

Analytical Studies in World Music: Analytical Studies in World Music

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INTRODUCTION Analysis, Categorization, and Theory of Musics of the World

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Abstract and Keywords

This introductory chapter provides an overview of music analysis and theory in universal and cross-cultural contexts, including: Analysis: Definitions and Perspectives; Choosing Perspectives for this Book; World Music as a Context for New Music; Categorizing Music; Periodicity and the Composer's Toolbox; Qualities of Periodicity; and Universals and a Future Music Theory.

Keywords: music analysis, music theory, ethnomusicology, music fusion, composition, categorization, periodicity, universals, world music theory

A symphony is a musical epic ... a journey leading through the boundless reaches of the external world," says the narrator in *The Book of Laughter and Forgetting*, Milan Kundera's fantasia-like novel of Czechoslovakia in the throes of mid-twentieth-century communism, but "the journey of the variation form leads to that second infinity, the infinity of internal variety concealed in all things." He is recalling what his father tenderly taught him as a child: that symphonies progress through a limitless musical field, whereas variations descend deep into a paradoxical space that is both bounded and infinite; and that the two archetypes encompass the eternal questions music poses.

In life we aspire to both kinds of journeys, accepting that we cannot literally travel as far as we might wish, but grateful that music evokes them. Music-knowledge is wisdom, and we require it in both of its contrasting manifestations. Kundera longs especially for the inner passage: "That the external infinity escapes us we accept with equanimity; the guilt over letting the second infinity

escape follows us to the grave. While pondering the infinity of the stars, we ignore the infinity of our father.”

Kundera's exemplars for these complementary sorts of musical explorations were Ludwig van Beethoven and other great European composers, whose compositions he contrasted with the Czech pop music “idiocy” of the era, mocked as “music minus memory.” In his time and place this apparent choice, politically charged, was between art and mass-market music, and Kundera makes a clear claim of superiority for the former. But he and his father, thoughtful contemplators, also invoke spiritual qualities by comparing musical space and time, **(p.4)** motion and stasis, perspectives of musical macro and micro levels, as well as external and inner experience, all as dimensions of musical knowing. They submit that there are kinds or categories of musical journeys as well as magnitudes of scale on which to perceive them, and that sensitivity to the differences—what we call analysis—enriches the voyage.

A generation ago, a book on music analysis would not have questioned Kundera's repertoire preferences. Today things are different, but we still appreciate such choices in their historical (and especially in his case, political) context. But now the classical/popular or Western/non-Western divide is frozen in the past. People's taste and purview scan the world, and claims to monopoly on musical value are disenfranchised. European repertoire, in this book as in music scholarship and culture at large, seeks equal footing and inexorably interacts with other music. It is but one music tradition among many world traditions of specific local origins now best thought of as more or less historical phenomena that have coursed separately to a delta beyond which the fate of their identities is presently unknown. Ubiquitous recording media and computer technology accelerate this mixing and destabilize not just Western music's centrality but also the notational literacy associated with it (Taruskin 2004; Halle 2004). To sail with the boats on that rising tide, however, leads to a threshold this book stops short of crossing. Assembling musics of the world together and juxtaposing them via transcription in staff notation asserts the present and future value, Eurocentric or not, of notational literacy as a potent means of imagining, knowing, comparing, and emulating sounds and sound-structures. Computers, recordings, books, and scores are a mutually enhancing quartet.

This is a book by music scholars, teachers, composers, performers, and theorists offered to all musicians, but especially to students, who need models for resisting pressure to identify themselves exclusively as one kind of musician or other. Kundera's stirring metaphors of discovery inspire us to know many kinds of music in many ways. Here we inscribe and analyze musical structure to journey attentively into it, to experience each performance/piece/sound-world as a singular, textured, and refined event; an utterance shaped, both like and unlike language, from individual creativity and the collective resourcefulness and effort of the generations. It is as if a composition or performance tries to speak to us in

carefully hewn gestures, nuanced like the behaviors of someone we know well communicating a particular message with heightened awareness on a particular day. We instinctively strive never to distort or trivialize it. Seeking both specific and broader meanings in each analysis is critical

If we are to distinguish one experience from another, if we are to have an identifiable experience with some music—you name it—that differs from an identifiable experience with some other music. Entering **(p.5)** into, entrapping, enticing us; touching, moving, alienating, enraging; our thoughts concerning our music emanating out of our hearts and minds, our senses, our bodies; at times, our entire being; at times, just a part of us; at times, no part at all. Rather like experiences and relationships we have with individual persons throughout our lives. (Bar-kin 1992:229)

But is the metaphor of analysis-as-discovery valid for all music? Is it all right to analyze music independent of its political, geographical, or cultural distance from the analyst or reader? Shall we allow ourselves to become absorbed in music's sound, conceiving of it as if in isolation from the world? Polemics and traditions of debate surround these questions which we visit in a moment, but no clean resolution exists. The response proposed here is nonetheless that yes, it is valid to do so, and anticipation of pleasure and refinement to be had is sufficient rationalization. We are all creatures of culture and ideology, but there is a moment in analysis at which we must curtail our penchants for modernist universalism, postmodern irony, or other language-based responses in order to confront music as elementally as possible. We submit that analysis is a path to musical awareness and better musicianship. Our purpose is to make the diverse systems of musical thought under consideration available for creative musicians looking for an informed basis on which to know assimilate, model, or borrow from world musics. The authors are at pains to crystallize what is distinctive about the music they discuss at the level of their selection itself, in its cultural context, and in implicit relation to the chapters surrounding it.

The goal of the second half of this introduction, moreover, is to suggest a simple and unified perspective on music structure that may enable closer comparisons and the formulation of common principles. With any luck, such an encompassing perspective may rouse us to a vision of what we can aspire to as musicians in the decades to come. At the end there is time to reflect on how we might harness energy from the contemporary world's torrent of musical interactions and put it to work shaping our futures. Our best energies will be well spent if we try to conceive of how we can influence musical change. The potential is enormous: ethnomusicologist John Blacking seems to speak with Kundera and his father in saying that the most efficacious use of music is for

the education of human emotions, the attainment of ownership of the senses, and the expansion of consciousness and social relations ... the whole point of understanding music *as* music is that we carry in our bodies the cognitive equipment to transcend cultural boundaries and resonate at the common level of humanity. (1983:15)

(p.6) Analysis: Definition and Perspectives

The eleven contributors to this volume are indebted to traditions of music analysis that shape their approaches to music and what they view as analytically relevant. They were invited to provide basic background and context for their selections, leading to a close reading of a single recorded musical work/performance from the perspective most important to them. Here I will consider some general contexts of music-analytical thought before locating the chapters in relation to these currents.

Analysis in Modern Western Discourse

Analysis as we shall speak of it is the encounter between the hierarchy-seeking mind and the music-sound event, often (as here, but not necessarily) inscribed in some way so as to fix it for study.¹ The encounter consists of structural listening—listening with explicit attentiveness to musical design and architecture—followed by reflection and synthesis, and is supported by the analyst's musical skill and experience. It is important to emphasize the listener's individual prerogative and agency in music analysis: one can listen structurally because one chooses to, for other ways of listening are means to different ends. But as we define it, the central result of analysis is the identification and grouping of manifest sound patterns and their relationships to governing schema in a work, repertoire, or genre, and especially the compelling musical tension that results as the patterns become set off in relief from the schema.² A description of the immanent, underlying principles uniting diverse musics (however delineated) is best thought of as theory; analysis is the application of theory to reveal individuality within and between levels of structure.

Music analysis must be rigorous but it is essentially creative, with only tangential claims to being scientific.³ Once observed, sound-patterns can be mobilized **(p.7)** for many purposes: to demonstrate or inspire compositional depth or ingenuity, to discover an archetypal sound-structure model on which a music or repertoire is based, to symbolize or reflect a philosophy, social value or belief (of the analyst, the composer(s), performer(s), or their society), to reveal a historical process of change, to unearth unsuspected connections to music elsewhere, to embody a mathematical principle. Good analysis demystifies by cracking sound codes, better enabling the ear to collaborate with the mind in search of richer experience.

In the West, analysis is allied with a conception of absolute music, music as escape-from-the-world, that has roots in nineteenth-century European

romanticism and earlier. In describing music, Theodor Adorno emphasized the “truth value” that analysis reveals (1982:176), and although he, like Kundera, had only one kind of music in mind, we still know what he means. The “truth” is insight into how the hierarchic organization of music helps us tune into indispensable percepts different from those ordinarily gleaned from the world around us. This impels us to see what music provides as legitimate, even privileged, experience, which would otherwise be unknowable.⁴ Through analysis, we also may have the opportunity to understand and acknowledge that musical structures—not unlike cultural or mythic narratives that shape us (and of which we may be equally unaware)—result from the time-tested efforts of successive forebears, and constitute a treasured inheritance, even as our generation adds to and modifies them.

Questioning the motivations for analysis and the validity of its results is always important. In the closing years of the twentieth century, analysis weathered an intellectual storm precipitated by the ascent of cultural relativism in the preceding decades. Relativism is more of a reaction than a perspective: it takes a critical view against Western enlightenment's claims to universal value, and wants to understand what other peoples and histories have to say (Krausz 1989). Wide-ranging debates over the value of analysis, especially in terms of its ideologies, have raged in music scholarship; here we want to be aware of these polemics without allowing them to paralyze us. Bear in mind that despite these debates, the experiential value of analysis—the extent to which it teaches the mind and ear—has rarely been at issue. In a discussion of transcription from **(p. 8)** recordings or performances (itself a very important kind of analysis since the act of notating music requires deciding how to represent virtually all music elements), ethnomusicologist Ter Ellingson wrote definitively that “one goal of transcription is the experience of transcription itself” (1992:147). It is a given that analysis—whether based on focused interior listening, working with a composer's score, or by making one's own transcription—is a worthy exercise because it brings us to a more intensive relationship with the particularities of sound. What arises next is the question of how we interpret and present our perceptions and decisions.

Adorno's truth has an implied aura of universality, and we should be mindful that his view seeks to fuse scientific-style inquiry with artistic sensibility in the name of the universalist legacy of European Enlightenment thought. Seeing art as *the* privileged domain of truth is an idea inherited from his nineteenth-century Romantic predecessors. In any event, we shall allow Adorno, in his established role as iconic musical thinker, to represent the modern West for current purposes. His is not the only perspective, but he has been both celebrated and critiqued extensively. To Adorno, music sound is a fixed autonomous object consisting of the composer's work, separated out even from words in song or opera. It is a container of quasi-sacred truth-knowledge to be revealed, and this powerful knowledge is analogous to the reach and might of the culture itself.

Autonomy suggests abstraction and aloofness from the real world and is compelling in a religious way, too, like the tolling timelessness of dictum.

This is not an outrageous analogy to make, as Nettl's (1995) persuasive allegory of music conservatory-as-religious-system memorably illustrates. Dicta come from on high and regulate beliefs for the diverse world below; thus the more abstract analytical knowledge of Western music is, the more ostensibly authoritarian, and potentially condescending to other music systems and beliefs about music.⁵ Scores of polemics since the 1970s have brought this realization home, making it essential to care about how we circumscribe the validity of our analyses, make appropriately modest claims for them, and account for them as interpretations rather than pronouncements about what is universally valuable (or, unworthy) in music.⁶ The crux of the political critique of **(p.9)** Western analysis has been to urge a cautionary "stop" to those who would adopt rhetoric like Adorno's uncritically, or who would not take into account (even implicitly) other kinds of musical value or complexity.

A different sort of critique, emerging from studies of music cognition and perception, considers the listener's point of view. Music analysts sometimes seem to be saying that one *must* listen structurally, the deeper and more abstractly the better. Yet should we? Listening is the most discrete and interior of activities as our ears do not visibly focus like our eyes and hence they reveal nothing about what they perceive to outside observers (Szendy 2001:29). Inside our own minds we may relate to music in many ways. Nicholas Cook claims that structural listening is not necessarily related to musical experience, and may be far less important than has been claimed (1990:15–21). Is it a chore, then, to even try? Adorno would have us *only* hear structurally but Cook would say to ease up and listen associatively for what music signifies to us personally, historically and culturally. Beyond either of these approaches, we often use music to evoke just a mood, which might be spoiled by too much attentiveness, so shall we just listen moment-to-moment, sensuously, or even distractedly, according to our whims?

The answer is that we choose the most appropriate listening mode depending on circumstance. Yet in defense of structural listening one can aver that structure, although abstract, has indispensable objective properties. For one thing, we need to know structure in order to grasp and admire the accomplishments of musicians as designers, builders, and inventors of ingenious frameworks for sound, itself an inspiring objective. Structure guides composition, enables performers to comprehend and interpret, and, as something anyone with suitably developed capacities can perceive, provides a basis for common understanding and appreciation. Music has many dimensions other than structure, but the sharing of its cultural and personal significance has limits without the basis structure provides. We need to hear structure to give our

diverse personal interpretations a common orientation. Structural listening deepens specifically musical experience.

Is every analysis an expression of ideology? Yes, in that we are who we are. Rather than shirk from the supposed risks of subjectivity, and without insisting that one must *always* listen for structure, let us do what we can. Musicians need to create representations of music *as music* in order to embody it and teach it: but we also must be ideologically self-aware. Analysis may have been part of the problem, but, reconstructed, it also provides many good solutions.

(p.10) *Analysis and Musics of the World*

The introspective autocritique summarized above is part of a Western culture in which doubt and self-questioning have been core values since Socrates. People in some cultures regard their musical knowledge as especially powerful and worthy of keeping secret; of course, this is a tenet one sensibly wants to treat with both common sense and respect (Berliner 1978:7; Nettl 1983:290–300). But in general there have not been voices from elsewhere accusing analysts of non-Western musics of pillaging; nor have other cultures weighed in to say that they think analysis is a bad idea. To the contrary, there have been what I would characterize as commonplace musical behaviors: interest and willingness to share. Perhaps only we analysts see the stakes as high enough to merit pondering our actions in terms of a moral or ethical quandary. In my own experiences in Bali and South India, whenever I had the chance to explain my enthusiasm for talking about music sound and structure, people were never negative; their responses ranged from respectful apathy to intense curiosity, to immediate and productive debate about musical details.

Recent scholars of African music have argued forcefully against many Western observers' "denial" of the potential for analysis to be enlightening in those repertoires. The claim is that this neglect has been a form of racism that "reduced [African music] to a functional status or endowed [it] with a magical or metaphysical essence that put it beyond analysis" (Agawu 2003:183). Writers such as Agawu or Scherzinger (2001) assert that to analyze African music is to welcome it into international musical discourse, and to empower African musicians to publish their own findings. Although the situation is different everywhere, when people cross borders to analyze others' music, it is usually motivated by respect and desire to understand. Few respond to that unkindly. Negative forms of such border-crossing appropriations are certainly possible, however, so inappropriate ones ought to be critiqued and questioned.

Throughout the twentieth century, via practices such as ethnomusicology and anthropology, a worldwide topography of musical practice, value, and meaning was under construction. Discourse in the arts and humanities evolved to accommodate a kaleidoscope of multiple voices. It is our common lot to look or move around the world for guiding ideas. We listen and become aware of our

affinities. Focusing those affinities into an analytical gaze is intrinsically difficult, however, especially when transcription and the learning of a foreign musical language and culture is involved. First, one asks what sort of cultural perspective is appropriate. Then, one must learn the music, often through fieldwork and the establishment of extended relationships with foreign musicians. Finally, one must formulate a point of view about it. This usually takes many years. One needs the discernment to evaluate which musical features are **(p.11)** relevant and which are not, and according to whom. Most musics are in fact flexibly structured (unlike typical Western scores), or rely to varying degrees on improvisation, lack clear beginnings or endings, or are inextricable from ritual, poetry, or liturgy. Often the idea of a “piece of music” seems like an old butterfly net, frayed and torn, from which delicate creatures easily escape and avoid even sympathetic scrutiny. Often one is better off thinking in terms of a particular *performance* of music to be isolated by recording, and transcribed. But still, what should one focus on therein? Each writer makes choices and must explain and justify them.

One may emphasize learning and analyzing the music of others using a mixture of local and the researcher's own terminology and techniques (most of this book tilts in that direction); or one may focus more on how others do their own kinds of analyses for their own purposes. Local analytical knowledge is often implicit, passive knowledge not formalized through writing or even oral means; in other cases, it is formalized orally but regionally varied within a culture; in still other cases encounters between Western researchers and the musicians they study have engendered new, hybrid streams of analytical thought. Here, ideological sensitivity amounts to recognizing that in representing another musical system to facilitate one's own learning, some distortion is inevitable. Of course, even within well-bounded cultures there is never uniformity of understanding. Now that knowledge and ideas about world music cultures have leapt into international awareness, local concepts fluctuate and exchange with cosmopolitan ones all the more. The music appears differently even to its own creators once outsiders value it.

The idea of autonomous music is strengthened, for better or for worse, by the ease of transforming music into commodifiable, infinitely replayable digital bytes. Yet even before the age of infinite accessibility “absolute music” was compatible with the spiritual dimension of music in many non-Western societies. If musicians worldwide read Adorno and could overlook his Eurocentrism, many might nod in approval of his notion of musical truth, understanding it in ways relevant to them. What have come to be called ethnotheories—indigenous conceptualizations about music—are, unsurprisingly, less grandiose than he was, however.⁷ Some ethnotheories are identified as such because researchers discover vocabularies people use to describe and critique their own music. Feld's definitive 1981 study of Kaluli use of metaphors of water flows to classify melodic shapes demolished older, myopic notions denying such kinds of

knowledge to non-literate peoples. The affirming idea is that water and its life-giving power are as much a truth to Kaluli as Enlightenment thought is to Adorno.

(p.12) In learning music of oral traditions one is often deeply moved by how the best teachers, often trained without notation, cultivate not only amazing memories for music but also an internal mastery that unites repertoire, practice, theory, analysis and broad cultural knowledge as inseparable components of an encompassing musicianship. When such musicians need verbal or written analysis—perhaps for the first time, and especially in late-twentieth-century contexts—it is often because circumstances demand that they classify, describe, and become aware of what they hear for some practical purpose. They may need to teach it in modern institutions, collaborate with outside researchers, or transmit to the next generations. Thus, in Central Africa, Simha Arom elicited the simplest, model-like realization of a complex improvised music when, after years of study and transcription, he at last thought to ask performers how they taught it to initiates (1991:370). This model was a kind of analysis that the musicians used to teach their own children, although they did not think of it as such nor identify it until Arom asked them the right questions (see also the chapter by Susanne Fūrniß in this volume). In Java, some late-twentieth-century musicians sought to inquire deeply into their music's structure in response to a pressing need to help students, an increasing number of whom were Western researchers (Perlman 2004:127–128). Yet even before that they had been impelled, by nature of their own cultural values, to undertake solitary quests for enlightenment regarding their music's true nature.

The South Indian scholar Sambamoorthy's vast classificatory system was developed in the mid-twentieth century at the University of Madras, where it filled a formal pedagogical need. In 1989, my tutorials with his successor Karaikudi Subramaniam were centered around the latter's intense microanalyses of South Indian vocal ornaments (*gamaka*), which instantly deepened my hearing of South Indian vocal styles. Many of Subramaniam's own Madrasi (Chennai) students had to adjust to his penchant for pinpointing such details, as they were used to absorbing them aurally and intuitively. But to me it was like a rocket into the music. It was the kind of experience that makes one want to come home to share the insight of understanding, even if just a bit, something so finely and carefully wrought.

Choosing Perspectives for This Book

Let us set those issues aside for now; they will arise again in the chapters to come. This is a book of analyses, not a study of debates about analysis or an argument for a particular method, though it is important to understand this discursive background before proceeding. Merely using the English language and distributing the book through the academic arm of Oxford University **(p.13)** Press unifies and privileges the collection in important fundamental ways. But

within this there is ample room for diversity. The present objective is to provide tools to listen and to enrich with recordings, notation, and other visual aids. All authors use indigenous terms and concepts, combining them in differing amounts with imported ones. They focus on clearly defined “pieces” of music to the extent appropriate in each case; where improvisation or a flexible concept of musical form is important the analysis may also focus on principles or strategies for shaping music, as realized in the performance included on the enclosed CD. Readers must be mindful of the wise ethnomusicological counsel, echoed throughout, that music's intense formative contexts embed layers of meaning and experience that structural analysis alone cannot penetrate.

William Benjamin's study of Mozart and John Roeder's of Elliott Carter (chapters chapter 10 and 11) represent Western art music in this global context. Their chapters level the playing field, defamiliarize that repertoire for those who have not yet ventured far beyond it, and bring it to the attention of world music students and scholars who might not ordinarily encounter it so intensively. It is a refreshing experience to have Mozart unapologetically called a “genius,” as does Benjamin, without also having to reflexively assume an outdated view of the European art tradition as a lone and embattled bastion of worthy musical values. Mozart, at least, is relieved of having to guard those boarded-up old gates anymore.

That the playing field might be leveled is, at this time, more of a wish than a possibility, it is true. Benjamin and Roeder have at their disposal authoritative scores and a range of preestablished vocabulary and concepts developed to discuss everything from minutiae to large-scale form. Their springboard is the history of ideas, debates, writing, and theorizing that led to the current state of Western music theory. In keeping with the tradition's specially individualized aesthetics, they have the luxury of being able to focus on qualities owing as much to Carter's or Mozart's personal compositional style as to general or historical musical characteristics of the genres. But here they set for themselves the tricky task of approaching their topics as if outsiders themselves. They build concepts from scratch, as if explaining a foreign music to someone from their own culture, and as if the Western notation they employ is a neutral tool not specifically evolved to convey the music they consider. (Roeder, acting the ethnomusicologist, even retranscribes the published score so as to render it in a way that better reflects what he hears and wants to explain.) It is virtually impossible for these authors to pull off assuming such a pose, of course, yet it is very much worth trying for. Whether or not close to Western repertoires, readers are encouraged to receive these chapters in the spirit of imagining Western music as if it is new to them.

The remaining nine chapters appeal for parallel reasons to those who have **(p. 14)** yet to consider non-Western musics closely as structures. As noted earlier, much non-Western music does not come packaged to us with the kind of

knowledge and specificity developed for the European art tradition—it must be gradually assembled through fieldwork and is typically augmented and extended by the scholar's own expertise. Peter Manuel, writing here of *flamenco* (chapter 3), nevertheless rejects the imposition of too much Western theoretical apparatus. He asserts that “formal structures seeking development, climax, and closure are distinctively modern bourgeois creations, [while] flamenco, in its essentially additive, sequential structure, is thus typical of many premodern forms,” thereby declining to examine the performance at a higher level of form than that suggested by those sequential units. This assertion importantly brings us up short, raising questions as to what flamenco musicians may actively or passively know about what they do, what they may wish or find worthwhile to know, and whether it is fair or appropriate for scholars to layer on analytical conclusions that do not originate with the culture under consideration. The remaining chapters are comfortable with that layering process to varying degrees; Manuel reminds us to weigh the ramifications.

Donna Buchanan and Stuart Folsie's study of Bulgarian *horo* (chapter 2) hews to remarkable articulate commentary fortunately provided by their teachers, who “systematically outlined the [music's] structure and creative process” for them. Speaking of modes, modulations, cadences, and improvisational strategies, they partake of a vocabulary both they and their teachers understand. Later, pointing out the structural ambiguities inherent in the song *Georgi le, lyubile*, they move beyond this dialogue and are able to “offer some clue” as to their teacher's unspoken perceptions. They thus go slightly further than Manuel in terms of integrating their own analysis techniques, but their teachers' enthusiasm for the venture rings out clearly in support.

Stephen Blum's chapter on Iranian poet/singers' renditions of verse (chapter 1), Robert Morris's on a South Indian *varnam* (chapter 19), and R. Anderson Sutton and Roger Vetter's study of Javanese gamelan (chapter 7) all rely on musicological discourse and terminology from these traditions. They extend and focus it gently to illuminate what might not be evident to untrained ears, or make observations that emerge from considering specific performances as fixed objects of contemplation—an approach not necessarily relevant for practicing musicians inside the culture. Blum works near the interstices of literate and oral tradition. One of the main fruits of his chapter is the demonstration of how singers cope with the strict demands of the former in the context of the latter's flexibility. His cosmopolitan analysis begins invoking Wagner's *Tristan und Isolde* as an example of how poetic meter and musical rhythm interact. Blum soon juxtaposes Wagner with Iranian bards, then continues on to show something the bards themselves may not be aware of: how competing **(p.15)** poetic and musical norms shape their music and provide options at the level of rhythm, melodic pattern, and instrumental pattern.

Robert Morris's study of a performance of the South Indian composition *Valachi Vacchi* describes the music in accord with venerable Indian discourses of music structure and terminology. He enriches his analysis by integrating the commentary and demonstrations of noted Indian scholar S. Bhagyalekshmy (CD tracks 16 and 17) then takes a leap by applying contour theory, a technique developed in the 1980s for analysis of post-tonal European art music but portable enough to enable new insight into very different musics. This explicitly cross-cultural fusion of preexisting tools produces an analysis whose enforced hybridity is strengthened by the author's mastery of both intellectual traditions.

Theory of central Javanese music is not as copious or old as Indian theory, but Sutton and Vetter's chapter about the Javanese gamelan composition *Ladrang Pangkur* nevertheless has a mature body of mainly twentieth-century scholarship to engage with, some indigenous and some Western. Yet most earlier studies of Javanese music are concerned with performance "rules" and the generalized explanation of music concepts and process (such as *gendhing*, basic compositional form and structure; or *garap*, improvisational treatment of melodic elements). This is because practicing musicians have sought guidance bringing the minimal skeletal framework traditionally provided for each piece to life. This must be done in a different way for each performance. By contrast, this chapter may be the first to consider in detail a particular Javanese performance as a finished product. The performers' many bold pathways through the cyclic template used to define the *gendhing* reveal an inner world of detours, transformations and asymmetries, the result of infinite choices the performers made. This complex manifest structure falls within norms that are just as much a part of the tradition as the performance practice, however. But it is new to grasp *what* Javanese musicians create, which importantly counterbalances the normative focus on *how* they create.

Robin Moore and Elizabeth Sayre must be inventive to analyze Cuban *batá* drumming and song (chapter 4), as that music has rarely been conceived or discussed in the way they do. It helps that the music's West African roots allow them to situate their analysis and transcriptions within a lineage of scholarship about other African or African-derived traditions. It is nonetheless incumbent on them to rigorously explain performance norms and the conventional freedoms and limitations of ritual and musical contexts *before* they can venture into the particulars of the recorded performance at hand. Once trained there with a fine enough lens, it becomes possible to follow the nuances of altered standard patterns, long calls, and conversational responses from supporting drums. The texture of the music comes alive with potential and significance to the attentive listener.

(p.16) African polyphonic vocal traditions are comparatively less studied than drum-centered musics such as *batá* or its African antecedents, so Susanne Fürniss needed, even more than Moore and Sayre, to deduce principles of

Central African Aka polyphonies and find ways to categorize and describe them (chapter 5). Although based on Aka terminology, her analysis (and that of her mentor Simha Arom) is almost entirely produced through observation, fieldwork, and meticulous transcription and comparison of a vast stock of melodic fragments and their variations. The emphasis on discovering underlying typologies and implicit cognitive models locates this kind of analysis in the lineage of French structuralism indebted to the anthropology of Claude Lévi-Strauss.

In a related way, my chapter goes some distance toward identifying a typology of melodic variants in a mid-twentieth-century Balinese composition (chapter 6), and then organizes this information to show how minimal the underlying structure actually is. At the same time I demonstrate that the music is practically without repetition at the surface. By pushing beyond the culture's own analytical observations, I make rather unexpected claims about form and structure that I point out to the Balinese musicians I have known and worked with, much to their interest. Yet they and I know well that without the use of their terminology, categories, and discourse about composition and style I would be unable to say a thing. Jonathan Stock's essay about the Shanghai opera star Yang Feifei is comparable in that way (chapter 8). By explaining how Yang's radical transformation of standard musical forms leads to new kinds of structural elegance, his analysis uncovers a remarkable by-product of her more immediate concern for invigorated expression and drama. As Stock concludes, knowledgeable Chinese listeners—and Yang herself—may not be aware of her own architectonic accomplishments. But his analysis, he continues, also can be integrated into a feedback loop of interaction involving the scholar and performer in future fieldwork and research situations. When this kind of thinking ricochets back to the creators of the music that stimulated it the analyst feels the satisfaction of making a contribution that can fuel further interaction, exchange, and musical development. That kind of long-range collaboration is a fitting hope for, and often a proven consequence of, cross-cultural musical contact.

The genres represented between these covers were selected with several balances in mind. Geographical diversity was a factor, but not a paramount one; it was not possible to be comprehensive even at the level of continents (Oceania is not discussed and the Americas are represented by African- and European-derived genres). Existing traditions of theory and analysis played a role as these can enrich; hence some weight has been shifted toward “larger” art music forms and ensembles (Java, Bali, India, Europe). “Smaller” musics such as those representing Iran and Bulgaria are here, too, as intricacy and musical **(p.17)** interest are by far not the provenance of large ensemble or storied “classical” traditions alone. Each writer's strength as an analyst and sympathy for the project (not axiomatic in ethnomusicology) was a factor, as was including contributors from both Europe and North America. Popular or contemporary or

fusion musics ought to be here, but the roll of the dice (and limits of space) did not favor them this time; also, they have begun to receive ample analytical attention elsewhere (e.g., Covach and Boone 1997).

The book as a whole models a repartitioning of the universe of music study, to encourage close analytical work in all kinds of contexts. But what we do not have—and may never have—are the likes of native Aka analyses of batá drumming, or Iranian perspectives on flamenco, that would catapult us to different revelations. From Bulgaria to Bali, few devote themselves as thinkers to other musics unless they have passed through a Western education system. The open tent of cross-cultural analytical research is inseparable from the acquisitive Western culture that cultivated it. That conclusion is impossible to avoid, however one may view it.

World Music as a Context for New Music

Humans are biologically predisposed to making music and it played an important role in human evolution (Blacking 1972; Cross 2003; Dissanayake 2000). Correspondingly, it is music's nature to fuse, recombine, and proliferate like genes. Musicians and composers, witting or unwitting, acting independently or constrained by beliefs and institutions, are the matchmakers in these reproductive sonic trysts. Music fusion is inexorable and something of an advance guard for actual genetic fusion: no human intolerance nor any reservations about propriety stopped Spanish melodies from eloping with West African rhythms to form rumba in racist, socially segregated, late-nineteenth-century Havana. One of ethnomusicology's most enduring contributions has been to show that such weddings take place whether the cultural parents approve of them or not (especially when they don't, it seems), and that they both prefigure and catalyze broad social changes.

The courtship that produced rumba was centuries long. Our accelerated era is wholly different from old Cuba's slow hotbed of West African and Spanish entwinement. That pace seems if anything luxurious in today's landscape. By comparison, contemporary music fusions are often like quick and casual arrangements, mail order bride services, or Las Vegas honeymoons, any of which may or may not work out in the end. A jazz trio fronted by koto, Gambian kora with string quartet, an orchestral work modeled on North Indian musical form, gamelan with electronica for *manga* soundtrack, the proverbial sitar **(p.18)** in the rock band—these are all post-late-twentieth-century alchemies arching across histories and cultures and designed by peripatetic musical geneticists. We become inured to such juxtapositions and the resulting hybrids, until recently felt to be radically novel, are common.

These comments are by way of observation. They are not intended as critique of the creators, whose actions as fusionists may range from inspired pilfering based on brief acquaintance to careful planning supported by years of

immersion and reflection.⁸ Neither way guarantees better music: mishearing can be as creatively productive as intensive engagement, and it is unwise to argue for one or the other approach. Whether such activities fragment, unite, or simply reconfigure us as human participants and receptors of music is also an open question to save for another time. The key realization is that the proliferation proceeds apace with tremendous energy and it requires sympathetic consideration not just to try to understand it, but to participate. That is why, in addition to reimagining the domain of analysis as something that is not positioned in terms of a Western/non-Western split, this book also assumes that analyst and composer are two interacting sides of each musical self. It is addressed equally to the composer in each of us and takes a proactive stance against the way Western music education channels students to choose among identities such as composer, theorist, musicologist, performer, and so on. In this book, designs and blueprints are available that may potentially contribute to future fusions. As a book written by educators and directed at learners, we assert that knowledge of structure in a variety of musics is necessary for the contemporary musician.

In the recent past, “new music” had a special niche in Western culture in terms of its complex range of tonalities (or atonalities), the radical contextuality of each work, instrumental virtuosity, alliance with computer research and technology, and the prestige of certain educational and performing institutions. That scene's exclusive and faithful core audience is no longer exclusive nor faithful. This reflects the composers, who are off exploring and have subverted everything that new music used to stand for, including and especially merging it with popular musics. But new music is best seen neither as the pedigree descendent of the Western tradition nor the constantly renewing product of the music industry; it is now nothing if not equivalent to world music in its prismatic and hybridizing forms.⁹ Conservatory trained composers in Seoul **(p.19)** work out their ideas on Korean drums and present them as a performers' collective, or in collaboration with Austrian jazz players. The Bang On a Can ensemble, fronted by their guest Burmese musician Kyaw Kyaw Nang, performs transcriptions of his traditional repertoire in New York. Of the best musical minds of our time, it can safely be said that “only a few of them are writing symphonies” (Halle 2004).

As stated, there are many justifications and goals for analysis. But today one of them surely ought to be activism—the development and promotion of a relevant and timely musicianship in accord with the international and cross-cultural nature of contemporary music creation. Once all of this is recognized and accepted, the task of theory and analysis becomes a fully global affair. But now that we have asserted that the music of the whole world is the proper context for new music, how shall we organize the former to make it comprehensible to the latter?

Categorizing Music

“I want to live the whole world of music,” the American composer Henry Cowell (1895–1965) famously remarked. For some he was the oracle of that irresistible spirit of inquisitiveness and passion, setting the tone for generations of musicians whose similar impulses to musically merge with others are now enshrined as a central aesthetic of our time. If we take Cowell at his word, no music should be excluded from our view, at least in concept. But it is mind-boggling to suggest that all of it—on a scale from Gustav Mahler's gargantuan Ninth Symphony to the intimate whispers of Rosa Salolosit, a girl singing a “private song” in her small room on Mentawai, an island isolated hundreds of miles off the west coast of Sumatra (Yampolsky 1999)—can be usefully considered under a sole capacious rubric like musical analysis.¹⁰ Yet such a conception is in fact inevitable as the music is already all around us and cannot be made unavailable any more. When I play that young girl's song for my students **(p.20)** we always feel uncomfortable in our classroom like eavesdroppers on something too intimate for our ears, listening to her tiny voice across oceans and years. But, the liner notes tell us, she consented—in fact, insisted—that the recording be made, that her song be digitally transported, and she practiced diligently in preparation for the recording session. I know both the recording engineer and producer personally. I trust them and their ethics, their human sensitivity. I can focus on the powerful inkling that she has something to teach us, and from what we know of Mahler, he would do the same.

We may ultimately only be able to follow Cowell in spirit. Nevertheless, just to aspire to his vision we must sort and categorize all music in some way. It is much harder to propose a categorization now than when Cowell was alive because we have such a proliferation of nuanced perspectives on music, much more detail about its varieties, and endless access (not even a vague dream in his day). The amount of study needed to know even a few music cultures and repertoires further raises the magnitude of difficulty. We have more skepticism now, too, about the status of music as an objectifiable entity, and are more comfortable with the notion of music as something contingent, a process of producing organized sound subject to varied perception and interpretation by those who make and listen to it. Yet categorization remains a cognitive imperative prior to which meaningful learning is impossible. Our task is to choose a point of view best suited to the philosophy of this book, one also useful to future writers and capable of being further developed.

Shall we use criteria such as tuning system, mode, or rhythmic organization? What about ensemble size, age, musical instrument types, singing style, timbre, dance movement, or the use/absence of improvisation? We could stick with geography (what are West African musics like? or Central American ones?), an obvious choice that has driven much scholarship but misses the point in today's world of perpetual diaspora and transcontinental recombination. We could think in terms of broad historical categories—prehistoric, ancient, high civilization, or

modern and postmodern (Wiora 1965). We might be drawn to base our categories on social concepts like culture, or its offshoots traditional/modern, local/global, high/low, cosmopolitan/rural, individual/collective, or others. What about trying to translate, cross-reference and compare already existing indigenous or ethnotheoretical music-categorization systems from around the world? (It is hard enough to make any two of these align, let alone a multitude of them!) Or something related to how people use music—for education, pleasure, refinement, ritual, governance, love, enculturation, capitalism? What of function, use, aesthetics, taste, value, durability, importance? This survey of choices is only the beginning and each threatens to reduce music to something far less than the sum of its parts.

(p.21) One thing is clear: when we categorize according to a certain criterion, the results will disperse other criteria. For example, if we group musics by social function (e.g., dance music or work songs), we will not have separated them in terms of musical structure (e.g., tempo, or pitch content), and knowledge of the latter will remain elusive until we train our lens differently. It is thus imperative to choose wisely according to our needs.¹¹

Many music categorizations have been proposed in the last century or so, and not a few before then. Among early comparative musicologists Alexander Ellis (1885) measured and sorted scales and tuning systems, whereas Curt Sachs (1943), who contributed many seminal works, grouped “primitive” singing styles and melody types according their origin in textual/liturgical or dance/celebratory contexts. Béla Bartók (1921, 1933, etc.) most influential of many musical forklorists active before 1950, grouped Hungarian (and several other nationalities') songs into age-stratified layers. Later, Mieczyslaw Kolinski copiously categorized pitch and rhythm varieties (1965, 1973, and others). Alan Lomax's *cantometrics*, a vast typology of world musics painstakingly coded according to thirty-seven criteria, was not well received when unveiled in 1976, at least partly because ethnomusicology was by then firmly committed to separate, relativistic studies of discrete cultural systems.¹² David Reck's memorable *Music of the Whole Earth* (1977), an inspiration for the present book, proposed division according to ensemble size, from solos (“alones,” as he called them) to large ensembles (“togethers”).

Music theorists offered not classifications, but techniques, or rubrics, through which one could view all music: in the early 1970s, Benjamin Boretz published his phenomenological *MetaVariations*, and in the 1980s James Tenney brought out *MetaHodos*, originally written in the '60s. Rober Cogan's *New Images of Musical Sound* and his many publications with Pozzi Escot in the journal *Sonus*, and Jay Rahn's *Theory for All Music* (1985) also appeared around this time. Cogan offered graphic acoustical snapshots, and Tenney was concerned with describing varieties of *klang*, or sound complex. Rahn, following Boretz, promulgated analysis based on strict adherence to empiricals, that is, solely

what was written in the score or transcription. What Rahn called “mentalism,” **(p.22)** that is, anything attempting to account for people's perceptions or ideas about music, was deemed subjective and unknowable, hence off-limits.¹³

The failure of such comparative or culture-blind perspectives to exert sustained influence is commensurate with the twentieth century's grand march toward knowledge specialization in all fields. Ethnomusicologically speaking, the aim has been to describe music cultures everywhere as particular phenomena so as to know them on their own terms, obviously an inestimably valuable collective venture. Here we avail ourselves of some of that knowledge to categorize with a different purpose: to abet the *activist use* of world music, to sort the music, as it were, into the drawers and compartments of a toolbox. This feels natural enough, as most of us are generalists or comparativists in our everyday experience. We hear music from all over, take or teach “world music” courses, and read encyclopedic music books from *Grove's Dictionary* to the *Rough Guide*. The question thus becomes: which criteria are most useful for the creative musician? Posing this is possible only if one accepts the utility of broad perspectives and is ready to live with their shortcomings. Standing on the shoulders of the many hoary debates about representation and discourse in music analysis glimpsed in the foregoing, we focus on *efficacy*. What can we put to productive use?

Periodicity and the Composer's Toolbox

For our categorization criterion, we turn to *periodicity*, a term from mathematics and physics referring to regular recurrence of waveforms, functions, or phenomena (e.g., orbits). In music, periodicity has long signified repetition or restatement, literal or transformed, of all kinds—of beats, rhythms, motives, melodies, structures, timbres: virtually any musical element can create a sense of stability through return or constancy, and such stability will always be in dynamic dialog with change. The potential for change and transformation within a higher-order framework of repetition is suggested by the related but distinct use of the word *period* to name time scales as long as historical eras: we understand Western music history, for example, in terms of transitions from, say, baroque to classic periods, while acknowledging that the fact of such change is both predictable and takes place in characteristic ways (a period of innovation followed by consolidation, and so on). For periods of all kinds, *plus ça change, plus c'est la même chose*.

Music is nothing if not iteration and pattern; periodicity is music's ultimate organizer on many levels. It is multidimensional and its range of qualities **(p.23)** should not be conceived along any single complexity scale. Periodicity is time line, cycle, riff, ostinato, passacaglia, song form, sentence form, meter, drum pattern, call-and-response, twelve-bar blues progression, tala (India), usul (Turkish), iqa'at (several Arabic), ban (China), gongan (Java and Bali), changdan (Korea), clave (much Caribbean), aksak (Eastern Europe),¹⁴ hayayahyoshi

(ancient Japanese court) and on ad infinitum, with many ideas, terms, and manifestations both within each music culture and suggested by outside scholars. The absence of periodicity in *any* music is a challenge to imagine. Even if one could invent such music algorithmically, we, as aware listeners, would impose or construct pattern, as that is the nature of mind relating to world.

For over a century extinguishing periodicity by creating continuous variation (Johannes Brahms, Arnold Schoenberg, Anton Webern) or types of hyper-complexity, or indeterminacy (Pierre Boulez, John Cage, Iannis Xenakis) was a major preoccupation among Western composers, and continues to be for some (Brian Ferneyhough).¹⁵ The effort to comprehend such music's structure, especially in contrast to the highly ordered periodicities of earlier tonal music, has been a core goal for theorists and analysts of Western music. That is, it is understood that composers attempted a fundamental break with the past of periodic tonal rhythms and underlying regularities, so analysts and theorists need to discern and describe other systems of coherence. Such twentieth-century music loomed large as a cultural jettisoning of the past, a powerful trope on the archetypal, intensifying individuality of Western humanity. "Liberated" from the periodic rhythms that bounded the Western tradition together in an earlier time, modern music sought to transcend this and approach an imagined "objective" state of perpetually renewing nature (Tenzer 2003:117). Zooming out to a worldwide perspective, however, the swansong efforts of modern composers can realistically be seen as significant only within the culture that produced it. When accounted for as a world music genre, the trend must instead take its place as a rare star in the galaxy of world musics—a small but vital exception proving the towering rule that periodicity is the stuff of music everywhere.

Periodicity is really a universal, inseparable from a conception of music. This justifies choosing it as a framework, but does not provide focus as virtually **(p. 24)** nothing is excluded. For this we must subcategorize. Periodicity structures and measures musical time, so we shall be concerned especially with *types* of periodicities: essentially rhythmic, hierarchial structures that enable us to perceive entities labeled, in tonal European art music, with terms such as measure, meter, measure-group, hypermeasure, sentence, formal section, and the word period itself. The South Indian analogue to meter is *tala*, whereas other kinds of rhythmic groupings such as *mora* build rhythmic groups at higher levels. In Moore and Sayre's depiction of bata drumming, a basic metric periodicity is expressed through the repeating (literally stated or implied) *clave* pattern, whereas larger grouping structures emerge through the varied repetition of drum patterns (toques) and songs. Periodicities are *cyclic* or *metric* in that something equivalent to hierarchic beat or meter organizes them; higher-level periodicities constructed from groups of events are heard in relation to cycle and meter.

Some music (compositions for the Japanese bamboo flute *shakuhachi*, many kinds of chant, recent Western open form works, the pulse-less *alap* of Indian classical music) is, in terms of strict rhythm, *nonperiodic*; that is, unmeasured with steady beats or cycles. Yet any number of musical behaviors impel us to perceive regularized pattern in them nevertheless, with the result that we may legitimately listen to such musics *as if* they approximate periodic ones, because even without the framework of steady pulsation we may group events such as returning motives patterns or a series of agogic accents into period-like components (see Widdess 1994:62–68 for an interesting example of this). In the next section, I implicitly encompass such music when I sketch subcategories of periodicity types. Admitting such music into a categorization scheme founded on strict periodicity requires us to immediately relax our definition to accommodate what may not literally recur in either clock or rhythmically counted time, yet exhibit behaviors closely enough related to make the analogy plausible.¹⁶ In this book, however, such music only appears *passim* in Stephen Blum's Iranian selection and Jonathan Stock's Chinese one; readers may decide for themselves whether passages in the Elliott Carter work John Roeder considers are so complex that periodicity is neutralized.

Why all these architectural perspectives? Because the way periodicities are laid out generates musical form, perhaps the most fundamental compositional concern. When one grasps how periodicity drives music one thinks and understands more compositionally than when one deals with a less malleable, more static element such as scale or mode. This means that, given a perspective as broad as ours, rhythms and formal structure are prior in importance to pitch and other parameters. In a manner of speaking periodicity *is* form, and content—what fills and to greater or lesser degrees generates form—is to be heard in relation **(p.25)** to it and supported by it. Return to Kundera's archetypes and to how he reserved special awe for the inner voyage suggested by variation form—which we can now understand to mean the spiraling into periodicity, repetition, the simultaneity of change and constancy in a fixed, hierarchial formal frame. When we defined analysis earlier as a search for the ways sound patterns create tensions in relation to governing schema in music, the “governing schema” are the periodicities to which we now refer; the “sound patterns” are the musical materials, the content.¹⁷ These interact and shape each other in as many ways as there are musics. Periodicity may be relatively static or dynamically entwined with process.

Periodicity orients us in music and a much larger hierarchy of time that connects to experience both at and beyond the scale of human lives. Lewis Rowell wrote memorably:

The experience of human temporality in music arises as a result of our perception of time as an immense hierarchy, a hierarchy that extends from the smallest rhythmic units (individual tones, durations, accents, and

pulsations) to intermediate levels of structure (patterns, phrases, poetic lines) to the larger, deeper structural levels (formal sections, entire compositions and performances). In the case of Indian music it seems particularly important to recognize and emphasize those aspects of the temporal hierarchy that outlast the duration of the individual musical event: musical seasons, creative lifetimes, the understandings that are handed down from teacher to student, ... and the glacial evolution of musical practice and its theory over many centuries. (1992:181)

Given the venerable age of the Indian tradition he describes, it would be presumptuous not to grant Rowell his emphases, yet what he says is true for any time-tested music, else it would likely not survive.

Qualities of Periodicity

Periodicity is an implicit concern of every author in this book. Whether focusing on melody, rhythm, or some other element, in order to analyze their selection each must come to terms with this aspect of it. Looking forward to some future integrated, comprehensive categorization of the world's musical **(p.26)** periodicities, here we propose a beginning, a blueprint for organization, a grouping of architectural types as reflected in the ordering of the chapters and rationalized in what follows.

To begin, resist any easy intuition that music could be arranged along a two-dimensional continuum with some bare and unchanging heartbeat of an ancient ritual rhythm at one end and the ultimate aperiodic modern Western music at the other. World periodicities have infinitely distinctive qualities, unpredictable similarities, and extended family resemblances that demolish a linear logic; besides, a line-continuum with aperiodicity at one end smacks of an archaic Darwinism placing Western music at the culmination of world musical development. (Were such a line even possible the idea of direction or progress would still be an illusory byproduct of the visual metaphor "line": only diversity, not purpose as in a strict Darwinian view, would be represented there.) By contrast, a point of orientation is of course essential, and common sense leads us to try to find something straightforward to fill that need, something that can be directly compared to as many other things as possible. Perhaps economical is a better term, for simple periodicities need not correlate with simple music.

Rather than a line, let our model be a constellation in motion around a hub of *isoperiodicity* (figure I.1). Seen from the perspective of their periodicities the most economical musics are those that are *isoperiodic*: constructed from the uninterrupted reiteration of a single, bounded musical time cycle. In this book, isoperiodicity is offered not as a beginning but as a focal point—in part II—for other musics to congregate around; and it is discussed first below. I discuss it first because it is particularly essential to the book's organization; but I place the actual chapters about isoperiodic music second so that they appear in the middle

or center of the book, as they do in the constellation “model.” The realization of the book's concepts in these contrasting configurations illustrates that music's organizing principles cannot be ordered or compared in any single way. The dotted-line rings in the figure are intended to be merely suggestive of the many other possible ways to group and interrelate the chapters.

In part I, described after part II, tensions between contrasting periodicities coexist sequentially within individual musical works or performances. These may be restricted to a small number of culturally authoritative musical states that recur in some conventional order. In other cases, the logic is not one of return but of succession, where different states follow each other, medleylike, without necessarily ever looking back. The musics in part I might be described as having a series of discrete isoperiodicities, including both cyclic and unmeasured structures. In part III, described last, a music's grounded, fundamental periodicity cedes some control as it meets an overarching compositional logic (**p.27**) binding it over longer spans to other processes, be they melodic, harmonic, or indeed other periodicities layered on simultaneously. Here periodicity is malleable, extendable, and adaptable to the expressive needs of the moment.

Part II: Strict and Discursive Isoperiodicity

In the essential musical state of isoperiodicity, variation is the procedural mandate. The strictest isoperiodic music discussed in this book is that of the Aka pygmies, chapter 5. In the song analyzed by Susanne Fürniss, Aka singers build an elaborate polyphony working within a rigorous and unchanging cycle of twelve ternary beats (thirty-six subdivisional positions). Their concept of a four-part melodic space in which the modelised constituent parts are both (**p. 28**) continually varied and unpredictably interwoven is both dazzling as an aural experience and compelling as a potential point of departure for a composer.¹⁸

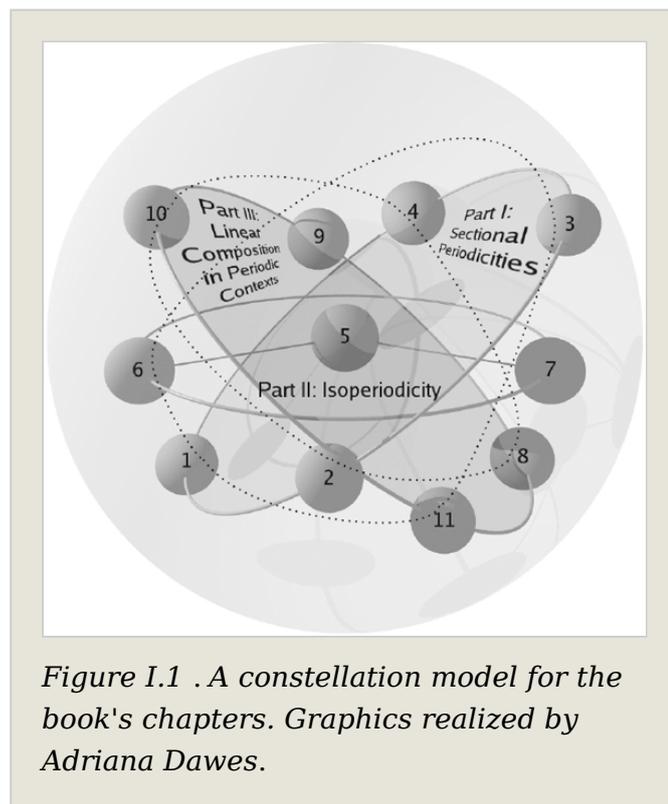


Figure I.1 . A constellation model for the book's chapters. Graphics realized by Adriana Dawes.

Also isoperiodic, but very different from the Aka, are the geographically and culturally proximate examples of Balinese and Javanese gamelan (chapters 6–7), the former analyzed by me and the latter by R. Anderson Sutton and Roger Vetter. Unlike Aka culture, in which all music is isoperiodic, these gamelan examples are drawn from repertoires in which many other kinds of structural strategies are also available. But these thrity-two-beat Javanese and sixteen-beat Balinese cycles are strict and unchanging in a conceptual sense comparable to the Aka's. They are in other ways more flexible, however, and submit to extreme fluctuations in tempo and temporality. Across these changes a consistent melodic core supports rich layers of heterophonic variation produced in a range of idioms. Meanwhile, processes of augmentation, diminution, and transposition coordinate with the tempo topography to produce a musical form that, in important ways, is through-composed. In gamelan music, it becomes especially evident how even strict processes of repetition can be molded into forms that transform radically through time. I call these *discursive* isoperiodicities, in that a single cyclic entity narrates, as it were, a journey through processes of temporal expansion and contraction developed and sanctioned by the culture. The ingenious manipulation of rhythmic motion, density, and tempo in gamelan is a central creative resource for gamelan musicians and, internationally, an underappreciated creative legacy.

Part I: Sectional Periodicities: Poetry, Strophe and Song

In gamelan and with the Aka, periodicity and the basic melodic conception are coextensive, hand-in-glove. But in other musics arrayed around our isoperiodic point of reference they decouple. In this cluster of types isoperiodicity is in dialog with the demands made by a variety of forces such as poetic meter, call and response, strophe and refrain, or a ritual's progress. At the highest level there is kind of binariness to such music: either it is in or out of pulse; or it toggles from one kind of rhythmic cycle to another, or it juxtaposes contrasting elements within an otherwise isoperiodic framework. Formal elements are discrete and change from one to another is decisive, not blurred.

When setting text to music it is impossible, as Stephen Blum says of Iranian *Navā'i*, for poetic and musical meter not to come into some sort of relationship **(p.29)** of juxtaposition and tension. In his example, the two parry, switching in and out of prominence according to a roster of stylistic considerations, for the performer is “not constrained by any obligation to maintain the pulse.” But when a constant pulse is absent, a language-based periodicity, based on conventions such as syllable counts, is still implied since “the quantitative poetic meter may serve as a framework for interpreting the temporal flow of a performance.”

The “spinning” metaphors *horo* players use to describe the progression of musical elements stem from what Donna Buchanan and Stuart Folsie describe as “the organic development ... inherent in a *horo*'s structure.” At the level of periodicity, however, the spinning takes place within one of two contrasting

frameworks: songs of varying lengths and shorter, squarer, transition-like *otsvir*. Subsequent improvisation is often conceived within symmetrically arranged periods called *kolena* that can be inspired by either the song or the *otsvir*. As musicians move among these contexts, they enrich the juxtapositions with motivic, modal, registral, and ornamental dimensions. Similarly, as Manuel describes flamenco, the *compás*—the period—is an unwavering twelve-pulse cycle, but there are sharp contrasts of length and musical elements between the song forms (*copla*) and the guitar interludes (*falseta*) that overlay it.

In the succession of songs layered over drumming in Cuban *batá* performance there is constant change at various levels: melodies of different lengths, call and response, and rhythmic enhancement through controlled improvisation. But as Moore and Sayre point out, moments of true structural shift between *toques* (precomposed interlocking drum patterns), signaled by the mother drum *iyá*, constitute clear dividing points for aware listeners and are linked to ritual time. Musics with sectional periodicities such as those addressed here offer a range of models for the creative musician wishing to create strong and definitive contrasts, and the potential for masking or complicating those contrasts with a range of layering techniques.

Part III: Linear Composition in Periodic Contexts

In some cases, periodicity's strength as a foregrounded, controlling element partially recedes in deference to a more linear kind of thought. A great counterpart to periodic structure is gradual change in melodic, harmonic, or some other dimension. The sustained development of a musical idea, one that need not necessarily return precisely "home" each time the period does, forces the periodicity to be heard as a more neutral, background calibrator. Here is where periodicity itself may stretch, contract, dissolve, or otherwise distort to accommodate the needs of the rest of the music. We are challenged to perceive local **(p.30)** irregularities as regular at a higher level, much as we measure different kinds of patterns in nature when observations are scaled at different orders of magnitude.

In Jonathan Stock's analysis of Shanghai opera scene, the singer Yang Feifei moves in and out of meter, constantly varies phrase length, and holds forth with extended melody, building long sections that are internally varied and often rhythmically irregular. Overall periodicity and symmetry is apparent when the whole is considered from a bird's-eye view; otherwise local patterns of repetition dissolve in flux. In the South Indian *varnam* ("etude") explained by Robert Morris a cycle of eight slow beats is a constant, and an insistent drum rhythm () persists with minimal variation throughout. For the first two sections, the *pallavi* and *anupallavi*, tala cycles are linked in tidy groups of two (each repeated with subtle changes of melodic ornament, for a total of four). Beyond this tala groupings change a bit (see the second row of Morris's figure 10), but, far more significantly, the melody, always mutating in pitch content, ornament and range,

follows an arching, one-way, serpentine trajectory. This subdues the *tala*, making it a reference for correct rhythmic placement rather than a force explicitly dominating the music. The melodic curve etched in Morris's transcriptions opens a window to a world of refined compositional sensibility.

Harmonic rhythm and textural change, with their variable speed, multiply layered trajectories, are but two possible enrichments to periodicity in Western tonal music. In the detail of Benjamin's figure 2 we see the myriad linkages, elisions, extensions, and contractions that wreak havoc on regularity in Mozart's K. 453, yet a sense of regularity at several levels persists. Similarly, the ingenious working out of the basic triumvirate of tonic, dominant, and subdominant harmonic functions transforms their simple, balanced impulse into an omnibus set of interrelations. In Elliott Carter's *Enchanted Preludes*, we may be hard-pressed to hold on to a sense of grounded regularity, as periodicity is often cast in simultaneous different tempi or groupings that do not relate by simple ratios (such as the use of five against seven). Yet John Roeder identifies instrumental behaviors, patterns, and relationships that foster cooperation, hence support pattern and form. One feels in Carter's music a confidence and rhythmic freedom that is characteristically bold and individual: his ultracomplexity takes the music to the brink of aperiodicity.

Aperiodicity recalls nonperiodicity through the dissolution of perceivable steady pulsations. Thus, we are led back from Carter, as if returning to an origin along a Möbius strip, to Hasan Yazdani and Moxtār Zambilbāf, the Iranian bards introduced by Stephen Blum in chapter 1. Carter's quest to “speak” naturally and musically through rhythmic design, to make an utterance lifelike in contexts with only one or a few performers, serves as a worthy nexus of contemplation among these distant musical cousins. It takes a leap through a chasm (**p.31**) of imagination to do so, but this is what composers do. Besides, such distances are in other ways no farther apart than the tracks on a CD.¹⁹

Overlaps, Exchanges, and Contingencies

Viewed differently, many of the chapters could be reclassified. Reaching behind part II for an occasional handshake, the musics in parts I and III, as they are not strictly isoperiodic, partake of various kinds of structural contrasts that link them, however conceptually, with the symphonic half of Kundera's great musical divide. Although Stock emphasized the directed dramatic progression shaping Yang Feifei's performance, for example, one also could think of its structure as a succession of separate periodicities, which would tend to ally it with the musics in part I. In Cuban *batá*, the sectional basic drum patterns and song melodies could be heard as secondary to the incremental rise in drumming intricacy, which would be an argument for placing this music in part III.

Going from part I to part II, if we downplay the structural contrasts between copla and falseta in flamenco, for example, we might be able to hear the unchanging twelve-beat compás as providing a strict isoperiodic framework. Reinterpreting music in part II, perhaps the through-composed aspects of Balinese and Javanese gamelan qualify them to shift into part III, where their “unfoldingness” would be prioritized. Yet, as Benjamin shows in part III, it is profound and revelatory to think deeply enough into a developmental music like Mozart's to recognize its ultimate allegiance to an isoperiod.

It is as difficult to disentangle the properties of diverse musical structures as it is to essentialize cultural or ethnic traits. In this regard, remember that all of the examples categorized here represent their cultures of origin as *individual utterances*. Not all music in these traditions could be described or categorized in the same ways, although of course analysis of local styles, repertoires, and social formations would reveal many strong intracultural commonalities. For these and other reasons, it requires force of imagination to make our analyses hold their places in the cross-cultural periodicity schema devised for them. That our constellation of musics is in multidimensional motion is a boon for human expression, but it makes the categorization unstable. At a higher level, the relation of chapters to categorization is rather like that of content to form in each music analyzed; and it is right to conclude that, at both levels, other interpretations (**p.32**) are possible. By committing our selections to their places in the constellation here we do not impede their movement, but we capture and depict certain useful and characteristic positions in the musical universe according to the view taken at the particular moment of this book.

Universals and a Future Music Theory

If we accept periodicity as one universal we ought to consider others, too.²⁰ In his remarkable 2001 *Musique au Singulier (Music in the Singular)* Francois-Bernard Mâche meditates on what all musics of all places and times has in common. A composer-scholar closely connected with ethnomusicology in France since the late 1950s, his research and writing is motivated by a lifetime of considered responses to music he has encountered from all over the world. His drive to think beyond immediate creative concerns reflects a belief that

... within each true musician is also a philosopher of sounds, whose aesthetic conceptions take them beyond simple considerations of craft or emotion. In music, to ask what is universal is to ask what is true or important for all. Every musician who can see farther than ego or the public has experienced this problem, even if he keeps his questions and conclusions to himself. (15, my translations here and below)

Each of the book's twenty-four essays identifies either a universal (e.g., variation, repetition, fixed forms, ostinato, litany), a formal category in which to describe them (archetype, genotype, phenotype, model), or explores practices

and phenomena that link with all music (myth, animal sounds, language, ritual, play) He is careful, as we also must be, to situate the venture in terms of the powerful cultural forces of modernism:

Modernism very quickly drew its own radical conclusions with regard to awareness of musical *others*. Just as the discoveries of Japan, Oceania, Africa, etc. threw painters from Van Gogh and Gauguin to Picasso into upheaval, the discoveries of India, ancient Japan, Java and Bali have bit by bit had the same effect on the musical world. The appetite for exoticism was the most superficial reaction. Soon Debussy, Bartók, Milhaud, Varèse, etc. had intuitively or systematically applied logic as they wished. Since musical systems around the world exhibited **(p.33)** such diversity, and had led to such accomplishments, nothing prohibited composers from inventing new, equally viable systems despite their rejection of traditional norms. The relativity of musical cultures would serve as new justification of new aesthetic systems. If, by obvious paradox, relativity truly was universal, then the aspiration to universal value could occur through the elaboration of a new system, however relative it was. (16)

The central paradox of the *universality of relativism*—the independent structures and meanings of *all* musical systems—is what drives Mâche to search for supracultural connections. As a listening musician, he is confident that his ears and mind are experiencing a single kind of “truth” when hearing even strange or distant musics. Searching for unifying elements, he is ultimately compelled to reach beyond culture and even humanity, blurring what for many are sacrosanct distinctions between music and nonmusic, culture and nature, or human and beast. Asserting that the instinctive, mythic aspect of music is “situated at the deepest level of psychic life, more archaic than that of language” (p. 169), or that there are “important preliminary signs of musical thought in animals, enough to lead to subsuming them with humanity under a common natural law” (p. 24) is an appeal to our fullest appreciation of the role music plays in world history.

Contemplation of these issues, one gleans, is also a further step along modernism's path toward future music informed by our cultural cosmopolitanism and sensitive to our natures and needs as a species. As a composer like Debussy and his other forebears, Mâche's wish is to fuse modernist freedom of style and syntax with broad global awareness to transcend both. But where the modernists consciously developed “systems” in response to historical change, or to awareness of parallel other cultures, Mâche looks beyond the relativism of systems to locate music's essence in our collective unconscious.

Inspiring and original though it is, perhaps his vision is too abstract for our present situation. One thing Mâche has undeniably put his finger on, though, is the *need* for a vision. In quotidian musical life, we hear so many things and

respond to them routinely, as does he, with a diminishing sense that cultural boundaries are the obstacle they used to appear to be. We feel a growing confidence with musical diversity, nurtured by the intense variety we encounter from childhood on. But how shall we harness these new energies?

In coming years it is conceivable that we will want a *world music theory*. Unlike either Mâche's style of philosophy or the kinds of separate studies of isolated examples presented herein, it would have to be an umbrella set of practical concepts for teaching. In this book, the use of periodicity as a guide may be taken as a tentative suggestion as to what this could be like. The purpose **(p.34)** of such a theory would be in the first place to start making sense of our complex cross-cultural musical selves and perceptions. We are often told of the world's vast and rapid changes but rarely advised on how to make sense of them *as musicians*. A world music theory would be a response to economic and cultural transformation making it desirable for musicians to acquire competence not just passively hearing, but contemplating and integrating any music. The well-established ethnomusicological model of bi- or trimusicality is inadequate to describe us anymore; we are approaching multi- or a virtual panmusicality. For many this is already a fact of life, and not just for composers: trumpet players do salsa, Corelli, free jazz, and mariachi all in the same week, and the iPod shuffle mode compresses infinite musics, cultures, eras, and locales for listeners with consummate effortlessness.

Yet real musicality actually comes from prolonged exposure to deep details which we learn to experience cognitively and feel bodily. That takes years of focused study. To suggest world music theory implies a comparative perspective so diffuse that it would seem to preclude such closeness. Before any implementation, music education would have to change more radically and rapidly than institutions that provide it tend to do. Could such a course coexist with the need for students to master particular instruments and traditions? How could the unwieldy breadth of world music theory not stretch it too thin? And who will have the mastery to teach it? The questions are discouraging, yet the problem remains. Music theory in Europe and North America, oriented so heavily toward Western art music, fails to address the needs, selves, and likely life trajectories of more and more musicians.

Proponents of the status quo might aver that the point is not to reflect the world, but to (re)create it. In any tradition, theory (in whatever form it takes) is an aid to transmission, and is emblematic of the need to sustain and protect the tradition itself and its distinctive identity. From that perspective the current system is hegemonic, but necessarily and effectively so: it sustains Western art music. Any tradition would do the same in its own interest.

These issues mirror characteristic unresolved twenty-first-century tensions between the local and the global at the highest levels of political and social life. The tense dyad of local hegemony versus global perspective is a familiar one that we encounter all over: we are concerned about balancing the effects of local versus international media information, production and trade, politics, belief systems, and on *ad infinitum*. It seems inevitable that even an institution as venerable as the nation-state is itself fated to respond to these tensions. Anthropologist Arjun Appadurai, scanning the destruction wrought by nationalism worldwide, writes of his hunch that the nation-state “is on its last legs” and asks what might substitute for the way it “distributes democratic rights and allows (p.35) for the possibility of the growth of civil society.” He answers himself, saying that “I do not know [what will replace the nation-state], but this admission is hardly an ethical recommendation for a system that seems plagued by endemic disease” (1996:19). Correspondingly, a music theory paradigm continuing to valorize the Western art tradition in the face of evidence that it only partly corresponds with the needs or experiences of musicians can equally be said to need reform. Like Appadurai, I am for the present content to acknowledge the quandary without prescribing answers, for saying that the existing paradigm is anachronistic is not at all the same as saying that a proper substitute is at hand.

Yet glimmers of solutions to Appadurai's dilemma exist or are developing. Nonsovereign models of international cooperation such as the European Union, or even the humble international postal service (not to mention the internet) are excellent examples (Cranston 2004:49–68). In all of these arenas, people put faith in global entities independent of their ethnicity, nationality, or other conventional mark of identity. Appadurai's best hope would be a future balanced integration of local self-determination and international cooperation along these lines.

Music's situation is bound up with this and analogous to it. Organizations such as UNESCO and the International Council for Traditional Music (ICTM) work to protect and recognize distinctive local musics needing assistance; and governments and cultures everywhere—including the superculture West—strive to strengthen their own identities. But in counterbalance, musics mix freely and internationally, carried via media or diaspora. When we transmit musical values and skills to coming generations, how shall we reflect this tangled nexus? Should musicians specifically be educated to nurture the growing reality of musical interdependency? Within teaching institutions ethnomusicology's importance may be uncontested, but its predominant status as an enrichment, a humanistic discipline at some remove from the core mission of training musicians to master musical materials, has barely been problematized. We may ask ourselves if our commitment to preserve the historical Western tradition can, in its own best interest, cede some hegemony to the unbounded, cosmopolitan vitality of the

whole world of music, including new music and the gamut of traditional and other globalizing forms.

Such a situation looms as a possibility—tantalizingly or ominously, depending on one's predilections. But our first approach to any action must come through comparative analysis and understanding of the variety of musical structures that would ultimately have a voice in it. Analysis will not tame music, nor neutralize its mysteries, but it will gradually enlighten us. There is still much listening and reflecting to do, and that is purpose enough for this volume.

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11–12.)

Notes:

(1) Musicians in many cultures preserve complex musical structures in their
minds without notation as a reference and think theoretically or analytically
about them. Analysis is made possible by musical memory.

(2) The two never coincide as musical schema are Platonic concepts, not human
realities.

(3) Scientific knowledge, per epistemologist Karl Popper, involves the necessity of being able to disprove and discard earlier theories in favor of more powerful explanations. Music theory and analysis do not partake of that kind of progress: analyses are always interpretations that do not supplant, rather complement, other analyses. Other dimensions of this issue are explored in depth in Meyer 2000, ch. 1. Perlman (2004:5-7) demonstrates the subjective contingency of music theory especially well, implying that it and analysis are not fundamentally separate creatures, but rather two levels of the same quest to make sense of music. Both rely not on autonomous principles or even necessarily agreed-on social conventions, but rather on individual theorists' and analysts' perspectives and their institutional and social circumstances.

(4) This is quite different, as Leonard Meyer points out, from enriching our actual musical experience. An analysis, or a theory on which it is based, may enrich our understanding of how a music is made, but this is not to be confused with the phenomenon of the music itself, which is "ineffable" (2000:292).

(5) Nettl explains the resemblance of the behaviors, beliefs, and institutions of the culture of Western art music to the legacy of Judeo-Christian religious practices. See also Small (1998: 87-93) on the perceived mythical character of great European composers.

(6) In ethnomusicology, the debate between Kolinski and Herndon in the 1970s was especially dynamic and formative (Herndon 1974, 1976, and 1977; Kolinski 1974, 1976, 1977). Martin Stokes (2001:394) summed up the prevailing perspective in his depiction of recent ethnomusicology written for the *New Grove Dictionary*: scholars are "ambivalent about the application of western music-theoretical systems to non-western musics"; applying theory and analysis amount to a "quasi-colonial form of ethnocentrism." In historical (Western) musicology Susan McClary's *Feminine Endings* (1991) and many associated publications in the early 1990s raised doubts about the supposed ideological neutrality of earlier analytical work.

(7) Nonetheless, in some cultures (e.g., Brahman or Vedic), cosmologies linking sound and music to the ultimate questions of existence reach at least as far as Adorno did.

(8) Critiques and explorations of ethical, aesthetic, political, and historical aspects of music fusions, particularly those involving the West, have appeared elsewhere; see especially the varied essays grouped in Born and Hesmondhalgh (2000).

(9) Philip Bohlman (2002:36-39) defines world music as something unpredictable and fundamentally shaped by encounter and creative misunderstanding between people making music at cultural interstices, a formulation that admits a Self/

Other distinction rather than an East/West one, and extends to what is conventionally called Western New Music.

(10) There is no point, at the outset at least, in judging. Are all musics *worthy* of analysis? That depends on the analyst's needs; besides, it takes equal amounts of insight to say clearly why one disparages a certain music, or why one is aloof towards it but recognizes its significance, or why one values it. Bad music is not off limits (see Washburne and Derno 2004), though here our motivation is desire to deepen a sincere and nonironic aesthetic pleasure.

(11) An incisive theoretical approach to the study of musical categorization is found in Arom et al. (2005). An earlier, incomplete version of the same research was Olivier and Riviere (2001).

(12) Blum (1992) is an invaluable study of analytical classification schemes in the history of ethnomusicology. Slobin (1992) was a remarkable categorization not of music itself but a vast array of cultural formations and perspectives; ethnomusicologists were so hungry for such a document that it achieved "classic" status almost instantly.

(13) In the 1960s, ethnomusicologists tried something similar, devising mechanical transcription devices such as the Seeger melograph.

(14) A term developed by the ethnomusicologist Constantin Brailoiu for metric types built from combinations of duple and ternary units (see Blum 1992: 176–177).

(15) Even in such extreme cases, however, periodicity remains a crucial factor from virtually all perspectives except that of the composer's score. Although repetition may be sedulously avoided, inhere only minimally or be dispersed to the point of disappearance in the music *per se*, no such work is conceivable without the "slightly" extramusical factors of performers' repetition through preparation and rehearsal, and repetition as experienced through multiple performances, recordings, or listening.

(16) I develop and rationalize this analogy for Balinese music in Tenzer (2000: 334).

(17) Schema and content are fused in non-periodic contexts such that one must deduce which musical events (e.g., longer agogic accents, motivic beginnings, sudden contrasts) qualify for higher-level positions in an implied hierarchy.

(18) The central position of the Aka in the book is also partly motivated by the likelihood that Aka music is particularly ancient and has changed but little over a long span of time (Olivier and Fūrniiss 1999).

(19) There are many cases of such seemingly haphazard connections being put to productive use. A great deal of Filipino composer José Maceda's (1917–2004) creative work, for example, sprang from the unlikely relation he perceived between the ultracomplex music of Greek composer Iannis Xenakis and the precolonial indigenous music of the Philippines (Tenzer 2003).

(20) The study of universals is of importance to ethnomusicologists, but sustained interest has been dormant for some time. Volume 15/3 (1971) of *Ethnomusicology* is devoted to the topic.

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