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## THE OTHER OF THE EXOTIC: BALINESE MUSIC AS GRAMMATICAL PARADIGM IN LIGETI'S 'GALAMB BORONG'

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In the late 1970s, under the sway of American minimalism, György Ligeti constructed a new stylistic practice based on the integration of additive rhythmic patterns with cyclical forms. His exposure to the music of Central Africa in 1983 ignited in him a fascination with non-Western indigenous musics which offered novel rhythmic and formal models and 'new types of intonation (and of tonality)' ('neue Arten von Intonation [und von Tonalität]') (Ligeti 1993, p. 29).<sup>1</sup> The works Ligeti wrote after the 1980s reveal the varying degrees to which he engaged with non-Western music. Although he consistently avoided the temptation of exotic paraphrase for its own sake, he openly acknowledged and celebrated the influence of African polyphony, Indonesian gamelan and music of the Americas on works such as the Piano Concerto (1985–8) and Violin Concerto (1989–92) and the three books of *Études pour piano* (1985, 1988–94, and 1995–2001). In this article I shall seek to provide a detailed analysis of 'Galamb borong', *Étude* No. 7 from the second book, in order to untangle just where the Western and the non-Western meet in Ligeti's music.<sup>2</sup> As a prelude and post-script to this analysis, I shall consider the ways in which Ligeti's approach to the non-Western – the other of the Western classical tradition – compares and contrasts with that of other twentieth-century composers, using Matthew Head's concept of orientalist musical paradigms and Martin Scherzinger's analysis of African sources within Ligeti's music.<sup>3</sup> I shall examine both the spectacular music born of this alliance and the impulse behind Ligeti's celebration of the exotic under the umbrella of the cosmopolitan, an inherently local discourse of the universal. By showing how 'Galamb borong' unfolds as a dialogue between Balinese music and the Western classical tradition, I hope to better clarify the composer's use of 'amalgamated musical languages' ('amalgamiert[e] Musiksprache') (Ligeti 1993, p. 29) as the force which will liberate the contemporary composer both from tradition, and from the postmodern present.

### The Other of the Exotic

The history and hermeneutics of musical exoticism in the eighteenth and nineteenth centuries are complex and ambiguous, but exoticism's immediate function was usually transparent. Devices such as the arabesque, the Phrygian mode and non-functional chromaticism pointed outwards, towards the 'foreign' and away from the concept of the autonomous Western concert piece. Rimsky-

Korsakov's *Shéhérazade* captured and tamed such general musical signifiers of the exotic as whole-tone passages, while the titles of Mozart's *Rondo alla turca* and Liszt's *Hungarica*, for example, helpfully directed the listener to the Near East for the appropriate imaginary context.<sup>4</sup> Twentieth-century inclusions of orientalist elements often featured an explicit homage to particular locations, such as Albert Roussel's *Evocations*, composed for orchestra, soloists and chorus and based on his memories of India.<sup>5</sup> But modernist composers rejected the surface charm of chinoiserie in favour of less obvious structural appropriations. The relation between Debussy's music and Indonesian gamelan encourages scholarly investigation partly because it is difficult to locate in it any clear traces of the composer's avowed interest in Javanese music.<sup>6</sup> Nationalist composers such as Bartók and Janáček took a proprietary interest in the traditional repertoires of Eastern Europe, the language of which, while not entirely foreign to them, was exotic within the context of twentieth-century art music.

According to Bartók, qualities missing from Romantic music such as 'sentimentality or exaggeration of expression' were to be found in 'all musical performances of unspoiled rural people'. To do these models justice, Hungarian composers would seek to 'mirror in their minutest details the spirit of rural music' (Bartók 1976, pp. 395–6). But the Western concert pieces which resulted – among them Bartók's string quartets and Kodaly's *Psalmus hungaricus* – often overshadowed their prosaic roots. The incorporation of traditional materials into such works conferred authenticity and novelty upon them; in return, the new nationalism offered folk music an ennobling invitation to the dance of high art. Bartók's Hungarian influences may be seen as a way of re-imagining a nationalist self, rather than imagining an other; however, this view is in turn partially obscured by the connections he noted between Turkish and Arabic folk 'orientalist music' and that of Eastern Europe.<sup>7</sup>

John Corbett, in positing Eastern influences on the American experimental tradition, draws a distinction between the 'conceptual Orientalism' of John Cage and others and the 'decorative Orientalism' of Alan Hovhaness (Corbett 2000, p. 20).<sup>8</sup> The notion of conceptual orientalism, a modernist construct if ever there was one, certainly contrasts with the cultural impressions represented by chinoiserie. Yet, the philosophic appropriations of Cage strike an ingenuous pose with regard to modern romance with the East. Works such as *Music of Changes* (1951) do not deny the silence (the structural 'lack') at the heart of oriental music but rather foreground and celebrate it as a virtue.<sup>9</sup> The structural opposition of sound and silence is recast as the opposition of intention and non-intention, a philosophic duality which validates Cage's work as ultra-modern. However, in a reversal of Liszt's and Mozart's palpable, visceral exoticism, we now need a label to tell us that Cage's abstract appropriation qualifies as music.

Cage's philosophy seems to fetishise chance and contingency in a manner similar to the reverence with which Bartók speaks of 'rural music in its most undisturbed forms' (Bartók 1997, p. 393). Nonetheless, rather than utilising what Edward Said called a 'congeries of characteristics' (1979, p. 177), Bartók

and Cage move directly to the underlying conceit: a more concise, if somewhat vague, evocation of the other. Paradoxically, the rise of Cage's conceptual orientalism coincided with the increasing ubiquity of the non-Western and its consequent loss of identification with the strange, the mysterious and the sexually alluring. It is in precisely this sense that the non-Western other comes to serve a grander and more exalted function in contemporary art music. The reverse of an exotic that once offered only arabesque or disembodied notions of purity or objectivity must be that which is neither superficial nor indefinite. The other of the exotic is the solid, disciplined *structure* which Corbett lauds in the minimalists Philip Glass and Steve Reich, who use the complexities of cyclic time to 'undermine composerly practice' (Corbett 2000, p. 174).

Ligeti entertained a similarly noble yet somewhat more daunting aspiration: that of transcending all reductive stylistic affinities in order to produce 'an ideologically free style' [*ein ideologiefreier Stil*] wherein vagaries of rhythmic construction, tuning and temperament fuse together to realise a musical language unique to each work (Ligeti 1993, p. 29). An article in a special issue of *Neue musikalische Zeitung* serves as a manifesto of his aesthetic position:

Thirty, actually twenty years ago, more or less, I belonged to a composition group understood as 'avant-gardist', [but] I am no longer tied to any group ideology. The avant-garde protest action was the political gesture of an elite. With the crash of the socialist utopia, and with the alteration of technical civilisation through the diffusion of microelectronics, it is also time for the artistic avant-garde to pass. Therefore, for me the 'beautiful' postmodern appears as a chimera. I look for 'another' modernity, either for a 'back-to', after a fashion, protest or 'critique'. Functional tonality as well as atonality is hackneyed, as well as twelve-tone equal-tempered tuning. Many ethnic cultures, in Africa and, in exceptional diversity, in Southeast Asia, present examples of completely different intonation systems: the pentatonic and heptatonic (equal-tempered and also non-tempered). Possibilities for divisions of the octave – from Thailand to the Solomon Islands – allow the salvaging of countless entry points for a new kind of tonality, with other possibilities for laws than those of [harmonic] function.<sup>10</sup>

In a recent review article, Matthew Head (2003) has compiled and interpreted four orientalist musical paradigms: orientalism as a mask for the critique of European society; ambivalence towards the other; orientalism and utopia; and Western music's otherness. Ligeti's comments effectively referenced the latter two as he staked his claim to a place in the historical lineage of composers who have looked to the East for more than mere refreshment. His notion of the non-Western drew attention to the reversal of figure and ground which separates the work of Debussy and Bartók from chinoiserie: 'Folklore in serious music is a lie. But Bartók was something else' (Ligeti 2003, p. 201).<sup>11</sup> The musical non-Western was no longer an inventory of topics, nor did it subsist, like post-Cage conceptualism, in a metaphysical cipher which inspired art at one remove. For Ligeti, the non-Western, as a boundless but definable category, served as the foundation of a new compositional practice, one which would

supplant exhausted nineteenth-century forms, the futile abstraction of the avant-garde, and the trivial pastiche of postmodernism. As the antithesis of the exotic, Ligeti's non-Western other would no longer be trivialised, marginalised or parodied; it would take its rightful place as the new modernity. I will thus proceed to address 'Galamb borong' in relation to three specific questions: (1) Can this work, in responding to the inspiration and challenge of Balinese music, really be said to contribute to a compositional 'paradigm shift' in Ligeti's practice? (2) In what ways is 'Galamb borong' representative of the genre tradition of the virtuoso étude? And finally (3) Can the political and aesthetic consequences of Ligeti's approach be reconciled with a view of the contemporary composer as a cosmopolitan figure?

### **Form and Function in Ligeti's 'Indonesian' Étude: 'Galamb borong' and Gamelan *gong kebyar***

The Piano Étude No. 7 (1988–9) offers a prime illustration of how non-Western influences affect the 'grammar' of Ligeti's music. Like a number of his other compositions from around the same time, 'Galamb borong' illustrates a unique fusion of rhythmic/temporal and tonal events inspired by non-Western sources, in this case the music of the Balinese gamelan. And like other studies from the second book, No. 7 features 'illusory rhythms' ('Illusionsmuster') and 'new types of intonation (and of tonality)' ('neue Arten von Intonation [und von Tonalität]'), two markers of Ligeti's "other" modernity' ('"andere" Modernität') (Ligeti 1993, pp. 25, 29 and 28).

Illusory rhythms result when several rhythmic layers are superimposed to produce a complex and often irregular pattern. They are usually produced either by mechanical means (as in the case of computer music or the player-piano works of Conlon Nancarrow), or by the group performance of separate, individual parts (as in the repertoires of Indonesian gamelan, South African *mbira* music or Central African wind ensembles). The novelty of Ligeti's approach lies in his attempt to represent the same type of complex, illusory rhythmic patterns with only one human interpreter. Because this is a work for piano, the 'new types of intonation' are equally illusory and cannot be perceived outside the context of their rhythmic setting. The durational patterns which when juxtaposed give the impression of a single pattern also pit one harmonic collection against another to suggest a corresponding temperament that is not actually present.

#### *Gamelan gong kebyar*

Ligeti's 'Indonesian' Étude is a self-reflexive homage not only to Balinese music but also to Debussy's in its whole-tone harmonies and organic shape. The words of the playful but nonsensical Hungarian title 'Galamb borong' translate as 'pigeon' or 'dove' and 'melancholy', but their real significance lies in the fact that they form a cross-cultural homonym: they sound Indonesian but are actually Hungarian, just as the piece itself sounds – in both its tonality and its metre –

vaguely Eastern even while conforming in design and intent to the Western model of a classical *étude*. Furthermore, just as the music works on different levels of meaning, so its title is a perhaps unintended pun, *Barong* being the name of the beloved protector-dragon of Balinese myth which dances to the music of the gamelan at major festivals.<sup>12</sup>

Although the *Étude* does not relate specifically to any particular work in the Balinese repertory, it compares in a number of ways to the dynamic *gong kebyar* style. *Gong kebyar* is the dominant secular gamelan idiom of modern Bali and is characterised by extreme virtuosity, sudden and drastic changes of mood, dynamics and tempo and an intricate precomposed design. The varied rhythms, articulations and pedallings of ‘Galamb borong’ echo the twenty or more percussion instruments of the *gong kebyar* orchestra (which may also include a stringed rebab and an end-blown bamboo flute called a *suling*). Ex. 1 is a representation of one cycle of a traditional dance, ‘Baris’, as transcribed by Michael Tenzer in approximate Western notation from a recorded performance by the gamelan ensemble of the Sekolah Tinggi Seni Indonesia (College of Arts) in Denpasar, Bali.<sup>13</sup> Here low-voiced bronze gongs and bass metallophones (*jegogan*) anchor the colotomic, or cyclic, structure of the composition, while mid-voiced metallophones (*ugal* and *calung*) form the body of the *kebyar* orchestra, which performs the *pokok*, or core melody, at a pace two or four times faster than that established by the bass instruments. High-pitched metallophones (*gangsa*) and tuned gongs (*polos* and *sangsih*), led by paired drums with interlocking rhythmic patterns, embellish the whole at a pace four to eight times faster than that of the *pokok*, and two to four times faster than that of the *neliti* (the lead melody, usually twice the rate of that of the *pokok*).

#### *Sound as Syntax in ‘Galamb borong’*

Most contemporary *kebyar* works are composed in five-note modes drawn from the *pelog*, a scale of seven notes separated by unequal intervals. These are not modes in the Western sense of the term; only the general intervallic size between adjacent notes identifies the ‘key’ of a gamelan, for each set of instruments is tuned to a unique standard.<sup>14</sup> Paired tuning and interlocking elaboration are the most distinctive signifiers of Balinese, as opposed to Javanese, gamelan. Each metallophone in a Balinese gamelan is partnered with another which is tuned slightly higher or lower, though with the same intervallic content. This creates an audible tremolo – acoustic beats – when the same pitch is struck simultaneously on each member of the pair. One *gangsa* struck alone is dead; it is this fluctuating sound or *ombak* that breathes life into the gamelan.<sup>15</sup>

Ligeti’s tonal and harmonic language offers a kind of equal-tempered variant of such Balinese tunings. The right hand takes the ‘odd’ whole-tone scale of G–A–B–D $\flat$ –E $\flat$ –F, while the left hand is restricted to the ‘even’ whole-tone scale of C–D–E–G $\flat$ –A $\flat$ –B $\flat$ . By assigning a different whole-tone scale to each hand, Ligeti intensifies the ‘paired tuning’ effect generated by the semiquaver groups which ornament the core melody. The rich, highly stratified timbre of the

Ex. 1 Transcription by Michael Tenzer of one cycle of 'Baris' in approximate Western notation

The musical score is organized into two systems of staves. The first system includes:

- High gongs**: A single staff with a treble clef and a key signature of one sharp (F#).
- Tuned gongs-palos**: A single staff with a treble clef and a key signature of one sharp (F#).
- Tuned gongs-sangvih**: A single staff with a treble clef and a key signature of one sharp (F#).
- Ugal (ornamented melody)**: A single staff with a treble clef and a key signature of one sharp (F#).
- Calang (core melody)**: A single staff with a bass clef and a key signature of one sharp (F#).
- Jegogan (bass)**: A single staff with a bass clef and a key signature of one sharp (F#).

The second system includes:

- Two drums**: A single staff with a treble clef and a key signature of one sharp (F#).
- Cymbals**: A single staff with a treble clef and a key signature of one sharp (F#).
- Kempli (marks pulse)**: A single staff with a treble clef and a key signature of one sharp (F#).
- Low, medium and high gongs**: A single staff with a bass clef and a key signature of one sharp (F#).

The score uses various musical notations including eighth and sixteenth notes, rests, and dynamic markings such as *p* (piano) and *f* (forte). The key signature is consistently one sharp (F#) throughout the piece.

gamelan is reflected by the nearly two-octave span of the opening tremolo (A $\flat$ 3–F5), the odd interval of imitation between the right and left hands and the explicit performance directions regarding articulation and pedalling. The *byar* chord that opens a typical *kebyar* work – one pitch struck in all octaves on the keyed instruments – represents the ‘multiregister fundamental sonority’, as Michael Tenzer terms it (2000a, p. 25), which in turn anchors the sound of the whole ensemble.

Metallophones struck with soft beaters have unusual partials; wooden mallets produce much denser overtones beginning an octave above the fundamental. The distinction between the two is mimicked in the *Étude* by single-line *pianissimo una corda* sections in the middle register contrasting with homophonic *fortissimo tre corda* sections which span the entire keyboard. Thomas Rossing’s measurements of the overtone structure of the *gendar panerus* (a high-pitched metallophone), the *jegogan* and numerous gongs belonging to a typical gamelan orchestra support more generalised observations regarding the instruments’ specific functions within the ensemble.<sup>16</sup> The second overtone is the strongest frequency on both metallophones; the *gendar panerus*, which is struck with a wooden mallet, displays an extremely broad spectrum but a high rate of decay across all frequencies save the fundamental, hence the need for constant articulation in the high-register elaboration. The bass *jegogan*’s most prominent frequency is consistently 5.2 times the fundamental, which produces an interval two octaves and a wide third higher than the pitch struck. Although the fourth partial supports the fundamental, the second and fifth partials reflect the wide third, like the sonorities that support the primary melodic line in ‘Galamb borong’, beginning in bar 19.

#### *The ‘Flowers’ of gong kebyar*

Paired tuning mirrors the most arresting and pervasive musical feature of the modern Balinese gamelan: *kotekan*, the remarkably fast, tightly woven rhythmic patterns which occupy the highest ranks of the *gangsa*. Even though non-interlocking elaboration dominates the texture of most works (see again Ex. 1), *kotekan* in its many variations represents the hallmark of the contemporary *kebyar* repertory. A typical passage is transcribed in Ex. 2. The *kotekan* is composed of two melodic strands doubled at the unison and the octave to embellish the *pokok*. Each instrument has ten bronze keys, which are struck rapidly with hard wooden mallets and damped immediately so that their two lines mesh but never blur, like the closing of the teeth on a zip fastener. As the fastest and most continuous level of motion in the *kebyar* piece, *kotekan* patterns subdivide the *pokok* by four or eight; expressed in Western notation, a *kotekan* in semiquavers might accompany a *pokok* proceeding in either crotchets or minims.

The two parts of the *gangsa kotekan* – called *polos* and *sangsih* – are composed in such a way as to interlock closely with one another within the larger cycle. They usually dovetail, so that each part is placed on the beat at different



Ex. 2 Interlocking *polos* and *sangsih* parts, core melody (*pokok*) and bass line in the first nine-bar segment of a 32-bar *kotekan* pattern. Intervals between *polos* and *sangsih* (in scale steps) mark duple divisions of the *pokok* pattern.

coincidence between *kotekan* and core melody:  
 x = all three parts strike the same note simultaneously; o = core melody and one other part strike together

*Sangsih*  
 Intervals between *polos* and *sangsih* (in scale steps)  
*Polos*  
 Gong  
 Core melody (in *catung*)

Bass line

4

7

moments. The result is a constant shifting of their rhythmic roles. The Balinese see the different levels of melodic structure as the trunk and branches of a great tree; *kotekan* are the ‘flowers’ of the composition and often represent aspects of the *pokok* in microcosm, in the sense that small segments of the melody may be repeated at faster speeds to ornament the underlying cantus.<sup>17</sup> There are several types of *kotekan* patterns; in some the *polos* and *sangsih* parts never intersect, but in others they share notes with one another or with the *pokok*. Syncopation and simultaneous attacks exchanged between ornamental and *pokok* notes establish a complex hierarchy of dynamic accents. Seven strictly hierarchical rhythmic levels can be deduced from Ex. 2, but these represent only the most obvious structural events.<sup>18</sup> They might be expanded to include the acoustic effect of ‘beats’ between two instruments which always play the same *kotekan* part but with slightly different tunings, or with shifts in texture and articulation which accompany repetitions of the basic cycle.<sup>19</sup>

In this music there is no sense of tension between strong and weak beats, no *arsis* and *thesis* as typically conceived within the Western tradition. Rather, the *sangsih* and *polos* of *kotekan* are complementary aspects of the single rhythm which they intersect to produce, and each player must perceive both as part of his or her performance. As Wayne Vitale notes, the extreme speed and melodic variety of interlocking lines, along with the sharp metallic attack of the instruments,

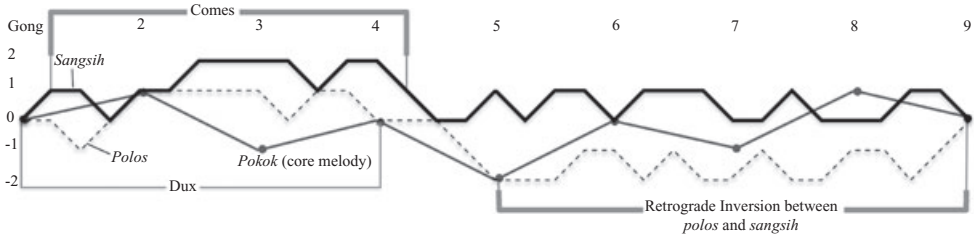
seems to many upon first hearing to be the sound of a machine, some frenetic music box set to twice its normal speed ... . One might imagine, as an analogy, the text on this page being read by two narrators, one of whom pronounces only the letters *a* through *m*, and the other *n* through *z*, yet fitting those sounds together so perfectly that we hear them as one speaker. (Vitale 1990, p. 7)

A less abstract description was offered by Hardja Susilo: ‘In Balinese gamelan half the group plays as fast as they can, and the other half plays as fast as they can, in between’.<sup>20</sup> Patterns within the *kotekan* and its underlying parts exhibit a mix of symmetry and irregularity, part of the dialectic between stasis and mobility or flow (*ngubeng* and *majalan* respectively) characteristic of Balinese compositions.<sup>21</sup>

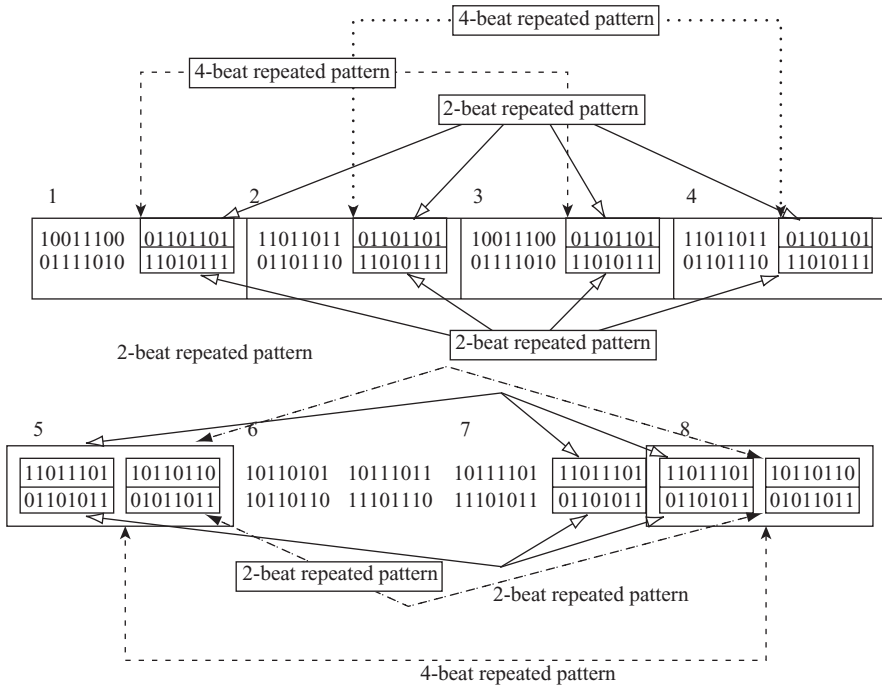
### Kebyar *Melodic Structure*

The nine-beat opening *pokok* melody of Ex. 3 (bars 1–3) creates a palindrome, E–G–D–E–C#–E–D–G–E. (Balinese melodies always end on a downbeat.) The central descent to C# is part of the colotomic structure, the interval of a third which anchors this opening ‘phrase’. Heterophony obscures the intervallic and rhythmic compression of core melodic segments in the *kotekan* embellishment. Yet a contour graph of the first four *kotekan* segments (*kotekan* are typically conceived as end-accented, two-beat patterns) reveals a canon between *polos* and *sangsih* from beat 1 to beat 4, and inversional symmetry between parts from beat 5 to beat 9, as shown in Ex. 3.<sup>22</sup>

Ex. 3 Contour analysis and graph of beat 1 to the downbeat of 9. The *pokok* is traced by the thick grey line, *polos* by the black line and *sangsih* by the dotted line



Ex. 4 Relations among four-beat and eight-beat rhythmic patterns represented in Ex. 3



The combination of novelty and repetition which characterises the melodic contour of Ex. 2 recurs in the rhythmic structure. The surface rhythm of the passage is organised by additively combined binary patterns of attack and silence (indicated in Ex. 4, where 1 represents attack and 0, silence). Unique and repeating patterns alternate on each level of the rhythmic hierarchy. At the quaver level there are four possible attack patterns (or two patterns and their inversions). The pattern 00 appears only twice in 128 *kotekan* fragments. The

Ex. 5 Recursive patterns, *ubit telu* and *ubit empat*, and combined pitch series in bars 1–2 of Ex. 3

The image shows a musical score for two parts: *Kotekan* and *Pokok*. The *Kotekan* part is written in treble clef with a key signature of one sharp (F#). It features a complex, syncopated melody with eighth and sixteenth notes. The *Pokok* part is written in bass clef with the same key signature and features a simpler melody with quarter and eighth notes. Annotations above the *Kotekan* part describe two patterns: 'ubit telu: three notes per part, one shared note per beat' and 'ubit empat: two notes each part, no overlap'. Below the score, a 'Combined pitch series' is listed: E G D E G E G E G A E G E D G C# E C# D E C# D C# E D C# E D E C# D. A bracket under the first six notes (E G D E G E) is labeled 'Kempyung: C#/G'.

crotchet level of the structure employs eight patterns; three of these occur twice, while three others occur twelve times or more. Fifteen different patterns exist at the minim (two-beat) level of structure: five of those are unique, five occur twice, and five occur three times or more. Ex. 4 shows the relations among patterns found at the four- and eight-beat structural levels. Six of the ten patterns at the one-beat level repeat; at the eight-beat level, only two of the six patterns repeat.

Every level of structure in the *gong kebyar* repertory reflects this concern for a subtle balance between symmetry and irregularity. In his discussion of compositional procedure within the highly syncopated *ubit-ubitan* style (see again Ex. 2), Tenzer analyses the repeated three-note patterns which ornament a *neliti*. The patterns are inversionally symmetrical at each of eight possible positions within the five-note system. For Tenzer, this observation 'seems abstract, but ... is completely audible, and provides a rigorous perspective on the music's overall melodic coherence' (2000a, pp. 222–3). The distorted symmetry created by the circulation of larger patterns in diminution prolongs the underlying melody, creates syncopation and stabilises – by intensifying – a narrow band of pitch and timbre. For a brief example of how this works, I will again refer to the first eight beats of Ex. 2, reprinted as Ex. 5. Each individual *kotekan* part is attacked two or three times per beat using different but overlapping two- and three-pitch collections (bars 2 and 1 respectively). The combined pitch series of the *kotekan* on beat 1 is a microcosm of beats 1–4 of the *pokok*. The combined pitch series on beats 5–8, punctuated by the *kempyung* interval, permutes every possible combination of the three-element series C#/G–D–E.

#### *Gamelan gong in 'Galamb borong'*

The three primary levels of rhythmic structure in Ligeti's 'Galamb borong' can be compared in both form and function to the 'tree' of *gamelan gong kebyar*. A consistent semiquaver attack in each hand occupies the *kotekan* level of the *Étude*, while a *pokok* travelling in larger values creates a second rhythmic level. Aperiodic accents in this melody establish a third, slower-moving stratum of melodic motion, a pitch series subject to augmentation or diminution.

The *pokok* begins – as in the *pengawak* section of the *gong kebyar* – with a stately four-pitch melody falling on the downbeats of bars 3–6 in both hands at the distance of a minor third or major sixth. The parallel ostinati move in non-interlocking *nelu* (third-related) elaboration, introducing the mode, the basic pulse and the fundamental sonority. As in the Balinese *kotekan*, identical melodic patterns, rhythmically expanded or contracted, appear on different levels in the hierarchy, and the coincidence of accented notes creates a second rhythmic layer which stands out clearly within the texture.

Ex. 6 represents an annotated version of the first twelve bars of the score indicating the mode in each hand, the lead melody and the intervals between right- and left-hand articulations of the *neliti*. The interval class 3 relation characterises not only the introduction, but also most passages in which the right and left hands play the same rhythm. These sections interrupt dramatic registral and rhythmic climaxes just as they might in a *kebyar* piece: the simpler, non-interlocking elaboration adheres rather closely to the lead melody, playing it verbatim, twice as fast or four times as fast, with a fixed interval between upper *gangsas*.<sup>23</sup> Such a climax begins as early as bars 7–8, where the *pokok* gives way to a more lyrical *neliti* when the former doubles in speed. In bar 9, quadruple compounds of the semiquaver pulse condense into triple-metre attack points as the elaboration shifts from A $\flat$ /F to G $\flat$ /E $\flat$ , anticipating the melody's descent through A–G–C–E. In bar 11 the melody reaches the seventh octave (D $\flat$ 7), then gradually falls back to the fifth (bars 12–17) in a wave-like action which will continue throughout the Étude.

At the upbeat to bar 10, the left-hand melody begins to diverge rhythmically from the right, creating a 4:3 hemiola and permuting the order of groups found in the right-hand part. The *kotekan* moves in two-, three- and four-note patterns which weave in and out of the accented theme, travelling in thirds and sixths except when anticipating the melody or diverging from an established rhythmic pattern. Contrary motion in the *kotekan* coincides with the octave doubling of the theme, as shown in Ex. 7, in which are labelled the pitch series, rhythmic grouping and relationship between elaboration and theme in bars 9–12.

#### *The 'Flowers' of 'Galamb borong'*

These embellishment patterns – the 'flowers' of 'Galamb borong' – reflect the fundamental rhythmic organisation of Balinese music, which is permeated by various combinations of two, three and five over underlying duple divisions of a cycle.<sup>24</sup> The notes of the *kotekan* anticipate those of the *pokok*, with both converging on a single note at different times.

Ornamentation in Balinese gamelan relies on historically mediated and idiomatic rules for elaborating the notes of a melody with figures which express qualities of either *ngubeng* or *majalan*. In 'Galamb borong', the lack of a tonal centre in two competing whole-tone collections presented simultaneously elevates the semiquaver embellishment to a similar level of import. Ex. 8 illustrates four different categories of semiquaver elaboration in this Étude, each of which expresses different degrees of stasis and kinesis and is defined in terms of





Ex. 8 Four categories of embellishment figure in 'Galamb borong'

The image displays four staves of musical notation, each representing a different category of embellishment figure. The notation is in a key with two flats (B-flat and E-flat) and a common time signature. The categories are labeled on the left: Travelling (starting at bar 10), Overlapping (starting at bar 38), Fixed (starting at bar 9), and Rotating (starting at bar 39). Each staff shows a sequence of notes with various rhythmic values and accents. A dotted line with the number '15' and a '1' indicates a specific rhythmic interval or pulse across the staves.

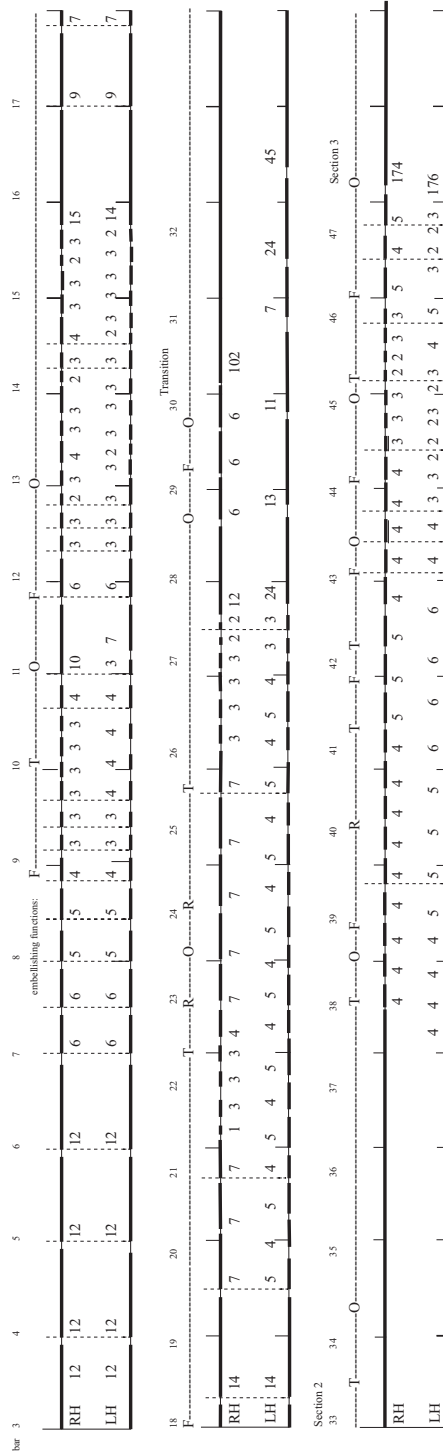
its relation to the rhythmic group directly preceding it. The two *ngubeng* categories are fixed (F) and rotating (R). In a fixed group, two or more pitches from the previous group are held invariant while one or two shift; in a rotating group, at least three unordered pitches are held invariant with respect to the previous group. The *majalan* category includes overlap (O) and travelling (T) groups. An overlap group retains at least two ordered pitches from the previous rhythmic group; a travelling unit shares no more than two unordered pitches with the previous group.

To track formal development in any gamelan piece, a listener must attend to the subtle qualities of *majalan* or *ngubeng* present in these groups, along with bass accents ('gong' tones) and periodic stress patterns. Ex. 9 shows the cycle of melodic embellishments in terms of F, R, O and T groups, as well as the rhythmic pattern of the *pokok/neliti* over bars 3–47. Durations between attacks of the lead melody are shown as multiples of the semiquaver pulse. A corresponding 'deeper' rhythmic level, created by simultaneous attacks between hands, is shown by a dotted line. The joint accents which at the outset articulate 12- and 48-beat recurring cycles represent the trunk and branches of 'Galamb borong'; the stability of the opening cycle is reflected in the static accompaniment of bars 1–8. In bar 8, however, this periodicity is compromised, and the independence of pitches in each hand is reflected in the hands' increasing rhythmic divergence along with the transition to fixed, followed by overlapping, embellishment groups.

Subsequent phrases include attacks of the core melody, evenly spaced first by 5 and then by 7 and 9 (subdivided as 5 + 4) semiquavers. Fixed and rotating groups accompany thematic motives (discussed below) as well as those points where both hands transgress the 12/16 metric boundary (bars 8–9, 12–13, 17–24, 38–73 and 76–end). By contrast, travelling groups mark the shift away



Ex. 9 Chart showing the progression of embellishment figures from Ex. 8, and duration of attacks in the core melody of ‘Galamb borong’, bars 1–47. (Attack points are indicated by the solid vertical lines; durations between the attack points are indicated by standard integers [1 = semiquaver]; dotted lines indicate simultaneous attacks in both hands)



from a thematic statement at one pitch level to contrapuntal development in a new octave (bars 10, 22, 24–27, 37, 40–41 and 44–45). The steady expansion and contraction of rhythmic groups by complex ratios effaces any sense of periodic recurrence and shifts the formal emphasis from pitch and rhythm to articulation, register and dynamic contrast. For instance, in the midst of bar 19 the right hand begins a series of 7 semiquaver attacks against an alternating 5 + 4 pattern in the left hand. Thus, three groups of 7 coincide with the cycle 5–4–5 in bar 20. Were this pattern to continue, both cycles would meet again on the downbeat of bar 24. But Ligeti interrupts the 7 cycle with the pattern 3–3–3–4 (bars 21–22). The effect of this interpolated ‘short cycle’ is a perceived acceleration of the tempo, despite its firm grounding in the semiquaver pulse.

The metric confusion caused by accent patterns that are uneven or whose durations are prime numbers creates a static, hovering effect augmented by the rotating embellishment groups (bars 22–23), the wedge-like expansion of the ambitus from three to seven octaves and the rapid, seven-bar crescendo from *pianississimo* to *fortississimo* (bars 19–26). A schematic outline of the form in Ex. 10 correlates the general expansion and contraction of range throughout the work with its dynamic and sectional divisions.<sup>25</sup>

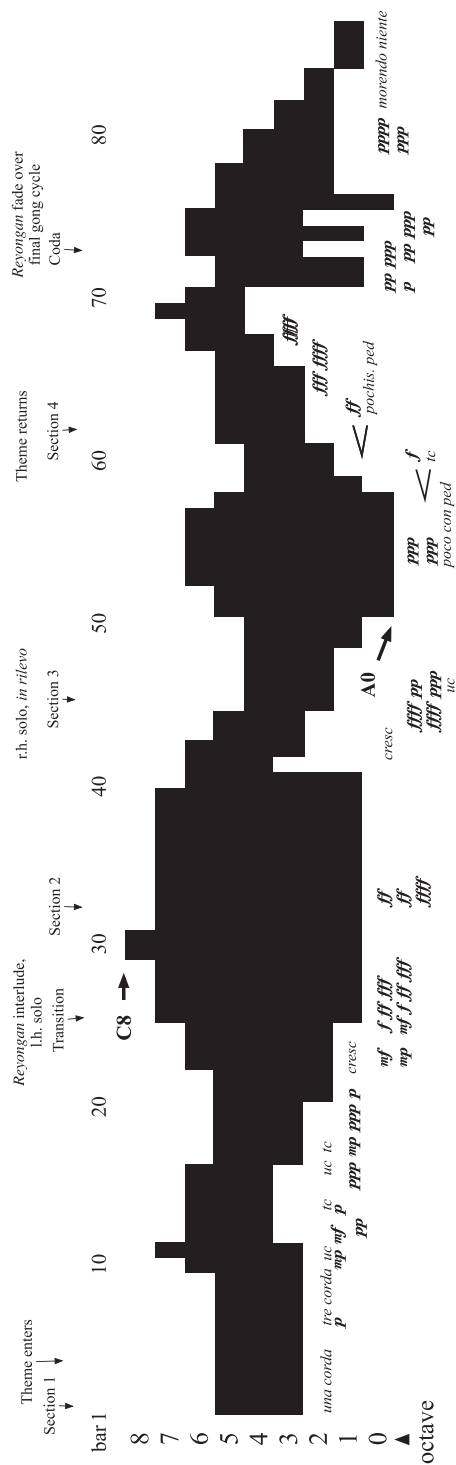
#### *The Virtuoso Étude as kreasi baru*

‘Galamb borong’ thus captures the spirit of gamelan *kebyar* (*kebyar* meaning ‘to flare up suddenly or to burst open’) and its contemporary manifestation in the rhapsodic composition of *kreasi baru*, or new creations. In these, the transitions between sections are often abrupt or ametric, and the composition as a whole is marked by shifts in cycle and texture over a rapid and flexible underlying pulse.<sup>26</sup> Octave support for the core melody begins in bar 10 of the *Étude*. The first unabashedly independent melodic statement sounds as a brief *tenuto* melody in the middle register of bars 27–32, underpinned by a series of gong-like strokes in the intervals of ninth–tenth–ninth. The complex partials produced by these chords recall the low frequencies of large gongs and drums, which may be tuned to pitches outside the gamelan’s scale.<sup>27</sup>

The descent to the first octave in the left hand occurs as the right hand ascends to the eighth octave, and the accented melody accrues pitches in the interval of a second to form diatonic clusters (bars 26–30). The addition of a note outside the mode in the right hand (C8, at the upper end of the keyboard) recalls the timbre of *reyong* kettle gongs, which add invariant notes in the middle and upper registers of the gamelan. This section in fact resembles *reyongan* texture, a feature of *kreasi baru* in which the high-pitched *reyong* take over *kotekan* from the *gangsas* for a solo interlude over the colotomic structure. The second section of the *Étude* culminates with the movement of the ornamentation into the foreground at a *fortissimo*, as shown in Ex. 11 (bars 32–34), six octaves above a quadruple-forte attack on C1–G♭1–D2 which is sustained through to the end of bar 42.

A similar texture occurs at bar 46, where a *subito misterioso, molto cantabile* melody enters in right hand, set *in rilievo* (in relief) over the *una corda* left hand;

Ex. 10 Graph indicating the relative octave, dynamics and formal divisions of 'Galamb borong'



## Ex. 11 'Galamb borong', bars 32–34

it continues for eight bars before fading into the background of incessant semiquaver repetition. At no point is there a break in the continuous semiquavers, and at no time does one whole-tone collection prevail over its neighbour. Accented notes receive comparable emphasis in both hands, and the 'soli' interludes of bars 27–32 and 46–53 appear in the left and right hands respectively. The escalating disjunction between hands holds not only metre but kinetic motion in abeyance as rhythmic patterns congeal into a static mass. The fleeting whole-tone melodies circle endlessly in their separate, isolated registers, representing two complementary pitch collections which can neither advance harmonically nor touch one another. Dynamic and registral contrasts sketch the formal outline of the *Étude* yet do not fully capture the sense of inexorable forward motion characteristic of 'Galamb borong'.

*Formal Hierarchies in 'Galamb borong'*

Because 'Galamb borong' lacks any tonal or metric goal orientation, a strict hierarchy of event levels – one which encompasses the duration, density and articulation of a note – reveals its own dynamic relations. Ex. 12 plots these relations over the entire span of the *Étude*. Using the semiquaver pulse as an additive value, the graph ranks the relative intensity with which notes are attacked on an eight-point scale combining articulation with duration and density. The semiquaver attack in one hand represents the surface level of the piece where the first two levels of intensity are provided by attacks of a quaver or longer. Duration and *tenuto* combine with density of attack over levels 3–5, while accented notes in one or both hands simultaneously form the peak intensity of attack for the entire *Étude*. A glance back at Ex. 10 reveals no real correlation between attack intensity and either extreme range or loudness (with the exception of bars 61–72). But the rise and fall of levels in relation to one another do sketch out a kinetic arc of intensity for each main section.

The two phrases of Section 1 rise from the second to the seventh levels and from the third to the seventh levels of intensity before falling back to the surface semiquaver level (bars 1–18 and 19–32). Section 2 enters at the sixth level of intensity before rising up to the eighth and falling suddenly to the fourth level



representation of the core melodic structure in Section 1 of 'Galamb borong' (Ex. 13) reveals a tight contrapuntal structure that is not evident on the surface of the piece. My analysis identifies six basic motives which recur throughout the Étude, each with a particular function defined by its position and number of reiterations in the core melodic voice of both hands.

The series B4–E♭5–G5–D♭5, each pitch of which falls on successive downbeats of the opening cycle, establishes the main theme (MT), or subject, as a motto featuring rising intervals of a major third (interval class 4) in one direction, followed by a falling tritone. This theme fragments immediately, recurring as a three-note head (B5–E♭6–G6 and F6–A6–D♭7, bars 25–26) or tail motive (C3–E3–B♭2, bar 25). A neighbour figure (N) follows the first appearance of the theme proper; this oscillation of major seconds functions as a means of retarding the transition from one registral level to another (D5–E5, bars 12–13; G♭5–A♭5, bars 13–14; E♭5–F5, bars 18–20; and E♭6–D♭6, bars 23–24). A three-note descending scale in bar 9 (a marker of the second level of intensity in Ex. 12) acts as a countersubject (CS) to the main theme; the countersubject returns prominently, expanded and inverted, throughout the Étude, appearing with greatest intensity in the sixth octave at the climax of the work (bar 72).

A second theme (ST) appears in the right hand in bars 11–12: a repeated G6 followed by a whole tone up and tritone down which inverts the tail of the main theme. The second theme first appears alongside a reduced version of itself in the left hand (marked STs: B♭4–C5–A♭4); it is followed by a shift to A6 against three versions of itself, a four-voice chorus which announces the first large-scale elongation of the rhythmic pattern (bars 15–17). The second theme instigates development in Section 1, moving from the bass voice to the upper voice at the end of the section (bars 27–28). The tritone found in both the main and the second themes is preceded by a whole tone in the same direction to form the transition motive (TR), which appears three times as a means of progressively expanding the Étude's registral compass (C4–B♭2–E2, bar 7; F6–G6–D♭7, bars 10–11; and E2–D2–A♭1, bar 26). The final thematic motive, labelled 'wedge' (W), first appears as the second half of the countersubject in the bass (G♭4–E4–C4–B♭3–C4); the falling whole tone–major third–whole tone turn appears only in descent in the left hand, and only in ascending form (inversion) in the right. The wedge motive moves outwards in both directions, appearing twice in its full version before fragmenting to close out the section in both hands (F7–A7–B7, right hand, bars 8–29; and C6–B♭5–G♭5–E5, and so on, left hand, bars 28–32).

I have chosen to identify the head note of each motive with the corresponding 'scale degree' belonging to each mode. Taking the opening tremolo as a cue, I begin the 'even' whole-tone scale (modal scale degrees 2̂, 4̂ and so on) on A♭ and the 'odd' (modal scale degrees 1̂, 3̂ and so on) on F. Working with modal scale degrees (rather than pitch or pitch-class notation) allows one more easily to track contrapuntal lines and their correspondence between hands through each of the constituent voices as they depart from and return to the normative minor-third relation between the hands established at the work's outset.<sup>31</sup> Despite the homo-



generosity of pitch and interval within each collection, a carefully notated hierarchy of attack intensity, combined with the audible cues of register change and a wide dynamic compass, promotes select melodic events which help shape this and later sections of the *Étude*.

Ex. 14 reveals an underlying contrapuntal structure which tightens as Section 1 continues. Three ‘middleground’ events in each of two phrases – the rising and falling countersubject, ‘composed-in’ register transfers and a descending five-line phrase – work in tandem with the accent pattern and the expansion of register noted above. In the first phrase (bars 1–17), a three-whole-tone ascent to  $\hat{4}$  in octave 5 shifts to octave 6 (B5–B6). The D $\flat$ 7 ( $\hat{5}$ ) in bar 12 becomes the first note of a graduated descent, which is expanded both by the second theme and by repetitions of the countersubject (see again Ex. 13) before coming to rest on  $\hat{1}$  in octave 6 over contrapuntal support from the left hand in octaves 4 and 5. The bass enters decisively on the downbeat of bar 17 with B $\flat$ 3 ( $\hat{2}$  in the left hand); this then transfers to octave 2, where it forms a  ${}^9_1$  chord [0257] with A $\flat$ 3, F4 and E $\flat$ 5 (bar 18).

Contrary motion in the bass line intensifies an ascent to the seventh octave, which continues the registral expansion downwards. Solid- and broken-line brackets above a large-scale descent from  $\hat{2}$  to  $\hat{6}$  in the bass indicate nested forms of the countersubject which move from the [0257] chord in bar 18 towards greater dissonance between the hands. The juxtaposition of chords in each hand produces diatonic sonorities through to the end of bar 22.<sup>32</sup> From A5 ( $\hat{3}$ ) in the right hand onwards, diatonic intervals are filled in to produce a series of symmetrical harmonies in bars 24–26, as indicated by the pitch-class labels between the hands.

Section 1 serves as a kind of contrapuntal exposition to the *Étude* as a whole: a two-bar introduction leads to a statement in two parts (bars 3–9) in which voices are gradually added. From three voices (bars 10–12) to four (bars 13–14), five (bars 15–20) and six (bars 21–29), the motion outwards from octaves 3–5 to octaves 1–8 is accompanied by stretto-like imitation of thematic motives, an accretion of linear density which is naturally followed by the ‘pedal notes’ of the bass progression A $\flat$ 1/B $\flat$ 2–E1/G $\flat$ 2–C1/G $\flat$ 1–D $\flat$ 2. As the hands move further apart, the accompanying harmonies grow denser and more chromatic. Eventually the progression sounds – over thunderous ninths in the bass – less like the cadence of a fugato passage in Bach or Beethoven and much more like the mutable overtones of the large gongs which mark the transition from one passage to the next in the gamelan *gong kebyar*.

#### *Transformational Structure in ‘Galamb borong’*

I have made a case for gamelan *gong kebyar* not only as an influence on Ligeti’s *Étude* No. 7, but also as a structural model for an entire compositional approach, one which includes tonality, rhythmic procedure, polyphony and form. Yet, as my motivic analysis suggests, the work sounds like the product of a composer schooled exclusively in the *études* of Chopin, Liszt and Debussy. In a sense,

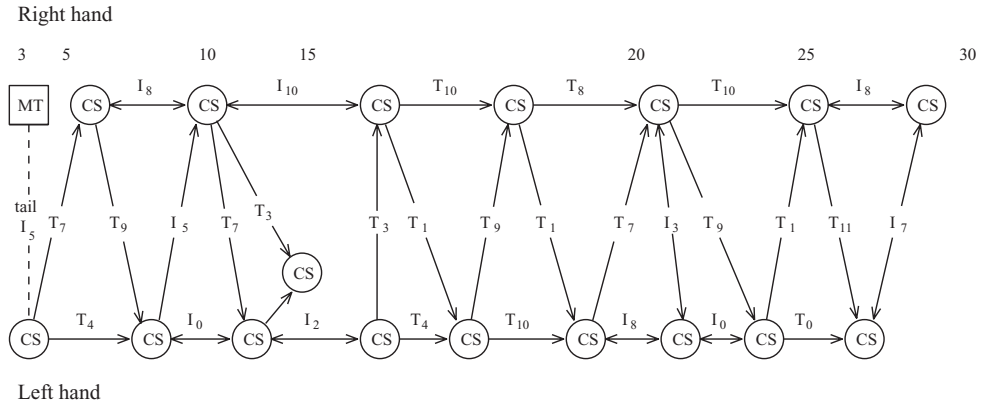


Ex. 14 'Galamb borong', structural counterpoint and shift from diatonic to chromatic harmonies, bars 3–33

The musical score for 'Galamb borong' (bars 3–33) is presented in two systems. The first system (bars 3–17) shows the piano accompaniment and vocal line. The piano part features a complex rhythmic pattern with eighth and sixteenth notes. The vocal part has a melodic line with various intervals. The score is annotated with Roman numerals (e.g., 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17) and intervallic structures (e.g., [012345], [0123456], [01234567], [012345678], [0123456789], [01234567890]). The score is divided into sections labeled 'octave 5 - octave 6', 'octave 7', and 'octave 7 4'. The piano part has a key signature of one flat (B-flat major/D minor). The vocal part has a key signature of one flat (B-flat major/D minor). The score is written in a 2/4 time signature.

The second system (bars 18–33) continues the piano accompaniment and vocal line. The piano part features a complex rhythmic pattern with eighth and sixteenth notes. The vocal part has a melodic line with various intervals. The score is annotated with Roman numerals (e.g., 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33) and intervallic structures (e.g., [012345], [0123456], [01234567], [012345678], [0123456789], [01234567890]). The score is divided into sections labeled 'octave 7', 'octave 7 4', and 'octave 7 4 3'. The piano part has a key signature of one flat (B-flat major/D minor). The vocal part has a key signature of one flat (B-flat major/D minor). The score is written in a 2/4 time signature.

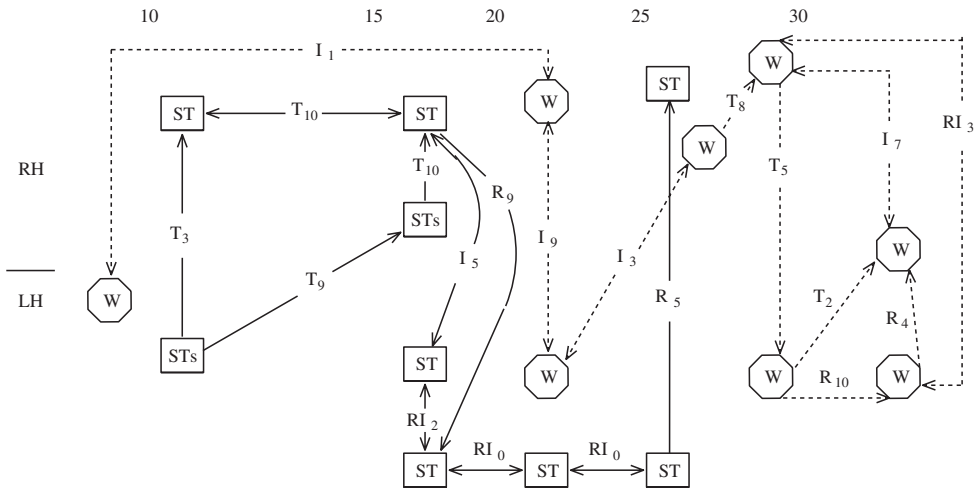
Ex. 15 'Galamb borong', transformation network of countersubject (CS), bars 3–33



'Galamb borong' is a subtle parody of both the virtuoso étude and the oriental character piece; yet it has for the most part transcended satire to enter the contemporary canon with nothing more than a sly wink. The virtuoso étude is well represented by this highly demanding and showy work, which utilises the entire pitch and dynamic range of the modern piano and requires the pianist to apply different levels of dynamics, articulation and rhythmic organisation to two, three or four voices simultaneously. The counterpoint noted in Section 1 is certainly a familiar procedure for structuring a toccata-like work or character piece, in which short, recognisable motives in transposition and inversion replace legato melody and clearly demarcated formal sections. As a further guide through this network of motivic associations, transformational graphs are provided for the primary motives in Section 1.

These motives travel predominantly by a level of transposition ( $T_n$ ) of interval class 10 in the hands, towards and away from the 'normative' or stable  $T_{3/9}$  relation between the right and left hands. Each motive transforms by characteristic transpositions and inversions (I), which move away from the relatively stable beginning of the work to produce contrapuntal and 'harmonic' motion. I will first examine the progress of the countersubject, which, like descending scales throughout Ligeti's oeuvre, permeates the texture and provides a constant source of dynamic tension. Ex. 15 includes only those appearances of the countersubject in the outer voices of bars 1–33 (including one instance of the countersubject in concert with itself, bars 13–14). Two scale degrees,  $\hat{3}$  and  $\hat{4}$ , predominate in both hands (A/C and B/D respectively) in order to reinforce the opening notes of the core melody and their prolonged descent. The  $T_7$  relation introduces 'harmonic progression' by sequencing the countersubject at the fifth, while the  $I_5$  relation introduces the 'consequent' of the opening phrase with rising scales in four registers (bars 10–15). As the section proceeds, both hands alternate

Ex. 16 'Galamb borong', transformation network of second theme (ST) and wedge motive (W), bars 3–33

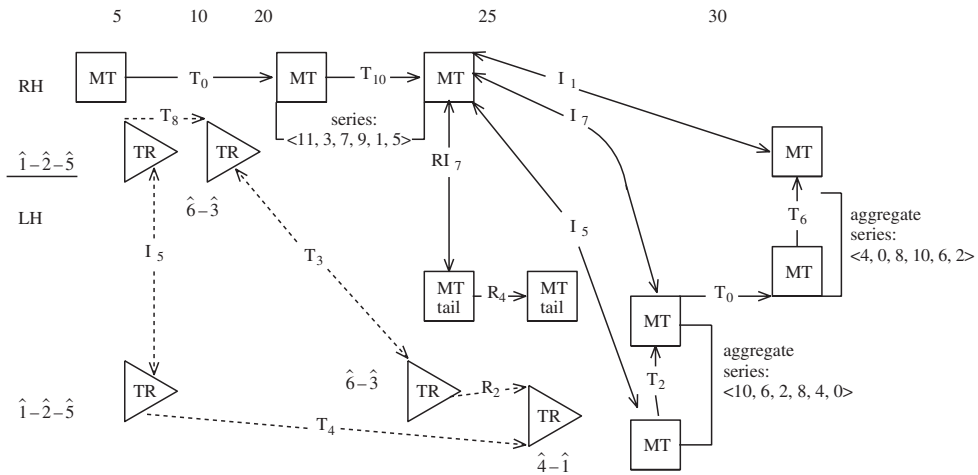


T<sub>3/9</sub> 'plateaus' with T<sub>1</sub> relations, producing greater dissonance in parallel with the growing rhythmic disparity between the hands. Maximum saturation of the countersubject motive occurs at the climax of Section 1, where T<sub>1/11</sub> and I<sub>3/7</sub> relations set up the return of the main theme at T<sub>0</sub> in the sixth octave (bar 25).

Ex. 16 shows the progress of the second theme and the wedge motive. The stable T<sub>3</sub> relation in the left hand supports the right-hand introduction of the second theme in bar 10. The second theme returns in bar 15 in the right hand, accompanied by itself in three voices. Here the theme appears in all four canonical relations, T, R, I and RI, directly preceding a shift to *una corda* and *subito pianississimo* (bar 16). Except for an appearance in stretto (bars 27–28), the theme moves to the left hand exclusively where, along with the countersubject, it rotates around itself to shape the bass line (bars 21–25). The wedge motive is announced on the last semiquaver in bar 7 in the left hand and transfers to the right and then back again to the left through inversion. Two final entries of the wedge motive in the right hand (bars 22–24 and, in a truncated version, 28–29) are complemented by fragmented appearances afterwards in the left hand which conclude this section (bars 30–32). As with the second theme in bar 15, these appearances of the wedge form an imitative complex which produces a pronounced shift in texture, as well as a formal division in the Étude.

Ex. 17 presents the network which connects the forms of the main theme and the transition motive. The strictly whole-tone countersubject, second theme and wedge motives simulate cadential and harmonic functions to create a familiar contrapuntal environment over the course of bars 3–33. The main-theme motive itself does not return until the T<sub>0</sub> repetition at the 'recapitulation', whereupon it

Ex. 17 ‘Galamb borong’, transformation network of main theme (MT) and transition motive (TR), bars 3–33



replicates at  $T_{10}$  to produce a full six-note ‘series’ in the soprano voice. The next full (and indeed the final) appearance of the main theme comes at the end of Section 1 in the left hand. Here, in the lowest bass and highest treble, it accompanies itself so as to cycle through the even-note collection not once, but twice. The transition motive opens up the seventh, third and first octaves respectively. It is transposed outwards and inverted between the hands to exchange  $\hat{2}$  with  $\hat{5}$  (bars 8–11) and with  $\hat{3}$  (bars 14, 26) in turn before terminating the motive on  $\hat{1}$  in the first octave (bar 26), having run through eleven pitch classes en route.

The rather abstract motivic and contrapuntal structure of the *Étude* is enlivened by subtle allusions to tonal practice which include parallel  $\frac{6}{5}$  chords in bars 12–13, the minor seventh chords which harmonise the *molto cantabile* melody at bars 19–20 and the serial melody which begins in the right hand and continues in the left (Ex. 18). In addition, ‘Galamb borong’ pervasively inverts the harmonic values of tonal music. Whole-tone harmonies prevail, with the intervals of the second, the tritone and the minor seventh being perceived as contextual consonances (especially when shadowed by the minor third that produces, among other sonorities, the aforementioned inverted seventh chords), while fifths are marked as dissonant. Melodic motion by semitone occurs not as a tonal inflection, but rather on account of the inherent limitations of the performance medium. The sheer physicality of the boundary pitches C8 and A $\flat$ 0 implies an infinite space beyond the work, thereby disturbing the balanced system of ‘Galamb borong’, which began with circular gestures in the middle range of the piano. Yet the sense of strain evoked by the *Étude* with respect to its implied physical container plainly links the work to its romantic forebears. The

Ex. 18 ‘Galamb borong’, twelve-note series in the upper voice near the end of Section 1

The image shows a musical score for Ex. 18, 'Galamb borong'. It features two staves: a treble clef staff and a bass clef staff. The treble staff contains a series of chords, each labeled with a number (25, 26, 29) and a series number (4, 2, 6, 3, 5, 1). The bass staff contains a series of notes, each labeled with a series number (4, 1, 5, 3, 2, 6).

nineteenth-century piano étude strove to explore the limits of evolving keyboard technology while still maintaining the illusion of a self-contained world. Ligeti’s *Étude* pointedly acknowledges those boundaries in an attempt to transcend not only the registral scope of the piano, but also its reliance on equal temperament.

*The Cosmopolitan Imagination in ‘Galamb borong’*

In this *Étude* Ligeti acknowledges his romance with the Balinese exotic. The whole-tone scale of ‘Galamb borong’ – the mode of Debussy’s reflecting pools and Scriabin’s static poems – creates a harmonic framework which serves as a ‘dirty’ (‘unsauber’) approximation of Indonesian *pelog* (Ligeti 1993, p. 29).<sup>33</sup> The two identical, equidistant modes are separated by a semitone – more than the quarter-tone common between the paired *gangsas* of the Balinese gamelan, but less than the interval between most of the pitches belonging to the diatonic scale. Ligeti called the segregation of hexachords by register the ‘super whole-tone’ collection: ‘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 1988, p. 8). This evocative statement could serve as a description of the rapprochement between East and West represented by ‘Galamb borong’, a work which clearly originates within the Western classical tradition but that is not subsumed by it.

Ligeti’s professed goal of an ‘ideology-free style’ (‘ein ideologiefreier Stil’) (Ligeti 1993, p. 29) seems to have represented a fantasy for this ageing modernist, who once confessed to Alex Ross (1993): ‘I am in a prison. One wall is the avant-garde, the other is the past. I want to escape’. Yet one reason this fantasy produced such powerful music is that through it non-Western influences could be seamlessly integrated into a personal language which, paradoxically, seemed to anticipate their discovery. Ligeti’s fascination with the music of Southeast Asia may have been new, but the use of symmetrical pitch modes, rhythmic cycles and parody – as a playful reworking of familiar genres – remained a consistent feature of his style from early works such as the *Polifon gyarkorlat* (Piano Study) of 1943 through to the *Three Pieces for Two Pianos* of 1976.

[Ligeti] was the most cosmopolitan of composers, but paradoxically, he remained very clearly defined in terms of his roots and language', noted his fellow composer and conductor Esa-Pekka Salonen.<sup>34</sup> Salonen's notion of the cosmopolitan is no paradox if we consider Ligeti to have been a 'rooted' or situational cosmopolitan, one who maintained ties to his country and tradition while retaining an inherent idealism about the role of culture on the world stage.<sup>35</sup> Like the transnationalist and the globalist, the cosmopolitan acknowledges historical and cultural transition as normative and resists the claims of a particular nationalist or ethnic identity. A Hungarian Jew brought up in an Eastern Orthodox community in Romania, Ligeti survived both the Nazi and Soviet occupations but spent most of his career in Austria and Germany. His status as an international exile afforded a select vantage point from which he was able to survey the musical and cultural legacy of both East and West. Thus Ligeti's cosmopolitan imagination was rooted in a very specific cultural place and time, his openness to the influences of non-Western music, art and science tempered by nostalgia and fatalism. His music neither mimics nor merges with the vernacular sources which inspired it, but functions instead as an imaginative creation which communicates with a global audience.

Martin Scherzinger has written perceptively on the production and reception of 'Africanness' in Ligeti's works as it relates both to the public performance of several piano pieces along with the music of the Aka pygmies of Central Africa and to a subsequent recording which joined eight Aka songs with six of the *Études* and two works by Steve Reich.<sup>36</sup> Notes accompanying the public concerts and recording were fraught with some of the hoariest orientalist clichés (the least egregious of which was the presentation of African musicians as a collective representation of 'Africanness', not one of them being identified by name). Hence media reception of the compact disc displayed a strong element of anxiety about the sociopolitical ramifications of a pairing which, as Scherzinger notes, was 'largely sublimated into an argument on *aesthetic* grounds' (2006, p. 229). This element of anxiety is part of a modernist cosmopolitan discourse which, while rooted in the local, is 'always surreptitiously imperial', in the words of Timothy Brennan (2001, p. 81). The editors of *Public Culture* maintain that part of modernity's core project is an attempt to separate and purify individual cultures, 'each of which is better seen – more historically seen – as a "quasi object" located at the intersection of a range of other cultural quasi objects' (Pollock, Bhabha, Breckenridge and Chakrabarty 2000, p. 587). Where does one draw the line between the Western and non-Western 'objects' of a cross-cultural fantasy such as 'Galamb borong'? As Scherzinger admits, ideological projection is a two-way street, as demonstrated by a critical comparison of the formal properties shared by certain African musics and the compositions of Ligeti and Reich. African music, once entrained to social practice, is celebrated as abstract-sounding form, while the music of Ligeti and Reich is recast as embodied practice (and, I might add, given a commercial boost by fashionable appeals to multiculturalism).<sup>37</sup> Tenzer describes a contemporary Balinese culture, engaged

in the same dialectic, surrounding the genre of *kontemporer*, a heterogeneous blend of gamelan with influences from modern Asia and the West. *Musik kontemporer* is similar to movements throughout Asia which self-consciously employ the aesthetics and techniques of local musical traditions within a Westernised performance context. Although based on traditions common throughout the Indonesian archipelago, it is an experimental art music associated with urban conservatories and music festivals and aimed at a select international audience.<sup>38</sup>

I return to my original query of what it might mean to allow music from one culture to alter the ‘grammatical paradigm’ of one’s native tongue with a provisional answer. Ligeti’s is not the language of the audience for whom the phrase ‘music is the universal language’ was coined, nor is it that ‘schizophonic mimesis’ (2000, p. 254) so memorably depicted by Steven Feld – the aura of authenticity captured in a bottle for sale on the global market.<sup>39</sup> The absorption from African and Asian cultures of ‘different intonation systems’, new ‘divisions of the octave’ and even other ‘possibilities for laws’ acknowledges that these musical ideas no longer signify the local or vernacular; bound to no specific place, time or authoritative meaning, they have entered the *lingua franca* of art music. But their use does not result in a shift of grammatical paradigm; it does not create an entirely new compositional model divorced from the practices of the past. This expanded, enriched musical language is open to the world, yet it retains a reflexive distance from tradition, striving idealistically to create from such ‘quasi-objects’ ‘another’ modernity, one with ‘a sense of order on a higher level’ (Ligeti 1985, p. xvii).

## NOTES

1. All translations are by the author unless otherwise noted.
2. The influence of African music on Ligeti’s earlier études is explicitly discussed in Taylor (2003) and Bouliane (1989).
3. See Head (2003) and Scherzinger (2006). I fear I may have fallen into twin traps that lie in wait for those who dare to discuss this issue: a reductive treatment of orientalism and evocation of the ‘timeless Orient’. In my own defence, Head avers that these are, to some extent, unavoidable in any full treatment of the topic (pp. 221–5). Seeking to rationalise the approach in his study *Gamelan Gong Kebyar*, Michael Tenzer (2000a, p.14) states the following: ‘As coda to this discussion I echo the oft-made observation that systematic thinking and the perceptions of interrelated hierarchic patterns – far from being alien to Balinese thought – are actually part and parcel of them; and at the very core of the ancient Hindu entelechy girding the tradition. Finding the mundane and the cosmological mirrored in one another is an essential aspect of the philosophy shaping both Balinese and Indian Hinduism, and hence a Balinese way of relating to the world’.
4. I have chosen examples from instrumental music; the question of exoticism and opera is further complicated by the interaction of libretto, narrative and musical signification.

5. For more on this topic, see Pasler (1994).
6. Debussy writes the following in a letter written on 22 January 1895 to Pierre Louÿs regarding gamelan performances at the Paris Universal Exhibition in 1889: 'But my dear good fellow! Remember the music of Java which contained every nuance, even the ones we no longer have names for. There tonic and dominant had become empty shadows of use only to stupid children' (Debussy 1987, p. 76). Richard Mueller (1986) convincingly demonstrates the influence on Debussy's *Fantaisie* for piano and orchestra (1890) of both the Javanese gamelan performance at the Exposition Universelle in Paris of 1889 and the instruments of the gamelan sent by the Dutch to the Paris Conservatoire in 1887. Nonetheless, he admits that the primary markers of this influence – whole-tone and pentatonic scale types and cyclic themes – appeared much earlier in Debussy's music.
7. Benjamin Suchoff identifies several of these instances in the editor's preface to Bartók (1997). See especially pp. xii–xiii and xvi–xvii.
8. Other conceptual orientalists are Henry Cowell and Harry Partch, while Colin McPhee and Lou Harrison are said, along with Hovhaness, to engage in 'cheap imitation' (Corbett 2000, p. 173).
9. As noted by James Pritchett (1993), p. 74.
10. The original reads: 'Gehörte ich vor 30, ja sogar 20 Jahren noch mehr oder weniger zur Komponistengruppe, die sich als "avantgardistisch" verstand, bindet mich heute keine Gruppenideologie mehr. Die avantgardistische Protesthandlung war ein politischer Gestus einer Elite. Mit dem Zusammenbruch der sozialistischen Utopie und mit der Veränderung der technischen Zivilisation durch die Verbreitung der Mikroelektronik ist auch die Zeit der Künstlerischen Avantgarde vorbei. Da für mich die "schöne" Postmoderne als eine Schimäre erscheint, suche ich nach einer "anderen" Modernität, weder nach einem "Zurück-zu", noch nach modischem Protest oder "Kritik". Sowohl die funktionale Tonalität als auch die Atonalität wurden abgenutzt, ebenso die gleichmäßige zwölftönige Temperatur. Viele ethnische Kulturen, in Afrika und, in besonderer Vielfalt, in Südostasien, geben Beispiele für ganz andere Intonationssysteme: Sowohl die pentatonischen als auch die heptatonischen (gleichmäßige als auch ungleichmäßige) Aufteilungsmöglichkeiten der Oktave – von Thailand bis zum Salomon-Archipel – bergen unzählige Ansatzpunkte für eine neue Art von Tonalität in sich, mit anderen Gesetzmöglichkeiten als jenen der funktionalen'. Ligeti also remarks upon the importance of the example of Java in the music of Debussy, who 'utilised Southeast Asian influence not as folklorism but as a grammatical paradigm shift' ('Debussy hat den südostasiatischen Einfluß nicht als Folklorismus verwendet, sondern als grammatikalischen Paradigmenwechsel') (Ligeti 1993, p. 29).
11. In the same source, Ligeti also suggests that 'Bartók was incredibly antinationalistic!', as if to underline the purity of the latter's approach.
12. On this point see Ténzer (1991), p. 83. According to the composer, the title was intended to evoke the imaginary gamelan music 'indigenous to a strange island which is not found on any map' ('beheimatet auf einer fremden Insel, die auf keiner Landkarte zu finden ist'); programme notes to the Gütersloher Ligeti Festival (1990), quoted in Floros (1996), pp. 183–4. Ligeti originally subtitled the *Étude Les gongs de l'île Kondortombol* after this fabled location; see Steinitz (2003), pp. 299–300.



13. Recorded by David Lewiston on *Bali: Gamelan and Kecak* (Elektra/Nonesuch Explorer Series 9 79204-2), track 9, 7:02–7:20. I wish to thank Michael Tenzer for allowing me to incorporate his unpublished transcription; an alternative version is included in the transcriptions and compact discs that accompany Tenzer (2000a).
14. The five-note *kebyar* scale subdivides the octave into three small and two large intervals, although the size of corresponding pitch intervals varies within the four-octave gamut; see Tenzer (2000a), pp. 27–8. Tenzer also notes (2000b, para. 2.5) that the *kempyung*, or ‘*pelog* fifth’, of gamelan music may vary by as much as 339 cents within a single ensemble, yet is readily identifiable by a Balinese musician as a distance of three modal steps in any orchestration.
15. See Vitale (1990), pp. 2–3.
16. See Rossing (2000), pp. 71–3. Although each instrument obviously has a unique harmonic signature, Rossing’s observations may be taken as forming an accurate representation.
17. See Vitale (1990), pp. 3–4.
18. The seven levels, from background to foreground, are: (1) four simultaneous attacks on the same note; (2) four simultaneous attacks on different notes; (3) three simultaneous attacks on any notes; (4) simultaneous attacks between the same note in one *kotekan* part and the core melody; (5) two simultaneous attacks on the same note in any parts; (6) two simultaneous attacks in any parts; and (7) the semiquaver subdivision of the beat.
19. A contemporary work for *gong kebyar* will usually consist of several sections, some based on cycles of varying lengths and others which may exhibit neither cycle nor metre; see Tenzer (2000a).
20. Susilo, quoted in Vitale (1990), p. 14 n. 10.
21. See Tenzer (2000b), para. 2.6.
22. See Tenzer (2000a), p. 214. At this point Tenzer introduces a comprehensive and idiomatic analytic system based on contour theory applicable to both older repertoires and contemporary *gong kebyar* (an introduction to this approach is found in Tenzer 2000b). My segmental analyses are meant only to point out certain obvious and generalisable features of the modern repertory. They do not reflect Balinese compositional process, which relies on, among other factors, a complex, reflexive and historically determined structural grammar.
23. See Tenzer (2000a), pp. 209–12.
24. See the discussion of these patterns in Schlager (1965) and (1976), pp. 36–8; see also Tenzer (2000a), pp. 213, 226–7 and 235.
25. I have based sectional divisions in ‘Galamb borong’ on the parameters cited above, as well as textural changes from heterophony/polyphony to melody/accompaniment, supported by shifts in articulation and function between right and left hand. Peter Niklas Wilson (1992) discusses phrases rather than sections in his analysis of ‘Galamb borong’; his ‘fourth phrase’ is my second section, whereas his fifth and sixth phrases are equivalent to my third section.
26. See Tenzer (2000a), pp. 25, 61 and 158.

27. Indonesian gongs, no matter what size, vibrate at impact from two principal modes of vibration with frequencies in a 2:1 (octave) ratio. Immediately after striking, however, a gong will develop multiple modes, each of which decays at a different rate; see Rossing (2000), pp. 98–100.
28. Because the total number of bars – 89 – in ‘Galamb borong’ is a member of the Fibonacci series, it is perhaps worth pointing out that the lowest pitch of the piano is reached approximately at the golden section (not bar 55, but bar 53) and the highest one-third of the way into the piece (bar 30).
29. See Wilson (1992), p. 64.
30. See Lewin (1993).
31. Transpositions are simply identified by the scale degrees on which they occur, while motive inversions are related by index number to the first appearance of each component.
32. Pitch-class sets [0257], [0358], [0237], [01368] and [025].
33. Speaking of the *Requiem*, Ligeti said: ‘I used the twelve-note chromatic scale in the Kyrie. But what you actually hear is not a chromatic scale, since the singers cannot help making mistakes in the intonation, which produces a kind of microtonality, dirty patches; and these “dirty patches” are very important (if they follow the score too loosely that is also wrong, the result will be too dirty). Listening to this piece, what you hear is not the twelve-note chromatic scale but all kinds of other intervals’ (Ligeti, Várnai, Häusler and Samuel 1983, p. 53).
34. Salomen, quoted in Swed (2006).
35. In current discourse the cosmopolitan carries a wide range of connotations, but I refer here specifically to definitions advanced by Beck (2002), p. 17 and (2003), pp. 55–7; and by Roudometof (2005), p. 116.
36. The spectacle of featuring the Banda-Linda musicians of the Central African Republic on stage alongside a performance of Ligeti’s music first occurred at the Théâtre du Châtelet in Paris on 20 December 1999; a further concert took place two years later in the Kammermusiksaal of the Philharmonie in Berlin.
37. Scherzinger’s reading recognises several complicating factors unique to this particular performance and to Ligeti’s ‘African-influenced’ works. It is likely that ethnomusicological descriptions of particular African practices influenced several of the Ligeti *Études* rather than direct exposure to the music. None of the works featured in the recording or concert related directly to the music of the Aka pygmies (for that matter, works cited elsewhere by Steve Reich are most closely related to Ghanaian drum ensemble traditions). For his part, Scherzinger is moved to ask (2006, p. 258) whether the mere representation of African musicians alongside Western will ‘encourage the complex critical praxis required to allay the drastic inequality between Africa and Europe’. As it stands, the 2003 Teldec disc he cites was in fact preceded by two similar recordings by the Belgian pianist Jan Michiels in 2001: *Banda Linda* (Megadisc MDC 7821), which features Book 1 of the *Études* paired with African music, and *Gong kebyar* (Megadisc MDC 7820), which combines Book 2 with a sequence of Balinese music.

38. A detailed consideration of this topic appears Tenzer (2000a), pp. 433–40.
39. See Feld (1995), (1996) and (2000).

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### ABSTRACT

From the 1980s onwards, György Ligeti openly acknowledged the influence of African polyphony, Indonesian gamelan and music of the Americas on works such as the Piano Concerto (1980–8) and Violin Concerto (1989–93), as well as the *Études pour piano* (1985–2001). The present article analyses Étude No. 7, 'Galamb borong', in order to establish the precise point of intersection between Western and non-Western within one specific piece. On the basis of this case study, the composer may be shown to celebrate the exotic under the umbrella of the cosmopolitan in a discourse of the universal that is inherently local. Furthermore, by permitting 'Galamb borong' to unfold as a dialogue between Balinese music and the Western classical canon, Ligeti's embrace of 'amalgamated musical languages' comes to represent an aesthetic standpoint capable of liberating the creative individual not only from inherited tradition but also from the postmodern present.