Young scholars in search of academic positions tend to be intellectually timid, seeking safe niches in one of the two current paradigms, Schenkerian theory and pitch-set theory. Because asking questions does not promote security, there is little curiosity about the fundamental assumptions behind these approaches. The segregation of the discipline from related musical and intellectual fields, while initially a necessary step toward establishing professional autonomy, contributes to this conformity, and breeds theorists with narrow and inadequate training. A theorist who is not a fine practicing musician is unlikely to produce significant theoretical work.

More specifically, training in music theory should include proficiency in performance and composition. A theorist working with a given musical style should be able to play pieces and to compose competent exercises in that style. Depending on particular interests, he or she should be versed in related fields such as poetry, painting, pedagogy, ethnomusicology, history, philosophy, linguistics, psychology, acoustics, mathematics, or computer science. A theorist should learn from the start to question assumptions and to formulate novel solutions.

Now as to the future of music theory, let me venture the following hopeful predictions. The mapping of the history of the field will largely be completed, culminating in a few standard reference books. This increasing historical awareness, plus the sheer number of theorists, will lead to greater heterogeneity in research interests. The obsession with pitch relationships will give way to a more integrated approach to musical phenomena. Despite the difficulties of interdisciplinary work, music psychology is a burgeoning area of inquiry, and within that area theorists will have a great deal to contribute. This is true not only for cognition but for the psychology of composition, performance, and music education. Computers will continue to invade all areas of musical and intellectual life. For music theory, this means greater mathematical sophistication, more artificial-intelligence modelling, a growth in psychoacoustic (particularly timbral) research, and a partial rapprochement with contemporary composition. Finally, on a less sanguine note, I think there will soon be a glut of research-oriented theorists. Music pedagogy will again come to the fore, and those research theorists who have made interdisciplinary connections will be more likely to thrive.

Fred Everett Maus
University of Virginia

In an article published in 1961, Milton Babbitt makes his famous assertion that

there is but one kind of language, one kind of method for the verbal formulation of "concepts" and the verbal analysis of such formulations: "scientific" language and "scientific" method.

Music theory, Babbitt claims, must therefore adopt one kind of language and method.

Remarks of this sort have linked Babbitt's reputation to the notion of "scientific" music theory. But perhaps the aspiration to a single shared language, rather than the insistence upon "scientific" method, is Babbitt's more fundamental motivation. The aspiration may respond to the fragmentation of the community of contemporary composers. If music composition has become irreversibly diverse, perhaps a common language can replace a shared musical style as the basis for a rich, stimulating musical community.

The language Babbitt wants has two crucial traits. It should satisfy the "verbal and methodological requirements which attend the possibility of meaningful discourse in any domain;" that is, more crudely, it can be shown to be methodologically correct and, therefore, its superiority to some alternatives can be demonstrated. And it should permit the discussion and comparison of music in different styles. Such a language could bring serious musicians together into a single community *despite* the diversity of current musical practices.

But what if the pluralism that characterizes composition also develops within discourse about composition? What if professional music theory, like music itself, becomes irreversibly diverse? In a recent issue of the *SMT Newsletter* Richmond Browne writes:

If the past challenge to the Society has been to widen its interests, the future may hold a threat of rampant centri-"fugueing" (if not a plague of terrible puns).

If Browne entertains the possibility that future diversity is a threat, nonetheless his pun—however terrible—is also a little reassuring. Everyone who reads the *SMT Newsletter* knows a thing or two about fugues: the sentence that raises the prospect of a fragmented theory community also alludes, consolingly, to our shared knowledge. And the pun intimates that the theoretical discourse of the future, however polyphonic, might still constitute a conversation in which all voices can be heard and understood at once—a lucid discussion of a single subject, even if the voices occupy various registers. But what if one took the "threat"—or prospect—of uncontrolled centrifugal dispersion seriously? What if music theory is on its way to becoming a "polyphony" of wildly different discourses about different subjects?

Rebecca Jemian, as editor of *ITR*, invited me to reflect on "the future and course of the music theory field." Rather than predicting, I want to use this opportunity to recommend an attitude that I think would be beneficial to the future and course of our field: we should not only recognize the probability of a future characterized by musical and linguistic diversity, but we should welcome and cultivate this multiplicity.

Theory and analysis should take more seriously the plurality of musics, exploring repertoires beyond tonality, early 20th-century modernism, and their most direct descendants. (A familiar point by now.)

We should explore a wide range of linguistic media for communicating about music. To some extent this is happening, but even the most innovative writing about music often presents itself as the product of some rational or factual obligation. Hence, for instance, various invocations of phenomenology, in which philosophy continues to serve as a domineering master-discourse, telling theorists what they can and cannot try to do. Or, again, J. K. Randall's title—only partly a joke, I suppose—"how music goes," with its possible implication that the objective nature of music has somehow determined his goals in writing. I would prefer that diversification of discourse about music be regarded as a free activity of imaginative exploration, and a positive pleasure.

Greater diversity in professional discourse about music could come from various sources: consideration of "vernacular" discourses previously ignored by theorists (for instance, Marion Guck's work on

metaphors in actual conversations about music); attempts to describe repertoires beyond those for which familiar theories were designed; sheer literary invention (as in the substance, rather than the title, of "how music goes").

We should abandon the idea of a single metalanguage for describing first-order theoretical and analytical language, but we should not abandon Babbitt's more general project of reflecting on musical discourse. Rather than looking for methodological strictures that will conclusively demonstrate the goodness or badness of first-order languages, we should explore any characterizations of musical discourse that seem interesting and fruitful. In exploring metalanguages about theory and analysis, we might do well to eschew the model of the philosopher of science who adjudicates the rationality of discourses by applying a uniform standard. We can benefit more from the model of literary critics, communicating flexibly and responsively about literary texts. My work on animistic language about music is an instance of such *ad hoc*, improvisatory metadiscourse.

In recommending diversity, of course I am anticipating and welcoming changes in the field of music theory. But I want to mention two distinctive and valuable aspects of traditional music theory that I hope will be preserved in future developments. Both are consequences of the close association between the fields of theory and composition.

First, most theorists can and do compose, even if this is limited to tonal composition in the classroom, and theory instruction always involves compositionally-oriented exercises. We take this for granted, perhaps, but literary criticism and art history do not consistently involve such extensive practical engagement. It would be too bad if a self-aware exploration of discursive possibilities developed at the expense of this compositional activity.

And second, partly because many theorists are involved with contemporary composition, music theory resists becoming a purely historical discipline. We write partly to explore how we hear music, what we can make of various sounds, and sometimes in the pursuit of some fascinating new angle on (say) a passage by Mozart, we don't really care whether an 18th-century listener might have thought about the passage the same way. We inhabit a musical

culture that sometimes cheerfully decontextualizes its artifacts, or, more precisely, dehistoricizes them in order to recontextualize them within a community that *we* are making. I think this present-oriented quality is a healthy aspect of current theory and analysis. It sustains the intensity of personal investment that drew many of us into music theory and analysis in the first place.

If music theorists actively pursue discursive diversity, the "theory community" will not be constituted by the unity of its analytical, theoretical, or metatheoretical approaches. Instead there will be overlapping subcommunities, constituted by shared musical and linguistic preferences. The richer the variety that theorists achieve, the greater the certainty of mutual incomprehensibility among some music theorists. We should think of it as exciting, rather than problematic, that people will talk about music in ways that we cannot immediately understand.

A music theorist should not aspire to be a person who has the right theory, all the answers, about the one truly valuable repertory. We should cultivate the ideal of a theorist who can understand many different repertories, many different theoretical and metatheoretical vocabularies. A theorist like Schenker should be regarded as a heroic but rather sad figure: the sacrifice he made in confining himself to a single repertory and refining a single approach to that music enables the rest of us to benefit from his splendid, idiosyncratic musical perceptions without needing to emulate his obsessive, constrained musical life.

Eugene Narmour
University of Pennsylvania

Large economic, social, and demographic pressures are affecting, and will continue to affect, our educational institutions. Reacting to the persistent decline in educational standards, conservatives on the one hand cry for a return to basics, to a "core curriculum," while liberals on the other call for more ethnic studies,

in response to the demands of new constituencies. Such competing claims are only two of the more obvious ones confronting academia.

The field of music, of course, has not remained above the fray. In reply to attacks on what is taught, the traditional canon appears to have reemerged, more entrenched than ever. Yet in contrast we also see an increasing musicological interest in women's studies, the addition of ethnomusicological appointments in most departments, the popularity of rock, jazz, and folk music in the undergraduate curriculum, and, among primary- and secondary-school students, the preference for playing the guitar or the synthesizer rather than the piano.

The question is: Can the musical academy preserve its Eurocentric past while supporting educational programs more reflective of its new clients? Can music theorists properly conserve traditional analytical disciplines while addressing new responsibilities? Can the inherently rich, older academic subjects of music theory coexist with the headier, newer ones? Thus looms the current dilemma.

A possible way out suggests itself: reformulate the status of the listener. Indeed, in view of current external pressures, one might argue that music theory in the next century will perforce have to concern itself much more with the perceptual structures of music, in all styles, and less with the traditional compositional structures of Western classical music.

19th-century theory, after all, mostly envisioned artworks in terms of a culturally-centered compositional practice, with the composer as both priest and prophet, ministering to the supplicants. Even today, music theory still largely bows to this pantheonic view. Yet put into historical perspective, the European-American 19th century, with its beliefs in nationalism, individualism, and the received values of Western culture, seems to be just about over, albeit ninety years late. Sooner or later, we theorists are going to have to confront this fact.

In order to reconcile traditional approaches with newer ones, what thus seems called for is a profoundly new understanding of the role that average listeners play in perceptually reconstructing all types of music in all kinds of contexts. For we are all, at root, listeners—composers, musicologists, theorists, ethnomusicologists, and

laity alike—regardless of our politics, cultural origins, social strata, levels of educations, philosophical outlooks, or individual interests.

Before any empirical embrace of the listener can come to pass, however, certain preliminaries must take place. Experimental psychology must continue to move away from the study of abstract psychophysical phenomena toward the study of concrete hierarchical patterning. At the same time, much more interdisciplinary collaboration between theory and psychology must take place since most music psychologists are not sufficiently well-trained to understand how hierarchical patterning emerges in music.

Should these things happen, then new kinds of critical studies are likely to emerge—ones explicating musical styles and artworks in terms of idiostructural cognitions. Also, musical performance and its cognitive effects in co-creating style and art will probably become much more of an integral part of the discipline since variation in performance is an essential component in the critical perception of aesthetic structure. Clearly, performers and interpreters do not just serve composers, but listeners as well.

These projected developments in music theory should also relieve some of the internal pressures current to the field. For instance, though we now know a good deal about the tonal and harmonic structures of 18th- and 19th-century music, thanks to Schenkerian theory, cognitively, we remain quite ignorant about the melody of the period. Yet in tonal style, melody is THE perceptual focus of listeners the world over (ordinary people, after all, care very little about Verdi's harmony or Mozart's formal schemes). Similarly, although set theory has taught us something important about the language and materials of 20th-century music, many of its analyses of individual works make little perceptual/cognitive structural sense, at least not without invoking extreme, and thus unnatural, overlearning. Finally, medieval and Renaissance music, ever the traditional stepchildren of music theory, still beg for theoretical and analytical attention. Yet might it not be that even these musical styles could be very well served by an authentic interest in music perception and cognition, by a new conception of structural criticism, by a closer study of the affects of musical performance, and by new theories of melody?

Music Theory and Its Future

Jeff Pressing

La Trobe University, Australia

Music theory, as currently constituted, is in a precarious position. This may largely be traced to the fact that theory attempts to explain and elucidate music from a single viewpoint: that of the structure of the work which is transferrable to paper. Almost inevitably, the successful reductionist method of the hard sciences is borrowed: Break the piece down into a number of parameters (pitch, rhythm, texture, pitch, dynamics, pitch, orchestration, etc.), a number of cells (motives, event clusters, modules, sets—pick the nomenclature according to personal predilection and desired scholastic affiliation), and longer term processes of connection and development (variation, pitch and rhythm frames, recurrences, architectonic conceptions, etc.). Structural relations are then elucidated, and the piece can be intellectually (and hopefully, perceptually) reconstituted as a tissue of interlocking and interrelating processes and objects that make us marvel at both the composer's auditory sensibility and the analyst's cleverness. In practice, due to the pluralistic nature of current composition, the process with contemporary works is very much a cryptographic exercise: decoding an unknown or poorly known language. Yet analysts in my experience know very little about cryptography, and have not evolved an equivalent generally credible system, despite the specialized successes of leading methods.

In the future treatment of such problems computer methods will be more and more essential, initially to construct an appropriately accessible and cross-referenced database, so that substantive foundation questions can be automatically answered (is that F-sharp⁴ in the oboe ever followed by an E in the bass register anywhere else than in bar 56?—does that set in the horns occur in the top sounding pitches in the strings at any point where the woodwinds are silent?). The number of such possible questions

clearly tends towards the astronomic, yet where is the obvious stopping point? If we are to see the musical forest for the structural trees, we must either develop computer analysis tools, or recurrently devote many months or years of our life to each major work of analysis, if we are to become a real expert on its full manifestations. Is the data-organization part of this work really time well-spent? Shouldn't in the future theory aspire to be more than an academic cottage industry?

These computer tools should reach the point of providing built-in functions of intelligence: they should notice recurrences and point us to the questions we should be asking. They should be able to sort data under user-defined criteria, and convert between list, score, and graphic representations. We also need the equivalent of text concordance programs: score concordance programs. We need a universal score representation language, or a structuring of the gamut of compositional diversity into a number of suitable sublanguages, and facilities for translation between them, insofar as it is possible. It must become routine to scan printed scores directly into this database. Since theory is unlikely to ever command an economic base to spur major companies, with dedicated software development teams, to leap in, as has happened with MIDI music production, this will have to be a team academic effort. Can we do it? If not, I think theory will continue to be seen as irrelevant; it will still be located in departments separate from composition, which can hardly be a healthy sign.

A much greater problem looms for the future of music theory, however, one for which there is likely to be no in-principle ultimate technological fix. To see this, it is only necessary to list some fundamental questions that theory might be called upon to answer: *What is music? How does it achieve its effects?* Messy questions, customarily left to philosophers and others outside our field, but it must really be seen as central, despite the intelligent contribution of the American Northeast Positivist School of Musical Thought. Since there is clearly no single answer, let us list a few aspects of what music is seen to be:

music as: moral force
mode of communication
intoxication
structure (number)
sacred, spiritual connection
image of the deepest laws of the universe
part of social ritual
(cross-)cultural phenomenon
language
sound
set of references
cognitive phenomenon
laboratory process
healing force
emotion
expression
self-expression
source of physical power

Nearly all of these answers fall outside the familiar terrain of music theory; some fall outside the credibility of western culture. But make no mistake; it is no credit to music theory that this is so, for these are answers believed by the listeners, composers and cultures of the world, and it is they who are critically shaping the history of music.

Can music theory treat such things? Some of them, probably never. Shouldn't the future's task be to try? Can the incredibly confused and influential postmodernist debate be integrated with 20th-century music theory, or a symbolic system to support it for music be developed? Could a musical semiotics of perceptual impact on a mean or specifically defined listener be developed (in the spirit of Lerdaahl and Jackendoff but without its narrow base of applicability)? Can psychomusicology deliver a theory really informed by cognitive psychological methods, or will this founder on the reefs of individual preference and poorly defined central phenomena? Will we ever be able to link brain (or neurological) function and musical procedures in any generally meaningful way? How can cultural conditioning and multicultural musical variety be

input to a general theory of music? Can the creative and emotive aspects of music be integrated into a theory without degenerating into 19th century aesthetic pap or statistical tables of listener preferences? Will mathematical inputs into the boundary between order and disorder (as in the fine tuning of chaos generating equations) be shown to have a substantive role in musical analysis? In exploring such possibilities do I see one future for music theory.

Music Theory Enters the 20th Century

Jay Rahn
York University, Canada

Because a substantial portion of my early training and subsequent activity has been as a historian, I am quite reluctant to offer bald predictions. Nevertheless, I have few qualms about discussing the past and extrapolating from what we know about the past to what could be reasonably considered possible, and even desirable, in the future. Accordingly, what follows is in part extrapolation and in part wishful, or, at least, hopeful, thinking. And in this regard, my greatest hope is that before music theory enters the 21st century, it will have fully entered the 20th.

Every theory is a theory *of* something. During the 20th century, the scope of what is considered music, and hence, the domain of what might be considered music theory, has expanded in significant ways. Whereas atonal developments of the early 1900s have been the subject of much fruitful theorizing recently, this theorizing has not yet been fully coordinated with various formulations of tonal music. At the beginning of the 20th century, relatively little was known about early Western music or about non-Western music. Towards the end of the 20th century, much more is known about both, but few theorists have attempted to deal seriously with either. At the opening of the 20th century, there was absolutely no electronic music and there were few significant chance procedures

in music. Although both electronic music and chance procedures have flourished for decades, music theorists, as a group, have virtually ignored them. In short, there is a considerable amount of "catching up" to do in music theory before the 21st century begins, if only because of an accumulation, since 1900, of things about which one might reasonably theorize musically.

At the outset of the 20th century, music theory's established obligation consisted largely of providing the underpinnings for pedagogy and for the contemporary practice of professional musicians. The subsequent growth of scholarship outside music theory has shown that both pedagogy and practice, in any field, are embedded in contexts that can be at once cultural, social, historical and psychological. If music theory is a theory of something, it would seem to be irresponsible if it cut itself off from the contexts in which significant portions of that something are embedded. To be sure, what music theory seems to have been best at is relatively context-free description and explanation, but to undertake musical description and explanation in such a way that accounts of what might be called "para-musical" phenomena are hard to join to accounts of music in the narrow sense seems somewhat shortsighted. Music-theoretical myopia might be prevented at the very foundations of music theory where, for example, the undefined term "tone," which has generally been construed in a very vague manner by music theorists, could be considered to have as part of its reference or extension various sorts of acts (e.g., of perception, imagination or performance). Since acts constitute much of the subject matter of cultural, social, etc. studies, such a construal of musical entities might serve to forge a link, or, at least, not to erect insurmountable barriers, between music and adjacent, or even overlapping, phenomena.

Finally, it seems to me that music theory has failed to take sufficiently to heart certain great ideas, procedures and frameworks that are highly characteristic of 20th-century thought beyond the narrow realm of music itself. Each of the three that I have especially in mind has its roots in pre-20th-century thought, but each seems particularly characteristic of, and has achieved its most telling successes within, the 20th century, albeit largely in non-musical areas of inquiry and activity. The first of these, formalization, after

spectacular successes in mathematics and science, has spread far beyond these disciplines. Although formalization has become entrenched in atonal theory, where proceeding by axiom, definition and theorem have become relatively commonplace, there is much room for formalization elsewhere in music theory, and in at least a narrow sense, a theory is neither more nor less than its formalization. If nothing else, formalization has the merit of helping one to scrutinize closely and relatively dispassionately various regions of one's theories lest desired referents slip through the cracks or unwanted referents sneak in by the back door. As well, formalization functions frequently as a discovery procedure, a way in which aspects of a subject matter which otherwise might be overlooked are, instead, laid bare.

Particularly important to twentieth-century thought is the idea that much of the world makes considerable sense if understood as being part of processes that are essentially probabilistic or well-modelled statistically. Throughout the pure and behavioral sciences, this notion has led to important findings, and music theorists might well entertain much more seriously than they have done so far the possibility that, for example, the acts about which they theorize are more or less probable under various circumstances. At the very foundations of music theory, such an idea could be accommodated, for instance, by substituting "is at least as probable as" for the more usual, more determinate logical predicate "is true."

Finally, one of the great explanatory frameworks of the twentieth century is implicit in the notion of selection, which can be traced pre-eminently to Darwin and which has had profound effects and applications as far afield as behavioral psychology. Though explanations couched in terms of selection have been largely eschewed by music theorists, it seems to me that important advances could be made if one acknowledged, for example, that the consequences of a musical act might alter the probability of that act occurring again. And in this regard, it seems reasonable to believe that if a given act can be understood as involving hearing something, one of its most important consequences might consist in the relations it forms with other acts of hearing, and that these relations might well be considered to select (i.e., in behavioral terms, to

reinforce) the given act, that is, to alter the probability of its future occurrence.

It might appear modish to advocate such modernisms as formalization, probability and selection, and it must be acknowledged that each has its own ontological and epistemic problems. However, each has more than proved itself over several generations and across several disciplines, so that none of them can be considered merely "trendy" or "fashionable." Further, notwithstanding any qualms one might have about whether they convey the "real" story of music, I do not believe that the current mainstream of music theory has foundations that are any more secure than these three would provide. Moreover, insofar as formalization, probability and selection have told compelling stories, and insofar as their applications actually "work," I feel they are, at the very least, "worth a try" in music theory, for unless music theorists give such things a comprehensive try, music theory might well enter the 21st century without ever having fully entered the 20th.

John Rahn
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I cannot predict what will happen in music theory, but here are some things that I hope for. First, let music theory not regress into a discipline preponderantly concerned with the music of the past. In the past, music theory has healthily concerned itself with the music contemporary to its time, and has joined in the discourse in and about such music. Music theory does have an important contribution to contemporary discourse on contemporary music: the study of the formal and aesthetic aspects of contemporary music, or of possible contemporary music. Secondly, following this line, music theory need not entirely devote itself to reflective or critical pursuits, such as "analysis" (which is in some danger of becoming one of those ossified canonizations to which numb disciplines are prone). Let

music theory also embrace the creative and speculative study of system, form, and aesthetic, aimed at possible musics that are not yet existent, but which might be interesting and valuable if they were. In this way, theorists and composers may converse on more equal terms as collaborators in musical invention. Other important trends, such as the incorporation of expertise in computational methods and artificial intelligence, and the growing rapprochement with scientific study of the psychology of music, I see as basically tools to use for the traditional ends of music theory, though they will certainly bring their own inflections with them.

The Future of Music Theory

Michael R. Rogers
University of Oklahoma

I will not be so bold as to make an actual prediction about the future of music theory in the 21st century but I do sense a gradual evolution toward what I will call a more humanizing quality in musical analysis and research (similar parallels could easily be cited from the recent history of composition). At least some theorists seem, inch by inch, more willing to express their personal reactions in aesthetic response and to acknowledge the sterility and impoverishment of analysis as laboratory dissection—i.e., addressing printed notation rather than the interaction of sound patterns with human perceptual and emotional filtering systems. What is gradually being recognized is that what we bring to the listening environment from our cultural conditioning, the pre-wiring of our brains, and our personal storehouse of accumulated knowledge and training is as important as what the listening environment brings to us. The richness or poverty of our inborn capacities and previous experience is as much a part of the music as the notes in the score. This is why widely differing performance interpretations and analytical explana-

tions can vary so much yet remain equally convincing; this is why music theory is as much art as science.

The increasing prominence of phenomenological approaches, semiology, cognitive processes, aesthetics, analogies with other arts, and the use of concepts like drama, implication, schemata, metaphor, for example, all indicate to me a healthy move toward recognizing the importance of subjective and intuitive elements in the understanding of musical experience and expression. Music study, then, in my opinion, is developing more and more as a blend of philosophical and psychological interpretation and less and less as a domain of merely scientific scrutiny, correctness, and objectivity. Music theory, in this view, can (and maybe should) include the study of what it means to be human since music is not simply a barren artifact but is both created by and for human beings.

But perhaps this is just wishful thinking and says more about me than about how our discipline is actually progressing. Perhaps this is just what I would like to see music theory focus on while others will no doubt identify quite different or even opposite emerging trends. I do believe that music theory, properly done, demands a component of persuasive speculation (as opposed to dispassionate precision) since the most important questions are those for which clear-cut answers are elusive. In fact as Bierstedt's Paradox states, the more neatly and exactly an idea or statistic can be pinned to the examination board, the more trivial it will turn out to be.

At any rate, music theory continues to mature and will remain exciting and rewarding, I think, far into the next century since each new series of answers, discoveries, and developments seems to bring into play another higher level of questioning and questing not previously imaginable. This upward spiral seems unlikely to diminish anytime soon.

Arnold Whittall
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The least that 20th-century music theorists should require of their 21st century successors is that they bring order out of chaos—which means recognizing the limitations that 20th-century theory's understandable but chaotic obsession with order have imposed on the discipline's evolution.

The 20th-century theorist has had to cope with the daunting task of exploring the implications of positivism, organicism and formalism (all unleashed with maximum effect by Schenker) while composition itself has been much more concerned with the adumbrations of modernism in 19th-century music, and to that extent much more skeptical about the central concept of coherence-as-unity. I hope that the 21st century, as well as providing the definitive (one-volume?) history of music theory up to and including its own recent past, will establish with maximum clarity exactly which tonal compositions project the true Schenkerian structure, and which post-tonal compositions achieve a comparable motivic (and even hierarchic) integration. I look to the 21st century to continue to call the bluff of any historical musicologists who continue to argue that formalism has banished hermeneutics from the halls of theory and analysis, and to show that "criticism" is not impossible even when the mode of discourse is more technical than contextual. I expect 21st-century theory to improve spectacularly on our present rudimentary understanding of structural forces in early and non-Western music, and to advance decisively to a full explanation of the processes of cognition and perception: indeed, through such an explanation lies the best hope for rendering redundant any distinction between technical theory and musicological critique. Finally, I hope that 21st-century theorists, the more confidently they advance beyond the trials and errors of the 20th, will regard our work with the affection and respect due to trailblazers and pioneers. It may even be that 21st-century composers will find it possible to validate some of the more recondite theoretical enterprises of our own time, in a Music of Sets (Compositions with Pitch Classes) that may after all prove to be the true Music of the Future.

Of course, things may look quite different by 1999.....