Martin Scherzinger

LUCIANO BERIO'S *CORO*:
NEXUS BETWEEN AFRICAN MUSIC
AND POLITICAL MULTITUDE

I. Introduction

Coro for forty voices and instruments (1975-76) represents Luciano Berio's signature statement of the nineteen seventies. Expanding on the aesthetic premises of *Sinfonia* for orchestra and amplified voices (1968), we find music highly attentive to the microscopic permutation of details, and yet overtly resistant to the a-historical claims, and attendant technical constraints, of postwar serialism. *Coro* raises to a higher degree (than *Sinfonia*) both the music's (internal) transformational logic *and* its (external) historical field of referents and syntactic paradigms. The music dramatizes a series of encounters, including everything from medieval polyphony and romantic song to Peruvian dance music and serial technique of high modernism. In an interview with Rossana Dalmonte Berio states: «I'm interested by music that creates and develops relations between very distant points, and pursues a wide transformational trajectory».[1] Berio's musical philosophy of synthesis shares with serialism a dimension of radical metamorphosis, but distances itself from the hermetic neutralizing ambitions of serial permutation.

[1] *Luciano Berio. Two Interviews with Rossana Dalmonte und Bálint András Varga*, transl. and ed. by D. Osmond-Smith, New York-London, Marion Boyars 1985, p. 23 (first italian edition of Dalmonte's interviews: 1981).

Berio insists «there can be no *tabula rasa*»:

There's no doubt that we always carry around with us our precedents – a mass of experiences, "the mud on our shoulders", as Sanguineti put it, and therefore a virtual set of choices from the perennially present noise of history.[2]

Indeed, the transformational dynamism of *Coro* is not driven by internal musical operations alone, but by musical references that traverse a genuinely international historical frame. The music seeks out patterns, passages, and points of affinity and difference across vast spans of time and space. It is as if the apparent cultural *in*compatibility of its referents enlivens the very transformational mobility of the work's compositional and textual flow. This globalized dialectic is no mere intertextual play (as in postmodern pastiche). Rather, *Coro* is highly attentive to the precise social and cultural resonances of its references, frequently infusing the values of one historically and geographically demarcated gesture or genre with those of another. Compositional techniques, performance styles, cultural associations, and so on, that belong to music crafted in one part of the world, thereby weigh upon the content of such techniques, styles and associations elsewhere. The music thus effects not only compositional metamorphoses, but also conceptual ones. Multiple crossings produce musical passages that – seemingly suspended in an imaginary time and place – analyze, assess and comment on the actual history and geography of the music of the globe. In Berio's view, new forms of historical knowledge are thus secreted in the cracks of creative metamorphosis: «Between [...] distant points», the composer provocatively writes, «between an African heterophony and myself, for example [...] you may find the whole history of music [...]».[3]

As with *Sinfonia*, we find in *Coro* a gigantic self-reflexive study in the very art and act of making music – Berio calls it an «anthology of different modes of "setting to music"»[4] – which is nonetheless consciously framed by the historicized determinations of a single musical *genre*. Where *Sinfonia* dramatizes, examines and comments upon the dialectics of the symphony, *Coro* does so in the context of the chorus. *Coro* simultaneously demonstrates an acute awareness of the historical associations conjured by the musical chorus and then aims to transcend the genre's limits. Berio writes: «I must emphasize that mu-

---

2 *Ibid.*, p. 66.

3 *Ibid.*, p. 136.

4 LUCIANO BERIO, *Coro*, author's note now published in http://www.lucianoberio.org/node/1434?1011856635=1.

sic cannot detach itself from gestures, techniques, ways of seeing and doing [...] but it's not exhausted by them».[5] Thus Berio rethinks the traditional relationship between the chorus and the orchestra. Against the conventional oratorio-type staging of the chorus Berio arranges the concert platform for *Coro* in a novel way. Pairing each of the forty singers with an instrumentalist in the orchestra (sopranos, for example, are placed alongside flutes, violins, oboe, clarinet and trumpet; altos alongside clarinets, violas, english horn, saxophone and trumpets, and so on) the composer is able to accentuate ambiguity and proximity between vocalization and instrumentation. Berio's unique arrangement also implies new modes of polyphonic and harmonic organization. Instead of juxtaposing or pitting separate sound ensembles against each other, we find amalgamated duos in the solo singing sections (which dissolve the distinction between song and sound) contrasting with gigantic *tutti* chords in intervening sections (which disperse harmonic simultaneities into raucous sound blocs), interspersed, above all, with poignantly marked heterophonic sections (which scatter polyphonic threads into punctured rhythmic fields).

Along with the musical sources, the multilingual textual sources for *Coro* are pointedly numerous and dispersed; de-hierarchized, one might say, by dissemination. More specifically, Berio intersperses fragments from Pablo Neruda's three-volume *Residencia en la Tierra* (1933-45), emphasizing in particular the refrain «Venid a ver la sangre por las calles» [Come see the blood on the streets], with pithy folk poems originating from multiple sites across the globe, from Africa to America, from Persia to Polynesia. The poetry, set in different languages (sometimes in translation, sometimes not) is often spliced and pasted in various ways, intermingling and overlapping between sections. Of the relation between text and music Berio writes: «Sometimes the voices totally identify themselves with the instrumental articulation, while the text generates phonetic transformations which spread from one episode to another».[6] And yet this open-ended generative mechanism is no *laissez faire* meaning-production machine, for Berio nonetheless coordinates the music/text relations with complex consistency. For example, Berio paradoxically tends to set the folk poetry (word sequences ostensibly grounded in a kind of collective consciousness) to *solo* songs, while the highly personalized Neruda fragments tend to be elaborated in the orchestral *tutti* sections. This tension between instrumental medium and poetic voice complicates the commonplace dichotomy between collectivist musical production and individualized expression. At a minimum, the effect of

---

[5] *Luciano Berio. Two Interviews with Rossana Dalmonte und Bálint András Varga*, cit., p. 23.

[6] L. BERIO, *Coro*, author's note, cit.

this peculiar orchestral contrast (between solo and chorus sections) conveys an individuality figured as *interpellated subjectivity* against a collective figured as *individualized multiple*. Written at the height of the Cold War, Berio's instrumentation thereby superceded the exaggerations of (capitalist) solipsism, no less than (communist) collectivism: a dialectical argument that resists the vivid agon between social formations grounded in hyper-individualism as well as those grounded in imagined unities. This complex dichotomy is further mediated by the occasionally interspersed heterophonic sections, which hover precariously between individual rhythm and collective melody, smudging relations between figure and ground, point and line. Berio description of *Coro* reflects this manifold ambiguous fusion of universal and particular:

It is like the plan for an imaginary city, which is realized on different levels and generates, assembles and unifies different things and persons, revealing their individual and collective characters, their distance, their relationships and conflicts within real and virtual borders.[7]

It is the heterophonic sections in particular, simultaneously envoicing both the *tutti* and the *solo* (or neither *tutti* nor *solo*), that sketch out the detailed liminal zone of imaginary relations in *Coro*.

Berio would continue to employ this unique heterophonic compositional technique for many years. In *Formazioni*, for orchestra (1985-87), for example, the composer frequently isolates and highlights single pitches in the context of large pitch collections projected in a horizontal field, thereby rhythmicizing the harmonic/melodic flow. Most explicitly, perhaps, in *Call*, for five brass instruments (1985-87), Berio casts Banda Linda-type hockets in a playful context of jazzy "big band" *schmalz*. Berio even adds the aspect of singing through the wind channels of the brass instruments, likely reflecting his interest in Central African pipe ensembles that interlace punctuated sung tones with instrumental ones. In this music too, individual tones are woven into a collective pattern that is at once constituted by, yet non-synchronous with, the tactile aspects of the performance. Berio was particularly fascinated by this mode of orchestration. This article will trace Berio's interest in African music by describing the composer's unique approach to instrumental technique in *Coro*; the curiously individualized production of a chorus – especially pronounced in the heterophonic sections – in-between solo and *tutti*. The article will trace the empirical origins of this technique and demonstrate aspects of its formal musical articulation in both the original music and in *Coro*. The article

[7] *Ibid.*

will then assess the aesthetic dimensions of *Coro* and, finally, examine an aspect of the music's afterlife in western intellectual history. The project thus tracks the way music and sound circulates within different regimes of meaning and value, with a particular interest in retrieving the often tributary and ephemeral phenomena found in geographically-remote cultures that, for complex reasons, are systematically written out of world history. In sum, the argument charts a hidden genealogy of trans-discliplinary ideas beginning with the concrete ways a traditional non-western musical practice becomes a representative *modus operandi* in Berio's work, which in turn bears on a new political philosophy in the North Atlantic at the turn of the twenty-first century.

II. *Ndərəjé bāləndōr*

To begin with the interlocking heterophonic orchestral constructions in *Coro*: these are derived from music of the Banda Linda, a group of people living in a wooded savanna region of central Africa numbering about 30.000. Berio's technique is borrowed from music conceived for a giant horn orchestra comprised of between ten and eighteen antelope horns (of various species) and wooden horns (made from the *opo* tree) [*ango*] as well as pellet-bells [*engbi*]. The horns are tuned to an anhemitonic pentatonic scale, which is derived from the Banda Linda xylophone scale. In performance, the horns, arranged in a curved row from high to low, generally enter in consecutively descending order. Among the Banda Linda this performance is associated with rites of passage for adolescent youths, who learn to play the instrument during their initiatory retreat. The music, derived from various traditional sung genres, is played for pleasure to conclude the initiation rites.[8]

Berio discovered the music of the Banda Linda by way of the ethnomusicologist Simha Arom, who had spent considerable time in the Central African Republic as a researcher/ambassador funded by France's Ministry of Research. Arom's research was conducted during the rule of Colonel Jean-Bédel Bokassa, notorious for his lavish lifestyle and iron-fisted control over the Central African Republic. Before declaring himself President for life in 1972 and then Emperor Bokassa I in 1976, for example, Bokassa disbanded the National Assembly and suspended the short-lived constitution of the Central

---

[8] See SIMHA AROM, *African Polyphony and Polyrhythm. Musical Structure and Methodology*, Cambridge *et al.*, Cambridge University Press 1991, pp. 308-309 and p. 313. Originally published as *Polyphonies et polyrythmies instrumentales d'Afrique centrale. Structure et méthodologie*, Vol. I, Paris, Société d'Études Linguistiques et Anthropologiques de France (Selaf) 1985, p. 173.

African Republic following independence in 1960. By the end of the 1970s, Bokassa was overthrown in a French-backed coup, by which time Arom had returned to Paris. In 1984 Arom was awarded the Silver Medal from the «Centre National de la Recherche Scientifique» (National Center for Scientific Research) – a government-funded research organization, under the administrative authority of the Ministry of Research. According to Arom, Berio attended a symposium in the 1975, in which the ethnomusicologist presented a talk on the hocketing principles of the Banda Linda. In the years following this initial encounter the composer and the ethnomusicologist traveled together, presenting lecture-recitals in concert venues around Europe. Arom's lengthy subsequent association with modern music – from Herbie Hancock and Madonna to Steve Reich and György Ligeti – have become a hallmark of his inter-cultural intellectual achievements.

Arom had introduced into the field of ethnomusicology a new recording technique, made possible by the mass production of stereophonic equipment in the mid-1960s. Facilitated by a multi-track recording device and a *tutti* playback technique using headsets, Arom was able to isolate individual performers in a complex ensemble and record them on separate channels (see Ex. 1). This technique facilitated a detailed, arguably more precise transcription process using western staff notation. By 1985 Arom's extensive transcriptions appeared in a groundbreaking book titled *Polyphonies et polyrhythmies instrumentales d'Afrique centrale*. The book was translated into English in 1991, and, heralded as a groundbreaking classic, was awarded the prestigious ASCAP Deems Taylor Award in 1992. Arom's innovations included the systematic analyses of central African music in terms of a «paradigmatic technique» (associated with music semiology) developed by Nicholas Ruwet and others. In particular, Arom aimed to uncover the simplified «structural entity», or «model», that underlies the intricately patterned polyrhythmic strands of the music.[9] To this end, the book provides transcriptions of entire performances by these large multipart ensembles, which are rendered in various tabular arrangements. In a manuscript sheet within Berio's materials for *Coro* (housed at the Paul Sacher Stiftung in Basel), the composer outlines the overall structure of the piece, noting the interactions between text and instrumentation – i.e. folk song (F) versus Neruda poetry (N) mapped onto solo (S) versus chorus (C) versus heterophonic music (H) –, as well as the continuities and discontinuities between and across the thirty-one sections (by way of arrows and slurs; see Ex. 2). This scheme was used as analytic material for a lecture Berio

---

[9] *Ibid*. (English translation), p. 313.

gave in Tanglewood.[10] In the lower right-hand corner we also find, meticulously notated in Berio's hand, two measures of music simply titled «Banda-Linda». This music is a copy of the structural «model» derived by Arom from transcriptions of an Ippy horn orchestra's performance of *Ndərəjé bāləndōr*, an eighteen-part heterophonic horn piece (see Ex. 3).[11] In the performance of *Ndərəjé bāləndōr*, each horn generally produces a single pitch of an anhemitonic pentatonic scale. Horns with the same pitch class are assigned names: «instruments playing G are called *tete*; the ones playing E, *ta*; the one's playing D, *ha*; the ones playing C, *tutule*; and the ones playing A, *bongo*».[12] The six upper horns can produce an additional upper embellishing tone, by way of a small hole drilled at the top of the horn known as *ogoro ango* («hole in the horn»).[13]

Except for the first horn player, each successive horn player commences his part in relation to the preceding part one pentatonic step above it. These parts are comprised of short repeating figures, which are combined with one another in a way that emphasizes the principle of interlocking. Although the basic cell (Arom's paradigmatically derived «model») for each part remains intact throughout the performance, performers vary their patterns by way of subtle rhythmic manipulations, constantly adding or subtracting notes and extending or splitting note values. Example 4 tabulates the individual horn parts of the *tutuwule* family. After an introductory gambit involving a kind of 'call and response' between the first horn, which rhythmically intones a fragment of repeated notes, and a *tutti* response, which issues a raucous held cluster chord, the individual horns enter in descending order with their characteristic hocketing rhythmic figures. Once the musicians have all entered we reach the crux of the performance. Arom explains:

The musicians with the antelope-horn instruments perform embroideries, embellishing notes, and trills, while held notes predominate in the lowest register. The musicians with the oblique instruments turn from side to side to start up musical dialogues with their closest neighbours, as they break in on, reply to, and pretend to parody one another.[14]

Although Arom emphasizes the *model* or *paradigmatic theme*, it is the intricate variations, seemingly infinite in number, that grant the music's morph-

---

[10] Personal communication of Talia Pecker Berio.

[11] See S. AROM, *African Polyphony and Polyrhythm*, cit., p. 173.

[12] *Ibid.*, p. 311.

[13] *Ibid.*, p. 309.

[14] *Ibid.*, p. 310.

Ex. 1 – Simha Arom's representation of the technique of multipart recording via «*tutti* play-back» on a multi-track tape recorder (published in SIMHA AROM, *African Polyphony and Poly-rhythm. Musical Structure and Methodology*, Cambridge *et al.*, Cambridge University Press 1991, p. 110; with kind permission of the editor).
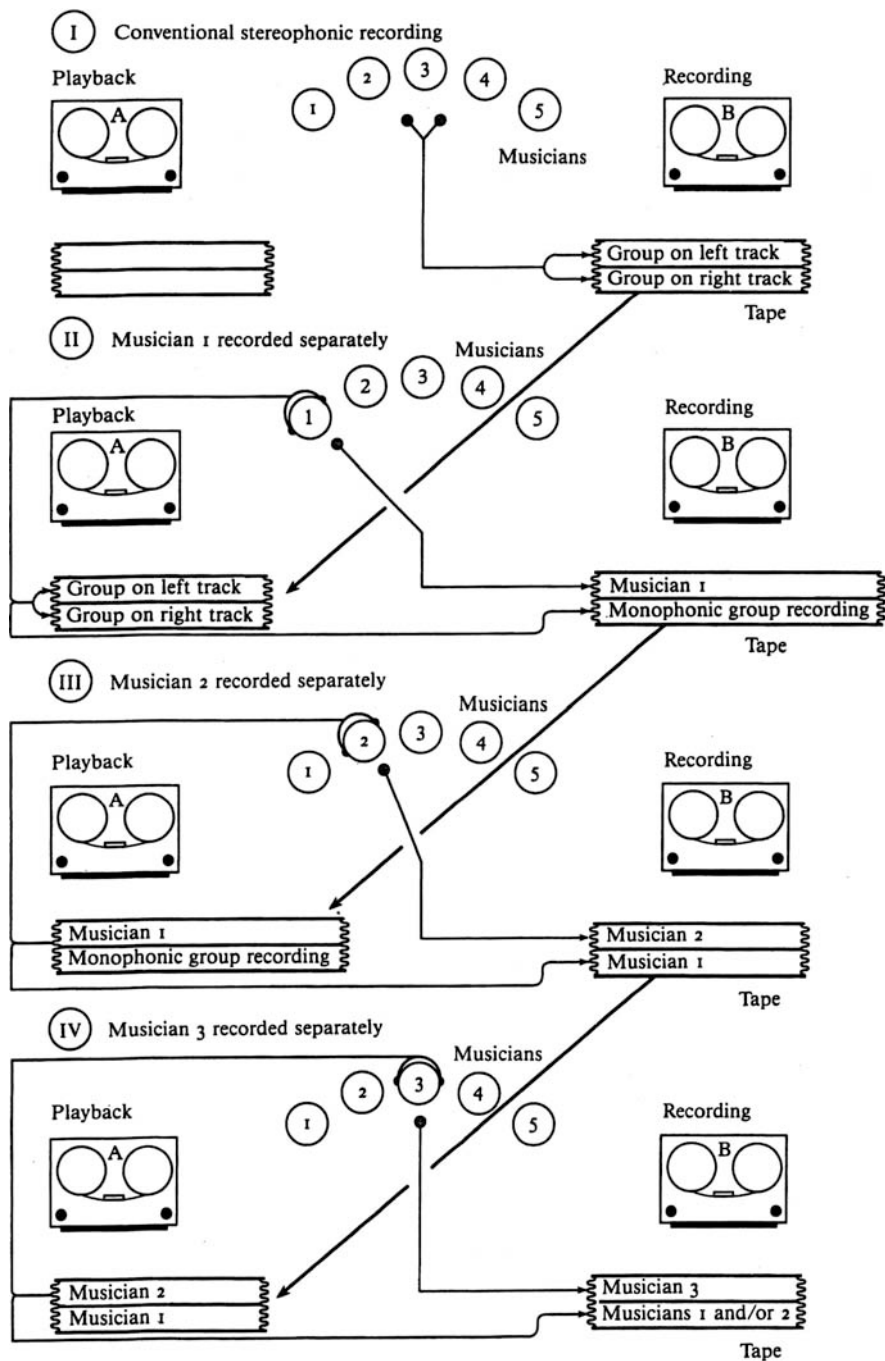
Ex. 2 – Luciano Berio's outline for *Coro* (Paul Sacher Foundation, Collection Luciano Berio, file «Coro»; with kind permission).

Ex. 3 – Simha Arom's Paradigmatic Model for *Ndərəjé bāləndōr* (published in S. AROM, *African Polyphony and Polyrhythm*, cit., p 371, Exs. 62 and 63; with kind permission of the editor).

Ex. 4 – Tabulated transcriptions of the High («*Tutuwule*») Banda Linda Horns (published in S. Arom, *African Polyphony and Polyrhythm*, cit., pp. 351-353; with kind permission of the editor).

ing micropolyphonic web its extraordinary aesthetic effect. Most remarkably, the heard melodies in the music are never performed by a single instrumentalist, but rather appear as phantom patterns created by the densely interwoven rhythmic instants of the entire ensemble. As a result, the kinaesthetic impression of the music's motor movements is out of sync with the acoustic impression of the music's sounding forms. The Viennese ethnomusicologist Gerhard Kubik described such ever-elusive, ever-unpredictable micropolyphonic phenomena as «inherent» rhythms or melodies, although his discussion was mostly related to the amadinda and akadinda music of Uganda.[15]

III. *CORO*

In his Norton lectures held at Harvard University in 1993, Berio acknowledges that the music of the Banda Linda was an essential stimulus for *Coro*. The composer at one point even writes that *Coro* is «derived» from the «complex experience» of the Banda Linda's heterophonies.[16] Berio's engagement with the music of the Banda Linda in *Coro* is remarkably wide-ranging, responsive to the music's conceptual, structural and even kinesthetic dimensions. First, the physical distribution of performers on the stage for *Coro* takes its cue from the semicircular arrangement of the Banda Linda horns (see Example 5). In the Ippy orchestra performers are grouped together not according to their assigned instrumental names (*tete, ta, ha, tutule*, and *bongo*), a distribution that would emphasize unified sound blocks, but they are interwoven instead with instruments of a different name, a distribution that meticulously maximizes the effects of heterophonic difference between one player and the next. Thus *tete* horns are not constellated in a group, for example, performing instead in isolation alongside *ta*, on the one side, and *bongo*, on the other. The five different horns are actually assigned a 'family' name according to each group of horns adding up to a pentatonic collection within a registral span; the highest family is called *tuwule* or *tutuwule*; the second, *ngbanja*; the third, *aga*, and the fourth, *yaviri*.[17] As Arom explains:

Tuwule is an onomatopoeitic term for the embroidered figures played by the antelope horn instruments using their embellishing note [...]. *Ngbanja* designates a kind

---

[15] See GERHARD KUBIK, *The phenomenon of inherent rhythms in East and Central African instrumental music*, «African Music. Journal of the African Music Society», III/1, 1962, pp. 33-42.

[16] See LUCIANO BERIO, «Translating Music», in ID., *Remembering the Future. The Charles Eliot Norton Lectures*, Cambridge Mass. and London, Harvard University Press 2006, pp. 31-60: 59.

[17] S. AROM, *African Polyphony and Polyrhythm*, cit., p. 311.

of file or rasp, for as the Linda people say, «The rasp makes a loud noise». When someone speaks in a loud voice, they say, «He has a voice like a *ngbanja*». The register is the easiest to play in. *Aga* designates a kind of fish. The master of the horns says no one remembers any longer why this register is so called («All the elders who once knew are now dead»). Finally, *yaviri* is the word for «heavy rain, storm, thunder».[18]

As it is in the Ippy orchestra, the instrumentalists in *Coro* are not grouped according to instrumental type as much as registral proximity between individual voices, which are distributed in pairs across the stage. For example, the group seated to the front and the right of the grand piano, on the lowest level of the stage, functions as a unit defined not by timbre consistency but by heterophonic interactivity within a certain pitch register (voices paired with violas, clarinets, etc.); a kind of Africanized *ngbanja* in the context of a westernized instrumentarium in *Coro*.

Ex. 5 – **LUCIANO BERIO**, *Coro*: Disposition of orchestra and chorus (Universal Edition, Milano, © 1976, UE 15 044; with kind permission).

---
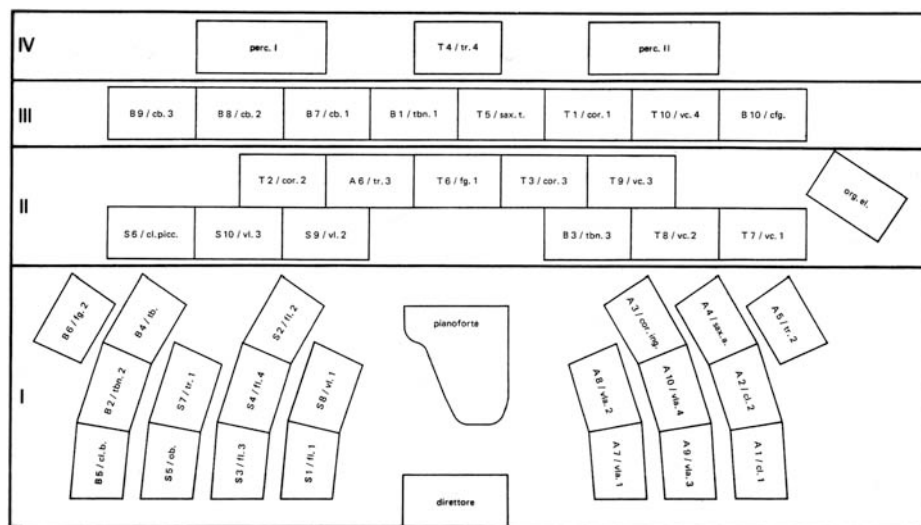
[18] *Ibid*. Arom mentions only the (highest) horns, the *antelope* horns, in naming the first pitch-class family; a point that stands to reason in light of the claim that only the highest six horns can produce a second tone (*Ibid*., p. 309). But it disconcerts the notion of pitch-class equivalence (implied by the «family» label) because the corresponding lower horns in the ensemble (horns 11 and 16 in Arom's text) are unable to produce the embroidered figures ostensibly characterizing this family.

Second, Berio's conceptual approach to text/music relations draws on an Africanized logic defined by Arom in the context of the Banda Linda. In crafting *Coro* as an «anthology of different modes of "setting to music"», for example, Berio explains how just as «the same text can occur several times with different music [...] the same musical model can recur with different texts».[19] As it is with the mode of melody-making in Banda Linda horn music, Berio here posits a musical model to permit different threads of musical and textual sense to emerge. Berio's interest in the intricate metamorphoses of emergent meaning within a given text resonates deeply with his philosophy of creativity in general. In his various interviews and public statements Berio repeatedly converges on music's capacity to transcend its historical and geographical points of identification by way of a peculiar transformational course. By «drawing out and consciously transforming historical 'minerals'», he writes, the music is able to absorb «them into musical materials and processes that *don't* bear the mark of history».[20] In particular, the composer is interested in the new musical incarnations («third» or purely imagined, entities, «fairy tales») brought about by compositional trajectories of permutation between diverse points. Berio articulates his aesthetic ideal plainly in his discussion of theater: «Well, it's to take two simple and banal forms of behaviour, say, "walking in the rain" and "typing" and to put them on the stage in such a way that they transform one another and produce by morphogenesis a third form of behaviour: we don't really know what this is because we've never seen it before, and it's not the elementary combination of the two familiar forms of behaviour».[21] This philosophy of almost surreal aesthetic transformation, whereby two independent motor processes produce a third process that exists at a phantom liminal point beyond the sum of its two parts, resonates deeply with the mechanics of melody-formation in the Banda Linda horn ensembles. What particularly interests Berio here is the way the independent rhythmic strands (*tete, ta, ha, tutule, bongo*) of the Ippy orchestra proffer flexible inherent melodic patterns; patterns that hover like acoustic illusions the motor processes of the music.

Berio's sketches to *Coro*, in keeping with his descriptions of Banda Linda practice, demonstrate his deep engagement with the compositional principles and aesthetic consequences of Africanized inherent patterning. In one of the

---

[19] L. BERIO, *Coro*, author's note, cit.

[20] *Luciano Berio. Two Interviews with Rossana Dalmonte und Bálint András Varga*, cit., p. 66. Emphasis added.

[21] *Ibid.*, p. 102.

sketches housed at the Sacher Foundation, for example, Berio analyzes the *Andante* from Mahler's Sixth Symphony by tabulating a series of melodic-rhythmic realizations in a manner that recapitulates the paradigmatic semiological character of Arom's signature fragments. On the bottom right-hand side of the sketch, the composer even describes these fragments in explicitly semiotic terms – individual transformations of a unitary model: «Trasf[ormazioni] ritmiche che hanno funzione di unitarietà (isoritmico)» [«Rhythmic transformations that have a unitary function (isorhythmic)''] (see Ex. 6). More dramatically, in two sketches in Arom's hand, and housed with Berio's materials for *Coro* at the Sacher Foundation, the ethnomusicologist traces an inherent pattern through horns 11 to 16 of the Banda Linda music for *Ndərəjé bāləndōr* (see Ex. 7). With arrows drawn in thick red pen, the composer stitches a phantom acoustic pathway through a segment of the transcription. In Banda Linda terms, the inherent melody, which spans the octave downward from G below middle C, reads: *ta - - - ha - - - ta ha - ta ha - tutule bongo tutule bongo tete bongo tete bongo tete tete bongo tete bongo ta*, and so on. The sketch almost reads like a lesson in Banda Linda pattern formation; below the staves we read, «la ligne mélodique de la Voix 1 (version chantée) superposeé au modèle polyphonique» [«the melodic line of voice 1 (sung version) superimposed on polyphonic model»]. According to Balz Trümpy, Berio's assistant between 1975 and 1978, Berio instructed him to orchestrate the heterophonic sections of *Coro* on the basis of this kind of African practice. Trümpy claims he approached the task by writing his own work *Code* for four horns (1976) derived from his compositional experiment with central African hockets in the context of *Coro*.[22] Whatever their precise creative origins, the heterophonic sections of *Coro* are remarkably exacting incarnations of the multipart hocketing processes found in *Ndərəjé bāləndōr*.

Berio employs Africanized heterophony in six sections of *Coro*, namely Sections 9, 11, 16, 24, 25, and 31. Fittingly perhaps, Berio introduces the hocketing texture for the first time (in Section 9) in the context of a fragment of text from Gabon, thereby connecting a compositional technique from one part of Africa with poetry from another: «I have made a song», the text reads, «I often do it badly». As if self-consciously to cast judgment on its own aesthetic process, the poem in the context of *Coro* gestures toward the perils of inter-cultural music-making itself, the possibility of failure, the danger of doing it badly. In the interview with Rossana Dalmonte, Berio addresses the necessity and the attendant *risk* of placing disparate elements in creative

---

[22] Personal communication with the author.

Ex. 6 – Berio's analysis of Mahler's *Andante* from the Sixth Symphony, with emphasis on the paradigmatic technique (Paul Sacher Foundation, Collection Luciano Berio, file «Coro»; with kind permission).

proximity: «It interests me to place those elements further and further away from each other, so far away that the search for a complementarity and unity between them becomes a very dangerous and complex operation».[23] What precisely are the complexities and dangers here? To discuss but one: the original African text, already substituted by its English translation, is in fact sung (by ten sopranos and ten altos) to the tune of a twenty-two note Macedonian (then Yugoslavian) melody – C-sharp, E-flat, D, C-natural, F, E-natural, F-sharp, C, B, B-flat, etc. –, thereby setting the text adrift from the coordinates of its native intonation.[24] Amalgamated, multi-referential, and hyper-complex, the new passage threatens to dissipate into hollow pastiche. Perhaps this

---

[23] *Luciano Berio. Two Interviews with Rossana Dalmonte und Bálint András Varga*, cit., p. 136.

[24] See DAVID OSMOND-SMITH, *Berio*, Oxford and New York, Oxford University Press 1991, p. 83.

Ex. 7 – Arom's sketch of *Ndərəjé bāləndōr*, tracing inherent patterns in a passage of Banda Linda heterophony (Paul Sacher Foundation, Collection Luciano Berio, file «Coro»; with kind permission).[25]

---

is why the Gabonese song in Section 9 initially becomes inarticulate, ushering a sequence of meaningless syllables – «avaya – tandinanan» in response.

However, for all the risk of such epistemological drift, the *ideas* produced by the re-contextualization should ultimately be evaluated on the composition's unique terms. Berio elaborates moments of ethnographic contact to seek out unguessed-at histories of association and unity. His is a meticulous mode of surreal aesthetic blending that aims at once to liberate history from sedimented notions of cultural difference and also to resist collapsing ethnographic regions into mundane sameness: «In *Coro*», he said, «I do use certain folk techniques and procedures which I link to completely different musical material. That is how I retain my freedom, and how I can switch from one to the other while retaining the individual features of an ethnic area».[26] The curious musical amalgam is thus able to retain traces of its distinctive ethnographic characteristics (via the division of labor between Yugoslav song and Gabonese text), without relinquishing the ideal of, what Berio calls an «acoustic unity» to come.[27] For even the gabbling gibberish of «avaya-tandinanan» turns out to be more complicated as the music unfolds.

First, far from mere linguistic detritus, the latter syllables are in fact quotation, thereby infusing rhyming rhythm with reference, this time to the experimental writings of Bob Cobbing. Berio quotes the first words from Cobbing's poem *tan tandinane*. Resonant with the composer's own experiments on language and sound, Cobbing's acoustic poetry blends foreign languages with local ones, juxtaposing technical and interpretative processes, such as palindromes and puns, to create entirely new soundscapes, which nonetheless cast perspectives on existing historical fragments of sonic practice. The formal rotations and permutations of Cobbing's *tan tandinane* («Tan tandinanan tandinane / Tanan tandina tandinane» and so on), for example, conjure a make-believe terrain of ancient Sanskrit recitation. Through word play, the text even suggests the sacred philosophy of tantric ritual, thereby faintly recapitulating the tantric practice of employing mundane elements to access the supramundane, here permuting known text fragments to access concealed ones. The first point is that by m 10 in this section of *Coro*, the poet's invented tantric mantra engulfs the African text (a case of «exploding the text»?), effecting a transition from the *interpretation* of musical content (attending to its references and allusions) to the *experience* of musical content (attending to its

---

[26] *Luciano Berio. Two Interviews with Rossana Dalmonte und Bálint András Varga*, cit., p. 150.
[27] *Ibid.*, p. 151.

sounding patterns).[28] The second point is that, as the mantra gains ground the music simultaneously opens into a new rhythmicized field of punctuated brass, issuing the elusive heterophonic world of African inherent-patterning (Section IX, mm 22 ff.). This is a subtle metamorphosis, for the African allusion (to the difficulties of making music) metamorphoses, by way of tantric chanting on European melodic scraps, into the actual music-making of Africa; the text's dissolution into syllabic fragments, «rotat[ing] continuously about itself» as Berio might say, better reveals the structural drama of its meanings.[29]

Musically speaking, the transformation from Macedonian melody to African heterophony is framed by the (barely audible) unsettling of unison singing at the very beginning of Section 9. The folk melody, sung by altos and sopranos doubled by upper winds, is accompanied by a kind of melodic *silhouette* – a fluctuating double in the first and second trumpets. The trumpets outline a *drifting* version of the vocal melody by tossing up a host of passing notes and neighbor notes within a differently conceived metric frame. Example 8 outlines the first four measures of the folk melody in simple time (on the first staff) set against its double in compound time (on the second staff). The subtle polyphonizing of the monophonic line thereby punctuates the melody, soliciting from it a quivering rhythmic character that shifts the line in and out of audile focus. In other words, the resultant pattern formed by the two near-equivalent melodies (depicted on the third staff of Example 8 introduces brief repeated note fragments into the flowing melodic line. It is these tiny, almost illusionistic, repetitions that will evolve prolifically, culminating in an echo chamber of note-repetitions in the fully-fledged heterophony that appears in the second half of the section. A precarious monophony set to an African text is thereby able to prepare the sounding ground for an African compositional practice; the text comes to perform its own insight.

Following a series of transformations of the opening melody (via melodic interpolations, rhythmic accelerations, etc.) the Africanized heterophony is introduced by staccato brass in m 22 (see Ex. 9). Initially, horns, trombones and trumpets play a speeded-up version of the folk melody (still held in sopranos and flutes) by sounding single isolated notes from that melody in a sequence – passed from horn 3 and trumpet 2 to horn 2 to trombone 1 to trumpet 3 to trumpet 4, and so on, in quick succession. This kind of interlocking pointillism, wherein the melody is shared by multiple parts, echoes the behavior

---

[28] *Ibid.*, p. 96.
[29] *Ibid.*, p. 95.

Ex. 8 – Polyphonized unison in Section IX of *Coro*, mm 1-4.

of horns in the Ippy orchestra. By m 24, the pointillistic texture expands. On the first beat of the bar (m 24), horn 3 initiates a canonic echo of the same folk melody (likewise passed on to trumpet 2, then horn 2, then trombone 1, etc.) at the same pitch; while, on the second beat of the bar trombone 1 (by repeating middle C and then D above it) actually extends a hypothetical vocal line (voices break off in mid-measure) thereby completing the quotation. Two canonically circling folk melodies are thereby set in motion morphing finally into a repeated eleven-dyad progression, which features a myriad set of intervals (i.e. all interval classes are featured at least once in the progression; see Ex. 10).

From this point on the polyphonized melody is dispersed into punctuated heterophony.[30] In a manner that recalls the serial practice of Anton Webern and Olivier Messiaen, each instrument in the brass section is now assigned a fixed pitch (or at most two pitches) from the progression, which it articulates staccato in precise interlocking fashion. Canonic melody is here reconceived as rhythm; the overlapping parts are de-hierarchized into equalized pulsing units. The music has become, what Gilles Deleuze and Félix Guattari would call *molecular*.[31] Where traditionally we would hear in this passage *continuous melodic flow* (ascending and descending lines), the peculiar articulation of these simple melodic shapes is now heard as shifting instants and lopsided pulsations: a parade of hocketing signature rhythms. In Deleuze and Guattari's terms, the music «reaches the ultimate regions of a *Continuum* inhabited

---

[30] During this process, sopranos and altos double only the descending portion of the quotation (from C above middle C) in a call and response, effectively switching between voices in the canon.

[31] See GILLES DELEUZE – FÉLIX GUATTARI, *A Thousand Plateaus: Capitalism and Schizophrenia*, transl. and forward by B. Massumi, London, The Athlone Press 1987.

by [...] unfindable particles».[32] Almost at once, the individual parts, as if captivated by their peculiar rhythmic signature, elaborate perpetual transformations (elongations, splits, inflections, elaborations) that rotate around a basic model. This process begins with the repeated D-flat in horn 3 in mm 26-27, and quickly spreads to the entire brass section (mm 28 ff.). In short, a polyphonically conceived music, built on an identifiable melodic line, becomes molecular as the music tilts sideways into Africanized heterophony.

Ex. 9 – Heterophonized polyphony in Section IX of *Coro*, mm 22-27.

Ex. 10 – Canonic conception of heterophony in Section XI of *Coro*, mm 1-6.

Berio's handling of African musical processes in *Coro* is remarkably consistent. Following a characteristic intervention in Section X of the refrain from Neruda, set here to massive de-rhythmicized harmonic blocs (which paradoxically recall the gigantic *tutti* blare of the Banda Linda ensembles in this context), Berio decisively returns to heterophony in Section XI. The African text

---

[32] *Ibid.*, p. 248.

(initially cut short by tantric chanting in Section 9, and then by Neruda's text in Section 10) is now sung in full, this time accompanied by the hocketing rhythms resembling central African horn music:

> I have made a song
> avaya
> oh moon lying there
> when will you arise?
> tandinanan
> oh mother moon hear my voice
> I have made a song
> I often do it badly
> avaya
> It is so difficult
> to make a song
> to have wishes fulfilled
> I often return to this song
> I often try to repeat it
> I who am not good at returning
> to the stream
> oh mother moon hear my voice
> tandinanan.

As if to enact the drama of the text in musical terms, Berio returns to the song he is quoting, casting it in a way that recalls, but does not quite repeat, the molecular polyphony of Section IX. The near-repetition of musical elements is further disaligned from its own mechanics of canonic repetition by introducing complexities as the passage unfolds. These complexities appear already within the first six measures of Section XI.

Focusing only on the piano part, for example, which distills the basic texture of the heterophonic brass choir, we find a melody cast in a series of fluctuating canons at the unison. These canonic streams, commencing at unpredictable intervals (after 16 beats, then 10 beats, etc.) are depicted on separate staves in Example 10. Notice how the third canonic thread (labeled III on the third staff) enters as if in midstream, beginning, not on the 1st but on the 17th note (D above middle C) of the original melody. (In this new context, the note C on the second 16th-note pulse of m 4 is a kind of pivot note, belonging to both canonic streams.) When the third canonic thread reaches its proper beginning on the first beat of m 5 the second canonic thread is largely submerged (phantasmically emerging once as D on the second beat of m 5?) as indicated by rests on the second staff. Nonetheless, the second canon begins its round again where it 'would have begun' had it sounded properly

throughout m 5 (i.e. on the fourth 8th-note pulse). It is as if the silent music was still going on somewhere. (Its final sounding, however, is only an approximate repetition of the original melody – as the fourth note in the series [C] is omitted from the melody, and the notes D and F sound simultaneously instead of successively. At approximately this time, the first canonic strand also peters out.) As the second canonic thread lies dormant in m 5, meanwhile, another canonic thread is initiated (depicted on the fourth staff), again as if in midstream, thereby threading a fourth contrapuntal stratum into a texture that at any point exhibits only three of these strata. (Incidentally, it is likely that the E-flat on the last 16th-note pulse of m 5 is a misprint. Not only is it unplayable by left and right hands simultaneously, but it does not follow the intricate polyphonic logic of the passage. Furthermore, horn 2, plays the correct E natural at this point.)

In Section 11, Berio is thus able to produce an inherent pattern out of a host of imitating polyphonic threads – sometimes emerged, sometimes submerged – whose mode of repetition is endlessly metamorphosing, like a river of overlapping currents and recurrence. The piano pattern is further interpolated by the horn choir, whose approach to the texture cuts against its grain, or better, it cuts a kind of 'diagonal' through the flow. Instead of articulating the contrapuntal lines, thereby clarifying their points of origin and disappearance, the horns once again reproduce the texture in a field of staccato instants, which once again, congeal into signature rhythmic patterns that, in turn, succumb to a different inertial force of stasis and metamorphoses. The fluctuating melodic-polyphonic flow is thus radically horizontalized, setting off upon a trajectory that lies at the crossroads between variation and repetition. In this way, the music can perform the insight of the text: «I often try to repeat [the song]» the African poem goes, «I who am not good at returning to the stream». The poem speaks of the impossibility of repeating the song, of returning to the stream, as the music sounds out unpredictably patterned canonic streams, crossing swords with their own rhythmicized heterophony. Western techniques of polyphonic imitation, articulated to African techniques of heterophonic interlocking, thus generate the music's Heraclitean injunction against stepping into the same river twice. The music sings its own doctrine of fundamental flux.

IV. MILLE PLATEAUX

As the music testifies, Berio's own writing reflects a deep understanding of the African music he is paraphrasing in *Coro*. He describes the Banda Lin-

da music in metaphors that lie at a nexus between the historically remote and the future: The music is «both complex and coordinated, something between a cathedral of sound and an implacable musical machine» he claims in the second of his Norton lectures.[33] Here African music is associated, on the one hand, with the reverence of Christian worship, with attendant association of intricate, yet sturdy, architectural design, and, on the other, with the auto-generative reproducibility of the modern machine. As it is with early technologies of sound reproduction, Berio detects in the machine a ghost-like specter that lies at its spiritual center. The technical mechanism of the music's structure incarnates unimplied phantom patterns. Berio calls this the «intangible principle» of the Banda Linda: «As if by some tacit social agreement, nobody plays the melody as such, yet its nature and its spirit are ever-present at any point in this fabulous sound "installation"».[34] The inherent pattern, an ever-present spirit guiding collective musicking amongst the Banda Linda, carries connotations, in Berio's lexicon, with the site-specific open forms of the then-cutting edge aesthetics of the western sound installation. Rather than 'transcribe' the Banda Linda heterophonies for a symphony orchestra, therefore, Berio seeks to 'transfer' the intangibility principle into «other dimensions of music, and also to extend the same principle to other cultures».[35] The intangibility principle issues the antithesis of denotative melody, to invoke Roland Barthes, it becomes a 'melody effect,' a hesitant ontology.

The music of the Banda Linda thus undergirds a double transformation across the imaginary terrain of *Coro*: musical form mirrors aesthetic philosophy. In other words, at a particularized formal level the mismatch between played music and sounding form, which produces illusionary melodies that float (as if at some remove) within the Africanized heterophony of *Coro*, reflects a philosophy of surreal transformation at an overarching aesthetic level: a musical encounter between African heterophony and western polyphony whose transformational networks produce hallucinatory new musical entities that nonetheless carry speculative traces of history. In a remarkable passage that addresses the issue from the point of view of aesthetics, subjectivity and kinesthetics, Berio writes:

For me, music is giving a sense to the passage between the differing terms of an opposition, and between different oppositions, inventing a relationship between them and making one opposition speak with the voice of the other – as when the body

---

[33] L. BERIO, «Translating Music», cit., p. 58.

[34] *Ibid.*

[35] *Ibid.*, p. 59.

speaks with the voice of the mind and vice versa. So arranging things, in other words, that the elements of the oppositions become part of a single thing.[36]

The undoing of sedimented historical oppositions should not be confused with philosophical deconstruction – music cannot «be deconstructed» Berio unequivocally asserts in his Norton lectures – but with a philosophy of synthetic transformation and rhizomic production.[37] For Berio, dichotomous encounters (where self is infused with the properties of another, body speaks with the voice of mind, etc.) do not dissect phenomena into their contradictory antinomies (as in deconstruction), but effect inherently productive metamorphoses that issue forth hitherto unknown imaginative entities, 'third' things or phantom melodies on a micro-level – where acoustic and motor images are delinked, mind hearing through body, body through mind; and unguessed-at historical reverberations on a macro-level – confronting rhythmic patterning in the heart of traditional linear counterpoint, for example, or producing African music through principles found in western serialism (Webern and Messiaen), or even encountering Heraclitus in the music of an African poem. This is how, in the composer's words, «between an African heterophony and myself [...] you may find the whole history of music».[38] Such uncanny historical encounters, do not reflect some untroubled universalism but, in Berio's words «hesitant cues as to the existence of innate organisms which, if fittingly translated and interpreted, may help us pinpoint the embryos of a universal musical grammar».[39] In *Coro* we find a music of possibility, of becoming, of multiplicity, with the «perspective of mobility and risk»,[40] absorbing 'the full face' of music – naked.

This embrace of foundational becoming in the context of a global totality is more than a technical compositional exercise; reflecting instead an ethical comportment: «a way of thinking, and thus of being, that exists irrespective of any historical and cultural references that it may propose».[41] It is this di-

---

[36] *Luciano Berio. Two Interviews with Rossana Dalmonte und Bálint András Varga*, cit., p. 136.

[37] Luciano Berio, «Formation», in Id., *Remembering the Future*, cit., pp. 1-30: 12.

[38] *Luciano Berio. Two Interviews with Rossana Dalmonte und Bálint András Varga*, cit., p. 136.

[39] L. Berio, «Translating Music», cit., p. 60.

[40] *Luciano Berio. Two Interviews with Rossana Dalmonte und Bálint András Varga*, cit., p. 136. In his second Norton Lecture, Berio relates the story told by Roman Jakobson about «a missionary in Africa trying to convince members of a local community not to go around naked. "But you're naked, too," replied a tribesman, pointing to the missionary's face. "But only my face is naked," said the missionary, to which the candid reply was: "Well, for us the face is all over!"» (L. Berio, *Translating Music*, cit., p. 49).

[41] *Luciano Berio. Two Interviews with Rossana Dalmonte und Bálint András Varga*, cit., p. 67.

mension that led the philosophers Deleuze and Guattari to identify in the music of Berio (and others) a creative new model for politics. These philosophers emphasize the qualitatively new sonic characteristics opened up by various musical practices, which in turn transpose into new material possibilities in the political world («new possibilities for life»; «[un]constrained [...] by institutions of power and ... wealth», etc.). Political practice is thereby conceptually linked to a musical one. In the words of Deleuze and Guattari: «The problem [of political organization] is a truly musical one, technically musical, and all the more political for that».[42] At this point in the argument of *Thousand Plateaus*, Deleuze and Guattari attempt to negotiate the antagonistic demands placed on traditional analyses of political agency which all too often are determined, on the one hand, by the concept of the 'individual' and, on the other, the 'universal'. To elude the programmatic limits posed by these opposed (but mutually reinforcing) terms, the authors posit the *Dividual* (a term synthesizing the divisible and the shared) «to designate the type of musical relations and the intra- or intergroup passages occurring in group individuation».[43] Taking their cue from Claude Debussy, the authors reproach Richard Wagner for failing to «'do' a crowd or a people»:

The people must be individualized, not according to the persons within it, but according to the affects it experiences, simultaneously or successively. The concepts of the One-Crowd and the Dividual are botched if the people is [sic] reduced to a juxtaposition, or if it is reduced to a power of the universal.[44]

Instead of grounding their analysis of agency in the dualistic terms either of dissociated multiplicity («juxtaposition») or coalescent unity («universal»), Deleuze and Guattari take recourse to a musical model: «In short, there are two very different conceptions of orchestration, depending on whether one is seeking to sonorize the forces of the Earth or the forces of the People».[45] Musical composition thus functions in *Thousand Plateaus* as a model for political praxis. In light of the recent prominence in political theory attributed to the concept of *multitude*, especially its Deleuzian reinterpretation (along the tracks of the *Dividual*) in recent work of Michael Hardt, Antonio Negri, Donna Haraway and others, the synthesized musical basis for such politics in *Thousand Plateaus* is no minor point.

---

[42] G. DELEUZE – F. GUATTARI, *A Thousand Plateaus: Capitalism and Schizophrenia*, cit., pp. 340-341.

[43] *Ibid.*, p. 341.

[44] *Ibid.*

[45] *Ibid.*

Not all music is capable of productive rhizomic flight in *Thousand Plateaus*; Wagner is denounced, for example, popular music is regarded with doubt and skepticism, and non-Western music *per se* is ignored. In relation to political agency, for example, Deleuze and Guattari do not focus their attentions on the collectivist anti-establishment promise of the then prevalent rock'n roll scene, choosing instead to praise the compositional efforts of established European modernists, notably Berio, Boulez, Messiaen and Webern. For example, the authors value Berio's quest for a «multiple cry, a cry of the population, in the dividual of the One-Crowd» in works like *Coro*.[46] Berio's own description of *Coro*, quoted above, resonates with many central motifs of *Thousand Plateaus*. It is worth repeating here:

It is like the plan for an imaginary city, which is realized on different levels and generates, assembles and unifies different things and persons, revealing their individual and collective characters, their distance, their relationships and conflicts within real and virtual borders.[47]

Pairing the metaphors, we find in *Coro* a music that issues a «map» (Deleuze and Guattari) / a «plan» (Berio), entirely oriented «toward an experimentation in contact with the real» (Deleuze and Guattari) / «an imaginary city» (Berio), realized on various «plateaus» (Deleuze and Guattari) / «different levels» (Berio), which «unites disparate elements in the material» (Deleuze and Guattari) / «assembles and unifies different things and persons» (Berio) to reveal «the One-Crowd and the Dividual» (Deleuze and Guattari) / «the collective and individual characters» (Berio) in a utopian political collective.[48] Berio's *Coro*, under this reading, becomes a Deleuzian performance of the *multitude*, a political concept originating with Machiavelli, reiterated by Spinoza, and elaborated by Deleuze and Guattari, and others into a new model of political resistance. The translation of Berio's orchestral technique in *Coro* into a political metaphor in *Thousand Plateaus* was not demonstrably known by the composer – indeed the correspondence between Deleuze and Berio was scant and insubstantial, amounting to little more than general expressions of admiration. Neither did the philosopher properly recognize the origins of Berio's actual orchestration techniques in *Coro*.

It behooves the historian to trace this hidden genealogy of ideas, to show the concrete ways a traditional African musical practice becomes a represen-

---

46 *Ibid.*, p. 342.

47 L. Berio, *Coro*, author's note, cit. See also footnote 7.

48 See G. Deleuze – F. Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, cit., p. 12, p. 343 and p. 341.

tative *modus operandi* in a significant European musical composition, whose unique heterophonic orchestration provides a model for a new political philosophy in the North Atlantic at the turn of the twenty-first century. The other (and broadly unsympathetic) ways of understanding the legacy of *Coro* are, on the one hand, the technically musical one, and on the other, the postmodern one: of treating Berio's efforts as the essential enterprise, on the one hand, of a narrowly academic, Eurocentric unfolding of technical developments (serial pitch and rhythmic permutations, etc.), and, on the other, of a music reconfigured in terms of its intertextual dissemination *per se* (intercutting of narrative lines, pastiche, etc.). This paper interrogates these alternative readings – the developmental-technical one and the polysemic-postmodern one – drawing Berio's project closer to a confrontation with the world encircling it – Europe (West and East), America (North and South), Asia, and above all, Africa – in ways that dialectically re-interpret the very meanings of what constitutes a global history in the first place. Berio's music-historical narrative teases out dimensions beyond the logic and grasp of the empirically-oriented historian. By bringing traditions and ages into uncanny alignment with each other, the past and the distant become intelligible as they resemble the present and the close-at-hand, with which they share a secret affinity across a vast ocean of time and space. It is this aspect of historical mapping, a building process that ceases at strategic moments to be the mere linking of units (producing more through the some of its parts, a *third* thing), that Deleuze and Guattari detect and admire in Berio's work. Above all, it is the specifically re-aligned aspect of Africanized heterophony that is transmitted by Berio's *Coro*, via Deleuze and Guattari, to undergird a concept that comes to inform the political predicaments of our times.

Abstract – Riassunto

This article traces Luciano Berio's interest in Central African music, dramatized by the composer's unique approach to instrumental technique in *Coro*. The article traces the empirical origins of this technique and demonstrates aspects of its formal musical articulation in both the original Banda Linda music and in *Coro*. The article assesses the aesthetic dimensions of *Coro* and, finally, examines an aspect of the music's afterlife in western intellectual history, notably the work of Gilles Deleuze and Félix Guattari. The project thus tracks the way music and sound circulates within different regimes of meaning and value, with a particular interest in retrieving the often tributary and ephemeral phenomena found in geographically-remote cultures that, for complex reasons, are systematically written out of world history. In sum, the ar-

gument charts a hidden genealogy of trans-disciplinary ideas beginning with the concrete ways a traditional non-western musical practice becomes a representative *modus operandi* in Berio's work, which in turn bears on a new political philosophy in the North Atlantic at the turn of the twenty-first century.

Il saggio delinea gli interessi di Luciano Berio nei confronti della musica dell'Africa Centrale, approcciata in modo unico e esemplare nella tecnica strumentale di *Coro*. Nel saggio si tracciano le origini empiriche di questa tecnica e si evidenziano aspetti della sua articolazione musicale sia nella musica originale dei Banda Linda, sia in *Coro*, di cui si compie una valutazione della dimensione estetica. In conclusione, si esamina un aspetto della vita futura della musica, della sua ricezione nella storia intellettuale dell'Occidente e soprattutto nel lavoro di Gilles Deleuze e Félix Guattari. Il progetto è pertanto quello di osservare le modalità di circolazione di musica e suono in differenti sistemi di valore e significato, con particolare interesse verso il recupero di fenomeni, spesso secondari o effimeri, propri a culture geograficamente remote che, per ragioni complesse, sono sistematicamente eliminate dalla storia. In sintesi, l'argomento registra una segreta genealogia di idee trans-disciplinari a partire dal modo concreto in cui un pratica musicale di tradizione non-occidentale diventa un *modus operandi* rappresentativo nel lavoro di Berio, che a sua volta genera una nuova filosofia politica nel nord Atlantico sul volgere del ventesimo secolo.