

the world of music

vol. 45(2) - 2003

**Traditional Music and Composition
For György Ligeti on his 80th Birthday**

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**VWB – Verlag für Wissenschaft und Bildung
Berlin 2003**

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Ligeti, Africa and Polyrhythm

Stephen Andrew Taylor

Abstract

Since the 1980s György Ligeti has often spoken of his admiration for African music, even contributing the foreword for Simha Arom's African Polyphony and Polyrhythm. This essay will trace some of the African connections in Ligeti's music of the past twenty years, including the Piano Etudes, Piano Concerto, Violin Concerto and Nonsense Madrigals. These connections are not apparent to the casual listener; in fact, Ligeti seems to take pains to "cover his tracks," to use abstract principles rather than surface details. Furthermore, Ligeti combines these African principles with many other influences and ideas to produce a music which is uniquely his. The article concludes by examining this "integration" of the "Other" (not only African music but all sorts of music and ideas) into Ligeti's idiosyncratic style.

1. Introduction

Some readers may be surprised to learn that the Foreword to the English translation of Simha Arom's monumental treatise *African Polyphony and Polyrhythm* is written not by another ethnomusicologist, but by the composer György Ligeti. What interest could this Hungarian avant-garde figure have in African music? He describes his first encounter:

In autumn 1982 a former student of mine, the Puerto Rican composer Roberto Sierra, brought to my attention a collection of instrumental and vocal ensemble music of the Banda-Linda tribe from the Central African Republic, recorded by Simha Arom. The record "Banda Polyphonies," then several years old, was no longer available so I re-recorded it onto a cassette and made a photocopy of Arom's introductory text. Having never before heard anything quite like it, I listened to it repeatedly and was then, as I still am, deeply impressed by this marvellous polyphonic, polyrhythmic music with its astonishing complexity (Ligeti 1991:xvii).

His interests in African music, as we shall see, are mainly technical, but perhaps share some personal and broader aspects as well. This essay will trace some of the African connections in Ligeti's music of the past twenty years, including the Piano Etudes (1984-), Piano Concerto (1985-88), Violin Concerto (1990-92) and *Nonsense*

Madrigals (1988-93). The casual listener may not notice these connections. In fact Ligeti seems to take pains to “cover his tracks,” to use abstract principles rather than surface details. Moreover, Ligeti combines these African principles with many other influences and ideas to produce a music which is uniquely his. We will conclude by examining this “integration” of the “Other” (not only African music but all sorts of music and ideas) into Ligeti’s recent music.

2. Hemiola, Metre and Pulsation

Ligeti’s music of the past two decades is unmistakable for its fantastic rhythmic complexity, even while other elements—especially harmony and form—are somewhat more traditional than in his music of the 1960s. Writing about his first book of Piano Etudes (1985), the composer claims this rhythmic complexity stems from two vastly different sources of inspiration: the Romantic-era piano music of Chopin and Schumann and the indigenous music of sub-Saharan Africa.

One often arrives at something qualitatively new by unifying two already known but separate domains. In this case, I have combined two distinct musical ideas: the hemiola of Schumann and Chopin, which depends on meter, and the additive pulsation principle of African music.... [T]he hemiola arises from the metric ambiguity posed by a measure of six beats, which can either be divided in three groups of two or in two groups of three.... The shimmering effect of dividing the bar simultaneously into two and three produces the metric tension which is one of the most seductive attractions of the music of Chopin, Schumann, Brahms and Liszt.... A completely different metric ambiguity occurs in African music. Here there are no measures in the European sense, but instead two rhythmic levels: a ground layer of fast, even pulsations, which are not counted as such but rather felt, and a superimposed, upper layer of occasionally symmetrical, but more often asymmetrical patterns of varying length (Ligeti 1988b:4-5).

The hemiolas of Schumann and Chopin, especially when played at a fast tempo, can create a kind of “illusory” rubato, a floating feeling—the “shimmering effect” Ligeti mentions above. One of the best examples of this is a passage from Chopin’s Fourth Ballade in F Minor (mm. 175-76), a complex combination of 2:3 (two-against-three) and 3:8 discussed by the scientist Douglas R. Hofstadter, a writer whom Ligeti admires, in a 1982 *Scientific American* article (see Fig. 1).

At tempo this passage sounds like a rubato melody embedded in flurries of notes, not a complex hemiola. Ligeti utilizes this quasi-rubato effect by altering the European hemiola to combine several groups of beats: instead of two against three, he uses such combinations as 3:5, 5:7 or even 3:4:5:7. Below is a typical example, a 4:5:7 polyrhythm from his Piano Etude No. 6, “Automne à Varsovie” (see Fig. 2):

Here the hemiolas form descending, chromatic melodies, which the listener hears not so much as a hemiola but as three separate lines moving at different tempi (or, in Ligeti’s coined term, “polytempo”; for a complete analysis of this Etude see Taylor 1997). A constant stream of arpeggiated sixteenth notes (the small black notes in the



Fig. 1. Complex hemiola in Chopin, *Ballade No. 4*, mm. 175-76
(Hofstadter 1985:179 adapted).

Fig. 2. “Polytempo” hemiolas in “*Automne à Varsovie*,” mm. 73-74.

example) acts as a kind of “glue” to hold the hemiolas together (and as Ligeti points out, to make them easier to play for the pianist). Other works, notably the Piano Concerto and Etude No. 12, “*Entrelacs*,” push the hemiola concept much farther. The third movement of his Piano Concerto includes at one point a passage of six simultaneous polytempo streams, 4:5:6:7:9:11. Unlike the above example from “*Automne à Varsovie*,” though, the different lines do not move in smooth scales, but leap in disjunct intervals, making it nearly impossible to parse the thickets of interwoven lines.

Although barlines appear in these scores, there is no metre in the conventional sense, only a constant series of sixteenth notes—the “glue” holding the different tempo streams together. Ligeti calls attention to this quick, steady pulse in his foreword to Arom’s treatise:

For composition, [Arom’s research] opens the door leading to a new way of thinking about polyphony, one which is completely different from the European metric structures, but equally rich, or maybe, considering the possibility of using a quick pulse as a “common denominator” upon which various patterns can be polyrhythmically superimposed, even richer than the European tradition (Ligeti 1991:xviii).

Later in the book Arom painstakingly defines this quick, “common denominator” pulsation:

By *pulsation* we mean the isochronous, neutral, constant, intrinsic reference unit which determines tempo. To take this definition piece by piece:

- *isochronous*, i.e., repeated at regular intervals
- *neutral* insofar as there is no difference between one pulsation and another: the idea of an arrangement of beats at a higher level [i.e., metre] is excluded
- *constant* in being the only invariable element in the course of the piece
- *intrinsic*, i.e., inherent in the music itself and specific to each piece: this makes it always a relevant factor
- a *reference unit*, i.e., establishing a unit of time
- *determining tempo* by setting the internal flow of the music it underlies (Arom 1991:202).

He then investigates the difference between rhythm and metre, concluding that European metre is neither more nor less than a series of identical durations with regular accentuation—in other words, metre is just an extremely simple rhythm, spread out on a large scale. “*What is called meter in music is thus the simplest form of rhythmic expression*. In other words, musical meter has no independent status [from rhythm]. Ignorance of this fact is the root of the many confusions between meter and rhythm” (Arom 1991:204, his italics).

The primacy of metre is a comparatively recent development in Western music. To illustrate this point, Arom cites the French musicologist Maurice Emmanuel:

In the sixteenth century, the bar was not yet in use; partitioning, and even vertical alignment, were not indispensable to either eye or mind in reading a score. It was customary to beat *time*, nothing else. The intrinsic structure of a piece would thus give rise to measures which could be heard *but not seen*. This made it possible to conceive of rhythm as based on beats, but not on beats marshalled into measures (Arom 1991:196).

For Ligeti the lack of metre is nothing new: “Even as early as the orchestral piece *Apparitions* (1958/59) one finds in my music precisely this characteristic lack of a bar-oriented meter—I used bars and their subdivisions simply as optical aids for the notation” (Ligeti 1988b:6). The barlines in Ligeti’s recent music function similarly: the listener perceives only the chains of hemiolas (or as Ligeti calls them, “super-signals”), moving independently of the barlines. This rhythmic flow recalls not only African rhythmic but those of the Renaissance as well, and underlies Ligeti’s admiration for masters such as Ockeghem and Philippe de Vitry as well as the *ars subtilior* of the late fourteenth century.

Although complex polyrhythms have existed in Ligeti’s music ever since he came to the West—practically every score abounds in simultaneous layers of quintuplets, septuplets, etc.—the difference between the earlier pieces and the recent music lies in this new conception of pulse. In the earlier works, the pulse is something to be divided into two, three and so on; even thirteenth-tuplets occasionally appear. The effect of these different subdivisions, especially when they occur simultaneously, is to blur the aural landscape, creating the micropolyphonic effect of Ligeti’s music



Fig. 3. African 3:4 rhythms (Arom 1991:243, adapted). The thin vertical lines are sometimes clapped, sometimes danced.

from the sixties. The smallest common denominator of all these subdivisions is a microscopic fraction of a beat; no one can hear it, much less count it.

On the other hand, the recent music (and a few earlier pieces such as *Continuum*, 1966) conceives of the pulse as a musical atom, a common denominator, a basic unit which cannot be divided any further. Different rhythms appear through *multiplications* of the basic pulse, rather than *divisions*: this is the principle of African music seized on by Ligeti. It also appears in the music of Philip Glass, Steve Reich and others; and significantly it shares much in common with the additive rhythms of Balkan folk music, the music of Ligeti's youth. In effect, the blurred rhythmic patterns are now seen through a microscope; instead of a dense web, the shape's contours become clearer, though fantastically complex, like an image of a fractal coastline. "In a piece such as *Continuum* where I (consciously) tried to create an illusionary rhythm, I came (unconsciously) close to the rhythmic conception evident in the music of sub-Saharan Africa" (Ligeti 1988b:6).

African rhythms are cyclical and repeating, but the lack of bar accentuation, as well as their speed and complexity, distinguish them from European rhythms. Still, they do resemble hemiolas, as Ligeti explains: "it is possible to beat both a duple or a triple meter to these rhythmic patterns by handclapping or, for example, with a percussion instrument. This prevailing metric ambiguity produces, in theory at least, a kind of hemiola, which however in practice does not really exist: there can be no real

ambiguity as there is no meter based on the barline, there are no accents and consequently no hierarchy of beats, only the smoothly flowing additive pulse" (*ibid.*:6).

So, even though African rhythms do not rely on metre, they do resemble hemiolas, with different layers of accents occurring simultaneously. But only rarely do these accents fall into the European 2:3 grouping. More often they tend toward twelve beats, divided into 3:4: one level of complexity higher, as it were, than their European, 2:3 counterparts (Fig. 3).

3. African Rhythms in Ligeti

Twelve-beat groups divided into 3:4 patterns and polymetres have occupied Ligeti a great deal in the past two decades. Clear examples appear in the first of the *Nonsense Madrigals* ("Two Dreams and Little Bat," 1988) and the third and fifth movements of the Piano Concerto (1985-88), among other pieces. Several works even incorporate this hemiola quality into their time signatures, as in the fifth movement of the Piano Concerto and the first movement of the *Nonsense Madrigals* (see Fig. 4).

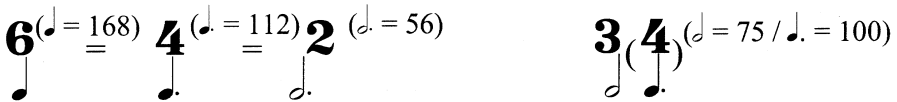


Fig. 4. Time signatures for *Piano Concerto*, fifth movement; *Nonsense Madrigals*, first movement.

In the third movement of the Piano Concerto, a passage for bongos articulates this 4:3 pattern quite clearly (Fig. 5).

This is one of the few Ligeti passages to feature an African-sounding instrument, the bongo, to play an African-sounding rhythmic pattern (compare to Fig. 3 above). Significantly, he marks the passage very quietly—*pppp* to *pp*—and it is almost imperceptible, serving to reinforce patterns already present in the orchestra (Steve Reich occasionally uses percussion instruments in the same way). Also, unlike much African drumming music, in which patterns repeat with little variation, Ligeti's bongo pattern gradually evolves so that its beginning and ending sound quite different—a kind of metamorphosis typical of Ligeti, as well as Reich and other minimalists.

Ligeti has developed a habit of marking his sketch paper with vertical, multicoloured lines showing various hemiola-like divisions of the bar, for instance: every twelfth pulse is marked by a thick black vertical line (the barline); every third pulse with a blue line; and every fourth pulse with a red line. Other colours sometimes mark different units, for instance every fifth or seventh pulse. One of the best examples is a sketch for the fourth movement of the Violin Concerto (see Ligeti 1993b); other sketches are reproduced in Floros (1996). Another appears on the cover of the

31 (etc.)

34 (etc.)

37 (etc.)

41

43

45

Fig. 5. Bongo patterns in *Piano Concerto*, third movement, mm. 31-48.

Piano Etudes, Book One (facsimile edition); the illustration, a multi-coloured sketch for the first Etude “*Désordre*”, is practically a composition lesson in itself.

Besides these hemiola-like structures, Ligeti also uses what Arom calls “asymmetrical internal structures.” One of the most prominent of these is a Ghanaian pattern, again consisting of a twelve-beat group. But instead of dividing into different hemiola levels, it is divided into 5+7, or (less often) 7+5. A typical bell pattern (from the Ewe dance *Atsia*) is shown below:

Fig. 6. Bell pattern from the Ewe dance *Atsia*. The vertical lines mark handclaps against which the bell implies a 5+7 pattern.

Several Ligeti works use this rhythmic pattern, perhaps a more explicit African reference than the extended hemiolas of the Piano Etudes and Piano Concerto. An interesting example appears in the first *Nonsense Madrigal* “Two Dreams and Little Bat,” since Ligeti goes to the trouble of marking the rhythmic patterns in the score with brackets (these are not tuplets, but instead show the desired rhythmic grouping; see Fig. 7).

pp *alla danza* mp

A I-II

sev - en round, round rain - bows with clouds to di - vide

mf f

them; sev - en pret - ty li(tt)le girls with sug - ar on their lips,

Fig. 7. *Nonsense Madrigals, I, 7+5 pattern. Alto parts only, mm. 22-25.*

This example, like the bongos in the Piano Concerto, is perhaps more easily seen than heard, considering the contrapuntal complexity of the piece. Figure 8 shows another example, again from the third movement of the Piano Concerto.

59

Ob.
Tbn.

pp

sev - en round, round rain - bows with clouds to di - vide them; sev - en pret - ty li(tt)le girls with sug - ar on their lips,

Fig. 8. *7+5 rhythmic patterns in oboe, trombone. Piano Concerto, III, mm. 59-60.*

This pattern, although eventually played by most of the orchestra, goes by quickly and smoothly (note the slurs and tenuto markings) and again, doesn’t really “sound” African. But in the fourth movement of the Violin Concerto there is a clearer example of the 5+7 pattern (Fig. 9).

Once again, despite its literal use of the Ghanaian bell pattern (see Fig. 6), this passage sounds nothing like “African music”: the dissonant harmonies and distorted timbres—muted trombone, slap pizzicatos—give the passage a biting harshness. Also, within the piece it comes as a shock, brutally interrupting the calm chords preceding and following it.

Fig. 9. 5+7 pattern in *Violin Concerto, IV*, mm. 44-48.

In each of these examples, Ligeti uses African-related rhythms, but in a context which sounds nothing like African music. If asked to imagine a fusion of European and African music, many musicians would probably think of spirituals, blues, jazz and rock (in fact, Ligeti does mention jazz pianists Bill Evans and Thelonius Monk among his influences). One of the reasons Ligeti's music sounds so different is because he works with abstract concepts from European and African music—hemiola and additive pulsation—not the musical sounds themselves. Also, unlike the makers of spirituals and jazz standards, Ligeti was composing with a conscious technical goal, namely to produce new, complex polyrhythms.

4. Modes and Tunings

Besides the rhythmic devices discussed above, some of Ligeti's harmonic ideas share qualities with African music. He has experimented with equidistant divisions of the octave (such as the whole-tone scale or some of Messiaen's modes of limited transposition) in an attempt to portray indirectly the tuning systems of other cultures: As for equidistant scales (or interval structures), tempered twelve-tone division of the octave permits only the chromatic scale (all minor seconds) and the six-tone scale (whole-tone scale: all major seconds). In addition, the four-fold division (in four minor thirds) and the three-fold division (in three major thirds) are possible. In many other music cultures additional (more or less) equidistant octave divisions are available, as in the Javanese *slendro*'s five-fold division and the Melanesian seven-fold division widespread throughout Southeast Asia as well as (independently) in the southern half of Africa. In the *Piano Concerto* and *Etude No. 7*, "Galamb Borong," Ligeti circumvents the limitations of equal temperament by making a "super-whole-tone" mode:

There are places in which the melody and piano figuration are formed out of the two whole-tone collections, one collection in one hand, the complementary collection in the other hand. In this way both whole-tone and chromatic languages reciprocally

arise, an unusual sort of equidistance, remarkably iridescent and likewise “oblique,” an illusionary harmony, clearly originating within twelve-tone temperament, but no longer belonging to it (Ligeti 1988c:11).

A related harmonic technique appears in his Piano Etude No. 1, “Désordre,” in which the right hand plays only on the white keys and the left hand plays only on the black keys. Denys Bouliane, citing Gerhard Kubik, points out that this partitioning recalls the xylophone technique of akadinda music in Uganda, in which musicians stand on opposite sides of the instrument, playing in ultra-fast hocketts (Bouliane 1989:42). This partitioning also recalls the music of Bartók who earlier used it in *Mikrokosmos* and some of the 44 Duos for two violins.

5. Ligeti Signals and the Integration of the Other

Ligeti’s music has long been distinguished by a palette of musical motives and ideas, which he (half-ironically) refers to as “Ligeti signals.” In the sixties he used barren, still intervals spread out over wide registers (especially tritones and octaves); “clocks,” or ticking, machine-like music; and “clouds,” the micro-polyphonic, dense web of interwoven lines found in orchestral works such as *Atmosphères* (1961) and the *Requiem* (1965). Starting in the 1980s, Ligeti has developed a new palette of these “signals,” which both replaces and appears alongside the old techniques. The African devices we have seen are one of the most important elements in this new palette, but there are many others, including Ligeti’s discovery of Conlon Nancarrow’s player-piano music and computer-generated images from chaos theory and fractals (see Steinitz 2003 and Toop 1999 for comprehensive surveys of recent Ligeti).

At the same time he is making connections with his own heritage—the traditions of both Western art music and his native Hungary. The cultures which seem to have made lasting impressions on him rhythmically—African and Caribbean music particularly—come close to the complex metrics of Balkan music. The different tunings in these cultures also share qualities with Balkan tuning, which can be stridently microtonal; Bartók himself occasionally experimented with quarter- and sixth-tones. Also, the descending scales found in many recent works—a kind of signal Ligeti calls the “Lament motive”—bear a striking resemblance to Transylvanian funeral laments.

Many of these new “Ligeti signals” share a sense of looking outward for new sources of inspiration, an extraordinary openness to external ideas and influences—or as some might say, an “integration” of “the Other.” But not only have these ideas become part of Ligeti’s style; they have changed his music profoundly. Moreover, he avoids copying his influences wholesale, but works on a higher, conceptual level. Most listeners likely have no idea they are hearing Ghanaian rhythms in the Violin Concerto. This abstraction implies a kind of objective respect for the powerful ideas he is working with, as well as a strong personality able to hold its own with them (un-

like, for instance, some “third stream” music like orchestral jazz, where the jazz element overpowers the orchestral style).

Finally, in a sense Ligeti himself is “the other,” since he has lived in exile from his native Hungary since the mid-1950s. As an outsider, he may be particularly receptive to outside influences himself and sensitive to connections with his own heritage. Whatever the reason, Ligeti’s extraordinary, idiosyncratic synthesis of African rhythm, Nancarrow, chaos theory and jazz—to name just a few of his influences—with his own musical preoccupations has resulted in some of the most beautiful, complex and radiant music of our time.

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Panel in the 2001 Research Assessment Exercise, and was elected a Fellow of the British Academy in the same year. Forthcoming publications include *The Cambridge History of Twentieth-Century Music* (coedited with Anthony Pople) and *Empirical Musicology: Aims, Methods, Prospects* (coedited with Eric Clarke).

Guo Wenjing was born in 1956 in Sichuan, China. Between 1970 and 1977 he was a member of the Chongqing Song and Dance Ensemble, where he learnt a great deal about Sichuan's folk music. Guo was selected for the Central Conservatory of Music in 1978 and graduated in composition in 1983. He is now a member of the Chinese Musicians' Association, and dean and professor of the Composition Department of the Central Conservatory of Music in Beijing.

Dr. Katherine Johanna Hagedorn is Associate Professor of Music and Director of the Ethnomusicology Program at Pomona College in Claremont, California. Her primary research has focused on Afro-Cuban religious and folkloric performance, with an emphasis on the central role of *batá* drumming. Her articles and review essays based on this research have appeared in *World of Music*, *British Journal of Ethnomusicology*, and *Ethnomusicology*. Her book, *Divine Utterances: The Performance of Afro-Cuban Santería* (Smithsonian Institution Press, 2001) won the Alan Merriam Prize in 2002.

Kim Jin-Hi was born in Korea in 1957, earned a BA degree in Korean traditional music at Seoul National University before coming to the US, where she received a MFA in electronic music and composition at Mills College, CA. She has studied traditional music for ten years at the National Center for Korean Traditional Performing Arts and ethnomusicology at Seoul National University. Kim has given lectures about Korean music and her compositional concept, "Living Tones," at many universities in the USA as well as in Japan, Korea and Europe.

Koo Bonu was born in Seoul in 1958. He studied at the College of Music, Yonsei University, Seoul (1978-82) with La In-Young and at the Stuttgarter Musikhochschule (1984-90) with Erhard Karkoschka. In 1986 he was music director at the Württembergische Landesbühne in Esslingen, Germany, where he composed stage music. In 1990 he did research at the Institute for Psychoacoustics and Electroacoustic Music (IPEM) in Ghent, dealing with problems of sound in space. In 1995 he was composer in residence at the 3rd Hibiki Hall Festival in Kitakyūshū, Japan and at the Kristiansand Chamber Music Festival in Norway. Koo is now professor of composition at the Sungshin University, Seoul.

Lukas Ligeti is a composer and percussionist whose work covers areas as diverse as "classical" composition, electronics, improvised music, and cross-cultural collaboration. Born in Vienna, he has lived in New York City since 1998, after having studied composition and jazz drums at the Vienna Music University as well as spending two years at Stanford University's Center for Computer Research in Music and Acoustics.

Barbara Mittler is an associate professor of Chinese Studies at the University of Heidelberg in Germany. She received her MA from Oxford in 1990 and a PhD from Heidelberg in 1994. She has published on the politics of Chinese Music in Hong Kong and Taiwan (*Dangerous Tunes*, Wiesbaden, 1997) and the news media in late-Qing Shanghai (*A Newspaper for China?* Cambridge: forthcoming). Her research interests also include May Fourth period literature and

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James R. Newell received his MTS from Vanderbilt University Divinity School and is currently a doctoral candidate in Vanderbilt's Graduate Department of Religion where he is pursuing an ethnomusicological dissertation. He is an active musician performing in genres such as folk, blues, and jazz.

Ashok D. Ranade is a vocalist trained in the traditional *guru-shishya* method of Hindustani classical music. He is founder director of the Bombay University Music Center, associate director of the Archives and Research Center for Ethnomusicology of AIIS and deputy director of theatre research and ethnomusicology at the National Center for the Performing Arts. He has numerous publications, workshops and albums related to music and theatre to his credit. Honours include the Coulson Indology Fellowship, Wolfson College, Oxford (1979), Visiting Professorship in Ethnomusicology at the Queen's University of Belfast, Northern Ireland (1989), National Lecturer in Music, University Grants Commission, New Delhi (1990-91), Tagore Chair, MS University of Baroda (1994-95). Recent works include *Essays in Indian Ethnomusicology* (1998).

Raden Franki Suryadarma Notosudirdjo (b. 1953) is a composer-ethnomusicologist known in Indonesia as Franki Raden. He studied composition with the late Frans Haryadi, Slamet Sjukur, Chou Wen-Chung and Stephen Dembski, and received his MM (1990) and PhD (2001) in ethnomusicology, with minors in performance art and Southeast Asian studies at the University of Wisconsin-Madison. From 1975 on, he has been active as a cultural critic publishing articles on arts and culture in Indonesia's most prestigious periodicals, and he has also written in *The New Grove Dictionary of Music and Musicians*. His compositions have been performed in Indonesia and The United States. From 1992 on, he has been active in organizing music festivals in Indonesia (Jakarta and Bali) and Japan (Kyōto). At present, he is a post-doctoral researcher at the University of Wisconsin-Madison.

Sabina Pauta is currently a doctoral candidate in the University of Michigan Ethnoscology Ph.D. program, and is conducting fieldwork for her dissertation on Romanian colinde, Christmas carols. For the past four years Sabina Pauta has been the recipient of the University of Michigan FLAS Fellowship (Foreign Language and Area Studies) in support of her secondary area of specialization in Indonesian music. Most recently she has been awarded the Glenn McGeoch Award from the University of Michigan for excellence in teaching and the Rackham School of Graduate Studies Fellowship for Research in the Humanities.

Qin Wenchen was born in Erdos, Inner Mongolia in 1966. After graduating from a composition class of the Mongolian Art School in 1987, Qin went to Shanghai to study at the Conservatory of Music composition with Zhu Jian'er. On graduation in 1992 he was appointed composition teacher at the Central Conservatory of Music in Beijing.

Suzel Ana Reily is Senior Lecturer in Ethnomusicology and Social Anthropology at Queen's University Belfast. Her publication include *Voices of the Magi: Enchanted Journeys in South-east Brazil* (2002, Chicago), the special editorship of *Brazilian Musics, Brazilian Identities* (2000, *British Journal of Ethnomusicology* 9.1) and the production of a website/CD-Rom

based on John Blacking's ethnography of the Venda girls' initiation school. Her current project involves the study of the musical life of a former mining town in Minas Gerais from the colonial era to the present.

Jonathan Stock, co-editor of *the world of music*, is reader in ethnomusicology at the University of Sheffield. His books include *World Sound Matters: An Anthology of Music from Around the World* (London, 1996), *Musical Creativity in Twentieth-Century China: Abing, His Music, and Its Changing Meanings* (Rochester, NY, 1996), and *Huju: Traditional Opera in Modern Shanghai* (Oxford 2003).

Takahashi Yūji was born in Tokyo in 1938. He studied composition with Minao Shibata and Roh Ogura. From 1963 to 1966, he lived in Europe, where he studied with Iannis Xenakis. From 1966 to 1972 he lived in the United States and performed with orchestras across the continent. During the 1970s, he recorded the piano music of Bach, Satie and others for DENON. Since 1984 he has been composing for traditional Japanese instruments as well as playing the piano and the computer.

Stephen Andrew Taylor is assistant professor of composition at the University of Illinois Urbana-Champaign and received degrees from Northwestern and Cornell Universities, graduating in 1994 with a thesis on "The Lamento Motif: Metamorphosis in Ligeti's Late Style." Among his commissions are pieces for Pink Martini, the Oregon Symphony and the Chicago Symphony. In 1996 *Unapproachable Light*, a commission from the American Composers Orchestra, was premiered at Carnegie Hall. More recent works include *Seven Microworlds* for flute, guitar and Max/MSP, to be released on a SEAMUS CD; *Viriditas* for flute, viola and harp, premiered by the Debussy Trio (July 2001); and the chamber quartet *Quark Shadows* premiered at the Chicago Symphony's MusicNOW series (November 2001).

Gordon Thompson is an Associate Professor of Music at Skidmore College and is the Web Editor and Vice President of the Society for Asian Music.

Christian Utz (b. 1969) studied composition, piano and music theory in Vienna and Karlsruhe. In 2000, he received a PhD degree at the Institute for Musicology at Vienna University with a thesis on "New Music and Interculturality. From John Cage to Tan Dun" (published by Franz Steiner Verlag Stuttgart, 2002). Other fields of research include Jewish composers in Asian exile (lectures in Shanghai and Beijing 2002) and the relationship between traditional and contemporary music in Asia. In 1998, Utz founded *AsianCultureLink* to enhance intercultural exchange between European and Asian countries. He has frequently presented papers at international conferences, and his compositions have been performed by leading ensembles and musicians worldwide. From October 2003 on, he will be guest professor for music theory and music analysis at the University of the Arts in Graz/Austria.

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