

ANALYTICAL AND
CROSS-CULTURAL STUDIES
IN WORLD MUSIC



Edited by
Michael Tenzer and John Roeder

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*for Mike and Kathleen,
and for Bernie and Marion*

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➡➡ CONTENTS ⬅➡

About the Companion Website ix

INTRODUCTION 3

John Roeder

PART I: Analytical Encounters with Music in Diverse Cultures

CHAPTER 1. Surface and Deep Structure in the *Tôgaku* Ensemble of
Japanese Court Music (*Gagaku*) 19

Naoko Terauchi

CHAPTER 2. Form, Counterpoint, and Meaning in a Fourteenth-Century
French Courtly Song 56

Elizabeth Eva Leach

CHAPTER 3. Nuances of Continual Variation in the Brazilian *Pagode* Song
“Sorriso Aberto” 98

Jason Stanyek and Fabio Oliveira

CHAPTER 4. Thelonious Monk’s Harmony, Rhythm, and Pianism 147

Evan Ziporyn and Michael Tenzer

CONTENTS

CHAPTER 5.	Dynamics of Melodic Discourse in Indian Music: Budhaditya Mukherjee's <i>Ālāp</i> in <i>Rāg</i> Pūriyā-Kalyān	187
	<i>Richard Widdess</i>	
CHAPTER 6.	Timbre-and-Form: The BSC and the Boston Improvising Community	225
	<i>Lou Bunk</i>	
CHAPTER 7.	Rhythm and Folk Drumming (<i>P'ungmul</i>) as the Musical Embodiment of Communal Consciousness in South Korean Village Society	263
	<i>Nathan Hesselink</i>	
CHAPTER 8.	Strophic Form and Asymmetrical Repetition in Four American Indian Songs	288
	<i>Victoria Lindsay Levine and Bruno Nettl</i>	
CHAPTER 9.	Musical Form and Style in Murriny Patha <i>Djanba</i> Songs at Wadeye (Northern Territory, Australia)	316
	<i>Linda Barwick</i>	
PART II: Cross-Cultural Analytical Comparisons		
CHAPTER 10.	Integrating Music: Personal and Global Transformations	357
	<i>Michael Tenzer</i>	
CHAPTER 11.	Combining Sounds to Reinvent the World: World Music, Sociology, and Musical Analysis	388
	<i>Simha Arom and Denis-Constant Martin</i>	
A Cross-Cultural Topology of Musical Time: Afterword to the Present Book and to <i>Analytical Studies in World Music</i> (2006)		
	<i>Michael Tenzer</i>	415
Contributors		
		441
Index		
		445

➔➔ ABOUT THE COMPANION WEBSITE ➔➔
www.oup.com/us/acccswm

To accompany *Analytical and Cross-Cultural Studies in World Music*, we have created a password-protected website where readers can access the recordings linked to the chapters. Throughout the text these are signaled with Oxford's symbol.🎧 Most of them can be played directly on the site. We have provided links to eight more that can be downloaded elsewhere at nominal cost. The remaining two (discussed in chapter 11 only) were unavailable when the book went to press. Also on the site is a complete transcription of the music discussed in chapter 6 and an innovative interactive video interface linked to chapter 3.

Access with username Music5 and password Book1745.

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➤ ANALYTICAL AND CROSS-CULTURAL
STUDIES IN WORLD MUSIC ⇐

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Introduction

JOHN ROEDER

The predecessor to this volume, *Analytical Studies in World Music* (Tenzer 2006), explored how diverse cultures organize sound into music. In each chapter, using terms and concepts familiar to most musically trained readers, a specialist identified the elements, processes, and form of a particular selection, represented by an audio recording and detailed transcriptions. Going beyond an inventory of generic technical features, the contributors highlighted the music's individuality, in many cases by focusing on its distinctive ways of shaping time. Hitherto such specifically analytical accounts could only be found dispersed throughout the academic research literature. Bringing them together was intended to satisfy the evident desire of music practitioners and students to appreciate others' music in these terms. To scholars it also exemplified how music theory broadly construed—not as a codification of Western harmonic practice, but as symbolic systems for conveying musical knowledge—can serve ethnomusicology's consideration of music in culture, by enabling the description and comparison of sound patterns, and of the cognitive schemas that shape how they are heard.

For many reasons this project deserved continuation. Building a knowledge base for comparison requires an appropriately diverse set of repertoires, both musically and geographically, but the constraints of a single volume forced the omission of whole continents and popular genres. The more that today's students gather music recordings from various places and times into their personal music libraries, the greater the need for an accessible consolidation

of expert analyses that can help them appreciate its nature and contexts, whether as part of an expanded music pedagogy appropriate for our globalizing era or as models for further research. Not incidentally, the project has revived interconnected methodological questions about the purview of musical analysis and about the possibility of cross-cultural comparison; these concern the object of analysis, the cultural values it respects or violates, and the extent to which it connects listening and production and their respective systems of signification. Any contemplation of them would surely benefit from more case studies.

We are therefore pleased to present this second volume of analytical studies in world music.¹ While expanding the scope to many more cultures, it maintains a similar format and objectives. Each chapter treats a recording, accessible through a link on the companion website at www.oup.com/us/accswm. To encourage the most appropriate analysis, as well as a consideration of the questions mentioned above, we have not required the authors to conform to any particular theoretical approach, but only to be explicit about their methodology. Along with transcriptions, they provide explanations of instrumentation and of pertinent indigenous conceptions of the music, and they contextualize their findings with historical narratives, characterizations of the genre, and personal anecdotes. Again we have guided them to make each discussion accessible to a general readership without specialized knowledge beyond basic musical literacy. Naturally our coediting has reflected both our common interests and our individual specialties (in my case, theories of rhythm), so these studies, like those in the original collection, share a focus on musical time. But whereas the previous essays were grouped to highlight facets of musical periodicity—repetition and its role in musical form—the contributions to this volume seemed to invite the comparison of other temporal aspects, and also some explicit comparisons of music across different cultures.

To that end we have sequenced the chapters in part I, “Analytical Encounters with Music of Diverse Cultures,” to juxtapose musics that originate in cultures widely separated in space or time but that share some reasonably objective features (such as type of performing ensemble, notation, or union with other media like text or dance) or technical properties (such as strophic form or meterless pulse). What is shared varies with the chapter pairings, so that each juxtaposition suggests different ways to compare and contrast cultures’ musical systems, forms, and techniques, and to consider the validity and value

1. Support for the research and production of this book was provided, in part, by a research grant to the editors from the Social Sciences and Humanities Research Council of Canada.

of such an exercise. As I briefly summarize each essay below, I raise a few points of comparison with the essays next to it, hoping to encourage readers to consider others (and to consider mine critically).

Interwoven Patterns of Music and Culture

Although the specific points of correspondence and difference vary from pair to pair, several recurring threads of inquiry can be perceived to weave throughout all the essays. These range in scope from microscopic descriptions of local patterns to macroscopic observations about the musics' social functions:

- How does the distinctive character of a musical item arise from its particular sound patterns and their positions within a culturally constrained field of possibilities?
- How do certain categories of sound patterns (such as cadence formulas) play greater or lesser roles in various kinds of music?
- How does the organization of rhythm—its regularity, the interplay of voices in the texture, the sense of continuity—reflect the nature of the performing ensemble?
- How does the music's large-scale organization mediate the specific properties of its local materials and its social and performing contexts?
- How do musicians construct their social identities by their actions in relation to cultural convention and to the internal exigencies of their music?

The order of this list reflects a crucial assertion: that these questions are not incompatible, but form an interconnected continuum. The essays' more global concerns with human social behavior rely on their accurate and appropriate smaller-scale descriptions of musical minutiae. Analysis thus provides a basis for progressing from an appreciation of particular local patterns to a more general understanding of music in culture.

In chapter 1, Naoko Terauchi analyzes *Etenraku*, an example of Japanese imperial court music. This item poses several challenges to listeners unfamiliar with its conventions. The protracted, wavering tempo obscures continuity and phrasing; and while the ensemble texture appears to be an accompanied heterophony, the identity of melodic events is frequently blurred when several instruments play conflicting pitches. By reviewing the history of the genre, its systems of modes and rhythm, and its instruments' various notational schemes, she demonstrates that the music is indeed organized on several hierarchical levels as an embellished, memorable basic melody. The conflicting notes actually originated in unnotated variants of the same scale degree, but their clash

is now heard as expressive, not wrong. Terauchi points out other unnotated features as well, such as the way that the players take turns leading the ensemble to the next beat. And she shows how the large repeated sections of the basic melody are measured by faster repeated accompaniment patterns that are understood to organize time cyclically even when (as in this recording) they cease sounding.

Although the subject of the next chapter, Machaut's fourteenth-century polyphonic balade *De petit po*, is a landmark in the development of Western art music, its context and conventions are unfamiliar to most modern listeners. So, as much as the other world music treated in this volume, it benefits from a culturally grounded analysis, here provided by Elizabeth Eva Leach. Like *Etenraku*, it is an ensemble piece intended for the delectation of a social elite, with each part's rhythm notated with reference to an underlying series of conceptually equal durations to which the performers synchronize, and with the pitches selected from a referential diatonic collection. Leach's discussion, like Terauchi's, considers the problems of interpreting scores whose realization is dependent on extranotational traditions, and of the meaning of old music to modern listeners. To determine which of the parts should play together and which pitches they may sound, she locates (as the original performers must have) repetitions of a basic "directed progression" of harmonic intervals, variously transposed and elaborated. This schema was understood by its audience to provide changing tension and cadence to music organized rhythmically in a continuous, noncyclical flow. As in *Etenraku*, form arises from the repetition then alternation of large, multiphrase sections, roughly equal in duration, that are distinguished by changes of content, range, and pitch focus. But *De petit po*'s formal divisions also match the organization of its poetic text into strophes with a recurring refrain. Musical events that satisfy or violate schema, along with quotations of well-known tunes, inflect the words' meaning, which engages the culture's intertwined concepts of gender, religion, and social status.

"Sorriso Aberto," analyzed in chapter 3 by Jason Stanyek and Fabio Oliveira, is also a song with ensemble accompaniment, but one that is sited as specifically and richly in the culture of modern-day Rio de Janeiro as are the previous musics in their respective ancient courts. The authors focus on the text (as witty and rich in its own way as Machaut's), on form, and especially on musical processes, the determination of which poses a special challenge since, like much world music, the performance realizes not a score, but an unnotated exemplar. They find that, although the song does realize a predetermined, metrically regular but asymmetrically grouped progression (analogous to *De petit po*), the essence of its processes resides more in the constantly varying "groove" of improvised and sometimes unsynchronized

instrumental interactions, which they represent through innovative notation and interactive audiovisuals. Both through its own temporalities and as part of an hours-long social event, the song blurs the boundaries between performers and audience.

A regular succession of distinctive events also underlies a rather different music, Thelonius Monk's solo piano improvisation on the 1940s ballad "I Should Care," which is the subject of chapter 4. Through a concise summary of jazz theory, and with reference to the idioms of Monk's contemporaries, Evan Ziporyn and Michael Tenzer explain how the performed sounds both divulge and resist implicit structures. Essentially, Monk elaborates on a pre-composed continuity—the chord changes and melody of the source tune, analogous to the "deep melody" in *Etenraku*, and drawing upon a harmonic language related to that of "Sorriso Aberto"—in the context of an understood but elastic meter; as in *De petit po*, this underlying continuity involves variously elaborated directed progressions that are grouped to match the versification of a text. But, as the authors detail, he constantly diverges from the norm, creating discontinuity by dissonance and extreme tempo variation, while maintaining an instantly recognizable set of pianistic techniques that include (as do the instruments of "Sorriso Aberto") faintly audible sounds and special tone colors. A listener who knows the norm and attends carefully to all dimensions of sound can attribute to his playing a "quest for self-realization" that positions him distinctively within mid-twentieth-century American musical culture.

Chapter 5, by Richard Widdess, concerns another premeditated solo improvisation, an *ālāp* by North Indian sitarist Budhaditya Mukherjee. He finds that it engages not only culturally specific schemas—the characteristic patterns of its *rāga*—but also more general expectations of melodic discourse, possibly because it was intended as a recording, capable of repeated replay and study by listeners across the world. Its focal pitches are organized into a clear overall contour and are elaborated locally by a variety of inventive melodic phrases, often in nested recursive processes, also conforming to contextually established contour schemas. The analytical description focuses on basic musical techniques that create continuity within the phrases and that articulate their beginnings and endings, techniques that seem to apply to music of the preceding chapters as well. The temporality of the *ālāp* also bears more specific comparison with Monk's improvisation. Each creates a waning and ebbing temporal flow, within a free tempo only occasionally regulated by pulse, by raising and playing with knowledgeable listeners' expectations—about the melodic tendencies of tones within the *rāga*, or of the progress of the underlying chord changes of "I Should Care." By repeating, varying, and developing distinctive gestures, each artist not only creates a

coherent and unified composition, but also calls attention to his unique and original vision, an indication of the value that these different cultures place on the individual.

The productive tension between individualism and group values is evident in the next chapter's analysis of an ensemble improvisation by the BSC, a performance collective situated in the artistic and intellectual milieu of the American Northeast. Unlike in all the other music discussed in this book, the performers eschew predetermined schemas of content and form. Yet there remain the basic cognitive mechanisms for grouping, shared by performer and listener alike, to which the preceding analyses have also referred. Lou Bunk, a composer and concert producer belonging to this community, explains how the performers take advantage of those mechanisms to articulate beginnings and endings, maintain continuity and gradual change, and create loose sectional forms by listening to and responding to each other's idiosyncratic contributions. These interactions, like those of "Sorriso Aberto," give a sense of shared leadership that resembles how the players of *Etenraku* alternate responsibility for driving toward the next beat, but is not so evident in the master-led ensemble musics discussed elsewhere in this volume. Undirected by any essential pitch or rhythmic regularity, the listener feels an intense focus on each event but also a sense of progress inculcated (as in *ālāp*) by the sustaining and incremental variation of activity. The performers seem able to enfold any sound—even the siren of a passing emergency vehicle—into the ongoing becoming. Their music thus strives toward a utopia of complete personal autonomy and a perfectly cooperative, environmentally responsive community, metaphorically linking the creators and their sounds. These ideals are thrown into relief by Bunk's history of their struggles to establish this music as a distinct genre, with its own specialists, venues, and audiences.

Chapter 7 demonstrates how very differently structured musics can serve similar social purposes. Whereas the BSC's music is variegating timbre, microtonally inflecting pitch, freely developing form, and intense listening to quiet, South Korean *p'ungmul* is percussive, pitchless, periodic, and brash. Yet Nathan Hesselink's close analysis shows how the latter also fosters community and a transcendent experience of time, even considered independently of the pageantry it normally accompanies. Although there are no melodies, the music, like *Etenraku*, heterophonically declaims a set succession of related patterns, each of which can be repeated *ad lib*. (To specify them, Hesselink avails himself of indigenous notation that emphasizes the cyclic processes.) The repetition promotes entrainment, enhanced by the social connotations of the particular patterns. One may perceive the succession of patterns as a sectional form, but they are so similar that for the performers it also becomes a gradual process toward total engagement rather than closure. The design draws

amateur musicians from the community into the ensemble, increases their mastery, and eventually gives them some freedom of expression.

Music associated with community ceremonies is also the subject of the following discussion by Victoria Lindsay Levine and Bruno Nettl, which compares the form of songs from different North American Indian cultures. The topic raises some classic methodological questions about how to transcribe and compare music about which there is little verbal knowledge. Navigating these uncertainties, the authors locate in each song the basic units of musical grouping by observing how repetition occurs both very locally—in vocal pulsing, reiterated pitches, and brief motives—and over long time spans, as phrases and phrase sequences are repeated. Across all four examples, separated in time and geography, they find a principle of “asymmetric” (by which they mean inexact or varied) repetition governing the melodic process. (One can hear this principle operating also at levels of grouping structure both smaller and larger than the phrase and strophe.) The pervasiveness of the principle in this repertoire, and its comparative rarity in music elsewhere, suggests prehistorical diffusion across the continent.

A focus on cross-cultural musical influence is also evident in chapter 9, which employs analysis to expose not only similarity, but also culturally significant difference. Linda Barwick examines a whole range of musical features—phrase lengths, contour, text repetition, melodic variation, rhythm, instrumentation, and texture—in three examples of northwestern Australian Aboriginal music. By typologizing them, she is able to illuminate the defining characteristics of the songs’ respective genres and to give a detailed confirmation of cross-repertory distinctions that inside authorities acknowledge. For example, one song is organized as a succession of repeated strophes, whereas in another the music and text recur cyclically at different rates. She also shows how certain features derive from the exigencies of the accompanying dances and ritual context, rather than from any purely musical schemas. Not only her transcription methods, but also her actual observations on grouping, melodic contours, and strophic form resemble those of Levine and Nettl, even though the respective aboriginal musical repertoires stem from opposite sides of the globe.

Daring to Compare

This last pairing, then, brings to the fore some methodological questions like those I broached above, which are addressed in part II, “Cross-Cultural Analytical Comparisons.” How can analysis inform a comparison of the meaning and value that inhere to organized sound in different cultures? Do the

structural properties exposed by analysis index the essential cultural meanings of different musics any more than a description of shape, color, and nutrient content accounts for the way one values apples and oranges? Or are the respective cultures' systems of musical signification so incommensurate that any technical similarities are misleading? One can contemplate such questions from the listener's perspective, considering how analysis may contribute to one's personal evaluations of various musics. Or one can look to see whether analysis captures the creative responses of musicians when they confront music outside their culture. The final two chapters approach the questions from these different angles.

Michael Tenzer describes a personal effort to achieve an inner reconciliation between two musics in terms of the values they signify. He establishes that Balinese musicians evaluate pieces in the contemporary *lelambatan* genre in terms of the quality of *bayu* (loosely, the rhythmic flow) that he can attribute to specific musical processes. The sensations that one gamelan passage elicits in him are similar to those he attributes to the beginning of a nineteenth-century Western chamber music movement by Robert Schumann, which similarity he explains by comparing their respective, culturally contingent "middleground levels." Ultimately this comparison enables him to determine, with personal integrity, which music he values the most. More generally, as formerly isolated traditions, under pressure from globalization, are fading into history, his essay argues for grasping the interconnections among cultural values through analysis.

In contrast, the final essay, by Simha Arom and Denis-Constant Martin, considers a public effort to mediate the values of different cultures by combining their artistic expressions, namely, the commercial venture marketed as "world music." The authors explore the various and sometimes inconsistent connotations of this term, attributing its origins to historical Western fascinations with exoticisms and the Other, but also identifying the contemporary values it connotes that appeal to its target audience. They show that there are actually several types of "world music" distinguished by the way they are produced. Focusing on the "synthetic" category, they use analysis to inquire whether the shared production method is reflected in any consistent traits. This requires deciding which theoretical concepts can be applied across the many different cultures represented by their world music exemplars. Suggestively, they decide to compare not pitch structures, such as scales or chords, but rhythmic form—grouping, meter, and repeated durational patterns—which are treated in all of the other essays in this book. This analysis informs a typology of synthetic world music they propose based on how it combines preexisting material simultaneously (within the texture) and successively (in sectional form).

Global Concerns

The ordering of chapters is not meant to restrict attention to sorts of contrasts and similarities I briefly mentioned above. Considered altogether, these eleven essays also engage perpetually vital questions about music representation, cognitive universals, and the purview of music analysis. A brief overview of them may be useful for the reader who wishes to analyze other music of the world, to extend or ponder more deeply the analyses given here, or to undertake further comparisons. To start, we must acknowledge that in many cultural contexts in which organized sound is inseparable from religious practice or dance, or where it results from a process regulated by certain principles rather than from the repetition of a fixed model, the Western notion of a musical work is inappropriate (Bohlman 2002: 6–9; Goehr 1995). This does not prohibit us from describing sound organization; indeed, analysis may help explain why music foreign to our experience can affect us as profoundly as did our contributors' first encounters with their eventual objects of study. But it affects how we regard the recordings and transcriptions upon which every essay concentrates, whose similar appearance may mislead us into assuming that all music is the same kind.

In seeking to describe and compare music, one naturally wants to concentrate on essential features, but, depending on the nature of the music, these may be represented with varying definiteness and fidelity. For *Etenraku* and *De petit po*, the music consists of distinctive sound sequences and combinations that are specified by a fixed score, to the extent that it can be interpreted in its proper historical, cultural, and performative context. Most of the other music discussed in this volume—Aboriginal songs, Brazilian *pagode*, gamelan, and “world music”—similarly consists of prescribed series of sounds or sound relations, but these are specified by an exemplar (such as a remembered performance) rather than in written notation (S. Davies 2003: 35). In contrast, the improvisations of Mukherjee and the BSC each constitute a unique act. The focus of study in those cases is not some stable underlying exemplar but rather particular audible features or processes that arise from the principles of its creation (D. Davies 2004), which may be evident in other improvisations of that performer or genre.

Comparisons are complicated not only by these different ontologies, but also by the subjectivity of transcription. The information on a score, representing the composer's performance instructions, does not comport readily with a notation of what an analyst hears, even if informed by the creators. On the one hand, unnotated performance practices may greatly affect how a score sounds (hence Leach and Terauchi renotate original scores as transcriptions of real or imagined performances). On the other hand, transcriptional accuracy

may be limited by failing to discriminate significant differences, by imposing foreign conceptions of pitch and time, or by the limitations of the recording itself, which, as Levine and Nettl caution, can distort timbre and form. The authority with which an analyst's transcription seems to establish a music's essential facts is subject to poststructuralist objections that "facts are probably theory-laden—selected, organized, hierarchized, formalized, narrativized—and theories probably instantiate ethical values that are founded on political commitments" (Scherzinger 2004: 258). Readers may wish to ponder the values and commitments underlying the facts observed in the essays here, and the extent to which they reflect ethics and commitments of the music's creators as well as the authors as listeners.

Some of these difficulties are evident in the essays' transcriptions and other graphical representations. The Western staff notation that they share seems valid to the extent that it captures some essential distinctions and identities, such as the diatonic ways of categorizing pitch that seem to apply to music of Japan, India, and late-Medieval Europe, not to mention jazz and various popular musics that regularly employ it. But its rigid quantization makes it hard to transcribe Monk's time-warping performance, to express tempo change in *gagaku*, to distinguish the critical timbral subtleties of the *pagode* instruments, and to represent microtonal inflections in *ālāp* and timbre-and-form music. Indeed, nearly every author who employs Western notation resorts to modifications and extensive verbal commentary in order to describe essential features it omits. One alternative explored in several essays is proportional notation, which entails a spatial metaphor for time of which one must be critically aware; for music such as *p'ungmul*, which is specified only by attack times, not by duration or pitch, comprehensible indigenous notation seems more appropriate and concise. Still, appropriately adapted Western notation does provide a common, familiar symbol system to fix musical sound sequences for study.

Granting the ontological disparities and the potential for misrepresentation, it is nevertheless possible to discern some basis for comparing these musics in the similar observations and terminology the authors employ. They all endeavor, through transcription and description, to identify those aspects of the music that are both perceptible and essential, and to connect their hearing of the music to what is known about the creator's (often unsystematic or vaguely articulated) conceptions, and to the culture that embeds them. By thus synthesizing listening- and making-oriented discourses about music (Nattiez 1990), they assert that patterns are chosen and combined for specific purposes, not arbitrarily, and that those purposes do not solely satisfy conventions in the minds of the creators, but also engage features that are audible and relatively stable for most listeners.

All the most striking similarities involve rhythm, consistent with recent research suggesting that “some temporal processes may be universal, in the sense that they function in a similar manner irrespective of an individual’s cultural exposure and experience” (Drake and Bertrand 2001: 17). Analysis of rhythm need not impose Western aesthetic concepts such as “structural unity,” “organicism,” “developing variation,” or “absolute music.” Rather, with a tightly controlled theoretical vocabulary, it can focus attention on what both insiders and outsiders can hear, as the essays in this collection do. This sort of analysis is thus not an etic imposition, but, as I argue below, an indispensable method of appreciating the individuality of a music, recognizing its similarities to other music, and understanding its dynamic relationship to its cultural contexts.

One fundamental cognitive process is the association of successive musical events into groups. Listeners sense the same sorts of temporal properties in groups—beginning, ending, continuation—as they do for the individual sounds that constitute them, and they understand them organized hierarchically, hearing shorter groups connected into larger ones, analogous to the way that one strings together successive gestures to play music or accomplish other tasks. Memory permits a comparison of present sensations with remembered experience, that is, to compare the quality and features of currently proceeding groups with those of past groups.

The description of grouping structure is one of the central concerns of every essay; for example, authoritative informants often focus on sectional design as critical to the music’s identity. Attention to even such a basic property pays surprisingly rich dividends, not only in discovering shared procedures in different music, such as the few I mentioned in the chapter summaries above, but also in describing each music’s particularity. Consider, for instance, the distinctive grouping structures of some of the music discussed here: the unequal durations of the groups in North American Indian songs, patched together from the most elemental motivic cells; the distinctive ways that the BSC starts and cadences its phrases; the role of unheard background melody in maintaining group continuity at the glacial tempos of *Etenraku* and “I Should Care”; the ways that the grouping of Machaut’s music both supports and cuts across the syntax of his poetry; and the dialog of voices and instruments and the surprising variability of group length in *pagode* strophes. Some music is individuated by the ways it *blurs* grouping: the subtle and gradual variations of motivic content in *ālāp* that only retrospectively are understood to signal new sections; the conflict of textural discontinuity and harmonic continuity in m. 29 of “I Should Care”; and the ways that the Kiowa Peyote song simultaneously projects two- and three-phrase structure.

Another principle evident in nearly all the music is the repetition of patterns, ranging from specific sounding pitched rhythms to more abstract successions that are understood but not necessarily sounded. It entrains listeners, and it contributes to the perception of grouping by marking beginnings and endings. Music can be characterized according to the explicitness of the repetition, by the way that various periodicities combine or are arranged hierarchically, and by whether they are presented explicitly with repeated patterns or implicitly with underlying metrical cycles.

Like grouping analysis, such detailed characterization of periodicity provides a highly salient description of a music's individuality. For instance, in Monk's improvisation the informed listener senses the tension between his incredibly wavering tempo and the pervasive periodicity (regular tempo, quadruple meter, highly symmetrical melodic construction) of the source tune. Just at the moment when the tune's periodicity is most forceful—in the drive toward the final cadence—Monk is most free, slowing greatly, then breaking into an unprecedented world with different chords, scales, and a sudden bebop swing. As another example, in "Sorriso Aberto" different sorts of periodicities proceed at the same time, each articulated in distinctive ways by the different instruments and continually varying in such a way that every moment is unique.

Such individuality is often most apparent when comparing musics that are similar. For instance, the striking similarities between *Etenraku* and *De petit po*, mentioned above, also highlight their substantial differences. *Etenraku*'s beats are very slow and somewhat elastic, and the music involves a multibeat cycle of distinctive percussion events, which is constantly and exactly repeated. The contents of the cycle are strongly directed, through acceleration, toward certain moments, and the phrasing boundaries coincide with cycle boundaries. Even when the cycle is not explicit, as in latter half of the version studied here, these affects of periodicity persist, and we understand even fragmentary events as locked to the cycle. In contrast, *De petit po* constantly varies its rhythm; there is no repeated duration between the mensuration value and the length of the section. Direction is created by the repetition of formulaic contrapuntal progression, arranged irregularly. It has fewer parts, and they are not doubled. All these factors, together of course with the fact that it sets a personal and witty text about courtly love, prioritizes the individual will. In *Etenraku*, individuality is certainly apparent—in the local deviations from and embellishments of the melodic core tone, and in the way that different instruments take charge of the tempo at different moments in the cycle—but without detracting from the impressive ensemble conformity to the basic melody. These examples, as well as my comments about the essays above, show how rhythmically oriented analysis may serve one aspect of ethnomusicology's

inquiry into the relation of music and culture: the role of music in defining the identity of the culture and the groups and individuals who comprise it.

Also like grouping analysis, analysis of periodicity permits recognizing similarities between music from different cultures, grounded on cognitive principles shared by creator and listener. An example from this collection is the process shared by the *djanba* song item and the Kiowa Peyote song, both of which establish a seven-beat pattern by repetition, then vary the length, and then return to it. *Analytical Studies in World Music* recognized the power of such comparisons by grouping the essays according to the sorts of periodicities present in the music they discussed. Michael Tenzer's afterword to this volume extends that scheme into a "topology of world musical temporalities" that sorts the music discussed here in both volumes into temporal categories, each featuring a particular mix of periodicity, grouping structure, and directed change. We invite readers to evaluate how this classification method applies to other music.

A coordinated consideration of grouping and periodicity (and change) can also expand our theoretical understanding of how these aspects of temporality affect and interact with each other. For instance, Mukherjee's *ālāp* can be heard as a study of the juxtaposition of measured and unmeasured time. Although his improvisation mostly floats untethered to an entraining pulse stream, the artist often initiates each fresh phrase with regular strumming on the sitar drone strings, and the resulting expectations of durational repetition permeate and shape the subsequent free rhythms. As another example, it is also interesting to observe, in the absence of an underlying rhythmic cycle, such as *De petit po*, the Arapaho Wolf Dance Song, or *Phoneme* (3), how group endings are much more definite and formulaic than in music where cycle endings regularly recur.

Thus, along with the specific insights the essays provide on their respective subjects, they collectively contribute to our understanding of universal aspects of musical production and cognition. We hope that readers will take from them the inspiration to extend this exploration of the nature of music, the specific ways it manifests itself in culture, and its centrality to human feeling, thought, and society. Musicians of the world—the ultimate experts in the shaping of time—have given us much to wonder at.

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➔➔ PART I ➔➔

*Analytical Encounters with Music
in Diverse Cultures*

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→→ CHAPTER I →→

*Surface and Deep Structure in the Tōgaku
Ensemble of Japanese Court Music (Gagaku)*

NAOKO TERAUCHI

Tōgaku 唐楽 (literally, “music of [the Chinese] Tang [dynasty]”) comprises a large portion of Japanese court music *gagaku*, which has been passed down and strongly associated with imperial court cultures for more than 1,300 years. This essay clarifies how its melody and rhythm are organized on multiple structural levels. Ethnomusicologist John Blacking employs the



Photo: Kangen Ensemble of the Ono Gagaku Kai Society, 2006 in New York. Photo by James Ware Billett.

concepts of surface structure and deep structure respectively to analyze musical patterns and to interpret cognitive processes (Blacking 1971). His notion of deep structure comprises an especially wide and deep viewpoint from which to understand the nonmusical, cultural, and social background of human behaviors. Here, however, I would like to limit the connotations of these terms simply to the context of sonic form and process. Between the surface and deep structures in present-day *tôgaku* practice there is certainly a disjunction of musical idiom and mode. In other words, different principles govern each level of the music. Analysis of these levels in contemporary practice reveals stages of historical change. The disjunctions it identifies between surface melody and deep melody not only inform an understanding of contemporary *tôgaku* but also provide important clues that permit a reconstruction of features of this music as it is thought to have been in the past, closer to its Tang Chinese source.

Current *gagaku* tradition can be divided into three categories according to origin and style: (1) indigenous vocal and dance repertoires, which are primarily performed in Shinto (Japanese native religion) ceremonies accompanied by both indigenous and foreign instruments; (2) foreign instrumental music and dances, *tôgaku* and *komagaku* (“music of Korea”) used in various court, Buddhist, and Shinto ceremonies, which feature instruments brought from the Asian mainland; and (3) vocalized Japanese or Chinese poetry, *saibara* and *rôei*, established in ninth-century Japan and enjoyed mainly by high-ranking noblemen in informal court ceremonies.

Tôgaku employs a characteristic ensemble of instruments introduced during the Tang era (618–907): *shô* (mouth organ), *hichiriki* (reed pipe), *ryûteki* (transverse flute), *biwa* (lute), *koto* (zither), *taiko* (big drum), *shôko* (small gong), and *kakko* (barrel-shaped drum). The music is *heterophonic* in that every melodic instrument plays a unique realization of a single, shared basic skeletal melody. But these realizations sometimes sound “contradictory” to one another. The inconsistencies are especially evident in the surface melodic patterns of the *ryûteki* and *hichiriki* parts, which lost some of their original Chinese modal features over the course of the long history since their introduction into Japan. On the other hand, the original Chinese modal principles are preserved well in the basic melody.¹

1. The article on *tôgaku* in *The New Grove Dictionary of Music and Musicians* claims that *ryûteki* and *hichiriki* melodies, at least their surface structure, are “not part of the legacy from China” and have developed independently since the fourteenth century or earlier (Marett 2001). This perspective summarizes the work of a considerable body of scholarship by Laurence Picken, Allan Marett, and others in the so-called

Here, focusing on a short but well-made (and the most popular) piece, *Etenraku* in *hyô-jô* mode, I examine (1) musical idioms of each instrument, conversation among the instruments, and melodic patterns associated with the registers of each instrument in the surface structure; (2) the original characteristics of the mode according to Chinese theory, which are clear in the basic melody, and the structure of the melodic patterns therein; (3) different principles of modulation and transposition between modes in the surface and deep structures; and I demonstrate that (4) it is possible to reconstruct ancient *tôgaku* melodies by reading and interpreting current and historical sources of music notation with a full understanding of the relationship between the current surface realization and the deep basic melody.

Surface Structure of Etenraku

Rhythmic Structure, Tempo, and Form

There are two categories of rhythm in *tôgaku*, nonmetrical and metrical. Short introductory pieces (preludes) and closing patterns are often nonmetrical, whereas the main body of a piece is metrical. A significant aspect of the metrical rhythm is a cyclic principle in which the last beat of a unit is of primary importance.² Traditionally, it is marked by a stroke of the big drum known as *taiko*. The *taiko* stroke is called *hyôshi*, a term also indicating the measurement of a rhythmic cycle. The rhythmic unit consists of four, six, or eight parts, called *kobyôshi* (“small” *hyôshi*) that can be thought of as “measures” in Western notation. The unit made of four *kobyôshi* is referred to as *yo-hyôshi* (*yo* = four), six as *mu-hyôshi* (*mu* = six), and eight as *ya-hyôshi* (*ya* = eight). If each *kobyôshi* includes four beats, it is categorized as *haya* (“fast”), while it is labeled *nobe* (“extended”) if it contains eight beats. For example, *Etenraku* is considered *haya yo-hyôshi*, wherein one unit of the cycle consists of four measures and every measure includes four beats (figure 1.1). Other types of metrical structure include *tada-byôshi* and *yatara-byôshi*. The former has alternating two- and four-beat measures (2 + 4), whereas the latter alternates two- and three-beat measures (2 + 3).

Cambridge School. The present analysis complements the Cambridge perspective by emphasizing the pitches falling on the first beat of every measure, which still mostly match those of *shô*, *biwa*, and *koto* and keep the outline of the original Chinese melody (discussed in detail later).

2. This is similar to Chinese *nanguan* and Indonesian gamelan, in which *paiban* or *gong* punctuate cycle endings.



Figure 1.1. Rhythmic structure of *haya-byôshi* (● = *taiko*).

Thus, the *taiko* is struck with strict regularity once every four measures in *Etenraku* (every six or eight measures in other pieces) and is anticipated as the moment when all instruments converge. However, the rhythmic cycles and melodic phrases do not begin or end together. In *Etenraku*, melodic phrases start with the second measure of the rhythmic cycle. If we analyze a *tôgaku* piece prioritizing melody, the *taiko* beat falls in the middle of each melodic phrase (figure 1.2).

Beats in contemporary *tôgaku* performance are actually not equal in duration but rather elastic. In particular, often the last beat of a measure is extended and the original tempo recovered on the first beat of the next measure. Over the larger scale, the tempo also changes, often beginning slowly ($\text{♩} = 40$ or so), then gradually accelerating toward the end.³

In this slow tempo, two measures make one unit of melody. In figure 1.2, the first two measures (comprising the rhythm that is specified by the mnemonic syllables *to – ra – ro o ru ro*) make a unit, and the next two measures (*ta – a ro ra a a –*) make another unit, which *ryûteki* and *hichiriki* can play with a single breath. In the current standard notation of *gagaku* (*Meiji-senteifu*⁴), each such unit is punctuated by intercolumnal dots.⁵

3. The final tempo differs among pieces. However, music for dance accompaniment (*bugaku*) often ends at $\text{♩} = 80\text{--}100$, while music without dance (*kangen*) can end as slow as $\text{♩} = 50\text{--}60$. The tempo was much faster, both in *kangen* and *bugaku*, at the beginning of the twentieth century (Terauchi 2002).

4. *Meiji-senteifu* was compiled in 1876 and 1888 by Gagakukyoku, a predecessor of the present-day Kunaichô gakubu, or the Department of Music, Imperial Household Agency, which has been the highest authority of the *gagaku* tradition since the Meiji era.

5. Sukehiro Shiba (1898–1982), a court musician who, in the *Meiji-senteifu*, completed a great work of transcription of the whole *gagaku* repertoire into Western notation, refers to a two-measure unit as *gakushi* (“musical word”), and to a melody lasting one rhythmic cycle (*hyôshi*) as *gaku* (“musical phrase”) (Shiba 1968, 1969, 1971, 1972). Garfias also analyzes *tôgaku* melodies in terms of two-measure units (Garfias 1975).

↓ melody begins				
1	2	3	4	(measures counted by melody)
to	ra	ro o ru ro	ta a ro ra a a	(ryûteki mnemonic syllables)
2	3	●4 = taiko	1	(measures counted by percussion)
				↑ rhythmic pattern starts

Figure 1.2. Rhythmic cycle of *Etenraku*.

These two-measure melodic patterns, reflecting each instrument's function, are combined into larger, repeating segments. The basic melody underlying these units is not obvious in the surface structure, but is organized into larger units of four or eight measures. The full *Etenraku* consists of three such eight-measure sections (section 1: mm. 1–8; section 2: mm. 9–16; section 3: mm. 17–24). In most performances each section is immediately repeated.

There are three accepted ways of ordering *Etenraku*'s three sections in performance. In the standard version, after the repeat of section 3, sections 1 and 2 are each played twice more (so the form is 112233 1122). A short version, omitting section 3 and playing sections 1 and 2 twice each, is acceptable when time is constrained. The *Nokorigaku-sanben* version (*nokorigaku*, “remaining music”; and *sanben*, “three times”), which is used for the present analysis, organizes the sections as follows: 112233 112233 1122.⁶ As the music unfolds, percussion and winds drop out one by one until only the lead *hichiriki*, the *biwa*, and the *koto* remain. Here the *koto* plays unusually complex figures called *rinzetsu*, accompanied by *hichiriki* phrases cut into fragments and separated by sporadic pauses in the third repetition (figure 1.3).⁷

Musical Idiom and Notation of Each Instrument

In contemporary *tôgaku*, three winds (*shô*, *hichiriki*, and *ryûteki*), two strings (*biwa* and *koto*), and three percussion instruments (*taiko*, *shôko*, *kakko*) make up the ensemble. However, there are two styles of performance: one without dance, called *kangen* (literally “pipes and strings”), and one that accompanies dance, referred to as *bugaku* (“dance music”), in which only

6. In the recording linked to this volume's website, the last repetition of sections 1 and 2 is omitted, making the form 112233 112233 12.

7. *Nokorigaku* is assumed to have been created to feature *koto* and *biwa*, which were relegated to amateur musicians, often higher ranked noblemen. The special arrangement of *koto* and *hichiriki* parts used to be improvised, and is partly so even today.

	<i>Ryūteki</i>	<i>Shō</i>	<i>Hichiriki</i>	<i>Biwa</i>	<i>Koto</i>	<i>Kakko</i>	<i>Shōko</i>	<i>Taiko</i>
Section 1	leader starts, tutti from first <i>taiko</i>	joins in at the first <i>taiko</i>	join in at the first <i>taiko</i>	joins in after the first <i>taiko</i>	joins in after <i>biwa</i>	enters with <i>ryūteki</i>	joins in at the first <i>taiko</i>	joins in at the first <i>taiko</i>
Section 1 repetition	↓	↓	↓	↓	↓	↓	↓	↓
Section 2	↓	↓	↓	↓	↓	↓	↓	↓
Section 2 repetition	↓	↓	↓	↓	↓	<i>kuwae-byōshi</i> , quits at the end	<i>kuwae-byōshi</i> , quits at the end	<i>kuwae-byōshi</i> , quits at the end
Section 3	leader only	leader only	leader only	↓	↓			
Section 3 repetition	↓	↓	↓	↓	↓			
Section 1	↓	↓	↓	↓	↓			
Section 1 repetition	↓	↓	↓	↓	↓			
Section 2	↓	quits in the latter half	↓	↓	↓			
Section 2 repetition	↓		↓	↓	↓			
Section 3	quits in the latter half		↓	↓	<i>rinzetsu</i>			
Section 3 repetition			fragmentary	↓	↓			
Section 1			↓	↓	↓			
Section 1 repetition			↓	↓	↓			
Section 2			↓	↓	↓			
Section 2 repetition			quits in the latter half	↓	↓			

Figure 1.3. Sectional form of *Etenraku: nokorigaku-sanben* version.

winds and percussion are used. In *kangen*, there are three players for each wind instrument, two for each string instrument, and one for each percussion instrument, making a total of sixteen musicians. *Bugaku* performances feature five or more musicians on each wind instrument, and one on each percussion instrument.

SHÔ (MOUTH ORGAN)⁸

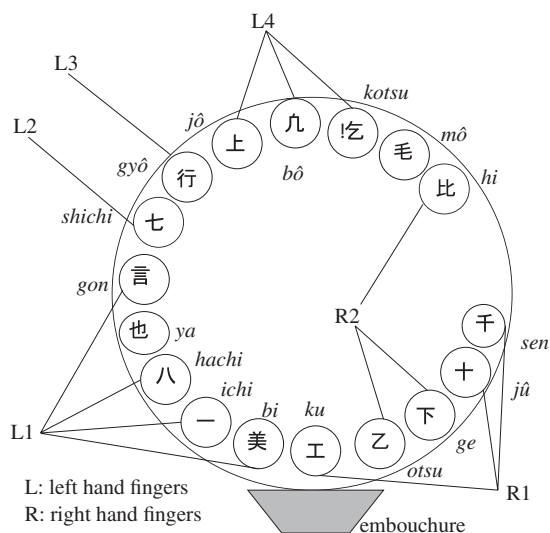
The *shô* is thought to have originated in the Yunnan province of China and in the surrounding areas in Vietnam, Thailand, and Laos, where one can find various types of this instrument. It has seventeen thin bamboo pipes, arranged into a circle (figure 1.4) and fixed onto a wooden chamber. Fifteen of them have a single metal reed at the bottom, above which there is a small finger hole. When the hole is covered the pipe sounds, both when exhaling and inhaling through the wooden chamber. Chords or clusters of five or six notes, called *aitake* (literally, “combining bamboos”), are commonly used in *tôgaku*, whereas in *saibara* or *rôei* songs the *shô* accompanies the melody only with single notes. Each *aitake* (figure 1.5) is named after the lowest pitch of the bamboo pipes played in the chord, although there are a few exceptions. (In the notation, the name of the *aitake*, or single pipe, is indicated by Chinese characters together with rhythmic signs.) Figure 1.6 shows all the possible lowest pitches. The series of lowest pitches presented by the series of *aitake* is actually the basic melody of the ensemble.

Shifting from one chord to another requires changing both fingering and the direction and pressure of breath, which varies the dynamics. Usually finger changes (*te-utsuri*; literally “moving of chord or hand”) come first, followed by a change (*ki-gae*; literally “change of breath”) from inhaling to exhaling or vice versa, starting on the first beat of the next measure. The breath pressure, and so the loudness, is minimal on the first beat, but it gradually increases, culminating at the last beat (figure 1.7).

HICHIRIKI (REED PIPE)

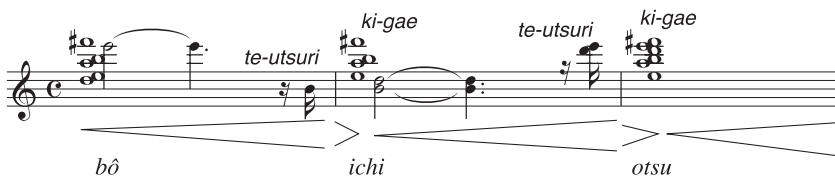
Hichiriki is a small vertical bamboo pipe 18 centimeters long, inserted with a large, flattened, shaved double reed that can produce a very loud sound. The main body has seven finger holes in the front and two in the back; its inside is lacquered, and its outside is wrapped with thin strings made of cherry bark. This instrument’s sound is distinguished by its pitch-gliding technique, called

8. The following information about instrumental and ensemble techniques comes from my personal experience of *gagaku* practice with master musician Shiba Sukeyasu (1935–), a former court musician, leading *ryûteki* player, composer, and instructor.

Figure 1.4. Structure and fingering of the *shô*.Figure 1.5. *Aitake* chords of the *shô*.Figure 1.6. Bamboo (and lowest *aitake*) pitches of the *shô*.

embai (literally, “salted plum seasoning”), which is attained with subtle adjustment of the lips, breath, and fingers. *Hichiriki* is so popular that it is used not only in *tôgaku* and *komagaku* ensembles, but also to accompany *saibara*, *rôei*, and other Japanese indigenous songs.

In *hichiriki* notation, finger positions are indicated by tablature signs derived from Chinese characters (figure 1.8). However, wind melodies are mainly learned with mnemonics (*shôga*) indicating pitch, rhythm, breath

Figure 1.7. Timing of *te-utsuri* and *ki-gae* for the *shô aitake* succession *bô-ichi-otsu*.

cuts, and other detailed information. Each wind instrument employs its own system of *shôga*. Present-day *hichiriki* and *ryûteki* notation, such as shown in figure 1.9, is presented in columns, each showing *shôga* syllables in the center, finger positions (tablature) on the left, and rhythmic signs on the right.

Shôga were already in use very early in the history of *tôgaku*, certainly before the end of the twelfth century, but only relatively recently, in the seventeenth century, did they begin to be actually written down in musical scores. The premedieval notation for *hichiriki* and *ryûteki* contained only tablature signs, as few as one or two per *kobyôshi* (measure), and thus seem to conform to the ancient basic melody.⁹ In contemporary practice the *shôga* syllables prescribe the ornamentations that are associated with the separately shown tablature signs.

RYÛTEKI (TRANSVERSE FLUTE)

Ryûteki is a transverse flute 40 centimeters long, with seven finger holes. Its body is finished like the *hichiriki*'s. Finger positions are likewise indicated by tablature signs based on Chinese characters. The same finger position can produce the lower register (*fukura*; “soft”) and the one an octave higher (*seme*; “tight”) (figure 1.10). The *ryûteki* adds a colorful ornamentation to the *hichiriki* melody, frequently switching from one register to another. It is used also in *saibara* and other few indigenous vocal genres such as *ô-uta*, *ônaobi-uta* and *kume-uta*.

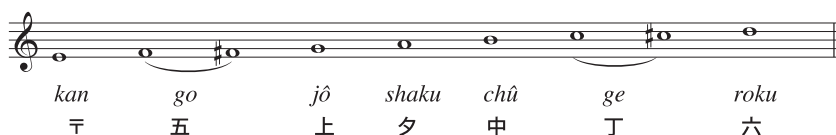
9. In the oldest extant large-scale wind score, *Hakuga no fue-fu*, compiled in 966 by the noble musician Minamoto no Hiromasa (918–980), only tablature signs and *taiko* beats are written. Hayashi Kenzô (1899–1976), focusing on number and distribution of tablature signs and the periodicity of the rhythm, tried to restore the basic melody as early as in 1960 (Hayashi 1960/1969). Allan Marett also worked on early *ryûteki* notations and interpreted them as a legacy of Chinese tradition (Marett 1977, 1985, 1988, 2006).

Figure 1.8. Tablature symbols and names for *hichiriki* finger positions.

zetsu go kô han riku shi itsu jô tei
舌 五 工 凡 六 四 一 上 丁

四	タ	・	工	ト	・	六	チ	・	越 天 楽
	ア			ヲ		四	ラ		
ノ	ハ ア	・	ノ	ホ ヲ	・	工	ロ タル	・	
一	タ ア	●	工	ト ル	●	四	タ アル	●	taiko
丁	リ イ イ	・	四	タ ル	・	四	ラ ア ア	・	kobyôshi
工 凡	ト ロ	・	上	テ リ	・	六	チ ラ	・	
工 五 六 丁	ト ロ タル リ イ 引 引	・ ● ・	丁 一 工 五 舌 四 六 四	テ リ ト ヲ ロ ル タ アル ラ ア	・ ・ ● ・	四 ノ 上 丁 上 四 六 四	チ ハ テ エ リ レ タ アル ラ ア	・ ・ ● ・	
									shôga syllables
									tablatures

Figure 1.9. Traditional columnar notation for the *hichiriki* ("Etenraku").

Figure 1.10. Tablature symbols and names for *ryûteki* finger positions.

BIWA (LUTE)

Biwa is a pear-shaped, four-string lute with four frets attached to the neck, which is angled back sharply. Twenty left-hand finger positions, including open strings, are indicated by signs made from Chinese characters (figure 1.11). The interval between the second, third, and fourth frets is equivalent to a semitone, whereas that between an open string and the first fret is a whole tone. There are six kinds of tuning, each corresponding to one of the six modes used in *tôgaku* (see below). The instrument's role is mainly rhythmic. The strings are plucked downward from lowest to highest with a box-wood plectrum, creating arpeggios. The notated pitch sounds on the first beat of its measure and is the last (and highest) of each arpeggio pattern (figure 1.12). The primary left-hand action is to hold fingers on frets. Sometimes a finger is released and replaced to produce a lower neighbor-note figure, but this technique may be almost inaudible. The notes played by the plectrum are indicated by large symbols, while those produced by left-hand finger motions are indicated by small ones (and are transcribed as small notes in figure 1.12).

KOTO (LONG ZITHER)

Koto, also known as *sô* or *gakusô*, is a thirteen-string-long zither plucked with bamboo artificial nails worn on the thumb, index, and middle fingers. Each string is tuned with a movable wooden bridge to one of the six modal tunings. Notational signs are either single or in combinations of two. A pair of signs indicates two strings of the same pitch or at an octave, but they are realized as *hayagaki* or *shizugaki* patterns in the actual ensemble. For example, in figure 1.13, the actual notation on the left specifies only the seventh and twelfth strings, but when it is realized as *hayagaki* or *shizugaki* as shown on the staff, the eighth, ninth, and tenth strings are also plucked. The *koto*'s idiom strongly articulates the quarter-note beats on which it plays. In Heian times (794–1185/1192), left-hand techniques of pressing or pulling strings were used that are now lost, with consequences for music analysis to be discussed below.

	Open	Fret 1	Fret 2	Fret 3	Fret 4
IV	⊥ <i>jô</i>	八 <i>hachi</i>	𠂇 <i>boku</i>	厶 <i>sen</i>	乚 <i>ya</i>
III	ㄣ <i>gyô</i>	七 <i>shichi</i>	匕 <i>hi</i>	ㄣ <i>gon</i>	乚 <i>shi</i>
II	ㄣ <i>otsu</i>	下 <i>ge</i>	十 <i>jû</i>	乙 <i>bi</i>	コ <i>ko</i>
I	一 <i>ichi</i>	工 <i>ku</i>	几母 <i>bo</i>	フ <i>shû</i>	斗 <i>to</i>

Figure 1.11. Tablature symbols and names for *biwa* finger positions.Figure 1.12. Timing of arpeggio patterns in the *biwa*.Figure 1.13. *Shizugaki* and *hayagaki* patterns that realize a *koto* notation.

TAIKO (BIG DRUM)

There are three types of *taiko*, a large double-headed barrel-shaped drum. The *dadaiko* has the largest diameter skin and an elaborate ornamental sculpture attached to its body; it is usually used outdoors for *bugaku* performances. The *ninai-daiko* is small enough to carry and play in processions. The most common type is *tsuri-daiko*, used in ordinary indoor *kangen* performances. All these *taiko*, however, have the same musical function: a strong right-hand stroke (*o-bachi*, “male stroke”) preceded by a weaker left-hand stroke (*me-bachi*, “female stroke”) articulates the end of each *hyôshi* rhythmic cycle.

SHÔKO (GONG)

The flat gong *shôko* also has three types: the largest one, *ô-shôko*, is used for outdoor *bugaku* performance; *ninai shôko* is for processions; and *tsuri-shôko* for indoor *kangen*. *Shôko*’s concave side is struck with two thin wooden sticks. Combinations of right-hand, left-hand, and double strokes by both hands produce distinctive rhythmic patterns.

KAKKO (CYLINDRICAL DRUM)

Kakko is a double-headed cylindrical drum playing one of three basic patterns with two long, thin sticks. The solid single stroke *sei* is played with the right stick. Two kinds of gradually accelerating rolling patterns—*rai*, with one stick on either side, and the double roll *mororai*—are combined into larger patterns that span the rhythmic cycle. In *tôgaku*, all the percussion repeat a specific pattern throughout the first half of a piece (figure 1.14a), then in the standard version they often replace it with another pattern called *kuwae-byôshi* (“added pattern”) (figure 1.14b).

Conversation among the Instruments: Who Leads the Ensemble?

There is no conductor in *gagaku*, but the ensemble is maintained even with the elastic beat and gradual acceleration. It is commonly held that the *kakko*, usually relegated to the eldest musician, acts as conductor, but the situation is actually more complicated. Smooth performances of *tôgaku* are possible due to a stylized “conversation” among the instruments. Undoubtedly, the *hichiriki* and *ryûteki* carry the most important melodic lines, but the percussion and

Figure 1.14. Standard percussion patterns for *haya yo hyôshi*.

L: left hand, R: right hand

a

L: left hand, R: right hand

b

strings also help to determine the subtle tempo changes within each quarter-note beat and from measure to measure.

Figure 1.15 is a transcription of section 1 of *Etenraku* in *hyô-jô* mode (with the tonic equivalent to the Western *E*), *nokorigaku-sanben* version, and its slightly varied initial repetition. Like other *tôgaku* pieces it opens with a *ryûteki* solo, whose first two half notes define the tempo. Percussion enters in m. 2, where the focus shifts to a *kakko* stroke on the first beat and a tremolo on the

Figure 1.15. *Etenraku* in *hyô-jô* mode, *nokorigaku-sanben* version, section 1.

Section 1 (measures 1–8), first statement

The musical score is presented in two systems. The first system covers measures 1 through 4, and the second system covers measures 5 through 8. The instruments are listed on the left: *shô*, *ryûteki*, *hichiriki*, *shôko*, *kakko*, *taiko*, *koto*, and *biwa*. The *ryûteki* part begins with a 'solo' marking. The *shô* part has a 'tutti' marking. The *taiko* part has 'mp' and 'f' markings. The *koto* part has a '3' marking in measure 8. The *biwa* part has a '3' marking in measure 8. The score includes various musical notations such as notes, rests, beams, and dynamic markings.

Figure 1.15. (Continued)

Measures 9–16: Section 1 (mm. 1–8) repeated

The musical score for measures 9-16 is presented in two systems. Each system contains five staves. The top staff is a treble clef with a key signature of one sharp (F#). The second staff is a treble clef with a key signature of one sharp. The third staff is a treble clef with a key signature of one sharp. The fourth staff is a treble clef with a key signature of one sharp. The fifth staff is a bass clef with a key signature of one sharp. The score includes various musical notations such as notes, rests, and dynamic markings. The first system shows measures 9-12, and the second system shows measures 13-16. The score is a repetition of measures 1-8.

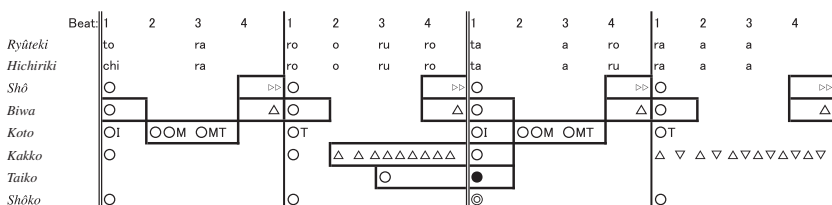
second, then to a weak *taiko* stroke on the third beat, which announces the coming of the most important stroke in the cycle at m. 3. The *shô* begins to play on the fourth beat of m. 2, just before the *hichiriki* begins. Measure 3, where all the winds have entered, is called *tsuke-dokoro* (“joining place”).¹⁰

10. In the standard version, *tsuke-dokoro* is on the next *taiko* beat in measure 7.

After *tsuke-dokoro*, the texture thickens with the addition of *biwa* and *koto*. *Biwa* arpeggios start after the *shô*'s change of fingering at the end of m. 4, helping the ensemble to synchronize at the next downbeat. Two measures later, *koto* eighth notes on the second beat help reestablish the original tempo after a *ritardando* on the fourth beat of the preceding measure.

Thus, *hichiriki*, *ryûteki*, *kakko*, strings and *shô* are each focused on at specific spots and lead the ensemble at those moments. Figure 1.16 shows this shifting of focus: *shô* and *biwa* lead from the *ritardando* at beat 4 of every measure to beat 1 of the next. *Koto* leads on beats 2–3 every two measures, where the tempo is faster. Every four measures the *kakko* leads on beats 2–3–4–1, and *taiko* on beats 3–4–1.¹¹ The *kakko* and *taiko* also establish and maintain the periodicity of the four-measure rhythmic cycle, but this larger cycle regulates the more active conversation among winds and strings.

In the standard version, a piece closes with the last *taiko*, briefly suffixed by an ending pattern in free rhythm played by *shô*, *hichiriki*, *ryûteki*, *kakko*, *biwa*, and *koto*. However, *nokorigaku* employs a quite different and more complex procedure (figure 1.3). First, the percussion quits at the end of the repetition of section 2. The *shô* quits at the second repetition of section 2. After the *ryûteki* quits at section 3, the *hichiriki* plays fragmentary phrases to focus attention on the *koto*'s own intricate patterns. Through this, the *biwa* continues normally.



Notes:

- (1) Ryûteki and hichiriki: *shôga* syllables are shown
- (2) Shô ○ = usual chord, ▷▷ = preceding finger change (*te-utsuri*)
- (3) Biwa ○ = last note of arpeggio, △ = preceding notes of arpeggio
- (4) Koto ○ = pluck, I = index finger, M = middle finger, T = thumb
- (5) Kakko ○ = single stroke by the right stick, △ = tremolo by the left stick, △▽△▽ = tremolo by both sticks
- (6) Taiko ○ = weak stroke by the left hand, ● = strong stroke by the right hand
- (7) Shôko ○ = stroke by a stick, ◎ = stroke by both sticks

Figure 1.16. Instrumental focus, beat by beat (after *tsuke-dokoro*). The part in focus is outlined in bold.

11. This account is based on my own experience. Shiba Sukeyasu has also pointed out the existence of multiple leaders in the ensemble, and describes as “listening” what I here call “conversation” (see Shôno 1987).

Patchwork Structure, Repeating Melodic Patterns, and Shared Patterns

As stated above, two measures constitute a melodic unit. In twenty-four measures of music (sections 1, 2, and 3), twelve such units are heard, but in *Etenraku* only ten are distinct because some are repeated. If we label each pattern alphabetically (A, B, C, . . . , J), the structure, including all sectional repeats, can be represented by figure 1.17.

Sections 1 and 2 (ABCB DEFB) conclude with B (mm. 7–8, 15–16), which insists strongly on the prime note *E*, whereas section 3 changes to another mode (*ôshiki-chô*) that stresses the note *A*. Patterns H and J also end on *A*. Sections 1 and 2 especially emphasize pattern B's closing function (underlined). Counting all repetitions in the standard version, out of ten pattern types (A–J), patterns A and C through F are heard four times each and G through J twice each, but pattern B is played a full twelve times.

Etenraku is a rather short piece of *tôgaku*. In other larger pieces, several patterns also appear repeatedly. In not a few cases, three or four consecutive units are repeated in the latter half of a piece. The proportion of iterating patterns ranges from less than 10 to about 60 percent for pieces in *hyô-jô* mode. For example, figure 1.18 shows melodic structure in *Funan*, a piece also in *hyô-jô* mode and *haya-yo-hyôshi* rhythm. There are twenty kinds of different melodic patterns, from A to T. Out of them, only patterns J, O, S, and T are unique to *Funan*. The rest can also be found in other pieces.

		*		*		
Section 1 (repeated)	A	B	C	<u>B</u>	Measure 1–8	
Section 2 (repeated)	D	E	F	<u>B</u>	Measure 9–16	Short version ends
Section 3 (repeated)	G	H	I	J	Measure 17–24	
Section 1 (repeated)	A	B	C	<u>B</u>	Measure 1–8	
Section 2 (repeated)	D	E	F	<u>B</u>	Measure 9–16	Standard version ends
Section 3 (repeated)	G'	H'	I'	J'	Measure 17–24	
Section 1 (repeated)	A'	B'	C'	<u>B'</u>	Measure 1–8	
Section 2 (repeated)	D'	E'	F'	<u>B'</u>	Measure 9–16	<i>Nokorigaku</i> ends

Figure 1.17. Melodic patterns of *Etenraku* (italicized sections are repeated in *nokorigaku* only; * = *taiko*).

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>
<u>I</u>	<u>J</u>	<u>K</u>	<u>L</u>
<u>A</u>	<u>B</u>	<u>M</u>	<u>H</u>
<u>N</u>	<u>O</u>	<u>P</u>	<u>Q</u>
<u>R</u>	<u>S</u>	<u>G</u>	<u>H</u>
<u>K</u>	<u>T</u>	<u>P</u>	<u>Q</u>

Figure 1.18. Common patterns (underlined) employed in *Funan*.

Examining all patterns found in pieces in *hyô-jô* mode and *haya-byôshi* rhythm in the current *Meiji-senteifu*¹² repertoire, we find some thirty-five patterns that are used in more than two pieces. Each piece includes at least one of the patterns in common use. Figure 1.19 shows the total number of unique and common patterns included in each piece. *Yûjô no kyû*, *Funan*, *Yahanraku*, *Korôji*, *Ôshôkun*, *Ôjô no kyû*, and *Shun'yôryû* each contain more than ten common patterns.

The more a piece employs common patterns, the more it gives the impression that it is similar to others and therefore its melody's distinctiveness is minimized. Conversely, the fewer such patterns, the more it carries a flavor of originality. In this regard *Etenraku* (together with the piece *Ringa*) is rather exceptional for music in *hyô-jô* mode and *haya byôshi* rhythm, since it uses only one common pattern, while most other pieces employ many. This is one reason why *Etenraku* makes such a strong impression, despite its small scale.

Deep Structure

Tang Dynasty Modal Theory

To grasp the relationship of the surface melody to the deep structure articulated by the basic melody, a brief review of the Chinese modal theory brought to Japan around the eighth century will be helpful. The ancient Chinese

Title	Number of Patterns	Common Patterns
<i>Ôjô no kyû</i>	16	11
<i>Goshôraku no kyû</i>	18	7
<i>Sandai no kyû</i>	26	9
<i>Shun'yôryû</i>	34	11
<i>Ringa</i>	32	1
<i>Rôkunshi</i>	12	8
<i>Keitoku</i>	16	5
<i>Yûjô no kyû</i>	30	14
<i>Funan</i>	20	16
<i>Yahanraku</i>	31	14
<i>Korôji</i>	25	13
<i>Ôshôkun</i>	14	12
<i>Etenraku</i>	10	1

Figure 1.19. Number of distinct patterns, and of patterns used in more than one piece, in the current *Meiji-senteifu* repertoire.

12. Pieces with *nobe byôshi* and *tada byôshi* rhythm are omitted here, because their melodic units are differently composed and derive from different rhythmic structures.

devised a mathematical method of calculating pitches called *sanbun son'eki* ("dividing into three segments and subtracting or adding one"), which is comparable to proceeding along the Pythagorean circle of fifths. If we divide a sounding length of string or pipe into three equal segments and subtract a segment (that is, take two-thirds of its length), the resulting pitch is a perfect fifth above the original. Adding a segment (taking four-thirds) gives the pitch a perfect fourth below. The left side of figure 1.20 shows how this process can be continued. Beginning from a given fundamental tone and proceeding by this method (alternately up by fifth and down by fourth) twelve times generates a pitch collection, which, collapsed into the range of a single octave, creates the analog of a Western chromatic scale. The first five of these make a pentatonic scale. These scale tones are referred to as the prime (*gong* in Chinese; *kyû* in Japanese), the second (*shang*; *shô*), the third (*jiao*; *kaku*), the fifth (*zhi*; *chi*), and the sixth (*yu*; *u*). Adding the next two pitches, flat-*chi* (*bian-zhi*; *hen-chi*) and flat-*kyû* (*bian-gong*; *hen-kyû*), creates a heptatonic collection equivalent to the Western Lydian mode (figure 1.20, right). In Chinese theory, this fundamental scale, consisting of the first seven pitches in the circle of fifths, is called *gong diao* (the mode of *gong*; in Japanese, *kyû-chô*, the mode of *kyû*). Shifting the prime note up a step to *shang/shô*, one obtains *shang-diao/shô-chô* (the mode of *shang/shô*). In this way, we can produce seven modes (figure 1.21). Transposing each of the seven to all twelve notes results in eighty-four distinct combinations of mode and prime note.

This theory was certainly introduced into Japan. However, only a small number of the eighty-four possibilities were actually used. Until the late Heian period (the end of the twelfth century), ten were known.¹³ Only six, called *chôshi*, survive in current *tôgaku* practice. These comprise two types, *ryo* and *ritsu*, equivalent to the Western Mixolydian and Dorian modes, respectively (figure 1.22). *Ichikotsu-chô* (prime note = *D*), *sô-jô* (prime note = *G*), and *taishiki-chô* (prime note = *E*) fall in the former category, and *hyô-jô* (prime

Figure 1.20. *Sanbun son'eki* and the fundamental mode *kyû-chô* (*gong-diao*).



13. In the *biwa* score *Sango yôroku* and in the *koto* score *Jinchi yôroku*, both compiled by aristocrat and musician Fujiwara no Moronaga (1138–1192), *ichikotsu-chô* (prime note *D*), *sada-chô* (*D*), *hyô-jô* (*E*), *taishiki-chô* (*E*), *kotsujiki-chô* (*E*), *sei-chô* (*E*), *sô-jô* (*G*), *ôshiki-chô* (*A*), *sui-chô* (*A*), and *banshiki-chô* (*B*) can be found.