In Pursuit of Utopia Between Sound and Sense: Luciano Berio's "Linguistic Projects" of Meta-Music

by

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Dissertation submitted in partial fulfillment of
the requirements for the degree of Doctor of Philosophy
in the Department of Music
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ABSTRACT

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Abstract

This study explores Luciano Berio's search for a utopian relationship between music and language. This utopian vision of pursuing the "eternal path between sound and sense" led him to initiate a series of "linguistic projects." I illustrate Berio's investigation of the relations between music and our cognitive ability, or "universality of experience," in three areas: the analysis of music, its generation process and its perception.

Although the utopian search was left inconclusive, it allowed Berio to develop what he called a "music of musics" or a "language of languages" in music. I argue that Berio's "meta-music" generates a signification system similar to artificial intelligence that is able to identify, analyze and produce music elements. The system is based on a hybrid of structuralist discourses addressing human's linguistic capacity. My study discusses the earlier model of this system established in the electronic work *Thema (Omaggio a Joyce)* (1957–58), its perfecting in the two symphonic works *Sinfonia* (1968) and *Coro* (1974), and its expansion onto the theatrical works *La vera storia,* (1982) and *Un Re in ascolto* (1984). I show that Lacanian psychoanalysis strongly informs *La vera storia* as well as its dramatic elements and provides a theoretical basis for the connection between signification and the unconscious. Concerning the perception of music, by deconstructing the hierarchy of a series of oppositions (e.g. sound-silence, Self-Others) in *Un Re*, I suggest that Berio introduced us to "deconstructionist listening" in relation to the human's "universality of experience."

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Introduction

The twentieth-century Italian composer Luciano Berio recalled an anecdote: In 1965, at Harvard's Faculty Club, Roman Jakobson, the renowned scholar in structural linguistics, came toward him with glinting eyes and asked him point-blank: "So, Berio, what is music?" After a moment of baffled silence, Berio answered, "Music is everything we listen to with the intention of listening to music, and that anything can become music."[1]

In a nutshell, this anecdote reflects what happened in the mid twentieth century. The discipline of structural linguistics was a strong wave that forced composers to respond to a series of questions: What is music as a communication system? How is it structured? How is it different from a linguistic system? After a period of rumination, composers responded with their compositions, writings, and aesthetic theories.

The aim of this study is to provide a detailed analysis on the interaction between language, musical thought, and compositional ideas between the 1950s and 1980s, when the study of language experienced rapid changes across various disciplines, among which linguistics, semiotics, psychoanalysis, and literary theory. The focus of this study is the Italian composer Luciano Berio (1925–2003), who persistently searched for the relationship between music and meaning from the perspective of language, i.e., the utopia

[1] Luciano Berio, *Remembering the Future* (MA, Cambridge: Harvard University Press, 2006), 49.

of sound and sense. The pursuit provides a foundation for his musical thought, which went hand in hand with his conception on language, including discussions on myth, the unconscious, and signification. Through a wider analytical perspective, we can see how Berio's experiments on music and meaning contributed to the greater discourse of structuralism and poststructuralism.

Why linguistics? Music and language have long been considered as communication systems. Whereas language possesses the symbolic referential function to convey concrete meaning, the semantic function of music has been up for debate. When Jean-Jacques Rousseau imagined the origin of language, he believed it to be musical with the emotive power to express passions: melody imitated the accents of languages.[2] In the nineteenth century, Arthur Schopenhauer stated that music is the "universal language" since it is instantly understood by everyone. The musical tones function intuitively in a similar way to words. The indefinite and non-referential quality of music can be seen as an imitation of the will rather than an imitation of ideas.[3] There are times when music does convey meaning: some musical signs (e.g. the horn-call, sigh motif, and horse galloping) are topoi which involve cultural associations and connections; musical onomatopoeia such as a bird chirping or water flowing can be intuited by listeners; the technique of tone-painting and the practice of *musica reservata* are also common means

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[2] See Jean-Jacque Rousseau, "Essay on the Origin of Languages and Writings Related to Music," in *The Collected Writings of Rousseau* Volume 7, translated and edited by John T. Scott (Hanover and London: The University Press of New England, 1998), 289–323.
[3] See Arthur Schopenhauer, *The World as Will and Representation*, translated by E. F. J. Payne (Indian Hills, Colorado: Falcon's Wing Press, 1958).

to convey meaning through music. Wagner's technique of leitmotif provides a hint at how music conveys semantic meaning by assigning extra-musical expression to musical materials, as well as bringing up the debate on program music and absolute music. In addition, text-setting in vocal music illustrates the relationship between music and language more directly.

Musicians in different eras have held different views on the balance between text or music or how the two amplify each other according to the aesthetic trends of their period. The discussions addressing music and text are not limited to semantic meaning, but also include the matter of intonation, as in the invention of monody and recitative during the Renaissance as well as the peculiar singing style of Sprechstimme in the twentieth century. Another area of debate is the existence of "musical syntax." The terms "syntax" and "grammar" are often adopted in music as metaphors to describe tonal music or the twelve-tone technique, although whether the convention of these organizing principles can be compared to rigorous linguistic syntax remains highly controversial.

In the twentieth century, the study of language experienced a paradigm shift from historical to scientific analysis after Ferdinand de Saussure distinguished *parole* (a particular occurrence of a linguistic phenomenon) from *langue* (a systematic pattern of a linguistic phenomenon). The novel approach to examining language brought new discussions of music as well. As recalled by Berio, nearly no composer in the 1950s could resist the temptation to understand and compose music as though it were a

language with its own syntax and phonetics.[4] The emergence of the field of linguistics provided new ways and frameworks to examine the perennial problem between music and language. Berio's musical works have often explored the intersection between music and language. Berio was particularly curious in dealing with the issue by borrowing ideas from linguistics. He once said,

> Why am I interested in linguistics? I think I felt, with regards to music, the very strong need to explore the eternal path between sound and meaning. Not a specific meaning but a meaning of musical processes. At a time when new material organizations were being sought, it seemed natural to study the organization of languages.[5]

To Berio, "meaning" does not merely refer to clear references of concrete entities in the world, but the meaningfulness of organizing the materials; and language offers abundance resources of the meaningfulness and the logic of organization. When the trend of exploring the intersection between phonetics and music waned in the 1960s–1970s, Berio turned from the study of "lingua," i.e., a specific occurrence in language, to the

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[4] "Il mio rapporto con la linguistica è molto semplice, anche se ha messo radici piuttosto profonde nel mio lavoro di compositore. È motivato dal fatto, credo, che nessuno può sfuggire alla tentazione—a un certo momento del suo sviluppo—di voler capire e usare la musica come fosse un linguaggio, con una sua sintassi, una sua grammatica e una sua 'fonetica.'" Berio, *Interviste e colloqui*, Vincenzina Caterina Ottomano ed. (Turin: Giulio Einaudi editore, 2017), 85.

[5] "Perché mi sono interessato alla linguistica? Penso di aver sentito, riguardo alla musica, il fortissimo bisogno di esplorare l'eterno percorso tra suono e significato. Non una significazione specifica ma una significazione dei processi musicali. In un'epoca in cui si cercavano nuove organizzazioni del materiale, mi sembrava naturale studiare l'organizzazione delle lingue." Berio, *Interviste*, 150.

study of "linguaggio," i.e., the organization of language or meta-language that reflects human's *a priori* ability,[6] in order to explore the deeper level of language structure. More importantly, the pursuit of music and language led Berio to explore the "universality of experience" which is closely related to the hypotheses of universal grammar and human language faculty (human's innate capacities for language) discussed in the mid twentieth century, notably by Noam Chomsky. Berio pondered if the hypothesis of man's inborn linguistic competence has an equivalence in music:

> In the end, the use of a specific language is not so important, perhaps, compared to man's ability to learn a language. I was wondering if it is possible to find this universality of experience in the field of music, as there is no culture without music. The phenomenon is very complex, and I think there will be immense work to be done.[7]

The exploration of the "universality of experience" enriches Berio's utopian pursuit of sound and sense by connecting music to human's cognitive patterns, rather

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[6] Berio described "linguaggio" as "the faculty of expressing oneself" ["la facoltà di esprimersi"], while "lingua" for him was a "determined system of expressive signs" [un sistema determinato di segni espressivi]. By synthesizing his musical thoughts in the 1960s, his use of "linguaggio" is similar to the organizing principles of language (or other communication systems) *a priori* in human and "lingua" refers to a specific language system. See Berio, "Eugenetica musicale e gastronomia dell''impegno'" (1964), in Luciano Berio, *Scritti sulla musica*, ed. Angela Ida De Benedictis (Turin: Einaudi, 2013), 378–85, especially at 379.

[7] "Alla fine, l'uso di una lingua specifica non è così importante, forse, rispetto alla capacità dell'uomo di apprendere una lingua. Mi sono chiesto se non fosse possible ritrovare questa universalità dell'esperienza nel campo musicale, in quanto non esiste nessuna cultura senza musica. Il fenomeno è molto complesso e penso che ci sarà un immense lavoro da fare." Berio, *Interviste*, 150. The description is followed by his explanation of *Coro*.

than merely searching for equivalence of representations between the two communication systems. Whereas the notions of "universal grammar" and "linguistic competence" have remained hypothetical until today, and the comparison between music and language has not come to a unanimous conclusion in musicology and in linguistics, Berio's utopian exploration remained constant throughout his career. Yet, on the positive side, Berio admitted that the searching process offered him abundant inspirations to create his works. The discourses associated with these "linguistic" projects provided him with "spiritual and intellectual landscapes" and new ways to connect sound and meaning:

> […] it is also certain that precisely this type of research [finding analogies between language and music] is another way of experiencing one of the most real and permanent conditions of music, which is to constantly pursue a utopia of language, to frantically elaborate "linguistic" projects which, precisely because they are doomed to failure, they continue to express emotions, to represent spiritual and intellectual landscapes, to discover new and temporary relationships between sound and meaning and to teach us to see the world as a set of processes that interact, and not as an exhibition of procedures and forms that function.[8]

[8] "[…] è anche certo che proprio questo tipo di ricerca è un altro modo di vivere una delle condizioni più reali e permanenti della musica, che è quella di rincorrere senza sosta un'utopia di linguaggio, quella di elaborare affannosamente progetti 'linguistici' che, proprio perché votati al fallimento, continuano a esprimere emozioni, a rappresentare paesaggi spirituali e intellettuali, a scoprire nuove e provvisorie relazioni tra suono e significato e a insegnarci a vedere il mondo come insieme di processi che interagiscono, e non come esibizione di procedimenti e di forme che funzionano." Berio, *Interviste*, 86.

Berio's "linguistic" projects were heavily influenced by structuralism and post-structuralism that initially centered on discovering the patterns in language and human's cognition. The "spiritual and intellectual landscapes" in his journey hence did not limit to discourses in music, but also explored areas in humanities that touch upon the topic of language, such as psychoanalysis, the study of myth, and semiotics.

In this study, I examine Berio's musical works: *Thema (Omaggio a Joyce)* (1957), *Sinfonia* (1967), *Coro* (1974–76), *La vera storia* (1982) and *Un Re in ascolto* (1984), and discuss the application of "atomistic" (or phonemic), structuralist and poststructuralist conception of language in these works. I illustrate three different aspects of Berio's experiment on the application of linguistic conceptions in these works. First, I show that a signification model was gradually developed in *Thema (Omaggio a Joyce)*, *Sinfonia* (the Scherzo), and *Coro*. The model identifies the distinctive features of the inputting music materials and keeps generating new materials as outputs by re-arranging the features. The signification model, similar to the concept of artificial intelligence to a certain extent, reflects the property of language to generate infinite number of sentences with limited number of materials and rules. As I suggest, this model echoes the motto of "infinite use of finite means" discussed in linguistics. Berio's experiment further leads to the discussion of human's inborn cognitive ability to process and create music, corresponding to the discourse on "linguistic competence" and universal grammar in linguistics.

The second aspect of Berio's "linguistic" projects examined in this thesis is the connection between music and the unconscious, as mediated by Jacques Lacan's famous dictum of "the unconscious is structured like a language." I argue that the opera-theater *La vera storia* allude to Calvino and Lacan's ideas on narrativity, language, and the unconscious in multiple ways. Not only for concert pieces, as Berio's wife and musicologist Talia Berio describes, the musical process of signification is also a fundamental concept in Berio's music theater.[9] I illustrate that, through the re-ordering of circumstances of an incident in one's memory, the hidden part of one's unconscious, or the "myth" in Calvino's elaboration, is revealed by the narrative process. By reducing musical and dramatic elements into "distinctive features" and symbols, the composer is able to recombine the musical and dramatic elements so that an absent male figure, who is the key to the incident, is intuited through the musical and dramatic representation. The structure of the musical and dramatic "language" directs the narrative flow so that meaning is evoked unconsciously in the audience's minds. Such "theater of the mind" or "theater of the ear"—labels that Berio used to describe his *A-Ronne* (1975)[10]—can be found in many of his works including all Berio's works discussed in this thesis. In addition, as I exemplify, Lacan's proposal of mirror stage, talking cure, and the "Name-

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[9] Talia Pecker Berio, "'A lei la parola taciuta,' Testo e subtesto di *Cronaca del Luogo*," in *Le théâtre musical de Luciano Berio*, edited by Giordano Ferrari, volume 1 (Paris: L'Harmattan, 2016), 250.
[10] Berio explained that *A-Ronne* is similar to "theater of the mind" or "theater of the ear" of the late sixteenth-century madrigals. See author's note of *A-Ronne* (http://www.lucianoberio.org/a-ronne-authors-note?1747386730=1; accessed Dec 29, 2021). Commentators adopted the idea of "theater of the mind" or "theater of the ear" to describe Berio's other works such as *Visage* and *Laborintus II*. See also Richard Causton, "Berio's 'Visage' and the Theatre of Electroacoustic Music," in: *Tempo*, 194 (Oct., 1995), pp. 15-21; David Osmond-Smith, "Voicing the Labyrinth: the Collaborations of Edoardo Sanguineti and Luciano Berio," in: *Twentieth-Century Music*, 9/1-2, pp. 63-78.

of-the-Father" are implicitly adopted as dramatic elements in *La vera storia* to emphasize the relations between language and the unconscious in the work.

Lastly, I examine Berio's experiment on binary opposition, the central notion in structuralism, and its relation to the act of listening in the music theater *Un Re in ascolto*. I demonstrate how meaning is intuited through the manipulation of a series of binary oppositions: "sound" versus "silence", "self" versus "others," "now-ness" versus "non-now-ness." By deconstructing the hierarchy of presence and absence, Berio portrays a protagonist whose body is a void and is formed by his listening to himself and Others. Furthermore, I explore Roland Barthes's "deconstructionist" listening approach encouraged in the work so that audience are urged to relinquish structural listening to absorb what comes to the ears moment by moment. This approach, I suggest, further reflects Berio's conviction that humans have their own "music faculty" to process music and comprehend meanings associated with it.

Significance of the Study

Berio saw musical creation as a form of research, since it includes an analysis of the genre.[11] To Berio, the best way to analyze a genre is to create a new work of that genre. This echoes the practice of meta-fiction in the 1960s when writers explored a

[11] Berio, *Interviste*, 351.

theory of fiction through the practice of writing fiction. Berio's exploration of sound and sense attempted to make establish a hypothesis of universality of experience as compositional model. Instead of providing a set of formulae for musicians to create a new piece, Berio's works are showing us examples and possibilities of the hypothesis of universality of experience. Although the search of universality of experience was ultimately unsettled, Berio admitted that the process assisted him to develop "a music that could be the music of musics."[12] This "meta-music" refers to an approach to integrate, use, represent many different musics and incorporate them into a musical process. As technology advances rapidly in the twenty-first century, Berio's exploration of music and language, as well as the hypothesis of universality of musical experience could be an inspiration for other musicians and researchers to continue the topic along with today's technology. Berio's compositional model can be adopted in computer-generated music or music drama by utilizing artificial intelligence or big data. In addition, the connection between music and the unconscious has ample potential for further research. This does not only involve neuroscientists or musicologists, but also composers since the relationship between musical designs and one's listening behaviors can also be a proof of man's musical ability.

On the other hand, Berio's "linguistic" projects have an interdisciplinary nature: they include multiple topics under the umbrella term of structuralism. The incorporation of other disciplines in humanities enriches his musical works by infusing some less

[12] Berio, *Interviste*, 78.

explored topics in music (e.g. Lacan's notion of mirror stage and talking cure as dramatic elements in *La vera storia*). The adoption of intellectual discourses, such as those by Umberto Eco, Italo Calvino, Claude Lévi-Strauss, Jacques Lacan, Roland Barthes, and Jacques Derrida, provides philosophical underpinning for Berio's musical thoughts. Reciprocally, Berio's works and his musical thoughts based on the comparison between music and language contributed to the broader discourses of structuralism and post-structuralism. Music has been often used as a metaphor, allegory, or another communication system to be compared in discourses by structuralists or post-structuralists (such as Lévi-Strauss, Lacan and Barthes). Berio's works and ideas examine similar issues of signification, the sound-sense relations, binary oppositions, and the patterns of human mind directly from the perspective of music. The role of music as a communication system in structuralist and post-structuralist discourses still has plenty to be explored.

Literature Review

Existing literature on Berio's music covers the historical background of his works, musical analysis,[13] social and cultural connotations of specific works,[14] comparative

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[13] For instance, Christoph Neidhöfer examines Berio's compositional techniques in his serial works *Nones* (1954), *Quartetto per archi* (1955-6) and *Allelujah I* (1955-6). Christoph Neidhöfer, "Inside Luciano Berio's Serialism," in *Music Analysis* 28, ii-iii (2009), 301-48. Angela Carone and Pascal Decroupet study

study,[15] and Berio's working relationship with his collaborators.[16] Discussions on music and language in Berio's works are often concerned with the music-text relations. Early studies focus on the semantic content of the text and the phonetic structure of individual words. For instance, David Osmond-Smith takes a traditional text-setting approach when analyzing the folk text in *Coro*, assuming a teleologic conception in the text.[17] Similarly, Michael Hicks and George Flynn focus on the content of the text and the function of

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the formal process and some compositional strategies by investigating Berio's sketches of individual works. Angela Carone, "La concezione formale di Luciano Berio negli anni cinquanta"; Pascal Decroupet, "Formazioni: A Sketch Study and Speculative Interpretation of Berio's Compositional Strategies," both in *Luciano Berio: Nuove Prospettive*, edited by Angela Ida de Benedictis (Florence: Casa Editrice Leo S. Olschki, 2012), 107-132; 133-162.

[14] For instance, Toni Geraci elaborates how social space can be identified in *La vera storia*. Social and cultural contexts are discussed in more details regarding *Coro* in Martin Scherzinger, "Luciano Berio's *Coro*: Nexus between African Music and Political Multitude," in *Luciano Berio: Nuove prospettive*, edited by Angela Ida de Benedictis (Florence: Casa Editrice Leo S. Olschki, 2012), 399–432; James Davis, "'Come and See the Blood in the Streets': Luciano Berio, 'Coro', and the Affective Staging of the One-Crowd," in *Music and Letters* (Oct 2019). The soundscape and the "voice politics" in relation to the Milan Studio is discussed in Delia Casadei, "Milan's Studio di Fonologia: Voice Politics in the City, 1955–58," in Journal of the Royal Musical Association (2016:141/2), 403–443.

[15] To name a few, the comparative studies in Mila de Santis, "Beyond *Opera*, Another Kind of Theatre: on the Dramaturgy of *A-Ronne*," in *Le théâtre musical de Luciano Berio* volume 1, 381-408; Luca Zoppelli, "Dramaturgie Structurale? Nouvelles observations sur le rapport entre La vera storia et Il trovatore," *Le théâtre musical de Luciano Berio* volume 1, 479-500; Jonathan Cross, "How Do You Make an Opera Without a Narrative? Journeying with Ulysses and Outis," *Le théâtre musical de Luciano Berio* volume 2, 201-222.

[16] Cecilia Bello Minciacchi discusses the working relation between Berio and Sanguineti. See "'Vociferazione' e 'discorso ininterrotto': aspetti testuali nelle prime collaborazioni di Berio e Sanguineti (1961-1965)," in *Le théâtre musical de Luciano Berio* volume 1, 95-138. Ives Hersant's focus is on the collaboration between Berio and Calvino by examining their letters. Ives Hersant, "Calvino librettiste," in *Le théâtre musical de Luciano Berio* volume 1, 453-465.

[17] David Osmond-Smith's monograph on Berio contains a whole chapter on music and text. See David Osmond-Smith, "From Words to Music," in *Berio* (Oxford: OUP, 1991), 60-74. See also Osmond-Smith's discussion on the texts of *Coro* in Osmond-Smith, *Berio* (Oxford: OUP, 1991), 81-2.

textual commentary in *Sinfonia*.[18] Ivanka Stoianova examines the phonetic structure of "O King" in *Sinfonia*, especially its timbral variation.[19]

More recent studies recognize the multiple aspects of textual elements in Berio's works, echoing Berio's opinion that only "vocal works in which all the meaningful facets combine to define the expressive singularity of that work."[20] As Mila de Santis points out, different interests and objectives lead to different types of texts for Berio.[21] The use of text is not solely concerned with the content and its formal characteristics, but more importantly the "semantic continuity," the sound components (e.g. onomatopoeia, alliteration and anaphor) and the social, geographical as well as historical context of the text. As Santis illustrates with Berio's *Stanze* (2003) and *Canticum novissimi testament* (1988), music can reinvent the text through the use of vocal expressions in a "right" context. Another way is to consider vocal gestures and other vocal elements as parameters, as in Santis's examples taken from *A-Ronne*. From the literary perspective, by examining Berio's sketches, Christoph Neidhöfer identifies various constructive concepts that are related to poetic values such as *ridonanza*, *rilettura* and *alliterazione*. These procedures are closely related to the rhythmic transformation, permutation of tone

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[18] George W. Flynn, "Listening to Berio's Music," in *The Musical Quarterly*, vol. LIX, issue 3 (1978): 388–421; Michael Hicks, "Text, Music, and Meaning in The Third Movement of Luciano Berio's *Sinfonia*," in *Perspectives of New Music*, vol. 20, issue 1/2 (1981): 202–24.
[19] Ivanka Stoianova ed., *Chemins en musique* (Paris: Richard-Masse), 1985, 96–141.
[20] Cited in Mila de Santis, "Organizzare il significato di un testo," 266.
[21] Mila de Santis, "Organizzare il significato di un testo," in *Luciano Berio: Nuove prospettive*, 237-266.

rows, and harmonic construction in multiple pieces.[22] In another vein, Alessandro Arbo relates musical meaning to musical understanding through listening. Drawing from Berio's writings, Arbo notes that instead of comprehending a work as the final product, musical understanding is closely related to the audience's active reconstruction of the elements.[23] The listening process allows the audience to experience the same processes that the composer has experienced.

Apart from tracing different forms of signification in Berio's works, my study takes a step further to examine Berio's exploration of a self-contained signification model in relation to human musical ability. Surprisingly, although Berio mentioned his ambition to explore "the eternal path of sound and sense," "linguistic projects," "universality of experience" related to man's linguistic ability, these areas have attracted very little attention by commentators. These aspects are not only concerned with the use of text, but also the organization of materials similar to that in language. Stefano Oliva explores Berio's hypothesis that music is a "language of languages" in relation to Saussure and Chomsky's texts.[24] His discussions touch upon the issue of "musical faculty" and "musical universals" in Berio's musical thoughts as inspired by linguistics. However,

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[22] Christoph Neidhöfer, "Berio at Work: Compositional Procedures in 'Circles,' 'O King,' 'Concerto' For Two Pianos, 'Glossa', And 'Notturno'," in *Luciano Berio: Nuove prospettive*, 195-233.
[23] Alessandro Arbo, "Ascoltare (e comprendere) la musica secondo Berio," in *Luciano Berio: Nuove prospettive*, 85–106.
[24] Stefano Oliva, "Luciano Berio and the Problem of Musical Language," in *Rivista italiana di filosofia del linguaggio*, vol. 14, no. 1 (2020), 24–32. See also Stefano Oliva, "Eco and Berio Between Music and Open Work," in *Rivista di estetica*, 76 (2021 April), 146-161.

Oliva mostly draws from Berio's own words and approaches the issue in a purely philosophical and aesthetic way without providing any music examples.

As I observe, Berio's signification model, i.e. the "path between sound and sense," is closely related to a number of ideas that have been discussed by commentors individually: form and formation, musical process, gesture, polyphony, collage and so on. Form and formation are one of the recent focuses of the analytical study that seeks to uncover the musical process and its connotation employed by the composer.[25] This also echoes Berio's criticism on Fedele D'Amico: "You look for forms while I look for formations; you look for systems and I the processes."[26] Marco Uvietta suggests that Berio's *Sonata* (2001) presents the two selves of a sonata in its two parts: one linear, consequential, syntactic and deductive; the other circular, episodic, paratactic, and inductive. This shows the plurality and also the "becoming" process in a sonata.[27] Such approach can be found in the opera-theater *La vera storia* (1982) discussed in Chapter 4. The second part of the work retells the same story of the first part. New meaning is created in a new context along a musical process.

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[25] Some examples of this type of study include Angela Carone, "La concezione formale di Luciano Berio negli anni cinquanta: influssi teorici e soluzioni compositive," in *Luciano Berio: nuove prospettive* (Florence: Casa Editrice Leo S. Olschki, 2012), 107–32; Pascal Decroupet, "'Formazioni': A Sketch Study and Speculative Interpretation of Berio's Compositional Strategies," in *Luciano Berio: nuove prospettive*, 133–62.
[26] Luciano Berio and Fedele D'Amico, *Nemici come prima* (Milan: Archinto, 2002), 66.
[27] Marco Uvietta, "'Sonata e no'. Processi formali in 'Sonata' di Luciano Berio," in *Luciano Berio: nuove prospettive*, 163–94.

One of the most discussed features in Berio's works is the issue of collage, particularly the collage used in the third movement of *Sinfonia*. Current studies focus on the identification of the sources adopted in the movement, as well as Berio's craftmanship of grafting the collage. Osmond-Smith and Peter Altmann have provided an inventory of the original sources of the quotations.[28] From this, Osmond-Smith and Catherine Losada have suggested the different ways the references are collated, such as overlapping pitches and texture, chromatic insertion, common harmonic basis and so on (a detailed literature review of the movement is provided in Chapter 3). However, on top of the craftmanship, the signification process through the means of collage is yet to be explored. Another notable study area is the investigation of gestures, as discussed by Ulrich Mosch and Claudia di Luzio. Their research is mainly based on Berio's writings on philosophy and aesthetics to explain how vocal and instrumental gestures carry meaning from a larger historical and social system.[29] Mosch notes that an instrument and its sound always carry the musical and cultural history associated with it, especially in Berio's *Sequenza*s. Luzio, for her part, focuses on the performativity and the dramatic nature of Berio's vocal gesture.

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[28] David Osmond-Smith, *Playing on Words: A Guide to Luciano Berio's* Sinfonia (London: Royal Musical Association, 1985), 57–71; Peter Altmann, *Sinfonia von Luciano Berio. Eine analytische Studie* (Vienna: Universal Edition, 1977).

[29] See Ulrich Mosch, "Luciano Berio's Concept of Musical Instrument in the '*Sequenzas*,'" and Claudia di Luzio, "Reverberating History. Pursuing Voices and Gestures in Luciano Berio's Music Theater," both in *Luciano Berio: New Perspectives*, 65–84; 267–92; See also Luzio, "Sanguineti e Berio, suono-voce-gesto," in *Poetiche* VIII, vol. 3 (2006): 529–48.

These recent semiotic studies on gesture by Mosch and Luzio have brought us back to the bigger picture of the Berio's exploration of music and signification. Berio strived to explore the function of musical processes in relation to sound. How exactly does musical process relate to sound, meaning, and further to dramaturgy in Berio's theatrical works? If a bigger picture of the conceptual model of signification is made, it will be clearer for us to see the way that music, like language, becomes a medium in our mind to reflect the cultural and social issues in Berio's musical world. Furthermore, all these keywords associated with Berio's works: collage, gesture, polyphony, musical process, metatheater, intertextuality, open work and so on, can be explained in terms of their functions to convey meaning. If a signification model can be formulated, some of the discussed areas by his commentators, including music-text analyses, social and cultural connotations of the works, and dramaturgy in the theatrical works can be synthesized on a conceptual level.

Methodology and Chapter Outline

This study is a historical one which investigates Berio's experimentation in connecting sound and meaning by drawing intellectual discourses on language in the twentieth century. This interdisciplinary study examines the thoughts on music and language from the perspective of music, linguistics, semiotics, literature, and literary

theories from the mid-1950s to the mid-1980s. While my main investigation subject is Berio, I provide a broader picture of the avant-garde musical scene centering on the Darmstadt summer school and the establishment of the Studio di Fonologia Musicale in Milan in the first two chapters. Some other works by Berio's contemporary composers are mentioned in order to set the scene to illustrate how music and linguistics started to intertwine in the 1950s and the 60s.

The study then focuses on Berio's musical thought and compositions. By investigating his interviews, letters, articles, TV programs, lectures, and compositions, Berio's ideas on the relationship between sound and sense are synthesized through the lens of language. These ideas are examined in relation to his works across 25 years, namely the electronic *Thema Omaggio a Joyce* (1958), the symphonic *Sinfonia* (1968), the choral *Coro* (1974), and the theatrical *La vera storia* (1982) and *Un Re in ascolto* (1984). Through the examination of Berio's musical conception and compositions, other topics regarding language and signs in literary theory, literature and linguistics are unraveled, such as the study of myth, psychoanalysis, semiotics, meta-theatricality, structuralism and poststructuralism.

Although Berio's works involved various intellectual topics, the development of sound-sense relations was always at the core. More importantly, the exploration allowed him to develop a composition style: to direct a main thread to assimilate diverse elements into an evolving musical process, so that the temporal dimension allows elements to establish relations. In this signification process, a work becomes a self-contained "world"

in which the emphasis of the internal mechanism and interactions renders the work self-reflexive. This style can be seen in Berio's compositions throughout his whole career. His understanding of music and language followed the trend of cultural theory of that time—the rise of modern linguistics, structuralism, semiotics, and a shift to poststructuralism. New ideas were constantly injected and assimilated into the "evolving process" of the "linguistic" projects, so that his oeuvre constitutes a self-contained world on a higher level to include all these discussions.

Likewise, my thesis takes a similar approach to illustrate Berio's "world" of the utopian search of sound and sense. As mentioned above, this study reflects Berio's evolving process and the interdisciplinary nature of his "linguistic" projects. Ideas will recur throughout the thesis without a clear boundary, including the notions of gesture, meta-theater, polyphony, myth, narrativity, sign, distinctive features, self-referentiality, the unconscious, human voice, the linguistic idea of "infinite use of finite means" and many more. These ideas taken from linguistics, literature, semiotics, and psychology were assimilated into Berio's projects along his career.

This thesis consists of two parts. Part one focuses on the methodology in structural linguistics adopted by Berio in his electronic and orchestral pieces around 1950s–70s. The second part examines how Berio revealed signification in his music theater by deconstructing the structure of the "sign." To set the scene of the study, Chapter One elaborates in detail the rise of "phonetic compositions" in Darmstadt summer school, the rise of linguistic studies in music, and the re-evaluation of language

in the Italian neo-avantgarde literary circle of Gruppo 63. These three areas of interest focusing on the nature of language were significant in shaping Berio's theory of music and language in subsequent years. Chapter Two focuses on Berio's electroacoustic music and the Studio di Fonologia Musicale in Milan. The chapter explains the turn to the phonological approach in the Studio that distinguished itself from the phonetic approach of the German studio, Westdeutscher Rundfunk directed by Stockhausen. The chapter also outlines the Italian studio's interdisciplinary investigations and other linguistic projects which foreshadowed the culturally oriented approach of Berio's music. Chapter Three traces the signification model devised in *Coro* and the third movement of *Sinfonia*. It elaborates the principles adopted in these works to identify, analyze and recreate pre-existing musical and textual elements. Whereas Berio described such approach of integrating pre-existing musical materials as "meta-music" ("music of musics"), the compositional approach reflects similarity to artificial intelligence in creating something new by generalizing numerous inputting data. Also, Berio's compositional model in these two works reveals his exploration of the "linguistic" nature of music, i.e. whether music is as productive as language to generate infinite material using only a limited number of principles.

The second half of the thesis focuses on Berio's two theatrical works, namely *La vera storia* and *Un Re in ascolto*. Chapter Four identifies the infusion of myth and Lacanian psychoanalysis in *La vera storia*, a work about the search for the "truth" in individual and collective memory. The two parts of *La vera storia*, an opera and a music

theater on the same text, juxtapose a structuralist and a poststructuralist (or deconstructionist) approach of signification through the critique of the "story" and the artistic representations.

Chapter Five examines the receptive side of communication—listening—in a Barthean approach in *Un Re in ascolto*, a tale about a king's absent body. It demonstrates the reversion of a series of hierarchical oppositions (presence over absence, sound over silence, self over others) in signification. The chapter also discusses Berio's conviction that our unconscious is able to analyze and prioritize the sounds that come to our ears through the act of listening. To him, listening is similar to a form of language that is governed by our unconscious. In addition, voice is examined throughout the chapters. Apart from the peculiarity of Berio's vocal representation, voice is also connected to one's unconscious to recall the memory, to uncover his inner secret and to relate to Others. It is also the medium of Berio's "theater of the mind" as expressed in these works.

To summarize, Berio's "linguistic" projects do not simply focus on the comparison between the internal structures of music and language, but also include a wide range of issues regarding language: the nature of language, our ability to learn and process language, and the way language and music reflects our thinking.

Chapter 1: Music, Linguistics, and Literature in the Postwar Avant-Garde in Italy

This chapter provides a background study on Berio's musical and textual experiments as well as his thoughts on music and language. It provides a context for understanding how twentieth-century thought on language affected musical compositions and more generally the philosophy of music. This summary focuses on three main areas concerning music, linguistics, and literature: (1) the development of avant-garde music inspired by linguistic studies, (2) musicological studies applying linguistic methods, and (3) the *neoavanguardia* [new avant-garde] literary movement, Gruppo 63, that aimed to renew literary language in Italy. By understanding the trend in musical discourses of the 1950s and 1960s, we can better understand what inspired Berio and fueled his innovation in subsequent years.

In the 1950s and 1960s, the postserialist generation reached the second phase of "New Music"—a label often referred to by critics.[30] According to Mario Bortolotto, avant-garde composers during this period treated musical pieces as a creative process. This New Music was characterized by an *epiphany* of the materials[31]: rather than adhering to preexisting form, musicians make sense of the material through a process,

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[30] "New Music" often refers to the post-1945 music which was created "from personal conviction rather than the demands of the commercial market, and often intended for an elite audience rather than for mass appeal." Elliott Schwartz and Daniel Godfrey, *Music Since 1945: Issues, Materials, and Literature* (Belmont, CA: Simon & Schuster Macmillan, 1993), 2.
[31] See Mario Bortolotto, *Fase seconda: Studi sulla nuova musica* (Turin: Einaudi, 1969), 52.

understand the materials in a revelation, and carry out the performance. In Italy, in particular, the question of form in music goes hand-in-hand with the discussion of *opera aperta* [open work] in the neo avant-garde literary movement, during which open form was adopted so that meaning and poetics would lie in the peculiar organization of words. On the other hand, the interaction between the New Music experiments and linguistic discourses became a heated exploration in a time when the field of structural linguistics was just taking shape, its methodology being disseminated among avant-garde composers.

The postwar Italian musical scene did not develop in isolation; it benefited from intellectual and technical exchange with French, German, and American composers and their approaches to music. Among the composers of the new generation, Luigi Nono (1924–1990), Luciano Berio (1925–2003), Niccolò Castiglioni (1932–1996), Giacomo Manzoni (1932–), Franco Donatoni (1927–2000), Bruno Maderna (1920–1973) and Franco Evangelisti (1926–1980) studied or presented their works at the Darmstadt Ferienkurse in the 1950s where they were influenced by the new styles and methods: many composers from this generation were inspired by serial technique, electroacoustic music, aleatoric procedure, and new conceptions of new music theater.[32]

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[32] Maderna first joined the course in 1951. From 1961–1966 Maderna and Boulez were the main directors of Ferienkurse. Berio and Evangelisti, for their part, joined the course in 1952, and Evangelisti worked in the Westdeutscher Rundfunk in 1956–1957. Nono had his first concert at Darmstadt in 1951. For almost a decade Nono remained one of the key persons in the summer school. Castiglioni taught at the Darmstadt Ferienkurse from 1958 to 1965. Donatoni attended the Ferienkurse in 1954, 1956, 1958 and 1961, whereas Manzoni presented his work *Seconda piccolo suite* there in 1957. See Gianmario Borio and Hermann

In Italy, Milan became an important music center where one defining event was the establishment of the Studio di Fonologia Musicale in 1955, which took its place among other groups such as the German Westdeutscher Rundfunk (WDR) in Cologne, the Groupe de Recherche de Musique Concrète and later the Groupe de Recherches Musicales (GRM) in Paris, the BBC Radiophonic Workshop, and the Columbia-Princeton Electronic Music Center (renamed as Computer Music Center) at Columbia University in the United States.[33] At the Milan Studio, young Italian composers were able to conduct new experiments in electroacoustic music. The Italian journal, *Incontri musicale: Quaderni internazionali di musica contemporanea*, named after the eponymous concert series, was published from 1956 to 1960 and edited by Berio in the same period as *Die Reihe*, the *Darmstädter Beiträge zur Neuen Musik*, and the *Gravesaner Blätter* in Germany. In addition, the September 1956 issue of the journal, *Elettronica*, published by Radiotelevisione Italiana (RAI), was dedicated to the Milan Studio. Avant-garde

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Danuser ed., *Im Zenit der Moderne: Die Internationalen Ferienkurse für Neue Musik Darmstadt 1946–66*, 4 vols. (Freiburg im Breisgau: Rombach, 1997); Bortolotto, *Fase seconda: Studi sulla nuova musica*; Martin Iddon, *New Music at Darmstadt: Nono, Stockhausen, Cage and Boulez* (Cambridge: CUP, 2013).

[33] See discussions on these studios in: Jennifer Iverson, *Electronic Inspirations: Technologies of the Cold War Musical Avant-Garde* (Oxford: Oxford University Press, 2018); Robert J. Gluck, "The Columbia-Princeton Electronic Music Center Educating International Composers," in *Computer Music Journal*, vol. 31, no. 2 (Summer 2007): 20–38; Louis Niebur, *Special Sound: The Creation and Legacy of the BBC Radiophonic Workshop* (Oxford: OUP, 2010); Daniel Teruggi, "Technology and Musique Concrète: The Technical Development of the Groupe de Recherches Musicales and Their Implication in Musical Composition," in *Organized Sound*, vol. 12, issue 3 (December 2007), 213–231; Marc Battier, "What the GRM brought to Music: From Musique Concrète to Acousmatic Music," in *Organized Sound*, vol. 12, issue 3 (December 2007), 189–202; Thom Holmes, *Electronic and Experimental Music: Pioneers in Technology and Composition*, second edition (NY and London: Routledge, 2002); Maddalena Novati and John Dack eds., *The Studio di Fonologia: A Musical Journey 1954–1983 Update 2008–2012* (Milan: Ricordi, 2009).

composers, critics, and scholars from various fields and countries contributed articles to these journals discussing cutting-edge topics such as serial technique, form, open work, aleatoric, and electroacoustic music.

The search for new musical thinking and new techniques to organize music led composers to investigate another communication system: language. Phonetics, a subfield of linguistics that emerged in the twentieth century to investigate speech sounds, particularly drew the attention of composers who were keen to explore relationships among music, sound, and meaning in a scientific way. On the other hand, the inspiration from linguistics extended to semantics, syntax, and other aspects of communication such as the study of signs and information engineering. All these investigations shed new light on the avant-gardists' scientific study of music as a communication system.

In a complementary way, an awareness of the internal structure of language also affected how writers and poets used their tool—words—to see the world. After James Joyce, writers continued to explore the properties of language as reflections of their worldviews, ideologies, and commentaries on social situations. In the 1960s, a group of Italian intellectuals gathered to experiment with new ways of deploying language to express their worldviews and criticism of capitalism and bourgeois society. Gruppo 63, or the Novissimi, involved participants who had close tie to Umberto Eco, Edoardo

Sanguineti and Italo Calvino. The meetings resulted in a formidable intellectual and artistic exchange.[34]

Berio's interest in the study of language persisted throughout his career. The 1950s was when Berio established the Studio di Fonologia Musicale after his trip to Tanglewood in the United States, where he attended a concert featuring the works of Varèse, Otto Luening, and Vladimir Ussachevsky. The Milan Studio flourished in the 1950s under the direction of Berio and Bruno Maderna. During this decade, Berio first read Saussure, Troubetzkoy, Jakobson, and Chomsky, and he collaborated with Umberto Eco on the radio project, "Omaggio a Joyce—Documenti sulla qualità onomatopeica del linguaggio poetico," which examines Joyce's peculiar writing style. In 1960, Berio left the Milan Studio after his last tape work, *Visage*, and returned to Tanglewood with Cathy Berberian to teach composition at a summer school. Later, he worked at Harvard University and the Juilliard School of Music while occasionally commuting to Paris and Berlin for other projects. While keeping close ties with the Italian intellectual circle—especially Sanguineti with whom he created *Passaggio* (1962) and *Laborintus II* (1965)—Berio continued to explore linguistic issues in the United States. There, he met Roman Jakobson, attended university classes on language, and gave lectures on music and language.

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[34] See discourses on the neo avant-garde literary movement in: Paolo Chirumbolo, Mario Moroni, and Luca Somigli ed., *Neoavanguardia: Italian Experimental Literature and Arts in the 1960s* (Toronto: University of Toronto Press, 2010); essays written by members of the neo avant-garde literary movement in Nanni Balestrini ed., *Gruppo 63: Il romanzo sperimentale* (Milan: Feltrinelli, 1966); Edoardo Sanguineti, *Ideologia e linguaggio*, edited by Erminio Risso (Milan: Feltrinelli, 1965, reprinted in 2001).

In the following sections, I elaborate on the introduction of phonetics to electroacoustic music in the 1950s and the musical thinking inspired by twentieth-century linguistic conception. Then I will discuss the neo avant-garde literary movement of the 1960s and briefly explain the interaction between textual experiments and Berio's music.

1.1 Electroacoustic Music and Phonetics

Among the early classical electronic/tape studios in the 1950s, the WDR in Cologne was the most active in adapting phonetics, also known as speech science, to electronic music. Established in 1953, the WDR resulted from research at Bonn University's Institute of Phonetics, a series of Darmstadt lectures, and a Cologne Radio broadcast. Phonetician and physician Werner Meyer-Eppler (1913–1960) was one of three key figures associated with this studio, along with composer Herbert Eimert (1897–1972) and the lecturer of sound recording at Cologne Radio, Robert Beyer (1901–1989).[35] Turning from the study of physics to phonetics after World War II, Meyer-Eppler published the book *Elektrische Klangerzeugung* in 1949 regarding sound production, including the use of the Vocoder which synthesizes the human voice and speech. He also introduced other disciplines to music and helped composers solve

[35] See Meyer-Eppler, Beyer and Eimert's views on electronic music and their collaboration in M. J. Grant, *Serial Music, Serial Aesthetics: Compositional Theory in Post-War Europe* (Cambridge: CUP, 2001), 50–60.

problems related to linguistics. For example, he would identify if musical information were too dense, assist in adopting gestures, approximations, and perceptible shapes in the music, and help avoid technological limitations.[36] By applying the principles of phonetics, Meyer-Eppler promoted speech synthesis, aleatory and statistical processes, and the treatment of phonetic elements as compositional materials in electronic music. Incorporating a phonetic conception in electroacoustic music was later promoted by Stockhausen, whom the WDR hired in May 1953.[37]

As electroacoustic music developed, its conception, technical realization, and relation to serial music attracted discussions by composers, critics, musicologists, and scientists. Essays discussing electroacoustic music and other avant-garde musical concepts appeared in various journals, such as *Die Reihe* (1957–68), *Incontri musicali* (1956–60), and *Gravesaner Blätter* (1955–66). The relationship between speech (or language in general) and music was also a subject of discussion. "Speech and Music" was even a featured topic in volume 7 of *Die Reihe*, published in 1958.[38] These texts did not limit the relations between speech science and electroacoustic music, but expanded on

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[36] Iverson, *Electronic Inspirations*, 105. See also Meyer-Eppler's career trajectory on pp. 24–25.
[37] In the WDR, Stockhausen composed *Studie I*, constructed entirely from sinusoidal-wave sounds. Before Stockhausen joined the WDR, he attended eight phonetics and acoustics seminars with Meyer-Eppler in the University of Bonn: Introduction to Phonetics, Section of Psychoacoustics, Introduction to Sound Research, Phonetic and Acoustical Problems of Radio Broadcasting, Practical Phonetics, Phonetics and Phonology of the German Language, Information Theory, and Perception and Cognition. He also attended an unspecified Presentation on Phenomenology. These courses touched upon multiple areas in physics, psychology, linguistics, and engineering, which provided Stockhausen with multiple perspectives on his compositions and future sound research. See Iverson, *Electronic Inspirations*, 117.
[38] Other volumes of *Die Reihe* were "Electronic Music" (1955), "Anton Webern" (1955), "Musical Craftsmanship" (1957), "Young Composers" (1958), "Reports–Analyses" (1957), "Form–Space" (1964), and "Retrospective" (1962).

general issues of music and language—the adoption of speech sounds in compositions, the comparison between language and music systems, and the peculiar organizing structure in modernist literary works that could be adopted in musical composition.[39]

The association between electroacoustic music and phonetics is not surprising, as both fields require and offer measurable and numerical analyses of sounds. Concerned with the physical properties of human speech sounds, phonetics cast a profound influence on electroacoustic music in the 1950s and 1960s. Although the field is focused on consonants and vowels, a more scientific "phone" is the proper unit specific to the physical property of a speech sound, as represented by International Phonetic Alphabet (e.g. "pen" consists of three phones [p^h], [e] and [n]). Phonetics not only affected the technical side of producing music, it also facilitated a fundamental shift in musical conception relating to the classification of sounds, the hierarchy of musical structure, and the adoption of musical parameters. Speech science explores physiological production, acoustic properties, and auditory perception (commonly known as "psychoacoustics" in Meyer-Eppler's time)[40]; applications in these three areas share similarities with the exploration of electroacoustic and other forms of avant-garde music.

On the acoustic level, one connecting point between electroacoustic music and phonetics is the representation of waveforms. Audio signals are analyzed in sinusoidal

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[39] For instance, Hans Rudolf Zeller contributed an article, "Mallarmé and Serialist Thought," in *Die Reihe* volume 6, "Speech and Music" (Pennsylvania, Bryn Mawr: Theodore Presser Co., 1960), 5–32.
[40] For the study of midcentury speech science, see Gloria J. Borden et al., *Speech Science Primer: Physiology, Acoustics, and Perception of Speech* (Baltimore: Williams & Wilkins, 2011).

components through the Fourier transform[41] and presented as harmonic content and noise. Amplitudes, frequencies of sine waves, and shaping of the harmonic partials determine the loudness, pitch, and timbre of these signals, respectively. Through manipulating these parameters, composers could generate sounds, including noise, by using oscillators, filters, modulators, and noise generators in the early days, with spectral modelling synthesis techniques added later on.[42] By assigning the configuration of frequencies directly to an oscillator, one creates a synthesized sound that can imitate human speech, a musical note, or a combination of the two. All possible sounds in the sound spectrum, including those beyond the threshold of hearing, can be generated.

Composers of electroacoustic music often explored compositional materials in relation to speech. Harmonic partials of sounds or sounds with rich sonority were considered vowels (periodic sounds), whereas noises were considered consonants (statistical or aperiodic sounds). This conception of electroacoustic noise challenged the tendency to produce pure tones of instruments in the Western music tradition. In traditional art music, especially vocal music, vowels have a higher significance than consonants, but in electroacoustic music this hierarchy was questioned. Noise even played an increasingly important role in electroacoustic music. For instance, Henri

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[41] The Fourier Transform is a tool that breaks a waveform into sine and cosine representation.
[42] See more explanation in Thom Holmes, *Electronic and Experimental Music: Pioneers in Technology and Composition*, second edition (NY and London: Routledge, 2002); Stefania Serafin, "Computer Generation and Manipulation of Sounds," in *The Cambridge Companion to Electronic Music*, edited by Nick Collins and Julio d'Escriván (Cambridge: CUP, 2007), 203–217.

Pousseur's *Scambi* (1957) consists only of noises with determinable pitch-registers which render the work full of consonant-like sounds.[43]

The development of electronically generated sound was conceptually distinct from the *musique concrète* promoted by Pierre Schaeffer and his French studio, Groupe de Recherche de Musique Concrète. Following the idea of *logatoms* (atoms of speech) in telecommunications, fragments of synthesized sound were conceived as "acoustic atoms" such that electronic pieces were built from an atomistic approach depending on the composer's knowledge of acoustics.[44] The influence of phonetics in electronic music also affected the way composers viewed the hierarchy of musical parameters, particularly the significance of timbre. Timbre is reflected in the discrete nature of the harmonic configuration of each instrument, but it lacks standard terminology to describe it. With the use of technology, timbre can now be described and quantified in terms of the shaping of formants with a specific number of frequency levels, displaying a sound continuum. During the rise of electroacoustic music in the 1950s, Stockhausen redefined the hierarchy of tone characteristics in occidental music to include five parameters (the first four of which Berio adopted in his classification), as shown in Table 1.1.[45]

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[43] See discussion in Karlheinz Stockhausen, "Two Lectures," in *Die Reihe* volume 5, "Reports-Analysis" (Pennsylvania, Byrn Mawr: Theodore Presser Co., 1959), 59–82, especially 62–63.
[44] Pascal Decroupet, "Archaeology of a Phoenix. Electronic/Electroacoustic Music: A Category Consigned to the Past?" in Veniero Rizzardi and Angle Ida de Benedictis, eds., *Nuova Musica alla Radio: Esperienze allo studio di fonologia della Rai di Milano 1954–1959* (Rome: Rai Libri, 2000), 8.
[45] See Stockhausen, "Two Lectures," 72–73.

Table 1.1: Karlheinz Stockhausen's suggestion of the five parameters of electroacoustic music.

Parameters	Examples
Pitch (harmony/melody)	92 cycle per seconds (cps) (F sharp)
Duration (meter/rhythm)	1 second
Timbre (phonetics)	a formant-area from 200 to 1000 cps
Loudness (dynamics)	80 phons
Location (topography, i.e., the location of the tone, such as the location of the listener)	0º / 5 meters

As Stockhausen's list of parameters shows, timbre is inseparable from phonetic sound, with the unit of formant-area expressed in terms of frequency.[46] Timbre has always been considered the "color" of music, as speech sounds are compared to the spectrum of the rainbow, providing a sensation akin to our perception of color. This is reminiscent of Schoenberg's emphasis on the fairly static sound-mass with changing timbres in his "Farben" from Fünf Orchesterstücke, op. 16, which has often been seen as the anticipation of "spectral" music.[47] Even sound created by a noise generator, generally

[46] Speech sound is a group of vibratory waves transmitted in the air when it is articulated. The shapes of these waves can be captured by spectrograph, which provides information as to how the sounds are produced. The spectral shaping that results from the resonances of the vocal tract is called a formant. It informs us how the sound is produced by showing the concentration of the energy level around a particular frequency of speech wave. For vowels, there are three crucial frequency levels that determine the sound of a vowel: the fundamental frequency (F0) determines the pitch level of the uttered sound; the first formant (F1) determines the height of the tongue body, i.e., whether it is a high vowel or a low vowel; the second formant (F2) determines the frontness or backness of the tongue body, i.e., whether it is a front vowel or a back vowel.

[47] "The skill of the orchestration [in 'Farben'] emphasized the acoustic and tonal properties of the instrumental combinations and the work is quite startling in its anticipation of 'spectral' music." Andrew Hugill, "The Origins of Electronic Music," in *Cambridge Companion to Electronic Music*, 7–23, citation at 15.

known as “white noise,” can be described as the simultaneity of all audible vibrations; it is given by the statistical distribution of all frequencies in the audible gamut. Noise with its frequency bands filtered out and having a purer, more sustainable tone is considered “colored noise”[48] and is compared to consonants such as [f], [s], and [z], which provide more focused frequency levels. The spectrum between colored and white noise is defined by bandwidth, i.e., pure tone has the narrowest “noise band,” while white noise has the widest.

However, the definition of timbre was still not as straightforward as listing out the numerical data. Timbre is a “complex” parameter, as described by Berio, as it is closely related to one’s perception.[49] One of the breakthroughs of musical science in the twentieth century was the measurement of perception. Since perception does not necessarily reflect the sound waves transmitted acoustically in the air, musicians and scientists investigated the auditory behaviors of the audience, as reflected in numerous essays in *Die Reihe*, *Incontri musicali*, and *Gravesaner Blätter*.[50] Apart from the threshold of audibility, one of the more familiar discoveries related to psychoacoustics were the correlations among duration, pitch, and intensity (loudness) in one’s

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[48] See discussion in Stockhausen, “Two Lectures,” 63–64.
[49] See Berio, “Prospettive nella musica. Ricerche e attività dello Studio di Fonologia Musicale di Radio Milano” (1956), in *Scritti sulla musica*, edited by Angela Ida De Benedictis (Turin: Einaudi, 2013), 186–87.
[50] For instance, Alfredo Lietti discussed one’s perception of rhythmic and frequency variations, which can be applied in editing tape compositions. See Alfredo Lietti, “Note su taluni rapport tra percezione e parametri fisici del suono,” in *Incontri musicali* vol. 4 (September 1960), 165–67.

perception.[51] For instance, as raised by Stockhausen, for the same duration of two sounds, the louder one is perceived as longer than the soft one. This finding provided a direction for the studio to explore how rhythm may be projected into the perception of pitch or timbre, or how temporal perception relates to intensity.[52] Other experiments also suggested timbral perception is affected by various parameters. For instance, the perception of attack is closely related to the identification of musical instruments; if the attack of a bell sound is removed, the timbral sensation of a bell is largely affected.[53] Apart from temporal factors, the perception of timbre is also closely related to space; Eugen Skudrzyk discusses the effectiveness of adding low-pitched instruments or low-frequency modulations to intermingle with the acoustic presentation so that the sensation of space in a large auditorium is enhanced.[54] What is known as the "tone-color" of the spectrum results from multiple factors that shape our perception.[55]

Therefore, as clarified by Berio, timbre is not merely a description of "spectral" information, but consists of the spatial and temporal relations of the components in the

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[51] The perception is affected by the sequence of multiple stimuli from the parameters. See Werner Meyer-Eppler, "Statistic and Psychologic Problems of Sound," in *Die Reihe* volume 1, 55–61. See also M. J. Grant's discussion on the psychoacoustical problems of electronic music. M. J. Grant, *Serial Music, Serial Aesthetics*, 93–94.
[52] See Karlheinz Stockhausen, "Actualia," in *Die Reihe* volume 1, "Electronic Music," edited by Herbert Eimert and Karlheinz Stockhausen (Pennsylvania, Bryn Mawr: Theodore Presser Co., 1955), 45–51, especially 49–50. The correlation between duration and intensity is also mentioned in Berio's essay, "Prospettive nella musica," in *Scritti*, 180–195, especially 187.
[53] The example is mentioned in Berio, "Prospettive nella musica," 188.
[54] This observation has been known to musicians mainly from experience. It was discussed in a more scientific way in the twentieth century. See Eugen Skudrzyk, "Psychoacoustical Phenomena Accompanying Natural and Synthetic Sounds," in *Gravesaner Blätter* (July 1957), 79–82.
[55] To Stockhausen, "tone-color" more specifically results from time-structure when superimposing formants. See Stockhausen, "… How Time Passes…," in *Die Reihe* volume 3, 10–40.

spectrum.[56] If, to Stockhausen, timbre is comparable to speech sound, he may have been influenced by Meyer-Eppler, who often compared acoustic research in music to that in speech science in the early days of the WDR.[57] Since the psychoacoustic study of language came earlier than its application to music, it would have provided abundant references for early research in musical perception. In fact, the discrepancy between acoustics and auditory perception also became an issue in the 1960s for musicologists and musicians who were interested in searching for the connection between music and language; they debated whether music should be considered acoustically in terms of numbers or perceptually in terms of subjective experience (see below).

Whereas acoustics and auditory perception attracted much attention by studios in the midcentury, arguably the Studio di Fonologia Musicale in Milan was the most dedicated to conducting articulatory experiments in human voice in the classical studio era. Berio's *Thema (Omaggio a Joyce)* (1957–58) rearranges (through tape splicing) Cathy Berberian's recitation according to the articulatory features of the speech (see Chapter 2). Apart from *Thema*, the Milan Studio paid particular attention to how electroacoustic sounds imitate natural sounds (including human voice, speech, and sounds from acoustic instruments). Berio's *Visage* (1960) adopts electroacoustic procedures to imitate Berberian's nonlinguistic vocal sounds—such as laughing, sobbing,

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[56] Berio, "Prospettive nella musica," 188.
[57] For instance, the variable perception of consonants "p," "t," and "k" in relation to their following vowels were used to exemplify the juxtaposition of sound elements to give rise to different sensations. Meyer-Eppler, "Statistic and Psychologic Problems of Sound," in *Die Reihe* volume 1, 55–61.

and singing—which lack concrete semantic words (see Chapter 2). Likewise, Maderna's tape composition, *Invenzione su una voce (Dimenzioni II)* (1960), features Berberian, who recited the phonemes prepared by Hans G. Helms. The phonemes and nonlinguistic vocal sounds were juxtaposed with the electroacoustic treatment of her voice so that the two dimensions are placed in dialogue. Without using any real human voice, Maderna's later tape composition, *Le Rire* (1962), is a comedy that imitates sounds of objects and human vocalics, notably laughing, with pure noise.[58]

The dialectic relation between electroacoustic techniques and human voice was also combined with indeterminacy in John Cage's *Aria* and *Fontana Mix* (1958), featuring Berberian's diverse singing styles and recitation. The score of the tape work consists of graphically notated music along with the text, which encompasses isolated vowels, consonants, and meaningful words in various languages.[59] On the other hand, nasalization in various types of folk singing is explored in Berio's electronic piece, *Questo vuol dire che* (1969 version). The degree of nasalization in different Italian folk singing shows how ethnic vocal styles can be compared to dialects in ethnography. In addition to speech science, linguistic studies—including discussions of onomatopoeia, vocalics (paralanguage and infra-language), intonation, and semantic properties of

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[58] The experiment of voice would be incorporated in Maderna's later works: *Hyperion* (1964) in which voice is given to machine, *Tempo Libero* (1972), and *Ages* (1972) which reflects the radiophonic technique.
[59] See more details of the two works in https://johncage.org/pp/John-Cage-Work-Detail.cfm?work_ID=29 (*Aria*); https://johncage.org/pp/John-Cage-Work-Detail.cfm?work_ID=79 (*Fontana Mix*) (accessed Oct 14, 2021).

sound—provide the intellectual basis for the work on top of experimentation with human voice.

The influence of speech science can be found in many of Berio's nonelectroacoustic works as well. The most obvious are the experimental articulatory techniques, notated in IPA symbols or other textual descriptions, in various works such as *Circles* (1960), *Sequenza III* (1965), *Laborintus II* (1965), "O King" in *Sinfonia* (1968), *Coro* (1974), and *A-Ronne* (1975). The articulatory experimentation in voice is further developed in the instrumental music, notably in his versions of *Sequenza*. The nuances of the playing technique can be compared to vocal articulation of phonetic sounds.

Knowledge of speech science allowed Berio to attempt new structures or create effects in multiple ways, as I discuss in later chapters. The most notable is his assimilation of fricatives ([s], [z], [f]) into white noise in *Thema (Omaggio a Joyce)* and his development of continuity based on similarities of sonic features. In *Coro*, as explained by Berio, the harmonic structures of the episodes corresponding to Neruda's poetry were modelled from vocal formants.[60] This results in an effect like an instrumental "voice" sung by the orchestra. The filtering technique of frequency from certain formant areas became a compositional idea when Berio developed the theatrical representation of "musical action" in the 1980s. He saw the relations between theatrical elements (music,

[60] Berio, *Interviste*, 151–153.

text, or scene) as a hierarchy of a "semantic bandwidth" that can be filtered[61]—the significant elements are highlighted while certain parts of the music or text are suppressed.

1.2 Speech/Text Compositions in the 1950s and 1960s

Speech or text compositions here refer to musical pieces that highlight the material of speech sounds, regardless of whether they bear semantic meaning. Although speech or text compositions remain isolated cases in the history of music, they have their own aesthetics and illustrate the intricacy between sound and meaning. These works emphasize vocal timbre and consider speech sound as a creative material similar to musical notes. Amid increasing interest in speech and language among the avant-gardists, speech composition was a means for them to explore voice, intelligibility of meaning, emotion, the use of linguistic materials as structural elements, and the boundary between speech and music (especially electroacoustic music). In these experiments, they employed various compositional techniques to investigate how meaning, syllables, and emotions relate to the musicality of language and the communicative nature of speech sounds.

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[61] Berio, *Interviste*, 173.

The first performances of speech compositions took place in 1955–56.[62] The pieces often performed in this period were Boulez's *Le Marteau sans maître* (1955, setting René Char's poetry), Nono's *Il Canto sospeso* (1955–56), and Stockhausen's *Gesang der Jünglinge* (1955–56). For *Gesang*, Stockhausen concentrates on the sacredness of the piece, where the memorization of certain words allows speech to become ritual.[63] The piece reveals structuralist conceptions to a certain extent—it is created in paired oppositions including sound-vowel versus consonant-noise, dark tones versus bright tones, and sound-noise opposition between purely harmonic spectra versus aleatoric noise-bands. A continuum between sound-motivic and word-motivic extremes is drawn, and this allows the audience to perceive a space between speech and music.

Avoiding electronic means, the sound and speech continuum in Boulez's *Le Marteau sans maître* is rendered in five categories of singing style: parlando, quasi parlando, syllabic song, melismatic song, and closed mouth [bouche fermée].[64] The peculiar text-setting and vocal styles required, when combined with the serial technique, rendering the sung text more syllable-oriented with tone color resembling musical instruments. Boulez's peculiar way of text-setting did not disrupt the conveyance of

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[62] See Stockhausen's descriptions of these performances. Karlheinz Stockhausen, "Music and Speech," in *Die Reihe* volume 6, "Music and Speech," edited by Herbert Eimert and Karlheinz Stockhausen (Pennsylvania, Bryn Mawr: Theordore Presser Co., 1960), 40–64.

[63] When explaining his work *Gesang*, Stockhausen stressed that: "the listener is reminded of a word-connection [between the words "preiset" and "Herm"] which he has always known: the words are memorized, and here we are primarily concerned with the fact *that* and *how* they are memorized, and the details of the content are secondary importance; the concentration is directed upon the sacredness; speech becomes ritual." See Karlheinz Stockhausen, "Music and Speech," in *Die Reihe* volume 6, "Music and Speech," 40–64, citation at 58.

[64] See Stockhausen, "Music and Speech," in *Die Reihe* volume 6, "Speech and Music," 40–47.

semantic meaning inherent in René Char's three surrealist poems; rather, the serial procedure applied in rhythm, dynamics, and articulation enhanced various interpretations and ambiguities.

Luigi Nono adopted the phonetic compositional approach to renew his vocal music,-believing that "text composition" (text as material to be composed, not applied) had opened up infinite possibilities for combining semantic and phonetic elements.[65] Unlike many text compositions that mask the intelligibility of meaning, Nono developed a compositional technique that connects semantic and phonetic elements. In his *La Terra e la compagna* (1957), two different but related texts on woman and nature are united by means of their phonetic similarities.[66] As shown in Figure 1.1, the first text is presented by a more articulated sound field, while the second has a more linear projection. By combining similar phonetic structures, the semantic contents are amplified while retaining textual comprehensibility.[67]

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[65] Luigi Nono, *Nostalgia for the Future: Luigi Nono's Selected Writings and Interviews*, edited by Angela Ida De Benedictis and Veniero Rizzardi (Oakland: University of California Press, 2018), 164.
[66] See Nono, *Nostalgia for the Future*, 162–163.
[67] Nono observed that Giovanni Gabrieli's *Alleluja* is a good example that includes an acoustic field in which textual meaning is increased through the fullness of phonetic constellations. See Nono, *Nostalgia for the Future*, 170–171.

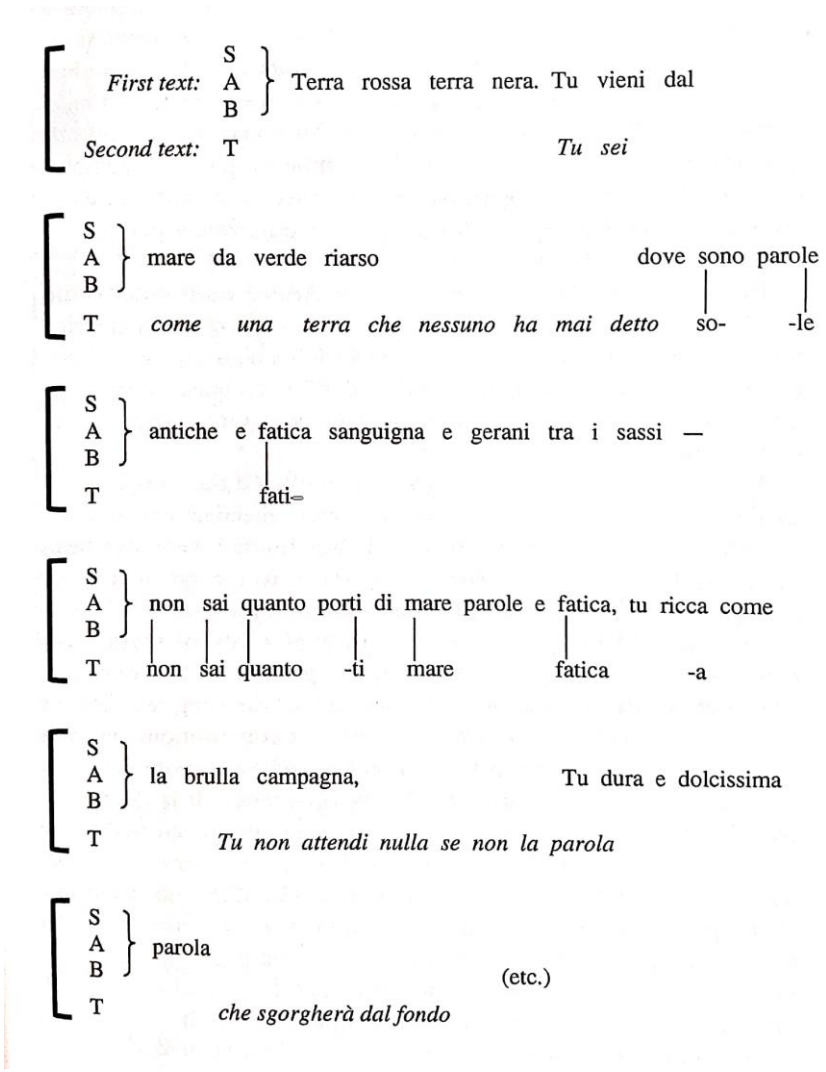

Figure 1.1: Textual counterpoint in Luigi Nono's *La terra e la compagna* (1957). Reproduced from Angela Ida De Benedictis and Veniero Rizzardi's illustration in Nono, *Nostalgia for the Future*, 163.

While contemplating the possibility that text can be "retransformed" by music, Nono attempted to shape the text so that it becomes music and has the same

communicative capacity.[68] In his choral work, *Il canto sospeso*, the text is seemingly fragmented into phonetic units and interwoven into the piece's introspective atmosphere. Rebutting Stockhausen's heavy criticism regarding the incomprehensibility of the work, Nono explained that the composition of the piece is based on the phonetic-semantic whole.[69]

Mauricio Kagel explores phonetic composition in another way through his serial choral work, *Anagrama* (1957–58). The composer adopts the 11 letters from the Medieval Latin palindrome, "In girum inmus nocte et consummiru igni" ("We circle in the night and are consumed by fire"), as a "tone-row" to form sounds that are either meaningful or meaningless by textual permutation. The letters are rearranged to "resemanticize" the syllables: they now form meaningful words across topics that evoke war—like death, night, and restlessness. Also, as observed by Jennifer Iverson, the vowel continuum in this work illustrates a timbral play induced by the mouth-filter as if the work were an electronic piece.[70] In a different vein, Stockhausen's *Stimmung* (1968) uses overtones as the primary elements and makes use of vocal formants as pitches. The piece is a collection of transitions between the vowels /u/–/a/, /a/–/i/, /i/–/œ/, and /œ/–/u/.[71]

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[68] Nono, *Nostalgia for the Future*, 182.
[69] Nono, *Nostalgia for the Future*, 177. Although Nono did not agree with Stockhausen's analysis of his work, it included an informative and detailed explanation of *Il canto sospeso*, which provides a good reference for readers. See Stockhausen, "Music and Speech," 40–64, especially 47–57.
[70] Iverson, *Electronic Inspirations*, 181–7.
[71] See Wolfgang Saus, "Karlheinz Stockhausen's *Stimmung* and Vowel Overtone Singing," in *The Annual of Texts by Foreign Guest Professors* (Prague: Univerzita Karlova v Praze, Filozofická fakulta, 2009) 471–8.

When the overtones made by different vocalists fall into the frequency domain of a formant, they are reinforced and become more prominent.

The communicative ability of language was challenged in other avant-garde vocal works. Ligeti chose to blur the boundary between sound and speech by challenging the communicative ability of nonlinguistic vocal expression. His phonetic compositions, *Aventures* (1962–63) and *Nouvelles Aventures* (1962–65), feature singers performing a text marked solely with phonetic symbols without any semantic meaning. Their vocal expression demonstrates sonic properties that sometimes function as instrumental sounds while at other times are imbued with human emotion, reminiscent of groans, cries, and shouts. The engagement of the performers' voices direct the audience to feel their own performative bodies.[72] Likewise, Dieter Schnebel's *für stimmen (… missa est)* (1956–69) consists of *dt31*$_6$, *AMN,:! (madrasha II)* and *Choralvorspiele I/II* and takes a radical approach to interpreting sacred texts with scattered phonemes in serial technique.[73] The emotional vocal expressions often musicalize and distort the integrity of the text, and the third movement further adopts only complex vocal sounds and even animal voices. Paul Attinello commented that the series of experiments disconnects "the human voice from its familiar territory of language" to achieve the final liberation for the voice, i.e., freeing

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[72] Zeynep Bulut, "Theorizing Voice in Performance: György Ligeti's 'Aventures'," in *Perspectives of New Music* issue 1, vol. 48 (2010): 44–64.
[73] For further explanation see Paul Attinello, "Dialectics of Serialism: Abstraction and Deconstruction in Schnebel's *für stimmen (… missa est)*, in *Contemporary Music Review* issue 1, vol. 26, (2007): 39–52.

itself from communication and meaning.[74] As stated by Schnebel, provoking the audience is an important aesthetic component in Kagel's *Anagrama*, Ligeti's *Aventures*, and his own *für stimmen*.[75] They are provocative because they challenge the "rational" communication tool of language and replace it with the "prelinguistic" utterances from one's instinct.

A failure to communicate verbally can also be found in Milton Babbitt's serial composition, *Philomel* (1964). The piece explores the boundaries between speech, synthesized voice, Sprechstimme, and singing by making the vocal line angular and disjointed. The emphasis on discrete syllables portrays Philomel as unable to speak after her tongue is cut out. Conversely, the possibilities of communication by means of human voice are explored to the extreme in the Milan Studio, through Berio's *Visage* (1960) and *Sequenza III* (1965), and Cathy Berberian's *Stripsody* (1966). A wide range of vocal expression and articulatory experiments are incorporated in these works.

In these compositions, what had traditionally been considered solely speech was now also adopted as a building block of music. The musicality of speech sound in these works is often placed in the primary position, and the organization of these speech sounds and the message derived from the communication process override the semantic meaning of words. Stockhausen went further to distinguish between a piece of text held together by the meaning of individual words ("meaning of a text") and a stream of phones united

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[74] Attinello, "Dialectics of Serialism," 49.
[75] Cited in Attinello, "Dialectics of Serialism," 42.

by their inherent sonic properties ("meaning of a phone").[76] In some cases, such as in Kagel's *Anagrama* and some instances within Berio's *Coro*, semantic meaning is evoked by chance during a permutational process, making meaning of the text the overtone of the phonic flow. Different ways of organizing words and phones result in multiple levels of comprehensibility.

1.3 Structural Linguistics and Music

At first, the exploration of music and language revived in the mid-twentieth century did not go beyond conventional descriptive comparisons between musical and linguistic properties. Deryck Cooke's approach to examine "the language of music" was a descriptive one which suggests musical expression, such as intervals, pitches, and tonality, can create certain perceptual experiences similar to those produced by linguistic expression.[77] Although Hermann Scherchen observed that the conflict between music and text is related to musical forms in modernist works, his elaboration was limited to the peculiar text-setting in vocal works such as Schoenberg's *The Book of the Hanging Garden* (1908–09), Berg's *Lulu* (1937), Dallapiccola's *Il Prigioniero* (1949), Hindemith's *Das Marienleben* (1923), Nono's *Lorca-Epitaph* (1951–53), Boulez's *Le*

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[76] See Karlheinz Stockhausen, "Actualia," in *Die Reihe* volume 1, "Electronic Music," edited by Herbert Eimert and Karlheinz Stockhausen (Pennsylvania, Bryn Mawr: Theodore Presser Co., 1955), 45–51, especially 45–46.
[77] Deryck Cooke, *The Language of Music* (London: OUP), 1959.

Visage nuptial (1946–47), and the dominance of words in Stravinsky's Cantata (1951–52).[78]

As explained by M. J. Grant, in the middle of the 1950s, "music and language" was related to a whole network of ideas between the two systems. They included issues from the aspect of text-setting to music's status as a language, a discussion "which itself may be subdivided into the structural functions of language on the one hand, and the more emotionally charged issue of what music 'means' on the other."[79] With the rise of the disciplines of linguistics and semiotics, as well as the influence from science and engineering, an increasingly scientific approach was adopted to explore the two communication systems. As noted by Michel Chion, the attractiveness of linguistics to musicians is its "scientificness" that could turn music into an objective field by adopting laws and principles.[80] After Ferdinand de Saussure's suggestion of the arbitrary relationship between signifier and signified (*Cours de linguistique générale*, 1916), linguistics was gradually redefined as a scientific discipline, with a focus on the linguistic system (*langue*) over individual occurrences (*parole*). The Russian linguist Nikolaj Trubetzkoy and his followers from the Prague School (including Roman Jakobson, Émile Benveniste, Leonard Bloomfield, and Louis Hjelmslev) applied Saussurean theory to the

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[78] Hermann Scherchen, "Sprache und Musik," in *Gravesaner Blätter* II/III, edited by Hermann Scherchen (Jan 1956): 3–4.
[79] Grant, *Serial Music, Serial Aesthetics*, 193–194.
[80] Michel Chion, *Guide to Sound Objects: Pierre Schaeffer and Musical Research*, translated by John Dack and Christine North, 2009. Original French version published in 1983 and 1995. The work is an introductory guide to Pierre Schaeffer's *Treatise on Musical Objects*. Document available online: https://monoskop.org/log/?p=536. (accessed Oct 7, 2021), citation at 84.

elaboration of “phoneme” in individual languages and identified the internal relations of phonological structure. The Prague School treated phonemes as a number of separate, distinctive, or “pertinent” features characterizing phonemes as a linguistic component. The identification of the “phoneme” and its distinctive features is one of the criteria needed to distinguish whether a communication system belongs to “language.” Two words that show a minimal phonetic difference required to create different meanings are called a “minimal pair.” For instance, the beginning /t/ and /d/ sounds in “time” and “dime” differentiate meaning between the two words. It is this minimal criterion, or *distinctive feature*, that is used to categorize speech sounds into natural classes from a group of sounds and differentiate their meanings in a specific language.

Around the 1950s, there was debate regarding whether serialism can be considered grammar. One such debate involved two Belgians, Nicolas Ruwet and Henri Pousseur. Ruwet was among the first to apply the structural linguistics of the Prague School into art music. He rebutted Pousseur’s hypothesis that serial music could be regarded as language.[81] According to Ruwet, if the identification of distinctive features among elements is a criterion of language, serial music cannot be considered as language since it involves the simultaneity of various parameters (pitch, dynamics, intensity, and rhythm) so that distinctive features cannot be singled out. The signification process is

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[81] See Nicolas Ruwet, “Contradictions du langage sériel” (1959), in *Langage, musique, poésie* (Paris: Éditions du Seuil, 1972), 23–40. The same article was reprinted in *Incontri musicali* and the “Speech and Music” issue of *Die Reihe*. See also the summary of discourses on music and language in post-war Europe in Grant, *Serial Music, Serial Aesthetics*, 193–220.

thus hindered. Ruwet was also much concerned with the audibility of serial music being precise enough to differentiate the nuances. In response, Pousseur explained that the variants of the parameters belong to individual occurrences (*parole*) that would gradually form a well-established system (*langue*).[82] Although Ruwet and Pousseur's debate was still rudimentary in dealing with the theoretical dimension of the two systems, it helped to move the topic of music and language away from the mere construction of phonetic composition. In doing so, it revealed a deeper linguistic issue that touched upon the core ideas of distinctive features—*langue* and *parole* in relation to serial music. Likewise, Berio took a semiotic perspective to rebut Amando Plebe's suggestion that the rigorous structuring of serial music functions as a language.[83] Berio considered serialism as being solely concerned for the arbitrary "phonemic" level of a "language"; serialism is an invention as opposed to language, which is a continuity from the past.

Another feature peculiar to language is *double articulation*, as discussed among linguists in the midcentury. It is a property that allows language to be productive and flexible as a communication system. Sentences can be formed with duality of patterning. On the first level (the level of sound), phonetic sounds can be grouped into a chunk of meaningful words, e.g., the meaningless sound units /p/, /e/, and /n/ combine to form the word "pen." On the second level (the level of meaning), words (meaningful units)

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[82] See Henri Pousseur, "Music, Form and Practice, in *Die Reihe* volume 6, "Speech and Music," 77–93.
[83] Amando Plebe, "Il critic marxista e la musica d'oggi," in *Il Contemoraneo* vol. 61 (1963): 28–39; Plebe, "Il problema del linguaggio melodrammatico nel *Mathis* di Hindemith," in *La Rassegna musicale* XXXII, vol. 2–4 (1962): 224–232; Berio, "Eugenetica musicale e gastronomia dell 'impegno'," in *Scritti*, 378–386.

combine to form larger units, i.e., sentences. According to André Martinet, who coined the term, double articulation permits an infinite number of words to be formed from meaningless units using a finite set of sounds.[84] Regardless of whether the product yields meaning, an infinite number of sentences can be formed in a similar way using a limited number of meaningful words.

The generative nature of sound and meaning by double articulation was the factor that led anthropologist Claude Lévi-Strauss to reject serial music as a language. In the "Overture" of *The Raw and the Cooked* (1964), Lévi-Strauss explains that in the case of serial as well as concrete music, a system of signs is constructed by combining the two levels of articulation into one.[85] It is because there is not an immovable semantic sphere for the other level of articulation (the level of sound) to rely on. For serial music, both levels of articulation can only be defined in the abstract and in the relations among musical units.

Even the linguistic properties of music were always controversial—musicians and musicologists never ceased adopting linguistic concepts to describe music. At the same time, in 1958, ethnomusicologist Bruno Nettl attempted to transfer to music some of the ideas and procedures used in language.[86] Although he admitted that linguistic analysis

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[84] For more explanation of double articulation see André Martinet, *Éléments de linguistique générale* (Paris: Colin, 1960).
[85] See Claude Lévi-Strauss, *The Raw and the Cooked*, translated by John and Doreen Weighman (New York: Harper & Row, 1969), 24.
[86] See Bruno Nettl, "Some Linguistic Approaches to Musical Analysis," in *Journal of the International Folk Music Council*, no. 10 (1958): 37–41.

cannot be analogous to musical analysis in matters of distribution, the ideas of "pitch phoneme," "rhythmic phoneme," "harmony phoneme," and others were introduced in hope of shedding light on a new approach to musical utterances. He also showed the possibility of viewing musical materials as "allophones," a pronunciation variant of the same phoneme (e.g., whether there is a trill for the Italian /r/ doesn't change the meaning). For instance, the flattened and nonflattened sixth and seventh degrees of a minor scale have the same tonal function despite the two different forms, and so they may be considered "allophones" of each other. This common property is prevalent in many forms of folk music. Charles Seeger, for his part, envisaged the atomic unit of a "musical phoneme" as a single note (toneme), beat (rhytheme), or tone-beat, while a grouping of phonemes constituted a "morpheme," or meaningful unit, such as a motif, pattern, or musical logic ("mood").[87] *Meaning* seemed to lie in the logical structure within the musical process. Nettl and Seeger's suggestion appeared at about the same time Stockhausen saw units of electronic music as "phones" and Berio adopted "phoneme" (see Chapter 2). Such vision provided a new perspective on music in relation to the combinations among the units, as opposed to the conventional musical units such as a quarter note, a minor third, etc. I return to the discussion of the distinctive feature in Chapters 3 and 4, where I will argue that it was adopted in Berio's symphonic and

[87] See Charles Seeger, "On the Moods of a Music Logic," in *Journal of the American Musicological Society*, vol. 13, issue 1–3 (1960): 224–261.

theatrical works to decompose preexisting musical and theatrical materials and recombine them to form new ones.

Beginning in the 1960s the investigation focused more on the musical equivalence of the phoneme, the segmentation of musical units, and the structuralist conception of music. One way of locating a phoneme is by tracing the repetition of musical segments. Ruwet identified repeated segments and divided them into subsegments that are either recurrent or nonrecurrent. These segments were compared and analyzed to see how they are combined, varied, duplicated in hierarchies, and contrastive with one another in terms of various parameters (pitch, timbre, duration, attack, etc.).[88] Materials may appear to be a transformation of each other, i.e., rhythmic or melodic variants; they have similar rhythm but different pitch contours or vice versa; or there may be permutations, additions, or subtractions of elements.

In fact, the issue of segmentation can be traced back to Lévi-Strauss's treatment of the narrative in myths as a *language* that consists of "mythemes."[89] Lévi-Strauss divided the narrative of myths into independent situations and arranged them vertically according to similarities of the situations and horizontally according to logical relations. As he describes, the layout of the arrangement spreads out in the manner of an orchestral score. Similarly, by means of segmentation of monodies, Ruwet and Simha Arom

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[88] Ruwet particularly used Debussy's music to exemplify the notion of repetition in relation to segmentation. See Nicolas Ruwet, "Note sur les duplications dans l'œuvre de Claude Debussy," in *Revue belge de musicology*, vol. 16, issue 1/4 (1962): 57–70.
[89] See Claude Lévi-Strauss, "The Structural Study of Myth," in *The Journal of American Folklore*, vol. 68, issue 267 (1955): 428–444.

identified musical segments and arranged them graphically in vertical and horizontal dimensions: the relations between the segments and the unity of the piece.[90] In their analyses, a segment was further divided into subsegments so that multiple levels of analysis could be established.[91] This structural analytical method provided an alternative to traditional musical analysis. Such syntagmatic and paradigmatic approaches that identify the smallest musical unit in a piece—the "musical phoneme"—were picked up by David Lidov and Jean-Jacques Nattiez.[92] The juxtaposition of similar segments to identify repetitions, transformations, and variations was further developed by Ruwet and Nattiez as the notion of "distributional taxonomy." Although Berio did not entirely agree to the musical semiotics established during this period,[93] his usual technique of motivic variation conveys meaning by combining with dramatic representation. For instance, the retrieval of specificities from a character's memory by constant repetition can be found in *La vera storia* (Chapter 4) and the gradual transformation of the character's self-experience is revealed in *Un Re in ascolto* (Chapter 5).

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[90] See Nicholas Ruwet, "Méthodes d'analyse en musicologie," in *Revue belge de musicology*, vol. XX (1966): 65–90; Simha Arom, "Essai d'une notation des monodies à des fins d'analyse," in *Revue de musicology*, vol. 55, issue 2 (1969): 172–216. Arom's analysis of African heterophony in the Banda Linda tribe, which inspired Berio's *Coro*, was obtained using this method.

[91] For instance, the structure of the first level is A+A'+B, whereas the second level defines the subsegments as A=a+b+c+b', the third level defines a=a1+a2, etc.

[92] See Nicolas Ruwet, *Langage, musique, poésie* (Paris: Le Seuil, 1972); David Lidov, *On Musical Phrase* (Montreal: Université de Montréal, 1975); Jean-Jacques Nattiez, *Fondements d'une sémiologie de la musique* (Paris: Union Générale d'Éditions, 1975).

[93] Berio did not entirely agree with the approach according to which musical semiotics, such as established by Ruwet, Osmond-Smith, and Nattiez, reduced musical works to something abstract. This especially happens in Nattiez's proposal of "neutral level," which is detached from the musical text. He preferred to take an evolutionary approach to analyze music, i.e., how music is evolved from real occurrences in history. Berio, "Invito" (2003), in *Scritti*, 482–98.

From the 1960s onward, as the fad for electronic music started to wane, attention to linguistic conception in music shifted from a phonetic perspective to a phonological one. Musicians and musicologists tended to approach the issue by searching for internal relations among parameters rather than absolute scientific facts. French composer François-Bernard Mâche (1935–) believed that music is not entirely sonorous "quanta" (presented in numbers) on the auditive level, but "qualia" (presented in subjective experience).[94] Specifically, timbre is a psychological feature which requires reference points of register and intensity subject to the context. Mâche proposed the use of the Jakobsonian phonological model to identify pertinent sonorous features in the music and demonstrated his analysis with the overture to Monteverdi's *L'Incoronazione di Poppea*.[95]

Schaeffer joined the discourse on music and language when he elaborated his ideas on sound objects and listening in his *Traité des Objets Musicaux* (1966; reedited 1977). Schaeffer saw that the language and music parallel lies in the correlation between units: a linguistic or musical sound does not merely play the role of the sound itself, but its *value*, which relies on the intrinsic properties of the sound object in relation to the system.[96] Between the two poles of material sound object and meaning, Schaeffer

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[94] François-Bernand Mâche, "Langage et musique," in *La Nouvelle Revue Française* 196, no. 17 (1969): 586–594.
[95] See François-Bernand Mâche, "Méthodes linguistiques et musicologie," in *Musique en Jeu*, vol. 5 (1971): 75–91.
[96] Pierre Schaeffer, *Treatise on Musical Objects* (1966), translated by Christine North and John Dack (Oakland: University of California Press, 2017).

sketches out stages of higher complexity regarding the parallels between language and music:

utterances in language	pieces of music
sentences in language	musical phrases
words from the lexis	intervals, chords, or motifs
phonemes (distinctive features)	values (pitch, intensity, timbre, duration)[97]

The comparison with distinctive features of the abstract musical qualities reflects Schaeffer's view that these "pertinent" parameters are playing a role in the system aside their absolute sonorous characteristics, though variations can complicate the system. Schaeffer further claims that if there is a closest point between music and language, it should be located at the level of pure music because values in music reach their highest level of abstraction.

The recognition of correlations and the search for "meaning" is also closely related to the act of listening. Schaeffer divides auditory reception into four modes: listening (*écouter*), perceiving (*ouïr*), hearing (*entendre*), and comprehending (*comprendre*).[98] Listening refers to the act of identifying the sound as a sign of the source; perceiving means receiving a sound passively (such as background noise); hearing is an intentional act to focus on the unique sound qualities; and comprehending involves the "semantic" of the sound, i.e., grasping a meaning through a code by treating

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[97] Pierre Schaeffer, *Treatise on Musical Objects*, 286–7.
[98] Pierre Schaeffer, *Treatise on Musical Objects*, 73–9.

the sound as a sign. The focus on listening and meaning reflects the investigation of auditory perception and the "decoding" process in the human mind. The issue of listening and meaning would be explored in Berio's *Un Re in ascolto,* examined in Chapter 5.

Whereas musicians and scholars focused more on comparing the natures of music and language, Berio's investigation was wide-ranging and more applicable to his compositions. As an interdisciplinary subject, linguistics has been investigated in multiple ways. In a 1965 letter, Berio shares a booklist with a friend who had inquired about linguistics books translated into Italian.[99] Taking a glance at the booklist can help us understand Berio's interest and inspiration in those years. Apart from general linguistic theories, the books cover a wide range of topics, from speech science, history, communication theory, and philosophy of language to interdisciplinary studies such as psycholinguistics and sociolinguistics. The books include: *Language, A Modern Synthesis* by Joshua Watmough, *An Introduction to Linguistic Science* by A. H. Sturtevant, *General Phonetics* by R.M.S. Heffner, *On Human Communication* by Colin Cherry, *Diachronic and Synchronic Aspects of Language* by Alf Sommerfelt, *Words and Things* by Roger Brown, *Psycholinguistics, Style in Language,* and other articles such as "La linguistique, science sociologique," "Le point de vue historique en linguistique," "Language, Society and Culture," and "Linguistic Problems and European Unity." Most

[99] Letter cited in Mila de Santis, "Organizzare il significato di un testo," in *Luciano Berio nuove prospettive*, 250–51.

recommended was Roman Jakobson's works on phonology, translated by Nicolas Ruwet, and his article, "Linguistics and Poetics."

Many of the ideas in these books were applied in Berio's works, as I show in later chapters. Apart from the phonetics and phonology prominent in Berio's experiments on voice, his works demonstrate an attempt to discover similarities between music and language through the notion of double articulation as well as paradigmatic and syntagmatic (also diachronic and synchronic) relations among musical materials. Taking cues from sociolinguistics, Berio adopts folk songs, variants of musical techniques in specific areas ("musical ethnography"), and variants of vocal representation among individuals ("musical idiolect") as compositional materials. Regarding communication, musical and textual materials are often considered to be information and conceived of as binary signals, i.e., old and new, presence and absence of certain elements. In addition, influence from psycholinguistics, which investigates psychological processes involved in the use of language, led Berio to investigate the "universality of experience" related to music, i.e., how the use of music is related to the pattern of the human mind—the central topic in this thesis.

1.4 Communication Process and Information Theory

Jakobson discussed the relationship between linguistics and literature in his 1958 paper, "Linguistics and Poetics,"[100] schematizing the six factors of the communication process with respect to their literary function: addresser (emotive), context (referential), message (poetic), addressee (conative), contact (phatic), and code (metalingual) (see Figure 1.2).

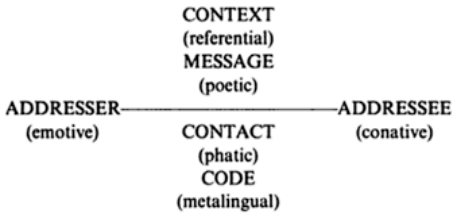

Figure 1.2: Roman Jakobson's model of literary function in relation to the communication process (1960).

Jakobson's model tells us that, contrary to the belief that poetics is concerned with the textual element, literary functions can be anywhere in the communication process. Deeply inspired by Jakobson's idea, Berio continued to explore and absorb the full face of language in his vocal music, especially through vocal gesture, e.g., how vocal gesture is related to emotion and the poetics of voice.[101] Indeed, composers during this period not only focused on the notes in the pieces, they also engaged with the audience (phatic function) and explored the intertextuality between pieces (referential function), the

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[100] Roman Jakobson, "Closing Statement: Linguistics and Poetics," in *Style in Language*, edited by Thomas A. Sebeok (Cambridge, Mass: MIT Press, 1960), 350–377.
[101] See Berio's discussion on vocal gestures in Berio, "Del gesto vocale," *Scritti*, 58–70. This topic comes up repeatedly in this dissertation.

organization of sounds (metalingual function), and the identity of the interpreters (emotive function).

Communication process and transmission of information attracted the attention of midcentury avant-garde composers. Information differs from meaning in that it depends on listener's knowledge. Information, as Eco puts it, is "something that is added to what one already knows as if it were an original acquisition."[102] A more effective communication system would be based on shared knowledge that avoids subjectivity at both ends. Communication structure also plays a significant role in enhancing the efficiency of information transmission; Claude Shannon proposed in 1948 that the quantity of information in a message is related to the degree of its organization.[103] Messages were assumed to be organized systems governed by laws of probability, and messages would be disturbed by any disorder. If there were a large amount of disturbance (or noise during signal transmission), information would frequently fail to reach the receiver.[104] To prevent information loss due to disturbance, redundancy is often added to the message to increase the probability of the message's survival.

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[102] Umberto Eco, *The Open Work*, translated by Anna Concogni (Cambridge, MA: Harvard University Press 1989), 40. A message might have no new information for the listener, despite being meaningful. For instance, when a ritornello is played for the second time, it gives no new musical information although it is formally meaningful.

[103] See Claude E. Shannon, "A Mathematical Theory of Communication," in *Bell System Technical Journal*, vol. 16, issue 3 (1948): 379–423.

[104] The quantity of information transmitted, especially with an increase or decrease in the amount of information, is measured by entropy, a concept borrowed from thermodynamics by information theorists. Entropy is a measure of quantity related to a system's thermal energy when it is converted into mechanical work. It is often used to quantify the degree of randomness in a thermal system, and hence an information process.

The notion of redundancy was especially significant for electroacoustic music due to its notorious lack of any unifying structure. By using repetition of sections, recurring materials, or electroacoustic sound that is similar to daily objects, the listening experience becomes less arbitrary and more predictable. Another way of creating redundancy is making units of electronic music similar to those in language and allow them to recur and vary. For instance, as Robin Maconie explains, the degree of redundancy explored in Stockhausen's *Gesang* and *Licht* cycle is through the means of deconstruction and reconstitution of linguistic segments.[105]

The study of transmission, processing, and using information (better known as information theory) was first applied in communication engineering, computer science, natural language processing in linguistics, and other fields. It is not surprising that Meyer-Eppler, as a phonetician and information theorist, advised composers at the WDR using his experience with language. He saw the possibility of using information theory as an analytical method of composition, assuming that, like language, music consists of definable discrete elements.[106] He divided the analysis into two orders: one contained all observations including the statistical distribution of all sound elements, whereas the other is concerned with the "Markov chain,"[107] which is the frequency of one element

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[105] Robin Maconie, *Other Planets: The Music of Karlheinz Stockhausen* (Maryland, Lanham: Scarecrow Press, 2005), 211.
[106] It is true especially after the discovery of the importance of the single note in the post-Webern era. See Werner Meyer-Eppler, "Statistic and Psychologic Problems of Sound," in *Die Reihe* volume 1, "Electronic Music," 55–61, especially 57–59.
[107] A Markov chain is a model that describes how a series of possible events happen, particularly the probability of one event occurring in relation to the previous one.

transferring to another according to the contextual relationship. The Markov chain was first employed by Shannon to predict the occurrence of each letter in a selection of English text; it is applied in electronic music to approximate the statistical structure of pitch, duration, and intensity. Statistical distribution can be found in Stockhausen's *Zeitmasse,* in which "data" unfold along a process in the complex whole, reminiscent of the information transmission process.[108] The statistical formation of discrete, pointillist notes constitutes the structure of a piece, and it provides an auditory experience tied to the density of information as well as the density of sound-mass and harmonic partials in a sequence. Such distributions of notes and other parameters can be conceived as an energy flow like the measure of entropy in thermodynamics, a field heavily influenced by information theory.

Berio's way of transmitting information was rather different. A key concept regarding the communicative design in many of his works is *familiarity*. Many of Berio's works are structured according to different degrees of recognition of some chosen models or musical materials, such as speech, quotations, pastiches, sounds, or music from daily life. Information in these musical objects is conveyed through different degrees of recognition and identification of the materials through musical processes.[109] This is also

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[108] See the discussion of Stockhausen's compositional conception of statistical formation; Maconie, *Other Planets*, 96.

[109] Berio explained the degree of familiarity as musical structure in his work, *Questo vuol dire che…*. In fact, the description can be applied to many of Berio's works in which the audience is invited to identify the sources of quotations, musical models, or text fragments. We can associate his treatment of familiarity with his design of the information flow. See the preface of *Questo vuol dire che…* in Programmnotiz "concerti di Roma." Text manuscript, Luciano Berio collection, Paul Sacher Foundation.

reminiscent of the recognizability of traditional instruments being one of the major obstacles in early radiophonic music.[110] Berio's music hence unfolds like a signal being transmitted to the audience centered on the perception of old and new information. The composer describes this compositional model as a "dramaturgy of recognizability."[111]

The dynamicity of information flow inspired those in many other fields to rethink the organization of content. In literature, for example, experimental poets explored how organization of words affected and expressed their mental projection of reality.

1.5 Italian Neo Avant-Garde in the 1960s

To understand postwar Italian avant-garde music, it is necessary to examine the neo avant-garde [*neoavanguardia*] of the 1960s, which pursued a new idea of literature, extending the discussion to other art forms such as music, visual arts, theater, and cinema. Gruppo 63 was established in Palermo during a meeting of 34 Italian writers, artists, and poets in October 1963. The cultural, ideological, and political significance of the neo avant-garde movement was in its rebellion against bourgeois ideology through

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[110] Nicola Scaldaferri, *Musica nel laboratorio elettroacustico: Lo Studio di Fonologia di Milano e la ricercar musicale negli anni cinquanta* (Lucca: Libreria Musicale Italiana, 1997), 30.
[111] The preface of *Questo vuol dire che…* in Programmnotiz "concerti di Roma." Text manuscript, Luciano Berio collection, Paul Sacher Foundation.

challenging linguistic, aesthetic, and social norms.[112] From this perspective, the literary work was not limited to the representation of praxis, but motivated its receivers to take action.

1.5.1 Language as Representation of Reality

In literature, one of the key features of this movement was the peculiar use of language as a lens for viewing reality. The relationship between reality and art is always a dynamic one, thus any change in the world should be reflected within the structure of the medium. The dynamicity of art echoes the rationale of Eco's notion of open work, so that art is seen from different perspectives and freed from interpretation.[113] The openness lies in the formation of a form to express the world according to its organization.[114] The formal structures of a work should not merely be seen from a formalistic point of view, but should be considered along with the "truth"—a deeper meaning beyond the words.

As observed by Florian Mussgnug, literature in this period "must increase the demands on its audience, reject neo-romantic platitudes and re-invent itself as an abstract

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[112] See the discussion of *neoavanguardia* and the critique of practice in Francesco Muzzioli, "Subverting Literature," in *Neoavanguardia: Italian Experimental Literature and Arts in the 1960s*, edited by Paolo Chirumbolo, Mario Moroni, and Luca Somigli (Toronto: University of Toronto Press, 2010), 21–37, especially 32–33.
[113] Quoted in Paolo Chirumbolo and Mario Moroni, "Literature and the Arts in the 1960s," in *Neovanguardia*, 3–18, cited at 8.
[114] Chirumbolo and Moroni, "Literature and the Arts in the 1960s," 8.

game of formal variations, where conflicts and contradictions are expressed on a purely figurative level."[115] Sanguineti, who had close ties with the Novissimi, observed that the tendency of literature produced by the neo avant-garde was "a return to disorder."[116] The disorder was shown by the mental perspective projecting on the page through the formation of form. Chaos—mosaic fragments of text, ungrammatical phrases, semantic indeterminacy, and discontinuities—illustrates the relationship between calculatedly unrelated data, which constitute "verbal ideograms" of disorder.[117] These fractures were perpetually juxtaposed and interpreted to form different meanings, as if a person observed nature from different angles, rendering the work in open form. The infinite combinations allow the reading experience to be a *perpetuum mobile* and fluid. The idea of writing, or the rule of this "combinatory calculus," is even more important than the writing itself. It is the "idea of form," as stated by one of the active members of Gruppo 63, Luciano Anceschi, rather than the "form of the ideas" that are more exciting and surprising.[118] The disorder allowed the neo avant-gardists to think about the arbitrariness

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[115] Florian Mussgnug, "Writing Like Music: Luciano Berio, Umberto Eco and the New Avant-Garde," in *Comparative Critical Studies* vol. 5, no. 1 (2008): 81–97, citation at 87.
[116] Edoardo Sanguineti, "Il Trattamento del materiale verbale nei testi della nuova avanguardia" (1964), in *Ideologia e linguaggio*, edited by Erminio Risso (Milan: Feltrinelli, 1965, reprinted in 2001), 77–107, especially 94.
[117] Sanguineti, "Il Trattamento del materiale verbale," 96.
[118] Luciano Anceschi, "Metodologia del nuovo," in *Gruppo 63: La nuova letteratura, 34 scrittori, Palermo ottobre 1963*, edited by Nanni Balestrini and Alfredo Giuliani (Milan: Feltrinelli, 1964), 7–14, especially 9.

of verbal signs. Nanni Balestrini challenges writers to consider literature as a verbal mechanism for the arbitrary production of signs.[119]

Such disorder can be found in many of Berio's works, including those that did not involve collaboration with Sanguineti. The chaos was not simply due to the complex texture; it stemmed from multiple possibilities for combining elements, which results in infinite interpretations. Eco further developed this formal ideology in relation to his reading of James Joyce's *Finnegan's Wake*. To him, the interrelations among the fragments constitute the cosmology of a textual universe displaying an aesthetics of "chaosmos." Berio explores such an idea in *Sinfonia*, discussed in Chapter 3.

With this new aesthetic, literary practices in Italy focused mainly on perspective—the relationship between subject and object, especially the phenomenological notion of the "riduzione dell'io" [reduction of "I"]. Apart from the suspension of subjectivity, the subject often acted as a cognitive agency to establish an authentic connection to the world through first-hand experience.[120] It was exemplified in a simple formula by Calvino in his novel, *Mr. Palomar* (1983), which depicts the protagonist's observance of the world as "himself plus the world minus him," and in Michael J. Rosen's explanation, "the observer in the observable, observing world."[121] To Sanguineti, the "being-in-the-world" experience is expressed through organization. Neo

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[119] Nanni Balestrini ed., *Gruppo 63. Il romanzo sperimentale* (Milan: Feltrinelli, 1966), 133. See also Mussgnug, "Writing Like Music," 88.
[120] Sanguineti, "Il Trattamento del materiale verbale," 77–107.
[121] See Michael J. Rosen, "Review: Himself Plus the World Minus Him," in *Salmagundi* 72 (Fall 1986): 261–266, citation at 261.

avant-garde literary works often involved an impossible story or one that can only exist in a reverie. The story is a technical irony of its form; the narrative is always presented in gibberish and forms its own mechanism. Only when the structure of the gibberish in the narration is disfigured can the compromised language be accepted as parody.

Sanguineti further described a type of antinovel in which the story of a first-person narrator is constantly contested, denied, and contradicted, which achieves a continuous adjustment between the critical discourse and its aesthetic object. The narrator who says "I" does not refer to the narrator, but to a narrated character. The regression between the subject and the critical discourse extends nearly to the absurd. Similarly, the subject "I" involved in Berio's *Sinfonia* (third movement) and *Coro* is such a character. "I" is standing face-to-face with his own musical discourse: both narrators are the creator of the piece in question as well as the critical discourse of the unfinished musical structure. "I" in *Sinfonia* keeps interacting with the compositional elements to create a movement, whereas in *Coro* "I" keeps revising her "bad song." The subject "I" in both works, never complete by the end (there's never a conclusion), interacts and comments with the musical structure in iterations. "I" is rendered by a voice, and he or she is the narrator, the composer, and the structure (or the soul) of the work itself, which provides criticism that activates an endless loop. As I illustrate in Chapter 3, the phenomenological notion to reduce the subject "I" was combined with the automation of musical structure, i.e., the structures in *Sinfonia* (the Scherzo) and *Coro* as agents activating an automatic compositional process. In Berio's theatrical work, *Un Re in ascolto*, the identity of "I"—

the opera manager of an eponymous work—is also challenged and denied as he creates his theater in a dream. His self, essentially a void, is shaped by a musical structure that assimilates other people's voices and the sound that comes to his ear. Similar to works in the neo avant-garde movement, these works of Berio demonstrate the self-contained structure that speaks for and corrects itself through internal mechanisms. Through running this automatic machine, infinite pages of music can be filled by inputting instructions and several examples. The work itself includes the abstract idea of how elements are employed, chosen, organized, represented, narrated, laid out, etc. Such construction is similar to the "book" which refers to the cosmology of a literary work as a self-contained universe after Mallarmé's vision of *Le Livre*.

As noted by the literary critic Francesco Muzzioli, the Novissimi in the 1960s promoted themselves through experiments similar to those performed in a scientific laboratory, where criticism becomes a means to verify and evaluate new writing models.[122] Literary criticism in neo avant-garde movement extended to past works in an effort to revolutionize them. In the postwar period, the Novissimi were aware of the idea that everything has already been done in history. They felt a need to rewrite history and to find a tradition of the new, which made criticism and commentary a way to reinterpret traditions and history. This can also be seen in Berio's *Sinfonia*, *Coro,* and other works that include preexisting materials and models and provide a new interpretation. If we understand why commentary was paramount in the neo avant-garde movement, it is not

[122] Muzzioli, "Subverting Literature," 21.

surprising that postwar Italian composers, especially Berio, relied heavily on commentary as a compositional device.[123] The juxtaposition of preexisting musical references alongside new elements challenges old traditions by putting the old and the new in dialogue. The old and new elements were treated as signs so that a new way of listening was worked out by comparison and contrast.

The revolution of language was also a protest and criticism of capitalist and bourgeois society as well as a political issue for the Novissimi, who were expected to survive in the consumer market and produce works that deserved to be regarded as high art. One of the methods was to adopt ordinary language or language from daily life so that social and political issues are alluded to in a revelation.[124] This practice is reminiscent of the third movement of Berio's *Sinfonia,* in which the message from a poster during the 1968 riots is included. After introducing musical references from composers of the past, an anti-Vietnam War slogan ("… all this can't stop the wars, can't make the old younger or lower the price of bread…") responds to the questions the movement has been asking: Where now? What is this moment? and, more precisely, What is this moment of which the movement is made up? The temporal flow is irreversible like the feebleness of the people facing the political situation. Likewise, for Part 2 of Berio's musical theater piece, *La vera storia*, which involves the reordering of

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[123] See more about Berio's commentary techniques in Osmond-Smith, *Berio*, 42–59.
[124] Chirumbolo and Moroni, "Literature and the Arts in the 1960s," 7. For instance, in the poem, "Non smettere," by a central figure in Gruppo 63, Nanni Balestrini, the newspaper description on the assassination of John F. Kennedy is adopted to trigger commentary in the poem. See Sanguineti, "Il Trattamento del materiale verbale," 100.

the text from Part 1, what seems to be gibberish uncovers the message, “the taste of the lead,” alluding to the political turmoil of “The Years of Lead” (Anni di piombo) in Italy from the 1960s to the 1980s. The game of words echoes Eco’s vision of a text that is able to re-invent itself with every reading, and his notion of “work in movement” which concerns the specific figuration of tropes and the text’s relation to its socio-cultural and historical context. The allusion to “The Years of Lead” presented by a play on words also provides an answer to a question central to the work, What is the true story? With the notion of open work, the audience or the reader develops a sense of self-consciousness that allows them to take part in the creation process. The participation is self-referential to cultural-political engagement,[125] which echoes the idea of experimental musical theater (discussed in Chapters 4 and 5).

1.5.2 Impact of the Neo-avant-garde on the Musical Scene

The Italian neo avant-garde movement had an intricate relationship with the musical scene of the 1960s. On the one hand, the musical journal, *Incontri musicali*, for which Berio was a main contributor, included Eco’s essay “L’opera in movimento e la coscienza dell’epoca” (1962) that would develop into his theory of open work. On the other hand, the magazine, *Il verri*, which was attached to Gruppo 63, had been open to

[125] Muzzioli, “Subverting Literature,” 26–28.

musical discussion and provided space for musical columns and articles. The publication of Eco's *Opera aperta*, which included the discussion of four contemporary works (Stockhausen's *Klavierstück XI*, Boulez's *Troisième sonate pour piano*, Pousseur's *Scambi*, and Berio's *Sequenza per flauto solo*) played an important role in connecting the two circles. The idea of open work was often discussed along with chance music and the freedom granted to composer, performer, and audience. Although musical and theatrical works seemed to offer more freedom when they were played on the stage, it did not trigger more discussion of open work in music, according to literary critic Paolo Somigli.[126] The original aim of Gruppo 63 was to develop a rigorous avant-garde practice rather than an ambitious but loose one. The problem of connecting the two circles with common avant-garde ideas from Gruppo 63 was that there lacked a rigorous practice in music like its counterpart in literature, or at least the practice was not mature enough to transfer those ideas.[127]

Although Berio rejected the label of neo avant-gardist, his works often show the influence of the movement.[128] The influence on Berio went far beyond the concept of open work, low culture, or the use of fragmented material. Let us consider the main goal of Gruppo 63: the radical renewal of the content and form of literary language so that it

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[126] Paolo Somigli, "Gruppo 63 and Music: A Complex Relationship," in *Neoavanguardia*, 254–282, especially 270.
[127] Paolo Somigli, "Gruppo 63 and Music," 270.
[128] Berio rejected the label of neo-avant-gardist: "Certo, in quegli anni sono cominciate molte cose, ma non saprei dar loro un nome, soprattutto un nome come neoavanguardia." [Of course, many things began in those years, but I can't give them a name, especially a name like neo-avant-garde.] Cited in Mario Bortolotto, "Sulla storia, le storie, e la storia vera di Luciano Berio," in *Piano Time* VIII, no. 93 (1990): 27–31.

can be used to criticize capitalist society. Berio's exploration of structure and narrative in his works develops new forms to direct multiple perspectives from which the audience may engage with society. As addressed in the following chapters, by directing the meaning-seeking process in multiple works through the manipulation of music, text, and scenic elements similar to language, hidden messages regarding the anti-Vietnam War movement and the Years of Lead are uncovered.

This chapter summarizes the historical background of the avant-garde musical and literary scenes in the postwar period, focusing on the intersection between music and language. Apart from the speech science that was introduced to classical studios focusing on electronic music, the discussion regarding music and language revived using new conceptions from modern linguistics. On the other hand, through the lens of language, writers and artists in the neo avant-garde movement sought for a better world by connecting language and ideology. Language became the means and the ends for exploring the human mind and reacting to social phenomena.

Some of the ideas mentioned above are revisited in later chapters. The discussions related to language and music in the 1950s and 1960s provided inspiration for Berio to formulate his musical thoughts and create his works throughout his career. And the starting point for Berio's long journey of sound and sense was the Studio di Fonologia Musicale.

Chapter 2: Composing Degree Zero: Musical Phonology and Berio's Early Signification Model

In this chapter I examine Berio's early compositional model that attempts to create new forms of expression based on sound, meaning, and organization, inspired by phonological, semantic, and syntactic conceptions within twentieth-century linguistics. I illustrate Berio's search for "degree zero" (a utopian state free of connotation) in his electroacoustic compositions where musical units are treated as "phonemes." I show that imagining phonemes in music—which are free of arbitrary connections to semantic meaning—breaks the conventional relation between sound and meaning before establishing new connections among sound units. A new layer of meaning was created to conform to the less arbitrary relations between sound and sense. This compositional model would further be adopted and modified in his large-scale symphonic works (see Chapter 3). In addition, Berio's pursuit of degree zero in music and the inspiration of Joyce's stream-of-consciousness narration were closely related to his exploration of the "universality of experience" (discussed in detail from Chapter 3 onwards) and the nonarbitrary relation between sound and sense throughout his career.

I first examine the phonological approach developed by Studio di Fonologia Musicale and in Berio's own intellectual thoughts that aided his electroacoustic music; then I demonstrate an early signification model developed by Berio with a focus on *Thema (Omaggio a Joyce)* (1957–58). In the second half of the chapter, I explore some aspects of Berio's electroacoustic pieces inspired by his linguistic thoughts (including his use of paralanguage and organization of information) as well as interdisciplinary studies

on music and language. These ideas would become the building blocks for Berio's pursuit of universality of experience in subsequent years.

As Berio recalls, very few composers in the 1950s resisted the temptation to understand and compose music as though it were a language, with its own syntax and phonetics.[1] This exploration of linguistics occurred for the composer himself around 1956, when he was studying Ferdinand de Saussure's *Cours de linguistique générale*. The study of linguistics was particularly related to electroacoustic music, which offered a new musicality by changing the conception and analytical method of music. Berio even compared the sinusoidal wave in electronic music to a phoneme (the basic unit in phonology),[2] which would be free from any conventional meaning inherited from history. As I illustrate below, by seeking new ways to overcome the arbitrary relation between sound (signifier) and its conventional reference (signified), Berio experiments with a new compositional model that absorbs phonological concepts, syntagmatic and paradigmatic representations, and Joycean polyphony. Before I elaborate, let us delve into the "phonological" approach used to create electroacoustic music in Studio di Fonologia Musicale, which is closely related to Berio's compositional thoughts during this period.

2.1 Musical Phonology and the Milan Studio

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[1] Berio, *Interviste*, 85.
[2] See Berio, "Intervento al dibattito *Musica sperimentale e musica radicale*" (1961), in *Scritti*, 370–377, especially 371.

The connection between electroacoustic music and linguistics had been discussed by various composers, such as Stockhausen, Herbert Eimert, Pousseur, and Berio, as well as the phonetician Werner Meyer-Eppler (see Chapter 1). After Bruno Maderna[3] extended an invitation to Berio, the Studio di Fonologia Musicale di Radio Milano was established in 1955, following the Westdeutscher Rundfunk in Cologne (WDR, 1951–2000), the Groupe de Recherche de Musique Concrète (GRMC, 1951–58) in Paris, and the Columbia-Princeton Electronic Music Center (founded in 1951, renamed as the Computer Music Center in 1958) in New York. As Berio recalls, electronic music in the 1950s responded to the profound need for unity between electronic sounds and the sounds of acoustic musical instruments.[4] The Studio di Fonologia Musicale was the result of these new analytical models and the new approach of sound.[5]

"Musical phonology" reflects how music was conceived in the Milan Studio, and the choice of name was incidental. It was suggested by the Turinese engineer Gino Castelnuovo, who was regarded as the soul of Radiotelevisione Italiana (RAI) with his expertise in science,[6] and he seemed to have had a certain intuition regarding the term: voice and word had been discussed in relation to their radiophonic use since the early twentieth century, especially for their function and aesthetics[7]; when used in radiophonic drama, or "radiotheather," voice and word tended to be heard as something musical. As

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[3] Bruno Maderna already created the first version of his tape music, *Musica su due dimensioni* (1952), after he first approached electronic music from Meyer-Eppler in 1951. See Iverson, *Electronic Inspirations*, 30.
[4] Berio, *Interviste*, 130.
[5] See Berio, "Prospettive nella musica. Richerche e attività dello Studio di Fonologia Musicale di Radio Milano," in *Scritti*, 180–195, especially 180.
[6] Veniero Rizzardi and Angela Ida De Benedictis, eds., *Nuova musica alla radio; Esperienze allo Studio di Fonologia della RAI di Milano 1954–1959* (Rome: Rai Eri, 2000), 229.
[7] See the discussion on radio drama, its history, and its features in Angela Ida De Benedictis, *Radiodramma e arte radiofonica: storia e funzioni della musica per radio in Italia* (Turin: EDT srl, 2004).

described by Nino Saverese in 1931, along with the musicality of words, all the logical links of language, the rhythmic patterns, and the rules of song could be abolished so that voice and sound become melted in a "free game" supported by new laws.[8] Rudolf Arnheim also observed that in the era of radio drama music was thought to support a unitary sound culture that would promote sensitivity towards musicality of language and sound in general.[9] The blending of noise, language, and music was one of the greatest artistic achievements in radio, in which spoken language and natural noises were elevated to the level of imagination. Radio cultivated the audience's sensibility toward the musicality of language as well as sound in general. Castelnuovo's intuitive use of "musical phonology" as the studio name can be seen as an extension of exploring voice, word, and music through the development of radio drama, which aptly reflected the direction of the Milan Studio.[10]

The Milan Studio quickly found its place among the other studios. It initially took an eclectic approach to combine the experiences of concrete music from the French and those of electronic music from the German. Its synthetic style can be found in the early radiophonic documentary, *Ritratto di città* (1954), which captured the soundscape of the

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[8] Nino Savarese, "Inchiesta sulla radio," in *Il Convegno*, cited in Angela Ida De Benedictis, *Radiodramma e arte radiofonica*, 49.
[9] Rudolf Arnheim, *Radio*, translated by Margaret Ludwig and Herbert Read (London: Faber & Faber, 1936), 27–51. See also Scaldaferri's summary of radio and the research of the new music in the early twentieth century. Scaldaferri, *Musica nel laboratorio elettroacustico*, 19–34.
[10] Some objectives of the Studio included producing concrete music and electronic music, creating sonorous commentaries for radio and television, and realizing dramatic and documentary emissions. See Angela Ida de Benedictis, "Bruno Maderna et le Studio di Fonologia de la RAI de Milan: musique savant et musique de circonstance, entre creation, recherche et invention," in *À Bruno Maderna* volume 1, edited by Geneviève Mathon, Laurent Feneyrou, and Giordano Ferrari (Villefagnan: Basalte Éditeur, 2007), 389–421, especially 394.

Milan city by synthesizing the real environmental sounds.[11] The idea of dialogue between concrete music, acoustic music and electronic music ("dialogue among different dimensions") gradually became characteristic of the Milan Studio.[12] However, the lack of rigorous organization of sound material presented a challenge for making electroacoustic music. Although the artistic value of radiophonic music had been established for thirty years, Berio complained that it still lacked a precise terminology for electronic music arguing that an eventual "radiophonic grammar" [grammatica radiofonica] had not been established from previous experiences.[13] One of the Milan Studio's goals, henceforth, was to establish a connection between the production of sound and its organization.[14] In a statement published in 1956, the Milan Studio clearly tied its goals to phonology,[15] and the nomenclature of Studio di Fonologia Musicale—as opposed to Studio di Fonetica Musicale—indeed marked a departure from the WDR's approach.

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[11] Benedictis, "Bruno Maderna et le Studio di Fonologia," 395. For more detail on the establishment and objectives of Studio di Fonologia Musicale, see Veniero Rizzardi and Angela Ida De Benedictis, eds., *Nuova musica alla radio: Esperienza allo Studio di Fonologia della RAI di Milano, 1954–1959* (Rome: RAI Eri, 2000); Nicola Scaldaferri, *Musica nel laboratorio elettroacustico: Lo Studio di Fonologia di Milano e la ricercar musicale negli anni cinquanta* (Lucca: Libreria Musicale Italiana, 1997); Maddalena Novati and John Dack eds., *The Studio di Fonologia: A Musical Journey 1954–1983 Update 2008–2012* (Milan: Ricordi, 2009). In particular, Delia Casadei examines how the focus on voice in Italian electronic music in the 1950s reflected anxieties and hopes relating to the political situation in Milan's changing cityscape. *Ritratto di città* was one of the works she illustrated. See Delia Casadei, "Milan's Studio di Fonologia: Voice Politics in the City, 1955–8)," in *Journal of the Royal Musical Association*, vol. 1441, issue 2 (2016): 403–43.

[12] See Berio, "Prospettive nella musica. Richerche e attività dello Studio di Fonologia Musicale di Radio Milano," in *Scritti*, 180–195, especially 180. Angela Ida De Benedictis also explains that what has come to distinguish the Italian electroacoustic production from that of the French experiences of *musique concrète* and German experiences of electronic music is the coexistence of the concrete and electronic dimensions. See Angela Ida De Benedictis, "The Beginnings of the Studio di Fonologia, in *The Studio di Fonologia: A Musical Journey 1954–1983 Update 2008–2012*, edited by Maria Maddalena Novati and John Dack (Milan: Ricordi, 2009), 3–18, especially 15.

[13] Berio, "Prospettive nella musica," 181.

[14] Berio stressed this mission in two articles: "Note sulla musica elettronica" and "Sulla musica elettronica," in *Scritti*, 196, 211.

[15] Berio, "Prospettive nella musica," 180–181.

As explained in Chapter 1, Stockhausen's conception of electroacoustic music, heavily influenced by the physician-mathematician-phonetician Meyer-Eppler, was closely related to the study of phonetics, including the acoustics and auditory perception of speech sound. The emphasis on musical phonology at the Milan Studio reveals a fundamental difference with the conception of sound at the WDR. The Milan Studio attempted to explore the organization and meaning evoked by structure whereas the WDR investigates the acoustic quality of sound and the perception of it. While phonetics take a scientific approach to study the possibilities of speech sounds by examining their physiological and physical properties, phonology "intervenes to apply strictly linguistic criteria to the sorting and classification of the material registered by phonetics."[16] In other words, phonology is concerned with the systematic organization of speech sounds in languages. According to Roman Jakobson and Morris Halle, phonology is the question of "how language utilizes sound matter, select[s] certain elements and adapt[s] them to various ends."[17]

Such structuralist thought finds its roots in Saussure's distinction between *parole* and *langue*. Discovering a system behind the musical phenomena in electroacoustic music, i.e. the *langue*, was Berio's goal. In contrast to Stockhausen's advice for musicians to expand their métier by studying acoustics,[18] Berio believed that composers need to have an understanding of the general structure of acoustic elements to rediscover

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[16] Roman Jakobson and Morris Halle, *Fundamentals of Language* (Berlin: Mouton de Gruyter, 1956), 7.
[17] Jakobson and Halle, *Fundamentals of Language*, 18.
[18] Stockhausen, "Two Lectures," in *Die Reihe*, volume 5, "Reports-Analysis" (Pennsylvania, Byrn Mawr: Theodore Presser Co., 1959), 59–82, especially 60.

what *meaning* is—"to re-enter and reconquer sense through the acoustic dimension."[19] His use of the prefix "re," I suggest, implies another level of meaning after the reorganization of materials according to their acoustic properties, adding to the connotation of acoustic materials by convention. It is the result of Berio's attempt to break the conventional arbitrary relations between sound and meaning, so that a new layer of sense is evoked from the acoustic dimension—as exemplified in *Thema (Omaggio a Joyce)*, below.

2.2 Phoneme as Musical Unit

Conceiving electronically generated music was a somewhat different process compared to other forms of electroacoustic music such as tape pieces. Electronic music was considered to have a "linguistic" sense at the microstructural level. As explained by Berio, the internal qualities of electronic music, consisting of frequencies of sound waves to present timbre, loudness, and pitch, are closely related to the analysis and formation of phonetic sounds. With the new technology, the linear perspective of traditional musical form shaped by musical notes was replaced by the moment-by-moment listening experience and the summative structures of the sonic qualities.[20] The focus on tone itself in electronic music was even compared to musical atoms. The internal quality of sound

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[19] Osmond-Smith ed., *Two Interviews*, 114.
[20] Berio, "La nuova musicalità" (1956), in *Scritti*, 7–13.

material in electronic music determined the choice of the sound space, so that similar elements aggregate and dissimilar elements fade out until the form becomes saturated.

This atomistic perspective provided Berio with a new musicality and constructive model in line with his views on music and language.[21] In the essay, "Intervento al dibattito *Musica sperimentale e musica radicale*" (1961), Berio associates the indivisible sinusoidal wave of electronic music, or "tone," with the phoneme.[22] In Eimert's definition, "tone" is pure sinusoidal without overtones, whereas "note" encompasses a series of harmonic partials.[23] Berio preferred to relate "phoneme" to "word" in representing musical units in electronic music since the latter is a conventional sign inherited from history. What drew Berio's attention was the phoneme's ability to shape perception directly and its abstract sonic quality that is free from convention.[24] The view of tone-as-phoneme reflects Berio's attempt to break the arbitrary connection between music (signifier) and convention (signified) by replacing it with a more natural relation between music and perception. In a subsequent essay, "Eugenetica musicale e gastronomia dell 'impegno'" (1964), Berio addresses the relation between music and language, articulating that all significant works and poetics should be able to configure themselves into "semantic links" starting from phonemes, similar to linguistic analysis.[25]

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[21] Berio, "La nuova musicalità" (1956), in *Scritti*, 7–13. The atomistic perspective also raised the discussion of chaos and order, freedom and boundary, in the WDR when considering atonality and electronic serial music. See more discussion on the dialectic of nature and *Geist* in electronic serial music by Eimert and Krenek. M. J. Grant, *Serial Music, Serial Aesthetics* (Cambridge: CUP, 2001), 80–82.
[22] See Berio, "Intervento al dibattito *Musica sperimentale e musica radicale*" (1961), in *Scritti*, 370–377, especially 371.
[23] Herbert Eimert, "What is electronic music?," in *Die Reihe* volume 1, 1–10.
[24] See Berio, "Intervento al dibattito Musica sperimentale e musica radicale" (1961), in *Scritti*, 370–377, especially 371.
[25] Berio, "Eugenetica musicale e gastronomia dell 'impegno'" (1964), in *Scritti*, 378–386, especially 381.

For Berio, the reduction of the musical unit to a phoneme is akin to Roland Barthes's suggestion of the "zero degree" of language—a natural, neutral writing free of conventional literary tropes.[26] If we combine views from these two essays, we can better understand Berio's experiment. The tones-as-phonemes (or acoustic properties shaped by sine waves) forms relations among each other and establishes their peculiar semantic links. For instance, the "wa-wa" sound in an electroacoustic work can be connected to another sound with similar sonic properties (such as vowels /u/ and /a/). A larger discourse henceforth forms a self-sustaining circle during a continuous transfiguration of audible material. Through the construction of "semantic circles" in a process, expressivity penetrates the work as a nexus. Such a musical process further echoes similarly through in the 1960s. As the American composer and musicologist Charles Seeger (1886–1979) suggested in 1960, music does not resemble language due to the isomorphism of phrase structure; it is the logical structure in a musical process that resembles "meaning," or a semantic process, in language.[27]

Electronic music provided a medium for Berio to conceive a new relation between sound and meaning, so that new meanings and new rules are created before eliminating

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[26] In the final chapter of Roland Barthes's book, *Writing Degree Zero,* entitled "The Utopia of Language," Barthes imagines an ideal language that would no longer be alienated from reality and a new type of literature in which the proliferation of modes of writing allows it to invent its own pattern. At this point, literature becomes the utopia of language. See Roland Barthes, "The Utopia of Language," in *Writing Degree Zero,* translated by Annette Lavers and Colin Smith (New York: Hill and Wang, 1967), 84–88. Barthes's notion of degree zero was compared to the abstraction of Boulez's *Le Marteau sans maître* by Paul Attinello in another way. As he explained, the assimilation of the vocal texture into the instrumental one, the fragmentation of the poetry, and the repetitions across movements direct the piece toward abstraction. See Paul Attinello, "Postmodern or Modern: A Different Approach to Darmstadt," in *Contemporary Music Review,* vol. 26, issue 1 (2007): 25–37.

[27] See Charles Seeger, "On the Moods of a Music Logic," in *Journal of the American Musicological Society,* vol. 13, issue 1–3 (1960): 224–261.

all the conventional associations.[28] However, such a "zero degree" is unattainable. As Barthes describes, the zero degree of writing is a utopia of language: it does not require the medium of a language loaded with convention. Likewise, Berio's treatment of sine waves as phoneme is also hypothetical because these tones-as-phonemes can only be perceived in the form of audible sound. When these musical qualities are heard in their audible form, it is impossible to avoid associating the sounds with existing musical experience. For instance, the sibilant quality may be reminiscent of some abrasive materials or certain words in some languages.

Imagining the phoneme and the semantic link might not be Berio's original compositional model; it might have come from a series of trial-and-error experiments regarding his own compositional models inspired by contemporary intellectual discourse. Yet such new conceptions of composition can still be traced in *Thema (Omaggio a Joyce)*, although it is a tape piece that involved recording, editing, and sound-mixing. The new organization of acoustic materials, I argue, further directed Berio to design a signification model that he would follow throughout his career.

2.3 New Strata of Meaning in Thema (Omaggio a Joyce)*: The Reimagination of Sound, Meaning, and Structure*

Thema (Omaggio a Joyce) was intended to be a production for the radio program, "Omaggio a Joyce—Documenti sulla qualità onomatopeica del linguaggio poetico," by

[28] The idea of breaking down or using conventions foreshadows Berio's conception of gesture and playing around with arbitrariness of signs in his theatrical works. I return to the topic frequently in this thesis.

Berio and Eco. In the end, two versions—*Thema (Omaggio a Joyce)* and *Omaggio a Joyce*—were produced in 1958 and 1959, respectively. These electroacoustic vocal pieces were derived from an excerpt of James Joyce's *Ulysses* (Episode 11, "Sirens") and incorporated musical devices (such as polyphony and trills) into literary writing.[29] Reciprocally, Berio transcribed the musicality of the textual materials along with other musical devices, such as verbal "chords" and trills. The chapter was recited in three languages: English (by Cathy Berberian), French (by Umberto Eco and Marise Flach), and Italian (by Ruggero de Daninos, Nicoletta Rizzi, and Furio Colombo). These three versions were recorded in separate channels and later combined into a tape piece as if a piece of polyphonic music.[30]

In *Thema*, the recorded sound was edited by subtractive analysis so that the full recitation by Berberian became heavily distorted. The first of the three sections (0:00–1:42) is Berberian's recitation, where some words are fragmented and blurred. The voice then starts to distort and becomes unrecognizable in the second section (1:42–4:47) while the heavy electroacoustic sound emerges as a remix of the previous recitation. In the final section (4:47–6:10), while Berberian's recitation resumes and acoustic music is added, certain words from the first section are also repeated. The electroacoustic means is

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[29] Joyce's "Sirens" are often considered an allusion to music. Alongside the singing of "The Croppy Boy" and the opera *Marta*, the chapter has been described as using a polyphonic texture with musical allusions to staccato, trill, appoggiatura, martellato, portamento, glissando, repeat side, and binary form. The literary critic Sean Sheehan notes that "Sirens" exhibits "an aural logic and a textual exuberance that expresses itself in musical puns and verbal games," and the lure of sirens are in fact translated into "a seduction theme that shapes the language." Such incorporation can be seen in the blending of erotic and the comic, the musical, and the voyeuristic in the text. See Sean Sheeban, *Joyce's Ulysses: A Reader's Guide* (London and NY: Continuum International Publishing Group, 2009), 60. The interweaving between the two media, music and language, projected through emotions and desire, is put into focus by Berio-Eco on the grounds of music rather than text.

[30] For more detail on the genesis and general description of *Thema*, see Osmond-Smith, *Berio*, 60–63.

adopted to multiply and increase the transformation of the vocal colors recited by Berberian.

Existing studies on *Thema* examine a variety of issues: François Delalande suggests adopting a more listener-centered approach to identify how *Thema* shapes the listener's expectation[31]; Flos Menezes explores the way Berio's works relate to Jakobsonian phonological conceptions[32]; David Osmond-Smith addresses Berio's exploration of the borderline, where "sound as the bearer of linguistic sense dissolves into sound as the bearer of musical meaning"[33]; Agostino di Scipio proposes that the sound editing in *Thema* resembles word-processing in a computer program;[34] Nicola Scaldaferri examines the musical terminology in Joyce's text and discusses the sound elements in *Thema*[35]; Delia Casadei demonstrates that the voice, onomatopoeia, and the act of listening render the work a "placeless space of speech," or a space of a sound recording, reproduction, and a primal scene from the origin of language[36]; Martin Link adopts a scientific approach to measure the intelligibility of *Thema*, demonstrating how expression becomes

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[31] François Delalande, "L'*Omaggio a Joyce* de Luciano Berio," in *Musique en jeu*, vol. 14 (1974), 45–54.
[32] Flos Menezes, *Luciano Berio et la phonologie. Une approche jakobsonienne de son oeuvre* (Frankfurt am Main: Peter Lang, 1993).
[33] David Osmond-Smith, *Berio* (Oxford: OUP, 1991), 62–63. Osmond-Smith also states phonetic materials can only be analyzed in two ways: the acoustic structure and the articulatory form. He believes that Berio "chose to sort out his materials in strictly articulatory terms" in *Thema*. This is not true because phonetic analysis involves also auditory perception, which drew much attention by composers of electronic music, especially those in the WDR (see Chapter 1). François Delalande's essay already explains the significance of an analysis regarding perceptual experience in *Thema* (perceptual aspect is beyond the scope of this chapter).
[34] Agostino di Scipio, "Da un'esperienza in ascolto di phonè e logos: Testo, suono e struttura in *Thema (Omaggio a Joyce)* di Berio, in *Il Saggiatore musicale*, vol. 2, no. 2 (2000): 325–59.
[35] Nicola Scaldaferri groups the sounds in *Thema* into five categories according to the degree of manipulation and recognizability: perfectly recognizable vocal elements, elements obtained through the montage of vocal phenomena, verbal chords, sounds obtained by subtractive synthesis, and silence. See Nicola Scaldaferri, "'Bronze by Gold': A Journey through the Sirensong," in *Nuova musica alla radio*, 100–155.
[36] Delia Casadei, "Milan's Studio di Fonologia: Voice Politics in the City (1955–8)," 403–43.

meaning in the work.[37] In a different vein, my study investigates the signification process in *Thema*, i.e., how music and text together create meaning by eliminating the conventional associations of sound before establishing a less arbitrary musical flow. My examination of Berio's pursuit of degree zero in music shares some similarities with Casadei's suggestion of a "placeless space of speech" and a primal scene from the origin of language. Adding to the investigation of sound and sense, I also explore the underlying system Berio developed to replace "grammar" in music based on contemporary discourses on language.

2.3.1 Selection and Combination

Berio's explanation of the compositional process for *Thema* regarding selection and combination of acoustic properties is particularly notable:

> After *selecting* the material, I linked the words according to their *acoustic properties* rather than simply their order of occurrence. After that, I *connected* them according to their *meaning*. In other words, I established *an acoustical and a semantic frame* and then transformed the words alternately according to the requirements of one or the other…"[38]

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[37] Martin Link, "*Thema Omaggio a Joyce*—Expression as a Meaning," in *Proceedings of the Electroacoustic Music Studies Network Conference 2017*. http://www.ems-network.org/spip.php?article443 (accessed Jan 1, 2021).
[38] Osmond-Smith, ed., *Two Interviews*, 143.

A similar description is restated in the author's note, indicating that the work was composed through "selection and reorganization of the phonetic and semantic elements of Joyce's text."[39] Such a process recalls the concepts of selection and combination, or the paradigmatic and syntagmatic relations in speech formation. According to Jakobson, selection and combination are two processes that occur unconsciously in human speech. Whether it is the formation of speech or the arrangement of other linguistic signs, two levels are involved: a "*selection* of certain linguistic entities and their *combination* into linguistic units of a higher degree of complexity" (emphasis in original).[40]

Selection in phonology means the concurrence of alternatives that can substitute for one another. Berio's selection process in *Thema* refers to more abstract acoustic properties rather than concrete sounds or words. This can be seen in the multiple series of words constructed by the composer (see Figure 2.1). After Berberian's recitation was recorded, it was cut into individual words that were then rearranged according to their core vowels (described as "vocal colors").[41]

(team)	(tip)	(tape)		(time)
steelyringing	chips	fade	sail	by
peep	picking	awave	veil	Idoloes
leave	tink	waves		cried
sweetheart	pity			dying
feel	jingle			bright
	listen			I
	Liszt			thigh
	Hiss			night
				spiked
				winding
				silent

[39] See author's note of *Thema (Omaggio a Joyce)*. http://www.lucianoberio.org/thema-omaggio-a-joyce-%E2%80%93-authors-note?948448529=1 (accessed Aug 16, 2021). (my emphasis)
[40] Jakobson and Halle, *Fundamentals of Language*, 72.
[41] See Berio, "Poesia e musica—un'esperienza," in *Scritti*, 253–266.

(never)	(ever)	(tap)	(far)	(ton)	(talk)
breast	heard	satin	bronze	thnthnthn	more
never	answer	rang	stars	not	call
deaf	have	clacked	garter	love	morn
sad	pearls	smack	throb	tup	warm
when		pat	ah	come	war
		pad	Martha		all
		plash	Far		lost
					saw
					call
					roar
(town)	(tone)	(took)	(tool)	(few)	
rebound	gold	look	blue	blew	
now	note	could	bloom	fluted	
avowal	rose	full	who's	lure	
jaunted	clouds	good	bloo	alluring	
	horn	took	bloom		
	hawhorn		moonlit		
	so lonely		blooming		
	cold				

Figure 2.1: *Thema (Omaggio a Joyce)*, Berio's grouping of word series. Reproduced from Berio's essay "Poesia e musica—un'esperienza" (1958) in Berio, *Scritti*, 259.

The words taken from Joyce were grouped into series according to their core vowels, e.g., the common /i/ vowel in the first group (team, steelringing, peep, etc.).[42] The arrangement of the series follows a certain logic, moving along the continuum of /i/, /e/, /a/, /o/, and /u/ across each row, including the diphthongs. The spectrum of the vowel colors corresponds to successive positions of resonance points in vocal production, and the proximity of their acoustic properties facilitates the electroacoustic means to multiply and increase the transformation of the vocal colors.[43] The groupings of words from Joyce according to phonemes are also indicated in Berio's sketch of *Thema*, as shown in Figure 2.2. Although diacritics were used instead of the standard International Phonetic Alphabet, the series were clearly grouped according to monophthongs and diphthongs.

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[42] Berio, "Poesia e musica—un'esperienza," 261.
[43] Berio, "Poesia e musica—un'esperienza," in *Scritti*, 260.

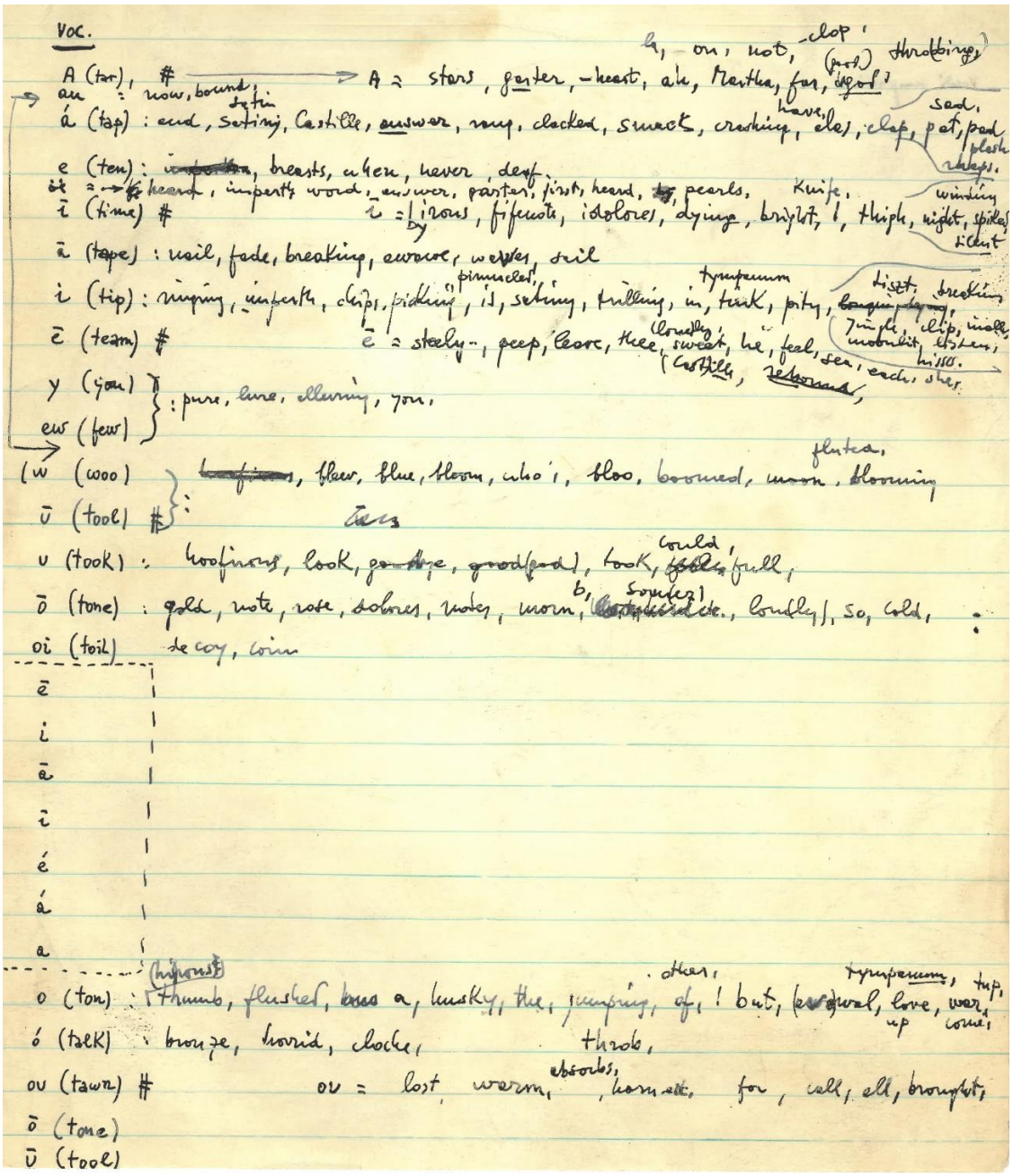

Figure 2.2: ***Thema (Omaggio a Joyce)*****, Berio's sketch for the word series. Luciano Berio Collection, Paul Sacher Foundation. Reproduced with their kind permission.**

In Berio's compositional process, recorded sounds are carefully chosen and edited. Sound fragments are combined to form syntagmatic relations according to these similar

acoustic features and combined in a stream of sound such that the recitation appears to be segmented and even unrecognizable at times. The selection and combination processes are driven by horizontal and vertical axes that create a matrix of possibilities, similar to the paradigmatic and syntagmatic relations of sentence formation as explained by Saussure.[44] Berio even expanded the reserve of verbal sounds by translating the same words into French and Italian. Figure 2.3 shows how continuity is achieved through the proximity of speech sounds, either by manner or place of articulation, such as the nasal /n/ sound in "bronze" and "thnthn" or the dental /ch/ sound in "chips" and "cloches." Sounds with similar articulatory features are connected across different tape tracks to create a new form of polyphony. The connections among the phonemes are often multidirectional; phonemes with similar features are interconnected throughout the process, which challenges the audience through a nonlinear listening experience.

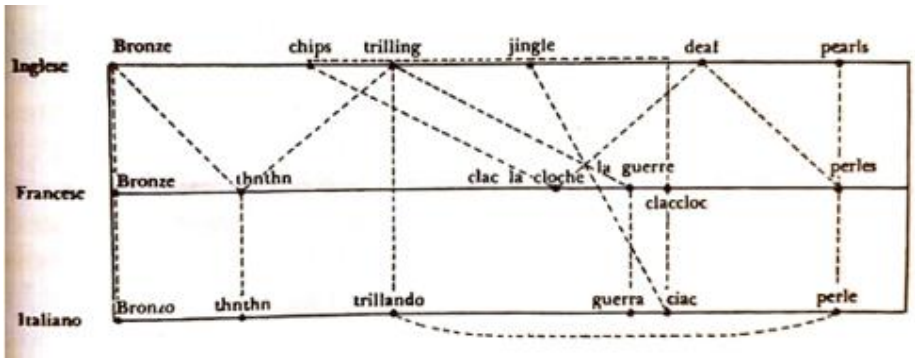

Figure 2.3: *Thema (Omaggio a Joyce)*, a "polyphony" connected by phonemic features. Reproduced from Berio's essay "Poesia e musica—un'esperienca" (1958), in Berio, *Scritti*, 259.

[44] The vertical axis of selection and the horizontal axis of combination can be traced to Saussure's discussion of differences between signifiers: signifiers present paradigmatic relations, i.e., intertextual selection among possible choices, and syntagmatic relation, i.e., the intratextual combination of words in a sentence. See Ferdinand de Saussure, *Course of General Linguistics*, translated by Wade Baskin (New York: Philosophy Library, 1959), 101–90.

Scipio relates Berio's compositional procedures to Joyce's manipulation of language from the perspective of word-processing in computer technology.[45] He traces the textual fragmentation in Joyce's text: elision, contraction, or concatenation of phonemes/syllables/words, repetition of the same phoneme/syllable/word, and temporal delay of phonemes (e.g., "Hissss"). Likewise, similar editing procedures can be found in Berio's treatment of *Thema*. For instance, the sound stream "list-ee-hiss-and for –'ft word-so s-other pla-listen!" (5:36) is observed by Scipio as concatenation of syllables or phonemes. In fact, such an approach can also be applied to nonverbal sound elements in order to identify musical phonemes in the work.

Table 2.1 shows some of the pure sound fragments in *Thema*; these sounds often involve short fragments that consist of a homogeneous timbre, a trill of a single sound, or a stream of fricative sound. The emphasis here is on their sonic qualities which are relatively neutral and close to the degree zero of music. In the context of *Thema*, however, these sounds form dialectic relations with the verbal fragments in Berberian's recitation: the "llll" fast-repeating tone is reminiscent of the /l/ phoneme (blooming, listen, etc.), the white noise with the /s/, /z/, /ts/ (so lonely, Liszt, etc.), and the resonant sounds with the vowels. In particular, the /s/ sound, obtained by subtractive synthesis from Berberian's recitation, has a fricative quality similar to that of white noise. This "neutral" verbal white noise is considered the basis of the piece by Berio.[46]

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[45] Agostino di Scipio, "Da un'esperienza in ascolto di phonè e logos: Testo, suono e struttura in *Thema (Omaggio a Joyce)* di Berio," 325–59.
[46] Berio, "Poesia e musica," 262.

Table 2.1: *Thema (Omaggio a Joyce)*, pure electroacoustic sounds.

0:45	"llllllll" monotone trill
1:14	High-pitched "iiiiiiii" monotone trill
1:31	High-pitched repeating fricative sound
1:51	High-pitched "tststststs" monotone trill
2:15–2:41	Percussive sounds with a variety of timbres (e.g., sounds resemble gong, metal bowl)
2:57–3:21	White noise: "ssssss' and "tstststststs"
4:10– 4:52	Sounds resemble thunderstorm; white noise: "tstststststs"
4:52–4:59; 5:46	Sound resembles wind instrument, with rich resonance
5:56–6:10	A series of hissing sounds: "sssssssssssss"

The exploration of the sonic quality of these sound units reflects Berio's intention to reduce "sound" into "phoneme"—the degree zero of composition. The sound units imitate the phonemes in the text due to their inherent sonic features. These multidimensional connections establish what Berio calls "semantic circles" with one another so that a nexus is formed. Here, "semantic" does not refer to a word, but rather something meaningful evoked by the comparison between verbal and pure sound materials. The sound units and phonemes are connected by certain similarities and differences, and then they are associated with the imagery of the words from which the phonemes are derived. For instance, the white noise, initially without any connotation, activates the audience's imagination of loneliness (so lonely), wind (hiss), violence (spiked), and emptiness (silent) through its connection with the fricative /s/.

Thema is primarily connected by its sound properties—phonemes in a linguistic or musical sense. The emphasis on sound does not mean that Berio abandoned the

conventional sense of semantic meaning entirely; the atmosphere and general meaning of the work are still driven by the semantic meaning of the words. However, the role of words and their semantic meaning differs from conventional linguistic expression with well-established syntax and a logical flow. The semantic meaning is expressed by individual words rather than sentences: rather than replicating the narrative, they evoke an atmosphere.

The montage of voice and sounds provides the general mood and dramaturgy of this electroacoustic drama, in a manner evoking Berio's previous piece, *Ritratto di città*, which he composed with Maderna to reveal the soundscape of Milan. While we focus on sonic connections, disjointed visual imagery is subconsciously suggested. The imagery from the words and the timbre in the music shape our perception of the acoustic materials so that images are evoked directly in our minds. Also, the varying degree of recognizability of the acoustic representation renders the listening experience a meaning-seeking process.[47] As observed by Richard Causton, electroacoustic music unavoidably evokes images that are related to our daily life; it is human nature to establish meaningful relationships among objects and to assimilate them to one's world view.[48] The tendency to evoke theatrical elements allows electroacoustic music to become part of our humanity as the theater inside one's mind.

The mental drama in *Thema* is suggested by "loneliness," "coldness," and "gloominess," along with the suggestive timbre of the electroacoustic sound. The

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[47] Scaldaferri suggests that the various degrees of manipulation of the material offers various levels of recognizability in the piece. Scaldaferri, "'Bronze of Gold'," 130.
[48] Richard Causton, "Berio's *Visage* and the Theater of Electroacoustic Music," in *Tempo* 194 (October 1995), 15–21.

continuity of sound is expressed similarly to the Joycean stream-of-consciousness narration. At around 5:45 of *Thema*, we hear a loud and clear synthesized "war" recited by Berberian and standing out from the background before the piece comes to an end. Indeed, in Berio's mind-mapping sketch, "war" was an intended word that appears after a series of phonological associations. The word appears in the "Siren" chapter and is also a morpheme of "warbling." As shown in the first row of Figure 2.4, "war" is emphasized by the composer through the association of words that share the vowel, /ɔ/: "bronze," "morbida," "fredonne," and "ton." (tenon)

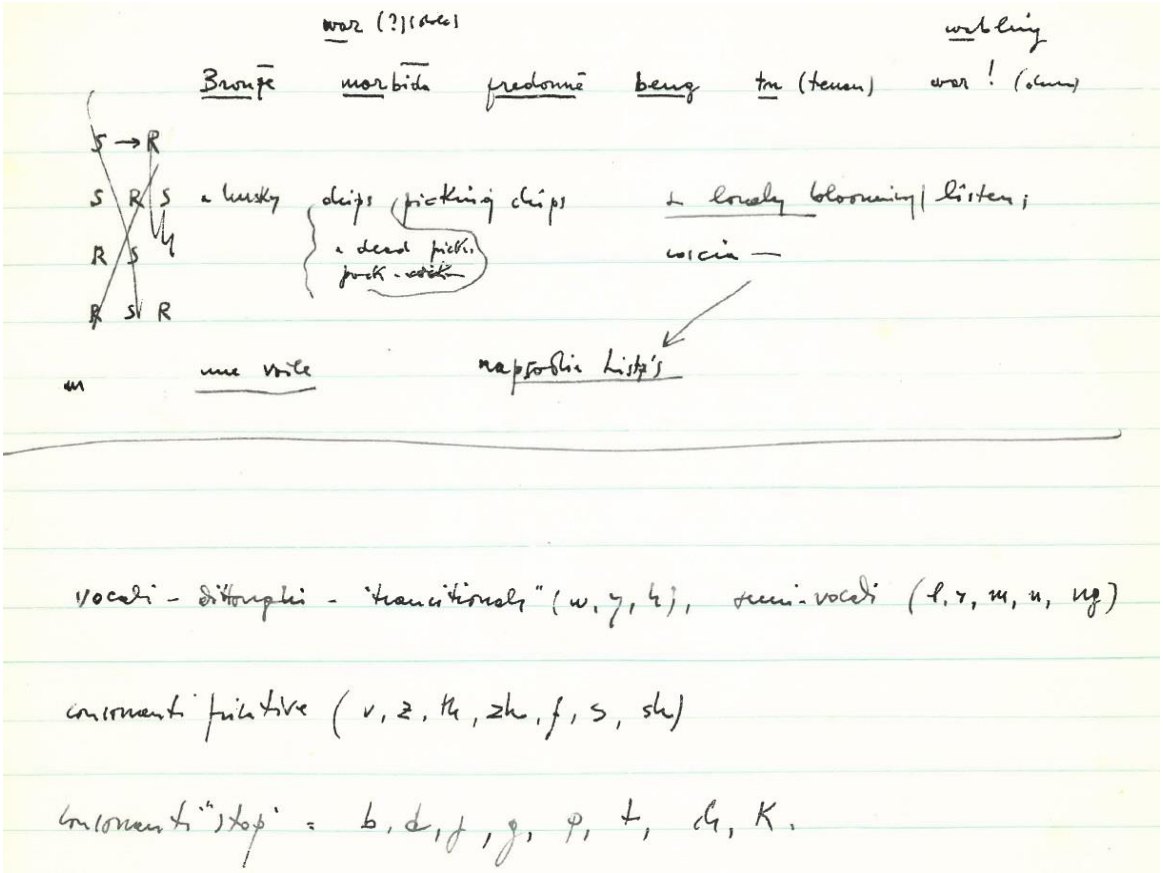

Figure 2.4: *Thema (Omaggio a Joyce)*, Berio's sketch. Luciano Berio Collection, Paul Sacher Foundation. Reproduced with their kind permission.

The gloominess, loneliness, and chaos evoked by the timbre in *Thema* recall the collective memory of the world wars. This happens especially at 3:30–4:42, with Berberian's recitation heavily distorted and the montage of diverse sound elements expressed at a faster pace, resulting in a series of chaotic aural images. The images related to the world wars are suggested subconsciously through the stream of sound until "war" appears explicitly. Requiring the audience to use imagination retains the expressive nature of music and provides a poetic layer to the work. The complex sounds of *Thema*, as Martin Link suggests, direct a field of possibilities of imagination so that expression becomes its meaning.[49] If the receiver's perception is paramount in twentieth-century communication theory, Berio's theater of the mind belongs to the decoding phase of the communication process. As stressed by the composer, the audience is invited to participate in the work,[50] and this participation also refers to the conative literary function in Jakobson's communication model (see Chapter 1).[51] The significance of listening in *Thema* echoes François Delalande's suggestion to develop a type of analysis focusing on the audience's listening behavior, especially one addressing how musical structure shapes audience expectations.[52]

This is the paradox of the degree zero of language: on the one hand, we pursue a neutral, colorless writing free of connotation; on the other, this utopian language is created with the medium of language in which the inherent features and connotations

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[49] Martin Link, "*Thema Omaggio a Joyce*—Expression as a Meaning," in *Proceedings of the Electroacoustic Music Studies Network Conference 2017*. http://www.ems-network.org/spip.php?article443 (accessed Jan 1, 2021).
[50] Berio, "Poesie e music," 264.
[51] Roman Jakobson, "Closing Statement: Linguistics and Poetics," in *Style in Language*, edited by Thomas A. Sebeok (Cambridge, Mass: MIT Press, 1960), 350–377.
[52] François Delalande, "L'Omaggio a Joyce de Luciano Berio," in *Musique en jeu* vol. 14 (1974), 45–54.

associated with it cannot be ignored. The way Berio pursued a degree zero of composing was done through establishing "an acoustical and a semantic frame"[53] to change the organizing structure of the sonic materials such that meaning would be expressed in a new way, as if the signification structure starts from zero. In this utopian state, sound does not contain inherent meaning but is itself related to the exploration of onomatopoeia in the piece, producing a natural relation between signifier and signified. As suggested by Casadei, the use of onomatopoeia allows *Thema* to embody a place that can be traced back to a primal scene of the origin of language, a place without linguistic restrictions but with an infinite potentiality for signification.[54] Whether it is degree zero or the onomatopoeia that recalls the origin of language, *Thema* reveals Berio's attempt to overcome the arbitrary relations between sound and sense and to rediscover the infinite potential of those relations.

Acoustic properties of the compositional units may be placed in a series of metonymies while the semantic meaning of individual words becomes evocative rather than definite. This reminds us of Stockhausen's remark regarding *Gesang der Jünglinge* (1955–1956), suggesting the German text remains of secondary importance,[55] or Kagel's *Anagrama* (1957–58), in which meaningful words are only formed occasionally as a result of the constant reordering of the alphabet. Likewise, the semantic meanings from words in *Thema* are placed in the secondary position so that they become an offshoot of

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[53] Osmond-Smith, ed., *Two Interviews*, 143.
[54] Casadei, "Milan's Studio di Fonologia," 439.
[55] See Karlheinz Stockhausen, "Music and Speech," in *Die Reihe* volume 6 "Music and Speech," edited by Herbert Eimert and Karlheinz Stockhausen (Pennsylvania, Bryn Mawr: Theordore Presser Co., 1960), 40–64.

the metonymic sequence of sound. The idea of placing the connection of sonic quality on in the perceptual foreground and allowing semantic meaning to appear passively would become increasingly developed in Berio's future works such as *Coro* (see Chapter 3), where distinct images triggered by words are brought together to form a variety of *tableaux vivants* resulting from a series of sonic metonymies between music and text.

In retrospect, Berio mentioned that in *Thema*, "new strata of meaning" had been worked out to replace the straightforward literal meaning in words:

> It was my experience with the electronic work *Thema (Omaggio a Joyce)* that first drew my attention to the new possibilities inherent in the human voice. In electronic music we make no distinction between human and instrumental sound: we use sound as an acoustical phenomenon regardless of its origin. Superficially, it might appear as though this would deprive it of an important characteristic—its meaning. In reality, however, exactly the opposite is the case: when analyzed, new strata of meaning come to the surface.[56]

Berio's description summarizes the development of the new strata of meaning I have demonstrated so far. By extracting acoustic properties from the vocal and instrumental elements before connecting them in continuity, meaning is evoked in individual words while the timbre of electronic music triggers the audience's imagination to produce a theater of the mind. This compositional model reconstructs sound and meaning by considering their equivalence to phonology, semantics, and syntax based on twentieth-century linguistic conceptions. The new model incorporating new strata of

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[56] Osmond-Smith, ed., *Two Interviews*, 141.

meaning directs the flow of perception through a musical process and establishes a less arbitrary relation between sound and sense. If sentence formation often starts from a deep structure (abstract semantic meaning that one forms in the mind) and is then mapped to the surface structure (the phonetic form that one articulates in speech), the creation model in *Thema* appears to proceed in reverse: the piece starts with the surface-articulated form and maps it to an abstract semantic meaning.[57]

2.3.2 Double Articulation, Polyphony, and Levels of Reality

From an early linguistic point of view, language is defined by whether the communication system has double articulation, which guarantees the infinite generation of sentences. Theoretically, combining meaningless elements (phonemes) at the word level with those that carry meaning (words) at the sentence level produces an infinite number of sentences. Such productivity is a key property of human language. The reason music cannot be considered a language is that music's inability to divide itself into meaningful signs in the first articulation (the level of words): indeed, music lacks inherent semantic meaning. Luca Cossettini and Angelo Orcalli argue that the ambiguous direction of "musical phonology" has an inherent implication of double articulation, showing that meaning is evoked in Berio's *Thema* similar to Lévi-Strauss's structural model on myth, which can be considered as the first level of articulation (the level of

[57] Deep structure and surface structure are concepts used in Chomsky's tradition of transformational generative grammar in the early 1960s. Berio was well aware of these concepts and Chomskyan linguistics as shown in his article, "Meditazione su un cavallo a dondolo dodecafonico" (1965), in *Scritti*, 37–41.

meaning).[58] Their analysis does not address the ability to generate new elements in Berio's example. Berio's intention to establish "an acoustical and a semantic frame" reflects his attempt to develop a structure with a property comparable to double articulation. He reduces sounds to meaningless phonemes (the level of sound) and aggregates them to form "semantic circles" (the level of meaning). Although such "semantic circles" do not refer to referential relations of real objects, but the meaning of organization, his compositonal model in *Thema* guarantees a productivity comparable to that of language. With the continuous narrative flow linked by similar acoustic properties, we can imagine that the piece can continue without end by adding a sound unit with similar sound features each time.[59]

Apart from intellectual discourses in linguistics, the Joycean conception of language and narrative is the primary inspiration for Berio's work. Along with the use of onomatopoeia, "polyphony" of narrative is a paramount device in *Thema*. In Joyce's chapter, the textual polyphony is manifested in the speech of multiple characters along with thematic repetition in the text, narrated as an analogy of counterpoint.[60] Such polyphony is transcribed rather literally as in Berberian's recitation in the three languages recorded in the four channels, which further trigger a polyphonic multidirectional

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[58] See Luca Cossettini and Angelo Orcalli, *L'invenzione della fonologia musicale: saggi sulla musica elettronica sperimentale di Luciano Berio e Bruno Maderna* (Lucca: Libreria Musicale Italiana, 2015), 22–31.

[59] The phonemic or syllabic play of speech sounds is ubiquitous in Berio's musical works, such as *Circles* (based on three poems by e. e. Cummings), *A-Ronne*, *Sinfonia* (the second movement), and *Coro*. The decomposition of meaningful words into phonemes is similar to the idea of double articulation. The music often imitates the text so that melodic phrases are broken down into shorter fragments. Likewise, the re-combination of short fragments forms other meaningful words.

[60] See Nadya Zimmerman, "Musical Form as Narrator: The Fugue of the Sirens in James Joyce's Ulysses," in *Journal of Modern Literature*, vol. 26, no. 1 (Autumn 2002): 108–118.

listening experience.[61] A variety of materials drawn from the polyphony are then assimilated into a continuous flow through a musical process. Such practice would continue throughout Berio's career, as the use of polyphony and musical process are essential to Berio's compositional model. In *Thema*, while suppressing the semantic layers of the text, polyphonies are formed by using different languages to generate more sonic resources, thereby establishing new relations and compensating for the limited connection with the outside world. These materials are assimilated and transformed through the musical process [*processo musicale*], which opens a temporal space to allow elements to establish relations among one another. This allows a complex system with organizing principles to gradually develop.

Polyphony and musical process are not limited to musical procedures that assimilate diverse elements; it also allows for a more conceptual level to overlay different "realities" in a continuity. In a 1981 interview, Berio comments in retrospect on the electronic music of his early years:

> It was during those years that I became interested, at first intuitively, in *expressing a continuity between different realities*, even if they were very distant from each other and sometimes even trivial. As far as I was concerned, the serial experience never represented the utopia of a language, and so it could never be reduced to a norm or to a restricted combination of materials. What it meant for me above all was an objective enlargement of musical means, the chance to control a larger musical terrain (such as the ethnic materials that I have often worked with) while respecting,

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[61] In the 1950s, the ability to present multilayered music was not only highly regarded in serialism, as explained by Eimert, but also a property valued aesthetically in literature and modern art. It was the individuality of the layers in polyphony that was lauded by twentieth-century artists. See M. J. Grant's discussion on polyphony and serialism in *Serial Music, Serial Aesthetics*, 196.

> indeed admiring, its premises… This interest in exploring *the continuity of musical processes*—even in the morphology of their sound-materials—explains why the pieces affected me most during those years.[62]

"Different realities," as Berio put it, were discussed and applied in philosophy and literature in the mid-twentieth century.[63] At a 1978 international conference, "Levels of Reality," Calvino explained that various levels of reality, while remaining parallel to one another, can meet and mingle to achieve either harmony or an unpredictable mixture. He even went so far as to claim that "literature does not recognize Reality as such, but only *levels*."[64] Levels of reality were also pervasive in Berio's works, and as he stated, electronic music uniquely allows one to compose with different types of reality.[65] Taking the theory of regional ontologies by Edmund Husserl and Nicolai Hartmann, an aesthetic object can be viewed in the context of nature, consciousness, and society. These three basic strata of reality can also be found in *Thema*—the material, the mental, and the social—through the musical process. The audience experiences material sound in a continuum of human voice, electroacoustic music, and noise; at the same time, a drama unfolds in the mind such that the chaotic soundscape functions as a commentary on war. Although the semantic meaning of text is suppressed or appears fragmented in *Thema*,

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[62] Osmond-Smith, ed., *Two Interviews*, 64–65. (my emphasis)

[63] Reality has been discussed from an ontological perspective of viewing aesthetic objects in layers. Simply put, an object can be viewed from different perspectives. The issue was first raised by Nicolai Hartmann in his *Zur Grundlegung der Ontologie*. The concept of "levels" was later picked up by phenomenologists such as Edmund Husserl and Nicolai Hartmann. See Roberto Poli, "Levels," in *Axiomathes*, no. 1–2 (1998): 197–211.

[64] Cited in Italo Calvino, "Levels of Reality in Literature," in *The Uses of Literature: Essays* (San Diego: Harcourt Brace Jovanovich, 1986), 101–121, cited at 120–121. The essay was originally read at the international conference, "Levels of Reality," Florence, September 1978.

[65] Cited in Angela Ida De Benedictis, "Riflessi del suono elettronico: singergie e interazioni nell'orizzonte compositivo di Luciano Berio," in *Luciano Berio: Nuove prospettive*, 293–336, cited at 311.

diverse images and scenes are evoked in the audience's imagination through multiple levels of reality—an alternative way of communicating semantic meaning through music.

Thema can be seen as Berio's early yet groundbreaking experiment. The goal of pursuing a utopia of language drove Berio to reexamine the organization of music. Rejecting the idea of serialism as the utopia of musical language, he turned to a wider realm across various disciplines to superimpose different "realities" through a rudimentary systematic model. Berio's model of signification, rather than relying on translation from transformational grammar in language, is instead loosely based on concepts in linguistics and literature.

The compositional model developed in *Thema* was still at a rudimentary stage by the end of the 1950s. Yet, it foreshadowed various devices and ideas that would keep returning in Berio's career: polyphony, metonymy, double articulation, assimilation of diverse elements through the musical process, evocation of mental images, and the use of multiple levels to portray reality. The signification model Berio developed would be considerably improved in *Sinfonia* and *Coro*, supported by more robust intellectual discourses from various disciplines (see Chapter 3). The composer would also continue to challenge the arbitrary connection between signifier and signified in his subsequent works. In addition, *Thema* was a work in which Berio delved into the connection between meaning and the unconscious. Although he asked the audience to actively participate in the meaning-seeking game, the work is highly suggestive: the fragmented, atmospheric sounds are arranged in a stream-of-consciousness narrative as if the audience were hearing the siren song, and images drawn from the listener's life experience would be

unconsciously evoked. Berio continued to explore during his career this process of creating meaning in relation to one's unconscious.

2.4 Beyond Semantics

In the following sections I outline Berio's compositional ideas related to the nature and analytical method of language during his Milan Studio period. These ideas were paramount as he continued his "linguistic" projects: how music conveys meaning and whether music is an innate ability of humanity. More specifically, I explore paralanguage (nonverbal vocalization), organization of information, and the significance of interdisciplinary studies centering on language. These areas of investigation by Berio relate to his search for a musical "grammar" along with the immanent expressivity and universality of musical experience in the subsequent years.

If the crucial difference between music and language is that music is lack of a definite reference, there are two ways in which Berio's electroacoustic pieces convey "meaning" or a thread for the audience to follow: one is setting a reference point to make electroacoustic music intelligible; the other is using materials that are intuitive and universal, such as vocal gesture.[66] The reference point can be music played by acoustic instruments, a piece of text, a recurring musical section, or anything recognizable by the audience. Meaning is then evoked when the electroacoustic part relates to elements with

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[66] Maderna's *Musica su due dimensioni*, Stockhausen's *Gesang der Jünglinge*, *Kontakte*, and Boulez's development of a continuum between electronic and instrumental music are also examples of this approach to bridge something familiar and unfamiliar.

which the audience is familiar.[67] These electroacoustic works hence direct an undulation to the audience's listening experience between the recognizable and the unrecognizable. The cognitive process of extracting meaning from a stream of sound represents the momentum and expressivity of these electronic works. Berio used technology as a way to amplify bridges between known elements, acoustic instrumental sounds, and synthesized sounds. As with *Thema*, the audience's task is to actively make sense of the stream of sound based on experience.

2.4.1 Vocal Gestures and Paralanguage

One familiar sonic element that Berio adopted was the vocal gesture, which can be applied to "almost everything that has to do with our body, to any formalized expression of meaning."[68] For example, a child who wishes to be embraced might cry, wiggle, or raise an arm. For Berio, gesture is similar to onomatopoeia, and he sought to explore the natural intended meaning of gesture along with the new technology of electroacoustic music. A variety of vocal gestures are adopted in the half-improvised work *Visage* (1961), in which Berberian "improvise[d] a pseudo-language in order to communicate emotion."[69] This "pseudo-language" is indeed paralanguage which refers to vocalics, a type of nonverbal vocalization suggestive of vocal gestures in daily life, such

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[67] Berio, *Interviste*, 107–108.
[68] Berio, "Del gesto vocale," in *Scritti*, 58–70, cited at 60.
[69] Berberian's description cited in David Osmond-Smith, "The Tenth Oscillator: The Work of Cathy Berberian 1958–1966," in *Tempo*, vol. 58, issue 227 (2004), 2–13, citation at 8.

as laughing, screaming, sobbing, and coughing.[70] Paralanguage is intuitive in nature and occupies a space where writing does not reach—yet it is rooted in human discourse. Berio's goal was to establish "a means to find musical equivalents of linguistic articulations" through musical and acoustic processes, including "sound phenomena that do not fit pre-established codes."[71] The use of paralanguage is consistent with Berio's semiotic approach: the intuitive expression bypasses the arbitrary connection between signifier and signified that the composer always challenged, and it probes the origin of language and humanity's instinctive reaction to language. The involuntary voice, as Mladen Dolar describes, is a "precultural, non-cultural voice [that] can be seen as the zero-point of signification, the incidence of meaning, itself not meaning anything, the point around which other—meaningful—voices can be ordered."[72] This "precultural" voice echoes the zero degree of musical phonemes and the use of onomatopoeia to search for the origin of language in *Thema*. Again, Berio's exploration of a nonarbitrary relation between sound and sense is clear: he consistently seeks for a state in which signification of sound is neutral or intuitive.

In *Visage*, Cathy Berberian's vocal gestures are assimilated into the musical flow. Electroacoustic music has been created to imitate these vocal gestures. According to Berberian, Berio "wanted to work within a parabola from the failure of communication,

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[70] The study of paralanguage began in 1958 after the linguist George Trager's discussion. Incidentally, his paper was published in the same year of the composition of *Thema* and two years before *Visage*. Although there was no indication that Berio was familiar with the study of paralanguage, Berio's approach to music and language seemed to keep up with the development of contemporary linguistic research. See George L. Trager, "Paralanguage: A First Approximation," in *Studies in Linguistics* no. 13 (1958), 1–12.
[71] The author's note of *Visage*. http://www.lucianoberio.org/visage-authors-note (accessed Sep 30, 2021).
[72] Mladen Dolar, *A Voice and Nothing More* (Cambridge, Mass: MIT Press, 2006), 26.

through trivial conversation, to serious emotion, and ultimately to song."[73] Sounds that involve diverse sound-meaning relations in this piece include: 1) vocal gestures suggestive of daily vocal expression; 2) stream of nonsense phonemes resembling a specific language; 3) pure electroacoustic sound; 4) the only meaningful word in the piece ("parole"); and 5) vocalics that are sung in a melodic line. These five types of sound are not independent from one another but are often superimposed. If the strong expressivity of paralanguage sets a reference for the audience to access meaning, what Berio shows us is a continuum from the electroacoustic music to the expressive voice that creates a continuous sound dramaturgy. As the composer describes, the "shadow of meanings" is expressed by the symbolic and representative function of vocal gestures and inflections.[74]

In the first section of *Visage*, Berberian's vocal gestures and her utterances of nonsense phonemes are accompanied by electroacoustic sound. The voice and the music propagate in parallel until Berberian utters the only meaningful word in the piece, "parole," for the first time at 6:00. Voice and electroacoustic sound imitate each other in conversation as well as conflict with each other (around 13:00). The sound associated with hitting objects is followed by the singer's laughter and sobbing. The border between pain and pleasure creates an erotic overtone in the situation. Sometimes the singer's nonsense phonemes are met with short sound fragments and are even eventually devoured by them. In the final section, Berberian's vocalics project in a singing voice

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[73] Cited in Osmond-Smith, "The Tenth Oscillator," 8.
[74] See the author's note of *Visage*.

with a more lyrical melody. The electroacoustic sound ceases to imitate the vocal gestures but to focus on the sonic effect.

Berio again challenges the audience with the meaningfulness of the sounds, and the audience can approach meaning in various ways. Apart from the paralanguage reminiscent of our daily experience and the singer's voice that reveals her affective state and identity, the utterance of meaningless phonemes invites us to match them with words we know in existing languages. The only codified expression in the piece—"parole"—is a word familiar to Italian audiences. But the word ironically is rather detached from the context of the wordless vocalics. It also provides little information in terms of the general structure except for its semantic meaning that involves an arbitrary signified-signifier relation. Conversely, the sexual connotation of the vocal situation renders the work to "say the unsayable."[75] Not surprisingly, the work was considered by the RAI as "obscene" and was banned from broadcasting.

The synthesized vocal gestures are then cut into short fragments, much like a phoneme unit, and they form a dialogue with the fragmented electronic sounds. The "meaning" in this section no longer relies on the intuitive expressions of paralanguage; instead it focusses on the similarities and differences between the two media. Thus the paralanguage functions as a reference in the piece so that the interplay between voice and electroacoustic sound is comprehensible.

Berio challenges the audience with the familiar and the unfamiliar in *Visage*—sounds from daily life and their uncanny juxtapositions and imitations. The difference

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[75] Osmond-Smith, "The Tenth Oscillator," 9.

between the familiar and unfamiliar directs the audience to look toward their linguistic knowledge, daily life experience, and emotive experience to interpret "meaning," which is endowed to the sound by the intuitive comparison with voice. Causton suggests that visual aspects of the drama in *Visage* are forced to appear in the audience's mind alongside their musical experience, personality, and the written program.[76] Perhaps the active meaning-seeking process is the reason for which Berio saw this work as a theater of the mind.[77]

Beyond the prosody and expressivity of paralanguage, the most prominent characteristic of Berio's works is the juxtaposition of features between human and synthesized voice: human and dehumanized, affective and nonaffective, recognizable and unrecognizable. Such a structuralist conception reflects the foundation of phonology, i.e., how the sound system of a language becomes intelligible through the contrastive relationships among the components. Berio would further develop his underlying structuralist thinking through his works in the 1960s.

2.4.2 Organization of Information

Oscillations between the familiar and unfamiliar can also be found in the structure of Berio's other electroacoustic pieces. The transmission of information and its relation to the order of a system plays a significant role in the "grammar" of electroacoustic music.

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[76] Causton, "Berio's *Visage* and the Theater of Electroacoustic Music," 15–21.
[77] Luciano Berio, "Testimonies," in *Nuova musica alla radio*, 230.

The contrast between the familiar and the unfamiliar is closely related to audience expectations. Considering how information is conveyed in relation to order and disorder, as Eco explains, large amounts of information should be given when one is able to define an order within an original disorder; a violation of the rules would highlight the dialectical tension within a given order.[78]

Many of Berio's works reflect the tension of disorder after the establishment of order. One way to direct the flow of information is to create a hierarchy between old and new information, so that musical sections and elements function as signal processing. By adding redundancy in a section, every sound process would be given a sense that refers to other senses in other parts.[79] Berio achieves that form of redundancy through repetition, which is also how the audience's familiarity with the material is organized. In some parts of the orchestral vocal piece *Epifanie* (1961) and *Circles* (1960), both musical and poetic elements return frequently. However, the two works in which Berio seriously addresses redundancy are *Différences* (1959), a piece that combines live instruments and electroacoustic music, and *Chemins V* (1980), a piece for guitar and an ensemble of forty-two players. Both of them develop a relationship between instrumentals and electroacoustic procedures. In *Différences*, sections for solo instruments or combinations among them (flute, clarinet, harp, viola, and cello) were prerecorded. A magnetic tape is then synchronized while the piece is performed on stage. The replay consists of different phases of transformation until the piece diverges completely from the original version. As observed by Stockhausen's student Robin Maconie, this work was a composition

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[78] Eco, *The Open Work*, 58.
[79] See Berio's discussion of electronic music in Osmond-Smith, ed., *Two Interviews*, 124–31.

influenced by Meyer-Eppler, as were Stockhausen's *Gesang* and *Kontakte*.[80] While Stockhausen focuses on the similarity of electronic sounds, Berio emphasizes their distinctions by means of redundancy. Redundancy is added to the music in the presence of returning material and when musical sense is induced by providing new information. New information acts as a commentary on old information, so that meaning is created by comparison.

Similarly, in *Chemins V*, redundancy can be found in the repetition of a self-contained clarinet solo melody, which is accompanied by its "vocalized shadow"—the same melody, yet previously recorded and transformed electronically. The sounds are filtered to characterize formants of vowels sung in extreme registers by different voices. The sound effect further develops a dialogue with the solo guitar. The "double image," alluding to the "shadow of meanings" in *Visage*, gives the electroacoustic sound a model to follow and hence evokes redundancy and anticipation in the audience by showing contrast and transformation.

These pieces illustrate processes in which messages are conveyed through the oscillation of recognizable and unrecognizable signals. Apart from redundancy of old information, a piece of text, the timbre of acoustic instruments, sound objects taken from daily life, and universal vocal gestures can be reference points for the audience to compare with the unfamiliar electroacoustic sound. The use of redundancy can also be found in Berio's nonelectroacoustic works. As observed by Christoph Neidhöfer, the musical poetics of redundancy (*ridondanza*) and rereading (*rilettura*) can be traced in

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[80] Robin Maconie, *Other Planets: The Music of Karlheinz Stockhausen* (Maryland, Lanham: Scarecrow Press, 2005), 214.

Berio's sketches of various works.[81] These compositional means regarding the repetition of pitches presents something new in the context of something familiar to the audience. Apart from the pitch level, the use of quotation, pastiche, and melodic variation are all devices for creating meaning and triggering the perceptual experience in Berio's nonelectroacoustic works.

2.5 Ethnography and Interdisciplinary Studies

Toward the 1960s, Berio's works and musical thought seemed to move in a humanities direction as opposed to a science-oriented approach like that of Norbert Wiener's exploration of cybernetics. Berio tended to examine language and music in relation to anthropology, social science, and psychology, and this directed Berio to view language as a social phenomenon that involves unconscious thinking. Indeed, humanity's unconscious and the collectivity of community would be two recurring topics in Berio's musical exploration throughout his career.

Berio's interest was moving from *culture* to *nature* (the "cooked" versus the "raw") in Lévi-Strauss's framework, or from emic to etic in terms of anthropology. Instead of focusing on Western music, Berio and the Milan Studio studied cross-cultural differences in music in lights of finding the universality of human experience and the cultural differences of music. Phonological analysis is thus a paramount way of the

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[81] Christoph Neidhöfer, "Berio at Work: Compositional Procedures in *Circles*, *O King*, *Concerto For Two Pianos*, *Glossa*, and *Notturno*," in *Nuove prospettiva*, 195–233.

method of research. As Jakobson and Halle elaborate, phonemic patterning is "an intervention of culture in nature, an artifact imposing logical rules upon the sound continuum."[82] One noticeable research area in the Studio di Fonologia Musicale that departs starkly from other studios was its focus on ethnographic studies and other disciplines across the humanities. The study of Italian folk music was one of these interdisciplinary studies, prompted by Alan Lomax and Diego Carpitella's works,[83] and aided in large part by the ethnomusicologist Roberto Leydi (1928–2003), who introduced Berio to multiple aspects of European and North American folk songs.[84] Folk songs are often considered as music that reflects collectivity. And phonological analyses were adopted to trace relations of expressions in various musical cultures. The founding members of the Milan Studio even believed that, by phonological analyses of vocal and musical expression, the relations among different cultures in history could be uncovered although the results remained inconclusive.[85]

In the television program produced and conducted by Berio, *C'è musica e musica* (1972), the composer interviewed the ethnomusicologists Alan Lomax (1915–2002) from the US, Klaus Wachsmann (1907–1984) from the UK and Diego Carpitella (1924–1990) from Italy for their views on folk songs (Episode 6: "Non tanto per cantare"). Berio shows the audience the opposing views among them. Lomax believes that, with his

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[82] Jakobson and Halle, *Fundamentals of Language*, 49.
[83] Scaldaferri, *Musica nel laboratorio elettroacustico*, 68–69.
[84] See Benedictis ed., *Una Polifonia di suoni e immagini* (Milan: Feltrinelli, 2013), 76. Leydi had a close relationship with the founding members of the Studio even before its establishment. He provided the text for the radio work *Ritratto di città* (1954, music by Berio and Maderna) as well as an experimental work, *Questo vuol dire che…* (1968) years later, which consists of folkoristic repertoires from different countries. In 1959, during the experimental period of the Studio, Leydi published the book, *I Canti popolari italiani* [Italian folk songs].
[85] Castelnuovo's letter to Berio in 1956, cited in Scaldaferri, *Musica nel laboratorio elettroacustico*, 68.

development of cantometrics (a method to measure certain aspects of songs), the social organization can be reflected by the way people sing. And Berio as the moderator in the show left the issue open for the audience.[86] To Berio, one thing for sure is that whereas folk songs and popular songs reflect collective sentiments and events such as work, love, and fear, music always transforms them into something else, i.e. another work, another love, and another fear by adding musical elements into the words.[87] Although Berio did not explicity express his personal views on the relation between music and social organization, musical expressions from different cultures became inspirations for him. For instance, the 1969 version of the electroacoustic work *Questo vuol dire che…* encompassed popular songs from different cultural areas, such as Piedmont, Veneto, Brittany, and Bulgaria, such that the musical style is marked by the degree of nasalization.[88] The harmonic characters of the nasalization were developed electronically in various transformation cycles along with other types of vocalizations.

Around the late 1960s, Berio intended to expand his research to other areas through interdisciplinary studies. In the proposal, "Note per uno sviluppo dello studio della Fonologia" [Notes for a development of the Phonology Studio] (1968–69), intended for submission to the senior management of RAI, Berio suggests a new direction for the Milan Studio. Specifically, he sought to make the studio an ideal place for developing interdisciplinary research.[89] He even proposed establishing two centers in the Milan

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[86] See the transcription in Benedictis, ed., *Una Polifonia di suoni e immagini*, 75–83.
[87] Benedictis ed., *Una Polifonia di suoni e immagini*, 76.
[88] See the program notes of *Questo vuol dire che…* (Programmnotiz "concerti di Roma"), the Paul Sacher Foundation.
[89] See Berio, "Note per uno sviluppo dello studio della Fonologia," in *Scritti*, 222–228.

Studio: Centro di studi etnografici [Center of Ethnographic Studies] to study literature, graphic arts, and popular music, and Studio dei dialetti [Studio of Dialects] to study Italian dialects.[90] Although the new research centers were never realized, we can see Berio's approach to music in relation to language studies. For instance, Berio envisioned that folk music would be studied in the Center by examining variations of intonation pattern and "phonetic" characteristics of string instruments used in folk music. Such a conception of dividing music into units to identify variations using linguistic terminology echoes ethnomusicologists' work in the mid-twentieth century.[91] Furthermore, areas in psycholinguistic studies would be explored by the proposed centers—notably the search for psychological and linguistic universals through the study of language acquisition by children.[92] Likely influenced by the first-language acquisition theory, Berio suggested that a child may acquire contemporary popular music as easily as art music.[93] That is to say, if a musical style is developed by social conventions, this "culture" can become "nature" for a child after their constant exposure to that musical style, given the hypothesis that a child acquires music in the fashion similar to their first-language acquisition. This assumption is closely related to the issue of whether man is born with a "music faculty," as manifested by Chomsky's suggestion of the universally found "language faculty" in humans (see more explanation in Chapter 3).

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[90] Berio, *Scritti*, 223.
[91] Similar studies include: Bruno Nettl, "Some Linguistic Approaches to Musical Analysis," in *Journal of the International Folk Music Council*, no. 10 (1958): 37–41; Charles Seeger, "On the Moods of a Music Logic," 224–261.
[92] Berio, *Scritti*, 226–227.
[93] The example is found in Episode 8 of the television program, *C'è musica e musica*. See the transcription in Angela Ida De Benedictis, ed., *Una polifonia di suoni e immagini*, 94–95.

Apart from the frequent use of folk materials, other ways were also adopted by Berio in his future nonelectroacoustic works to illustrate the relation between nature and culture in terms of human's musical ability as we will see in the coming chapters: the spontaneity of vocalism, musical drama directed by a stream of unconscious narration, the productivity of certain musical techniques to generate infinite musical materials, and the establishment of musical conventions.

The proposed new direction of the Milan Studio gives us a clear picture of its intellectual concerns as well as Berio's music. First, due to its interdisciplinary nature and central position in human experience, language allows for multiple contact points among different disciplines (psychology, sociology, anthropology, music, literature, and linguistics).[94] The Milan Studio's agenda indicates an apparent focus much more on language and linguistics than on music. A presumption behind applying linguistic theories in music is that music has to be conceived as a form of "language" (i.e., a communication system). As Berio continued to explore the two communication systems in relation to various disciplines, such as semiotics, psychoanalysis, and cultural theory, new thoughts regarding musical semiotics emerged, and these would go on to inspire his musical works. In addition, the Milan Studio's emphasis on culture, along with scientific methodology, encouraged Berio's works to be more culturally oriented. This is evident in the ubiquitous folk elements, religious and mythical topics, and literary texts found in his works. Phonology as the methodology common in humanities cast a profound influence on musical conception in the works of the Milan Studio as well as in Berio's own music.

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[94] Berio, "Note per uno sviluppo dello studio della Fonologia," 224.

Lastly, the Milan Studio's interdisciplinary research introduced ideas from other disciplines in the humanities, and these diverse experiences from other fields are brought together in music and language, such as the role of signs in musical works, the universality of music, the relation between music and the unconscious, and the role of voice as a bridge between the outer world and the unconscious. These issues explored in linguistics and other related disciplines were brought into the context of music to evaluate whether music possesses similar properties. Such explorations brought new musical conceptions into compositions and provided new angles for musicians and audiences to understand the works at different levels of reality. They not only enriched musical contents by applying composition ideas derived from less-explored areas other than literary works, but also provided a theoretical basis for compositions that experiment with the relation between music and language. Furthermore, adopting various humanistic topics allowed musical discourse to contribute to the more general discourse in the humanities, such as structuralism, universality of human communication, and social convention.

Apart from the turn toward interdisciplinary studies, the visual element is a significant component in Berio's career; the evocation of visual images through music and text can be found in many of his works, such as *Thema*. Apart from the evocative electroacoustic drama, which invites audience participation, visual representations in the form of images, scenes, situations, or other dramatic elements form connecting points between music and language. The "stage" of the drama penetrates concrete references from the real world and expressivity from the music so that meaning is evoked. The

search for “meaning” through music and language can be found in Berio’s future theatrical and nontheatrical works, as I exemplify in later chapters.

As noted by Angela Ida De Benedictis, Berio’s “electronic way of thinking” had cast an impact on his future works.[95] Some of these compositional ideas stemming from his electronic works, such as selection and filtering, infinite transformation of materials, imitation between two media, and exploration of systems of differences, do share similarities with the “linguistic way of thinking” discussed in this chapter. The investigation of language in the twentieth century inspired Berio to reconceive music with a new musicality, and searching for the degree zero of composing electronic music was only the beginning. The vision of pursuing a utopian relation between music and meaning directed Berio to explore a deeper level of musical structure—the universality of experience. The quest is concerned with how meaning is evoked unconsciously in the human mind. To pursue the concept of universality in the pattern of the human mind, language is an entry point, and music could be seen as a form of communication that is in some ways comparable to language. Berio commented on how electronic music was related to his understanding of linguistics:

> Electronic music is a type of music that precludes “content” which may become part of deep and richly significant levels of experience later on. What has happened, and is currently happening more than ever in certain respects similar to what has happened in linguistics, where the pursuit of

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[95] Angela Ida De Benedictis, “Riflessi del suono elettronico,” in *Luciano Berio: Nuove perspettive*, 293–336.

> research into a "universal" grammar has of necessity put the genuinely semantic (and indeed expressive) dimensions of language rather into the background.[96]

As I have discussed, Berio's exploration of electronic music provides a "new strata of meaning," which has relegated the conventional semantic meaning of text to a more subsidiary position. The focus is on how meaning may be evoked in music, similar to the exploration of universal grammar in linguistics. Berio's approach to the issue is the structure of the medium—the musical, the linguistic, and the dramatic—that reflects the patterns of our minds. This would lead to Berio's more developed structuralist thought on music and his search for "musical universality," as exemplified in *Sinfonia* and *Coro*, discussed in the next chapter.

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[96] Osmond-Smith, ed., *Two Interviews*, 118.

Chapter 3: Signification System and "Artificial Intelligence" in *Sinfonia* and *Coro*

This chapter addresses the following question: how was meaning expressed in Berio's music around the late 1960s and the early 1970s when Berio was deeply inspired by structuralism and semiotics? The conundrum of music and meaning is that the signifier (music) and the signified (meaning) are inseparable, thus the meaning of music is difficult to identify. In this chapter, I demonstrate how Berio attempted to resolve this problem and illustrate his vision that humans have inborn "universality of experience" [universalità dell'esperienza]. Through my exploration of *Coro* and the third movement of *Sinfonia*, I argue that Berio was consciously building a hybrid mechanism made of different theories and conceptions from linguistics, semiotics and literature under the umbrella term of structuralism. I suggest that Berio's signification system explores the "totality of form" which aims to view music from the perspective of the whole music history and all musical cultures. This system, I argue, is able to "think" like artificial intelligence—it can analyze the incoming materials while allowing chances to create an open-ended schema to generate infinite musical materials, based on the dictum "infinite use of finite means" in linguistics. I conclude that such a model that mimics cognitive functions of human mind could be one of the ways through which the composer explored this "universality of experience." In addition, the model also incorporates contemporary thought to reimagine old genres of symphony and choral work.

Although the trend of exploring the intersection between phonetics and music waned in the 1960s, Berio did not cease his quest for understanding the relation between

music and language. Many of his works from this period did not directly address the problem of finding the isomorphism between music and language. Yet his exploration was deeply rooted in structuralism—a methodology that emerged from linguistics and spread to most of the disciplines in the humanities, such as anthropology, sociology, philosophy and literary criticism. In the 1960s–1970s, Berio's interest in language was not limited to the adoption of text and phonemes in music: it extended to the unconscious activity of the mind and the universal principles of human communication. As Berio explained, there was plenty to explore in the "universality of experience" in relation to the study of language:

> At the end, the use of a specific language is not so important, perhaps, compared to man's ability to learn a language. I was wondering if it is possible to find this universality of experience in the field of music, as there is no culture without music. The phenomenon is very complex, and I think there will be immense work to be done.[1]

In this chapter, I focus on the meaning-creating process in Berio's *Sinfonia* and *Coro* and compare it to language. If the ability to signify (to analyze, create rules and produce signs) belongs to "universality of experience," similar signification processes, I argue, become a compositional model applied in both works to show whether equivalent procedures can be adopted to process music.

The existing literature on the third movement of *Sinfonia* is mostly concerned with the identification of the quotations and the musical and textual connections among

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[1] Berio, *Interviste*, 150. His claim is followed by his explanation of *Coro*.

them. Commentators of *Coro* investigate the use of heterophony and folk songs, but also the historical and political context of the work (summarized in the second half of this chapter). Yet, the existing studies on both works fall short of providing a full picture on how musical references taken from art and folk music convey one of the core problems in Berio's music: how music conveys meaning systematically.

Most of the existing studies on the third movement of *Sinfonia* focus on the collage of quotations from different sources, the connections among the sources, and the adaptation of the third movement from Mahler's Second Symphony as the cantus firmus. David Osmond-Smith and Peter Altmann provide a detailed inventory of the original sources of the quotations.[2] Alfred Schnittke turns to a more conceptual unifying approach of the movement and suggests that the polystylistics are unified by various factors: the image of "water," the timbral embodiment, the "tragic" quality in the correspondence between the ephemeral Mahler reference and the "deliberately imperfect form of the whole."[3] In a different vein, Francis Bayer favors a syntagmatic and paradigmatic approach to identify the juxtaposition of materials horizontally and the superimposition of quotations with Mahler fragments vertically.[4] Regarding the compositional technique, Osmond-Smith suggests three ways to understand the connections between the Mahler fragments and other references through superimposition and interpolation: common

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[2]David Osmond-Smith, *Playing on Words: A Guide to Luciano Berio's* Sinfonia (London: Royal Musical Association, 1985), 57–71; Peter Altmann, *Sinfonia von Luciano Berio. Eine analytische Studie* (Vienna: Universal Edition, 1977).

[3] Alfred Schnittke, "The Third Movement of Berio's *Sinfonia*: Stylistic Counterpoint, Thematic and Formal Unity in Context of Polystylistics, Broadening the Concept of Thematicism (1970s)," in *A Schnittke Reader*, edited by Aleksandr Vasil'evic Ivaskin, translated by John Goodliffe (Bloomington: Indiana University Press, 2002), 216–24.

[4] Francis Bayer, "Thèmes et citations dans le troisième movement de la *Sinfonia* de Luciano Berio," in *Analyse musicale*, vol. 10 (1988): 69–73.

pitches between counterpointed lines, common harmonic basis and common melodic shapes.[5] Following Osmond-Smith, Catherine Losada further investigates several ways the references are collated: overlapping pitches and texture, chromatic insertion and rhythmic plasticity.[6]

The music-text relation has also drawn attention. Whereas Osmond-Smith pays much attention to the fish sermon in Mahler's song cycle *Des Knaben Wunderhorn*, Michael Hicks contextualizes the work in relation to the sources of the Wunderhorn poem, Beckett's *The Unnamable* and Joyce's *Ulysses* to suggest how the texts hint at the musical scene of the 1960s.[7] Markus Bandur examines the music-text relation with a new perspective against the backdrop of James Joyce's *Finnegan's Wake* to investigate Joyce's influence on the idea of open work and intertextuality in Berio's movement.[8] Osmond-Smith and Hick's textual analysis focuses essentially on the literal meaning and the historical context of the text: in so doing, they do not pay much attention to the function of the text that acts as a part of the structure or a form of commentary on the music. Bandur also discusses the influence of Joyce's work. However, except for the concepts of open work and intertextuality, he does not address how the concrete idea of using language, i.e. the grafting of words and the intricate network among word, in *Finnegans Wake* is applied to *Sinfonia*.

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[5]Osmond-Smith, *Playing on Words*, 48.
[6] Catherine Losada, "The Process of Modulation in Musical Collage," in *Music Analysis*, vol. 27, issue 2–3 (2008): 295–336. See also her article "Between Modernism and Postmodernism: Strands of Continuity in Collage Compositions by Rochberg, Berio and Zimmermann," in *Music Theory Spectrum*, vol. 31, issue 1 (2009): 57–100.
[7] Michael Hicks, "Text, Music, and Meaning in The Third Movement of Luciano Berio's *Sinfonia*," in *Perspectives of New Music*, vol. 20, issue 1/2 (1981): 202–24.
[8] See Markus Bandur, "Berios *Sinfonia*, Joyces *Finnegans Wake* und Ecos Poetik," in *Musik-Konzepte Neue Folge 128* (Munich: Edition text + Kritik, 2005), 95–109.

While all these studies provide elegant and detailed analysis of the music and the text in the movement, what is left unaddressed is the establishment of a conceptual model of the movement from a holistic point of view. Why did Berio need to adopt so many citations? What point did he want to reach? There are many keywords surrounding Berio's study: gesture, structuralism, meta-theater, polyphony, open work, Bertolt Brecht, James Joyce and many more. The existing literature mainly refer to them separately. Before examining *Sinfonia* and *Coro* in detail, I put these keywords into a larger signification system that Berio was devising as a replacement for "musical syntax."

3.1 Berio's Signification System

Although Berio had been exploring the interaction between music and language for decades, over the years he insisted that music is *not* a language. He raised two main reasons for this argument: (1) signifier and signified in music cannot be separated and (2) language is a closed system in which few rules can produce an infinite number of sentences, while music is an open system that requires experiences as a point of reference.[9] Instead of searching for the isomorphism of "syntax" that is inherent in music, Berio's music and writings reflect the development of his own signification system, which involves certain principles for organizing music and conveying meaning.

Although Berio explicitly adopted structuralism in his works, structuralist method alone is not adequate since social and cultural codes are always needed to convey

[9] Berio, "Meditazione su un cavallo a dondolo dodecafonico," in *Scritti*, 38.

meaning. His turn to semiotics to develop his idea of gesture is hence not surprising. Berio viewed gesture as the trace of human action: therefore it always has an aura of historicity and strong expressive quality.[10] This notion of gesture is not limited to a group of pitches. Ulrich Mosch notes that an instrument and its sound, especially in Berio's *Sequenza*s, always carry the musical and cultural history associated with it.[11] An instrument is likewise a "linguistic object" (*oggetto linguistico*), as described by Berio, or a "social fact" which forms part of a social and musical contract as noted by Mosch. When musical references of Ravel, Debussy, Bach are cited in *Sinfonia*, stylistic specificities and the extra-musical meaning associated with them become a "musical contract" for an audience familiar with Western music. The references are juxtaposed so that similarities and differences can be perceived as meaning. Yet, since gestures are not codified signs, their connotations can be overridden or replaced with new values in the new context.

However, the meaning evoked by comparison is still rather weak—there are differences, so what? Also, what is the role of the texts? A "polyphony" consisting of music, text and theater can be traced in *Sinfonia* and *Coro* to convey concrete semantic meaning. Music and text in the movement are both multi-layered. Musical references from diverse sources are juxtaposed, whereas textual fragments often appear as layers in the movement. The two levels comment on each other in order to create an invisible scenic level mediated by the narrator's voice. There are two situations in the instrumental

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[10] See Berio, "Del gesto e di Piazza Carità," in Berio, *Scritti*, 30–36.
[11] Ulrich Mosch, "Luciano Berio's Concept of Musical Instrument in the *Sequenzas*," in *Luciano Berio: New Perspectives*, edited by Angela Ida de Benedicts (Florence: Leo S. Olschki, 2012), 65–6.

theater of *Sinfonia* (the Scherzo). The first situation is concerned with the compositional process that happens through the narrator, playing the role of composer, who talks with the musical elements in past repertories to mind-map a movement called "In ruhig fliessender Bewegung." The second situation (after rehearsal K) describes the narrator directly communicating and sharing the theatrical time with the audience in a show. The three levels, as I show below in Figure 3.1, form their own polyphonies while they relate to one another through commentary so that they form a complex.

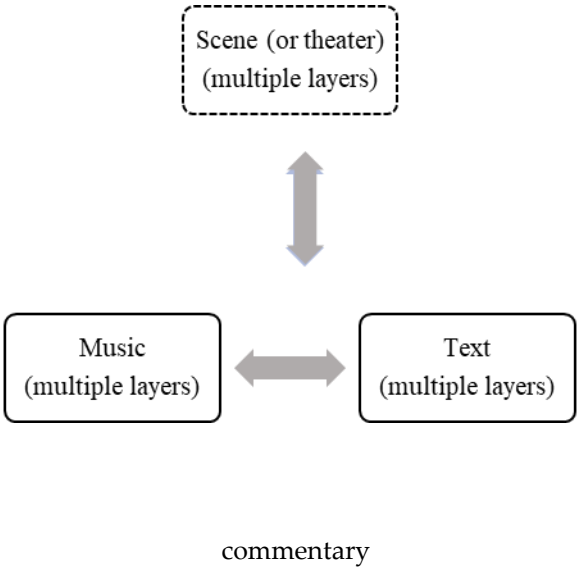

Figure 3.1: Representation of the musical, textual and scenic levels in Berio's works.

Despite its lack of semantic reference, music is considered to have strong expressivity, while language works the other way around. The introduction of a scenic level draws images and events from the real world, creating a platform or a stage to which the musical and textual elements can refer. The two media meet on the invisible

stage of the "imaginary theater" which is based on reality, as the motto of metatheater "all the world's a stage" (Theatrum mundi) goes.[12]

To refine the experience of "polyphony," Berio turned to James Joyce, whom he described as a precursor, whose work was characterized as a "polyphony of stories."[13] There are two aspects in Joyce's literary model that can be traced in *Sinfonia*. One is the network of words that connect their inherent linguistic features at multiple levels. Figure 3.2 shows the diagram constructed by Eco, who describes this network as "chaosmos." For instance, "dream" at the center of the diagram links to its French word "songe" while associating with "slip" as in slip of the tongue, which is also related to one's subconscious. By dividing a specific word into different levels in terms of meaning and sound, the reader can choose multiple paths to connect the words, rendering the reading experience a non-linear process.

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[12] As Berio explains, his music theater is not concerned with dramatic contrasts but complementarity among music, language and stage. See Berio, *Interviste*, 408.
[13] Berio, *Interviste*, 150. Joyce's *Finnegans Wake*, to Berio, encompasses such a rich complexity of relations that readers have new interpretations each time they read, discovering not only allusive connections, but also a concrete reality that keeps changing. See "Forma," in Berio, *Scritti*, 28.

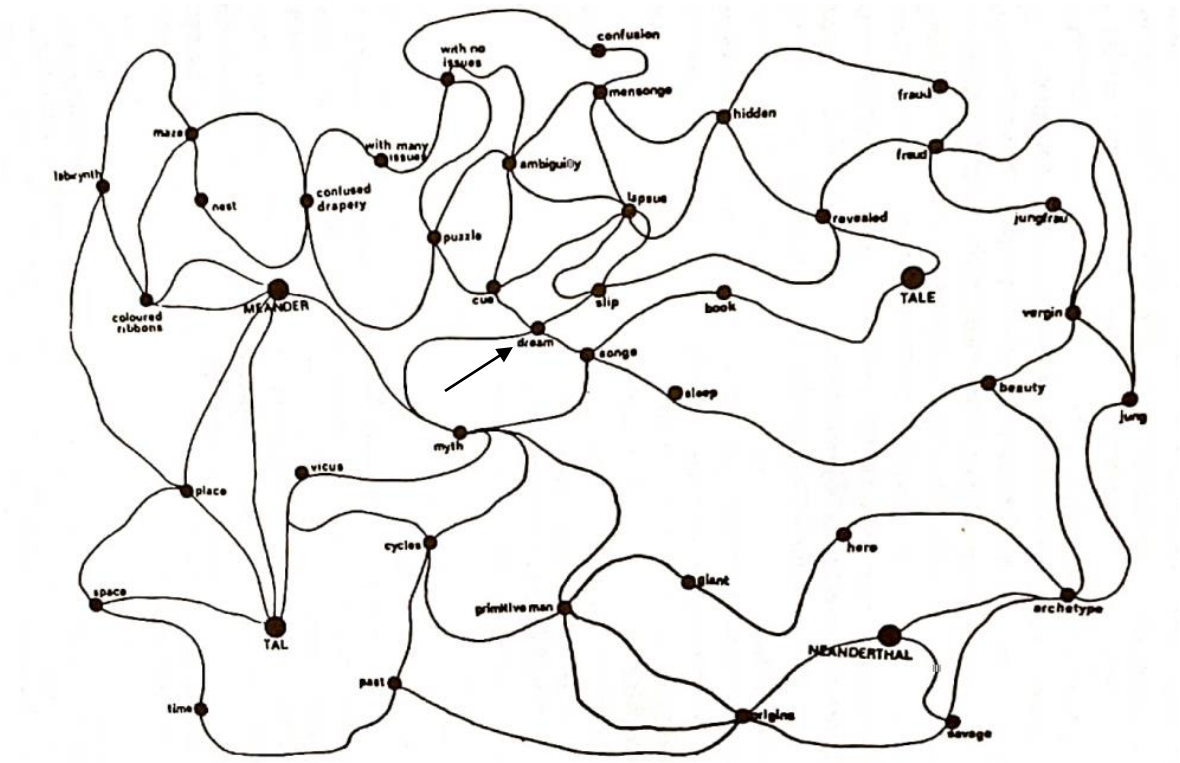

Figure 3.2: Umberto Eco's diagram of the network of words in *Ulysses* (1966). Reproduced from Eco, *The Aesthetics of Chaosmos*, 71.

Another lesson drawn from Joyce consists in the connection of diverse elements by coining new words using a collage of old ones. For instance, the synthetic word "Scherzarade" from *Finnegans Wake* shows an affinity between "Sheherazade," "charade," and "scherzo," which allows the reader to understand the writing as a fairy tale, a puzzle, or a joke from the surface form.[14] Similarly, the musical references and the pastiches in *Sinfonia* and *Coro* form a world of "musical myths,"[15] or what Francis Bayer

[14] Umberto Eco, *The Aesthetics of Chaosmos: The Middle Ages of James Joyce* (Tulsa, Okla.: University of Tulsa, 1982), 65–71.
[15] Berio described *Sinfonia* as "musical myth." See the program notes of *Sinfonia* (Programnotiz fur die fünfsätzige Fassung). Text manuscript, Luciano Berio collection, Paul Sacher Foundation.

calls "structures-networks,"[16] by joining and grafting musical and textual fragments to create infinite number of paths. The connections among the musical references hence direct multiple levels of listening experience to the audience. The implication of Joycean "polyphony" results in the independent paths between the linear textual representation and the non-linear literary experience. Berio also adopts the term "polyphony" to indicate the independence between sound and thought; it refers to "the sounding together of voices and thoughts that have their own identity."[17]

Voices have their own identity since Berio attributes to metatheater the agency to treat musical elements (as well as textual elements in *Coro*) as characters who have free will to act.[18] As Sanguineti notes, all kinds of sounds for Berio contain vocal quality and corporeality. Such meanings, inherent to the sound itself, are based on this lexicon of gesture.[19] And this assumption enables the composer to see his works as a stage in which gestures can talk, perform actions, and demonstrate certain behaviors.[20] Sometimes

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[16] Francis Bayer labelled Berio's citations as "structures-gigones," which is similar to my proposal of musical network here. I focus more on the linguistic conception behind this structural network. See Francis Bayer, "Thèmes et citations dans le troisième movement de la *Sinfonia* de Luciano Berio," in *Analyse musicale*, vol. 10 (1988) : 69–73.
[17] Berio, *Interviste*, 432.
[18] Berio's exploration of meta-theater and epic theater includes ideas proposed by playwrights such as Brecht, Lionel Abel, and to certain degree Pirandello and Lukács. See Berio's essay "Problemi di teatro musicale," in *Scritti*, 42–56. For instance, Debussy's *Pelléas et Mélisande* in Berio's opinion achieves a new type of dramatic unity, such that the motifs have a life independent from the character themselves. See Berio's unpublished essay "Toward Music Theater," text manuscript, Luciano Berio collection, Paul Sacher Foundation. Also, Berio considered Debussy's transformation and repetition of musical elements as the characters in Robert Musil's *The Man Without Quality* in which the characters gradually assembled into the crowd. See Berio, *Interviste*, 125.
[19] Edoardo Sanguineti, "La messa in scena della parola" (1982), in *Ideologia e linguaggio*, edited by Erminio Risso (Milan: Feltrinelli, 2001), 172–177, especially at 175.
[20] Claudia di Luzio focuses more on the properties of Berio's vocal gestures: with the imaginary corporeality, they are "performative" and dramatic in nature. In fact, this observation extends beyond voice to all instrumental sound. See Claudia di Luzio, "Reverberating History," in *Luciano Berio: Nuove Prospettive* (Florence: Leo S. Olschki: 2012), 267–289. See also Luzio, "Sanguineti e Berio, suono-voce-gesto," in *Poetiche* VIII, vol. 3 (2006): 529–48.

textual commentary is employed to signpost the interactions among these "characters" as in *Sinfonia*.[21]

The devices and principles discussed above (i.e. structuralist methods, gesture, polyphony and musical-elements-as-characters) are the building blocks of Berio's signification system that overcomes the fact that music lacks semantic meaning and an established organizing principle (or the so-called "grammar"). The system, functioning as a complex to replace "grammar," is exemplified in *Sinfonia* (the Scherzo) and *Coro* using Western music history and folk music as the "structures-network."

3.2 Symbolization Process in the Third Movement of Sinfonia

As previously mentioned, commentators of *Sinfonia* have often focused on the overlapping melodic, harmonic and rhythmic structure of the quotations. There are two issues that need to be addressed concerning the semiotic process in the movement. First, the unfolding of the "structures-networks" takes time. The discovery of the connections among the quotations is also a non-linear process. Osmond-Smith and Losada's analyses demonstrate the mechanism through which these quotations are juxtaposed at a specific moment or within a few measures. How quotations are laid out in a network (i.e. the

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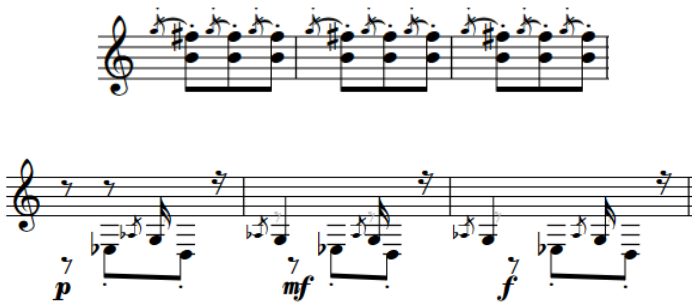
[21] Commentary was also a common device in narrative to incorporate the author's intervention of a fiction work in *neoavanguardia* during the 1960s. See more explanation in Chapter 1. George Flynn aptly notes that the quotations and collage in Berio's early works, including *Sinfonia*, were closely related to the realization of the musical commentary, which depended on musical considerations of continuity and contrast. However, his discussion does not go beyond using music as a means to comment on music. There is no discussion of the commentary by the narrator and how the commentary is related to the theatrical elements of the movement. See George W. Flynn, "Listening to Berio's Music," in *The Musical Quarterly*, vol. 59, issue 3 (1978): 388–421.

“diachronic” approach) is still unclear. Second, some connections among the quotations are established along criteria other than melody, harmony and rhythm. For instance, “water” is an implicit association shared with Debussy’s *La mer*, the drowning scene from *Wozzeck* and the rainfall of the Bororo myth in the first movement. Also, some gestures concerning performance modes, such as strings harmonics, staccato and tremolo, are obviously derived from specific musical references. Traditional music analysis is not enough to explain how these gestures are interrelated.

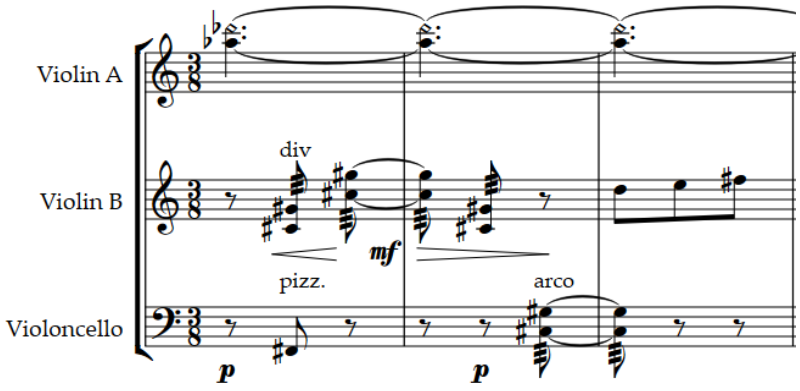
I suggest decomposing the quotations in the movement into inherent features of the gestures, including intervals, ornamentation, pitch organization, performative modes, and even extra-musical associations on top of the analysis of harmony, melody and rhythm. By establishing a list of these features similar to the practice in phonology, we can identify how the quotations are related to one another, and more importantly, how new elements are created by recombining these features.

When a quotation is first introduced in the movement, there are always common features that are shared with other quotations. At the beginning, gestures taken from Mahler’s Fourth Symphony and Debussy’s *La mer* are superimposed. The open fifths (F♯-B in flute as in Example 3.1a and G♯-C♯ in violin B as in Example 3.1b), with a tone apart, connect the two quotations in measure 4. While the commonality justifies the superimposition of the two quotations, the differences are equally significant. The prominent sonority from the acciaccaturas added to the open fifths in Mahler’s quotation and the figure with string harmonics played by violin A signal how both quotations differ from each other. After being endowed with identity by their differences, these gestures gain their autonomy and become independent in rehearsal A. The acciaccaturas are soon

attached to a new figure, as shown in 3.1a. The tremolo, prominent in the Debussy quotation, also gains its autonomy. It is first repeated in cello shown in 3.1b, then it is combined with other musical units in later sections, notably with the quotation from Ravel's *Daphis et Chloé* (flutes) and another quotation from *La mer* (violins B and C) in rehearsal D. On the other hand, a chordal figure with harmonics played by violin A would reappear as a standalone gesture lasting for 15 measures (see Example 3.1b for the chordal figure in violin A, which will reappear from measure 11 till the end).



a: The quotation of Mahler Symphony No. 4 (mm 2–5, flutes); The acciaccaturas combine with another figure (mm 8–10; clarinets 2 and 3).



b: Debussy quotation (mm 4–6).

Example 3.1: *Sinfonia*, 3rd mvt, quotations of Mahler Symphony No. 4 and Debussy's *La mer*.

If the open fifths are the common features shared by the Mahler and the Debussy quotations, the acciaccaturas, tremolos, harmonics and other features that show their difference are their *distinctive features*, as in phonological analysis. After the comparison, the quotations are endowed with *identity* so that the two sounds are recognized as individual entities. When these features recur in later sections to form new gestures with other elements, their sources are immediately remembered due to their uniqueness. Thus the musical material can be detached from its original source and become an independent gesture—a "musical character" along with the vision of meta-theater.

Example 3.2 shows the transition to the quotation of *The Rite of Spring* on top of the Mahler one. The acciaccatura played by the flute is now an independent gesture that has been detached from its original context (see Example 3.1a). The chromatic triplets played by the strings are taken from the Mahler reference (Mahler Symphony No. 2, Third mov., mm 347): as shown in the example, it is superimposed with the rhythmic pattern from *The Rite of Spring*. The triplets and chromatic figures are combined with the rhythmic pattern and ostinato that refers to *The Rite*. Although the whole quotation of *The Rite* does not appear yet, the stark rhythmic and melodic contrasts between these figures render these musical units recognizable. Indeed the features of chained triplets, thirty-second notes in a group of four, chromaticism and repeating notes would recur as independent musical gestures and be combined freely with other musical features in later sections. They gradually gain independence from their original sources.

Flutes

Clarinets in B♭

Timpani

Chromaticism + triplets from Mahler's symphony

Violin A&B

Violin C

Viola

Violoncello

Fl.

Cl.

Rhythmic pattern from *The Rite of Spring*

Timp.

Rhythmic pattern from *The Rite* + chromaticism from Mahler's Symphony

Vln. A&B

Vln. C

Vla.

Vc.

Example 3.2: *Sinfonia*, 3rd mvt, rehearsal H, mm 13–16.

The juxtaposition of musical references is hence not merely a play, but a deconstructive process to figure out the "distinctive features" so that these features are freed from their sources. With this meta-musical analysis, the uniqueness of the musical materials makes them identifiable, whereas the common features across the materials connect them through association. Metonymy, or association, is paramount in the first half of the movement in which the narrator is mind-mapping the composition. Pre-existing materials are recalled one by one by means of metonymy, in a mechanism similar to the stream of consciousness. These pre-existing musical references are recollected due to similar rhythmic or melodic segments, common pitch collections, the use of chromaticism and so on. This echoes Losada's observation that quotations are anticipated or introduced by similar melodic or rhythmic profile of another quotation or the Mahler cantus firmus.[22]

For instance, as Example 3.3 shows, an ordinary melodic figure hardly recognizable on its own, first appears in bassoons and contrabassoons. Taken from Ravel's *La valse*, this figure is repeated several times by the bassoons until the same figure in the Mahler cantus firmus is recalled: the presentation of the references resembles the thought process to remember certain experiences by means of association. After this transition, the Ravel quotation will become more elaborated in the next episode.

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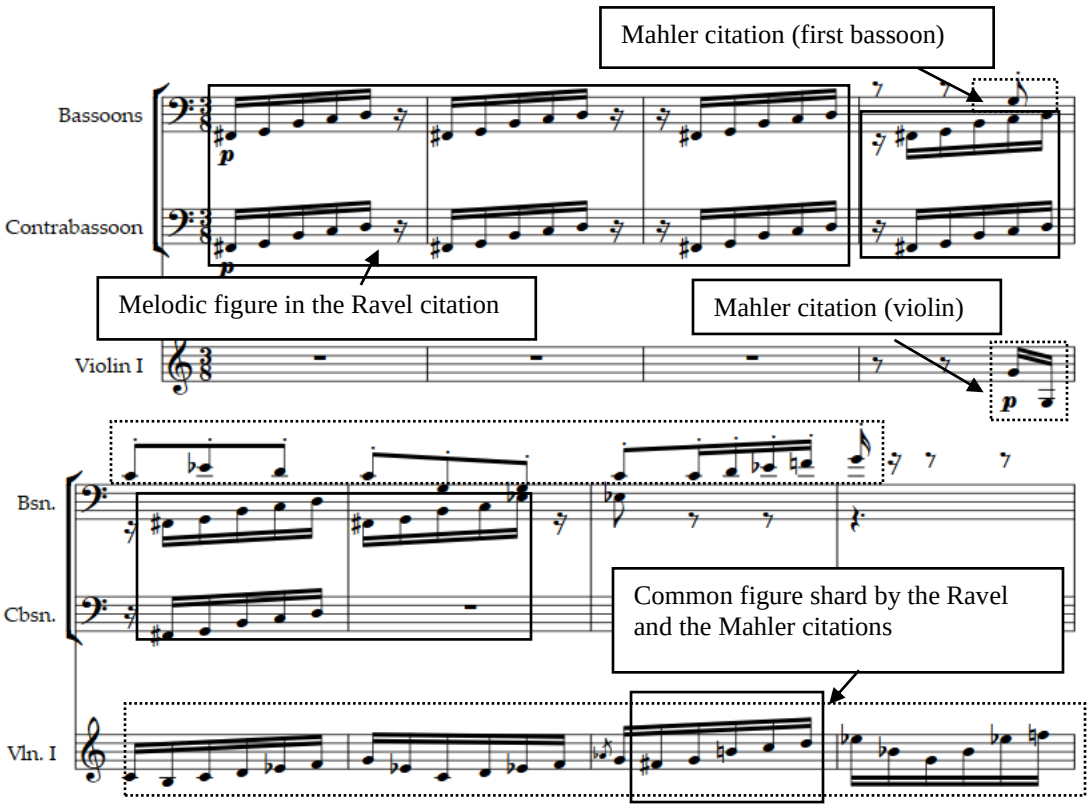
[22] For instance, according to Losada, Berio's insertion of chromatic scales anticipates the upcoming Brahms component by juxtaposing modifying the chromatic layers from it in measures 323–29. Another example is the heterophonic treatment of the Mahler Scherzo in measures 168–9 in which the acceleration of the rhythmic momentum is associated with the quotation from *The Rite of Spring* starting from the next measure. See Losada, "The Process of Modulation in Musical Collage," 312–22.



(solid line: Ravel's citation; dotted line: Mahler's citation)

Example 3.3: *Sinfonia*, 3rd mvt, rehearsal C, mm 20, to rehearsal D, mm 4.

The features that endow a quotation with identity are not limited to melodic or rhythmic figures; they can consist in any other musical and extra-musical information associated with the quotation as long as the information can differentiate two gestures. In rehearsal C, the *idée fixe* taken from Berlioz's *Symphonie fantastique* is superimposed with the Hindemith counterpoint on top of the Mahler cantus firmus. The comparison is multi-faceted. The arpeggiated counterpoint in the Hindemith reference stands in stark contrast with the more lyrical, stepwise melody in Berlioz's *idée fixe* and Mahler's fragment. Besides the contrast between program music and absolute music ("nothing but

an academic exercise”), the instrumentation is also notable. The timbre of flute, or the “flute-ness,” would become an autonomous feature that connects to other elements. It combines with the Mahler fragment in the strings (measures 2–4: see Example 3.4). It also connects with several Ravel and Stravinsky citations in later parts, and corresponds to a stage direction from *Daphnis and Chloé* in the original source: “Chloé réapparaît et figure, par sa danse, les accents de la Flûte.” The “flute-ness” is singled out from other features through multiple comparisons.

(Solid line in Flute 1: Berlioz’s *idée fixe*; dotted line: Hindemith citation; bold line: Mahler citation; dashed line: Mahler citation combined with the timbre of flute)

Example 3.4: *Sinfonia*, 3rd mvt, rehearsal C, mm 2–4.

Indeed, the extra-musical information along with the textual commentary create the scenic dimension, or the “stage,” of this theater of the mind. The dynamic motions mentioned in the text such as “competition on the stage,” “eight female dancers,”

"dialogues in the dunes," and "words falling" evoke images in a theater. The scenic dimension becomes the platform for the interaction between music and text: it allows visualizing music and signposting the behaviors of the musical characters. The boundary between music, text and stage is also blurred by the pun on chromaticism. Ravel's *Daphnis and Chloé* is described as red and displays an "obsession with the chromatic" (rehearsal D). Chromaticism connects the visual and musical dimensions as the music brings back the chromatic passages from *La mer*. Extra-musical meaning and textual elements sometimes link references as well. Apart from the imagery of water that connects the quotations of *La mer* and *Wozzeck*, the red color associated with *Daphnis and Chloé* is also connected to the references of Schoenberg's "Farben" from Fünf Orchesterstücke and Pousseur's *Crossed Colors*.

Rather than labelling the movement as a play of collage with diverse musical styles, we can also see the movement as a signifying chain (or "endless chain," rehearsal D) connected by the inherent properties of the individual musical materials.[23] I suggest listing the distinctive features of the citations, similar to phonological analysis. The citations can be described using a series of its features, with the "+" and "-" signs indicating their presence or absence. The features to be listed include the melodic, harmonic, tonal, rhythmic representation as well as ornaments, performative modes

[23] The signifying chain, or "symbolic chain" and "metonymic chain," was first suggested by Jacques Lacan in the 1950s. Lacan discusses the series of signifiers connected by their similarities. The term is often associated with the discourse on desire in psychoanalysis. The allusion to the Lacanian notions of signifying chain and desire is more obvious in Berio's later works including *La vera storia* and *Un re in ascolto*. I will discuss the signifying chain in relation to the psychoanalytical approach in Berio's music theaters in the next chapters.

(tremolo, harmonics, glissando and Sprechstimme), stylistic devices (pointillistic writing) and extra-musical information (composer, the text of the original sources).

For instance, the features of the Mahler and Debussy quotations in Example 3.1 can be listed as below apart from their pitch and rhythmic organization. The series of features can go on until they are adequate to differentiate the two entities.

Citation from Symphony No.4: [+open fifths] [+staccato] [+acciaccatura] [-harmonics]…

Citation from *La mer*: [+open fifths] [+tremolo] [+harmonics] [+water] [-staccato]…

In fact, when sketching out the parallel between music and language, Pierre Schaeffer compared phonemes and their distinctive features with musical values, i.e. pitch, intensity, timbre and duration.[24] Adding to these, I include also performative modes and extra-musical information. A long list is constructed for each quotation to indicate the presence or absence of specific features. Here are some examples of the distinctive features. Again, the lists are not exhaustive.

Symphonie fantastique: [+flute] [+dance] [+stepwise motion]

La valse: [+chromaticism]

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[24] Pierre Schaeffer compared music and language according to different levels of complexity: utterances are parallel to musical pieces, sentences to musical phrases, words to rhythmic or melodic intervals, chords or motifs, phonemes (distinctive features) to values (pitch, intensity, timbre and duration). Schaeffer's comparison reflects the tendency to decompose musical units into abstract features. His treatise was published two years before the premiere of *Sinfonia*. Pierre Schaeffer, *Traité des objets musicaux: essai interdisciplines* (Paris: Seuil, 1966), 362.

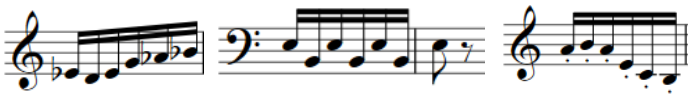
Daphnis et Chloé: [+dance] [+flute] [+color]

The Rite of Spring: [+ostinato] [+triplets] [+dance]

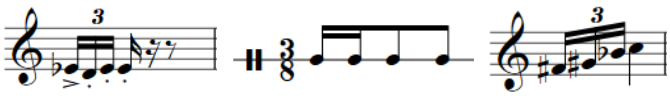
Agon: [+triplets] [+alternation between whole tone and half tone]

Kammermusik: [+counterpoint]

As the movement progresses, the recurring fragments from various references and the Mahler text become shorter and more simplified. Osmond-Smith aptly observes that Mahler's third movement is reduced into skeletal features before emerging as autonomous.[25] The reduction is not limited to Mahler's citations. As the movement progresses, the musical figures from various sources become more detached from their sources. The reduction is expressed in several ways. It can be a small part from the quotation, such as the melodic fragments from the Mahler cantus firmus shown in Example 3.5a.[26] Distinctive gestures can also be symbolic to retain the identity of the references, as shown in Example 3.5b. The rhythmic figures taken from *Agon* and the whole tone motif taken from *La mer* are distinctive for their internal features.



a: Recurring melodic fragments taken from the Mahler cantus firmus.



[25] Osmond-Smith, *Playing on Words*, 46.

[26] This reducing method is similar to synecdoche in rhetoric, which is a figure of speech that uses a part of an entity to represent the whole, such as the classic examples of saying "the crown" instead of "the king," or using the "White House" instead of the US government.

b: Gestures that are more recognizable and recur more often. (Left and middle: figures from *Agon*; Right: a whole tone motif from *La mer*)

Example 3.5: *Sinfonia*, 3rd mvt, distinctive gestures in later sections.

The gestures continue to develop in variations and are combined with the distinctive features of other materials. What is more, musical elements are further simplified and abstracted through the musical process. For instance, a wave-shaped melodic sequence appearing in the Mahler and Hindemith quotations is simplified and combined with the rhythmic pattern from *Agon* (the second figure of Example 3.5b, in retrograde form), as shown in Example 3.6a. Example 3.6b shows the abstraction of chained minor third which is ubiquitous in the movement. Chained thirds are elements shared by the Mahler cantus firmus and the Schoenberg citation of "Peripetie" (an ascent of thirds in m. 2 of the Schoenberg's piece). Chained thirds soon become an independent gesture and often reappears in variations. Similarly, the chained seconds so prominent in the *Wozzeck* citation are abstracted and combined with the gestures of glissando and tremolo as shown in Example 3.6c. Another example is the abstraction of the citation of *Agon* that underlines the alternation between whole tone and semitone as illustrated in Example 3.6d. Such abstraction shares some similarities with Schaeffer's observation of sound objection in relation to abstraction. When listening to the sound object, one experiences a process of abstraction since one goes through the process of "stripping down" and setting

up of relationships between objects based on their concrete qualities.[27] The processes summarize experience and allow us to identify an entity in a structure.

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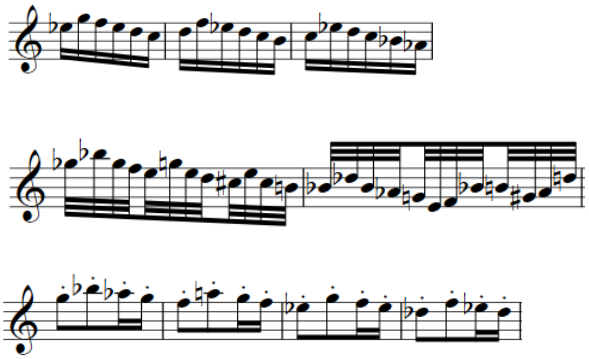

Abstract form:

(combined with the rhythmic pattern in *Agon*)

a: Wave-shaped melodic sequence (Left: rehearsal A, mm 7–9, violin A, cited from Mahler Symphony No. 2; Right: rehearsal A, mm 21–22, violin solo, cited from Hindemith *Kammermusik*; Simplified figure: rehearsal H, mm 7–10, oboe)

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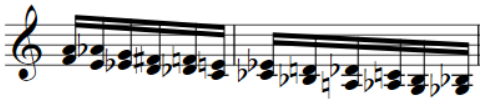
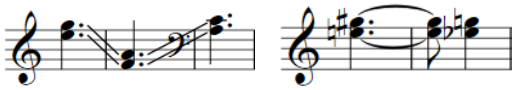


Abstract forms:



b: Chained thirds (Top: rehearsal V, mm 3–4, horns; Bottom left: rehearsal V, mm 1–3, keyboard; Bottom Right: rehearsal J, mm 1–2, oboes)

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[27] According to Schaeffer, musical objects are abstracted in the listening process so that their qualities are identified. A meaningful system is hence established. Schaeffer refers to André Lalande's definition of abstraction: a "mental activity which considers on its own an element—a quality or a relationship—of a representation of a notion, paying particular attention to it and ignoring the rest." Here the abstraction of concrete qualities through listening shares some similarities with Berio's work. Schaeffer, *Treatise on the Musical Objects*, translated by Christine North and John Dack (Oakland: University of California Press, 2017), 250.

Original:

Abstract forms:

c: Chained seconds (Top: rehearsal S, mm 5–6, violin A; Bottom left: rehearsal V, mm 6–11, violin C; Bottom right: rehearsal S, mm 14, trumpets)

(examples continue over)

Original:

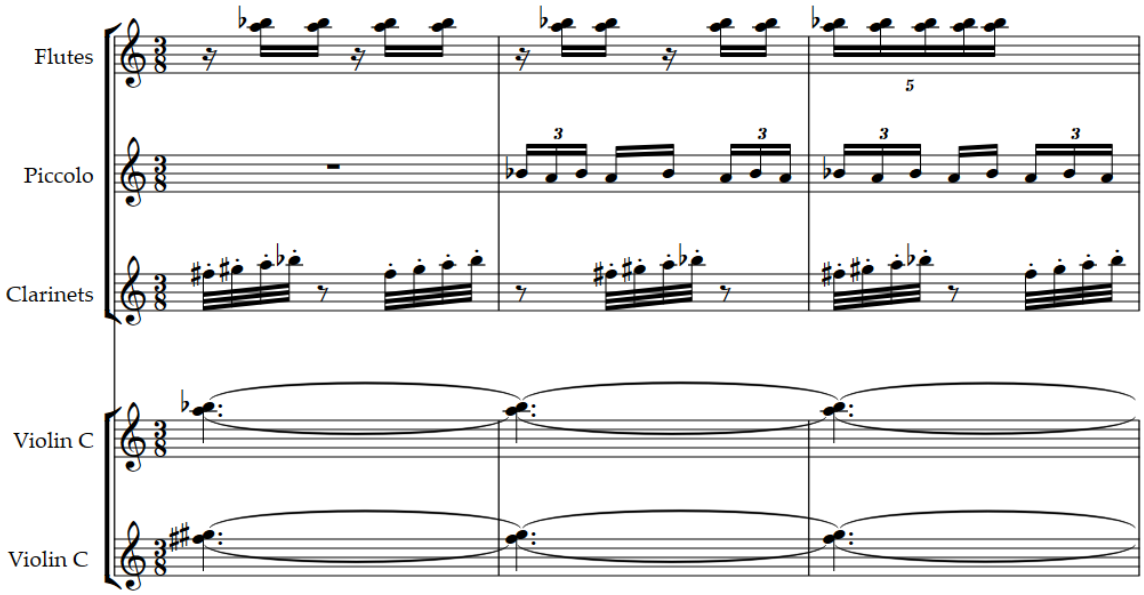
Abstract forms: or

d: Alternation between tone and semitone (Top: rehearsal J, mm 11–14, flutes, cited from *Agon* mm 108–109; Bottom left: rehearsal L, mm 8–9, trumpet; Bottom right: rehearsal L, mm 14, flutes)

Example 3.6: *Sinfonia*, 3rd mvt, musical gestures' development into abstract forms.

The abstraction takes place even more frequently toward the end of the movement. The simplified gestures become less identifiable with their sources: instead, they appear as mere musical symbols, especially when they recur more often. These symbols form abstract patterns so that the gestures' association with the original context is even weaker in the new contexts. For instance, all the figures presenting the pitch set B♭-A-G♯-F♯ in Example 3.7 come from quotations: the seconds played by the flutes and violins are the abstraction of the chained seconds in *Wozzeck*; the triplets in the piccolo

part reveal the identity of the *Agon* citation; the rhythmic pattern (a group of four thirty-second notes) is reminiscent of the one in *The Rite of Spring* citation. However, the memory of their original context is weakened after multiple recombinations of the musical features. These "musical symbols" are more neutral, providing a blank slate ready to be assigned new values in new contexts. The focus now is the musical elements themselves, such as the rhythmic and melodic pattern, the use of pitches and the timbre, rather than the identification of the sources.



Example 3.7: *Sinfonia*, 3rd mvt, rehearsal U, mm 1–3.

The abstraction or simplification shares similar ideas with the abstract presentations in paintings by Wassily Kandinsky and Paul Klee in which concrete images are abstracted into symbols. Indeed, Berio comments on Klee's approach of relating formal gesticulations and the reduction of experience to signal:

> Evidently [Klee, Webern and Stravinsky] are succubus to fetishes and formal gesticulations which tend to reduce experience to a signal and lead to grasping history as a flat sequence of manners and ways, without however being able to grasp the polyphony of the continuous process of formation of modernity […].[28]

We can now refer to Berio's description of "polyphony": the sounding together of voices and thoughts that have their own identity. Perhaps the criticism Berio's raises here is the lack of multiple sources to direct a non-linear perceptual experience with multiple paths, similar to the Joycean wordplay, in the works of these artists. But is symbolization of experiences taken from the music history Berio's final goal? Berio comments on the use of gestures:

> We can reach the point where we use gesture for what it may eventually become, thus resisting the "natural" tendency of languages to codify, to crystallize into symbols, to transform itself into a "catalogue of gestures," fragments of a still life, patterns of processes that have already occurred and been used historically, together with stories already told and of which everyone could always know the end in relation to the "best of all possible worlds."[29]

What does it mean? We can find the answer in the intriguing ending of the movement. After a long process of transforming pre-existing gestures, Berio returns to the Mahler movement and cites most of the parts from Mahler's ending as his own

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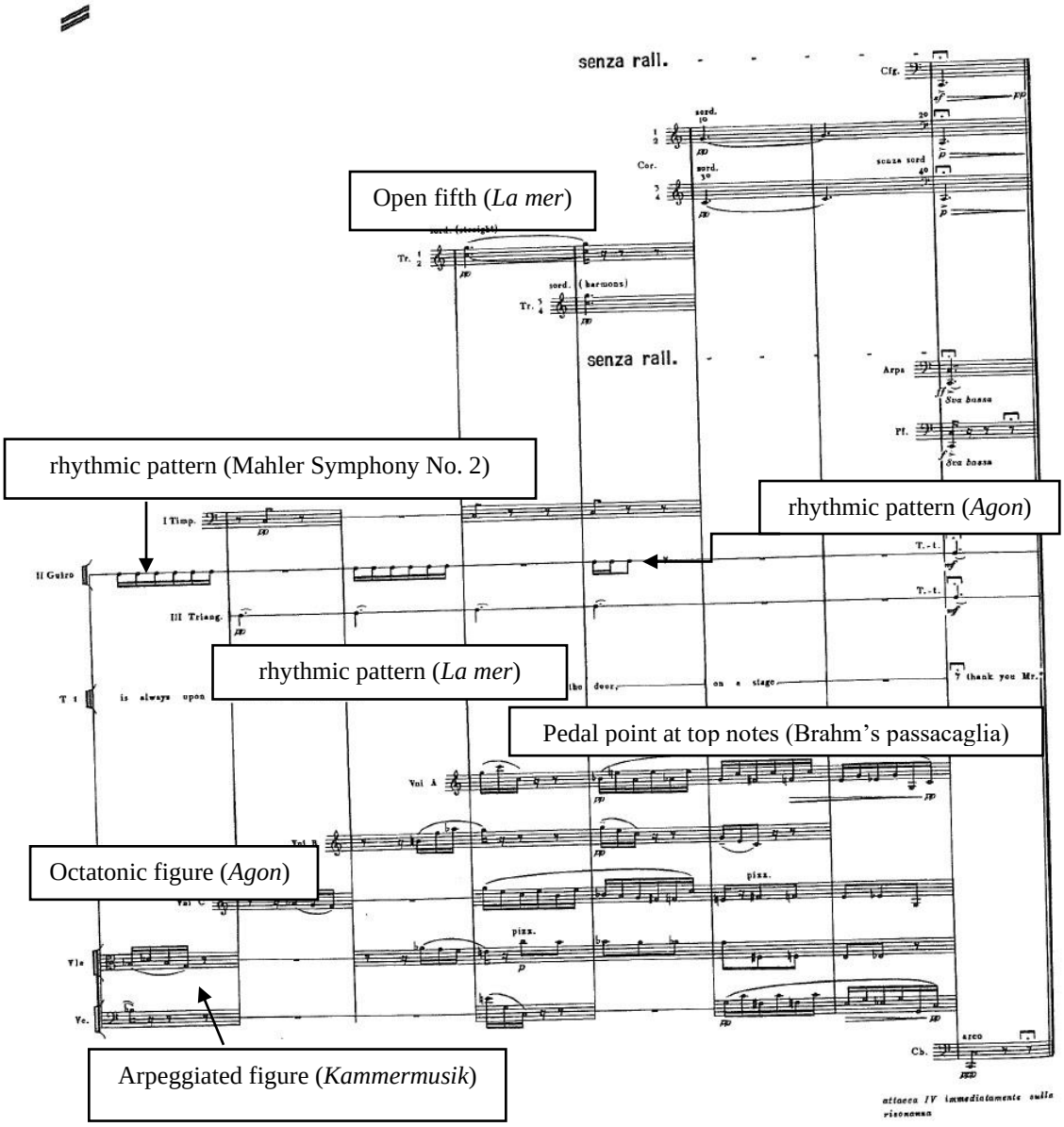
[28] Berio wrote an article about Paul Klee's structuralist idea and the "formal gesticulation": Berio, "Paul Klee," in *Scritti*, 332–333.
[29] Berio, "Del gesto e di piazza carità," in *Scritti*, 30–36, citation at 31–32.

(shown in Example 3.8). This ending exemplifies the goal of using "gesture for what it may eventually become." Consider the narrative process of the whole movement. Each feature in this ending can be traced from the pre-existing quotations that demonstrate their distinctive features. In Example 3.8, the rhythmic patterns in guiro recall those in the Mahler movement and *Agon*; the open fifths can be found from *La mer*; the A♭-G-F figure can be found in *Agon*; the arpeggiated figure in viola and the use of pedal point on top notes are reminiscent of Hindemith's *Kammermusik* and Brahms' passacaglia (and Pousseur's *Crossed colors* to some extent). However, the connotation of these sources is weak now as they are simplified to ordinary musical figures in a new context.



Example 3.8: *Sinfonia*, 3rd mvt, ending.

Using Mahler's movement as the cantus firmus, Berio shows us one of the possible ways that how the Western music history has developed. All transformations and developments are only one of the possible paths in the evolution. The "polyphony"

resulting from the combinations of musical features leads to infinite possibilities during "the continuous process of formation of modernity."[30]

3.3 The Humanistic Side of a Mechanical System

The third movement of *Sinfonia* is not merely a play of musical quotations, but a gradual process through which signification is revealed. Yet it seems that Berio is not satisfied with a strict and mechanical signification process induced by a collage; he allows other possibilities in the movement. The random behaviors of the musical "characters" adds aleatoricism to the compositional process. As musical features, these "characters" interact with each other, creating musical drama. For instance, in Example 3.9, the Mahler fragment (Mahler Symphony No. 2, third movement, mm 4–5 violin) transposes itself up a minor third in order to form a smooth melodic phrase with Berlioz's quotation (*Symphonie fantastique*, the second movement, mm. 135–37). The two quotations combine to form a hybrid phrase in the lower part of violin C and viola. The hybrid then recalls a similar figure in Mahler Symphony No. 9 through association.

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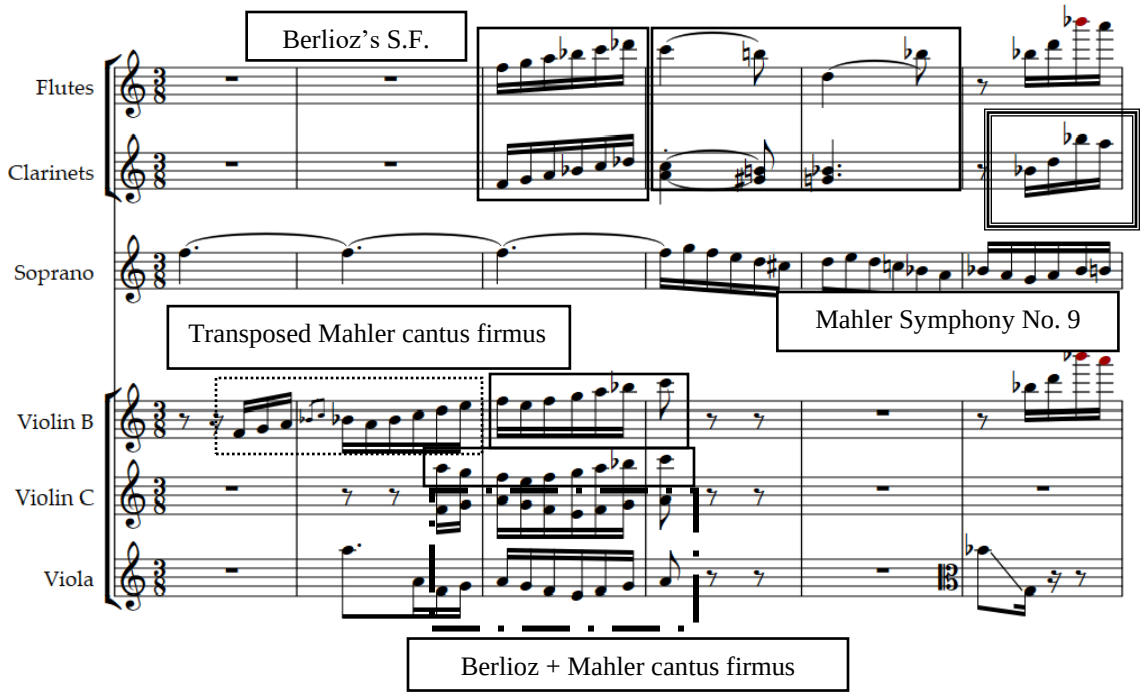
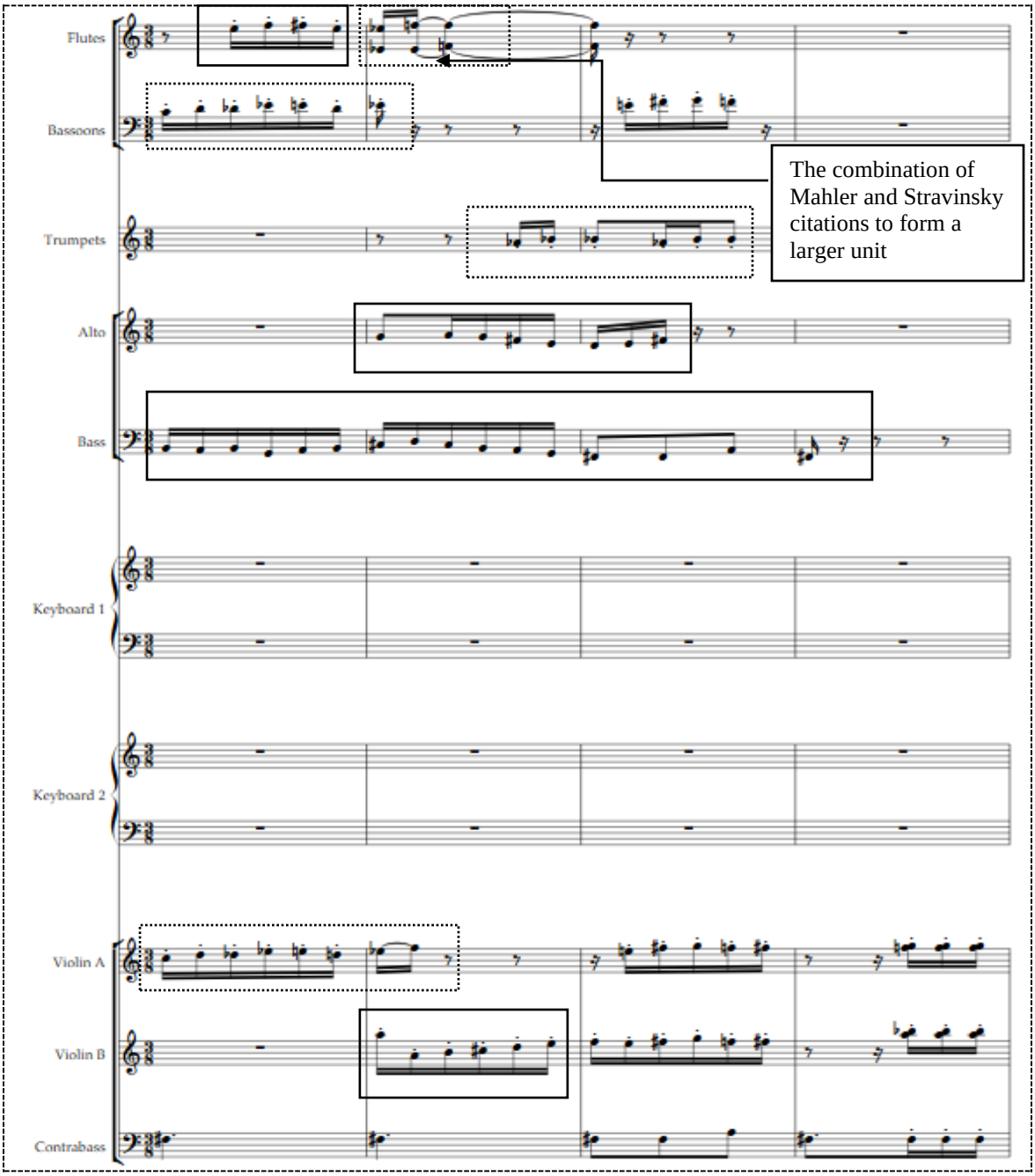
[30] Such way of revealing all possibilities and infinite possible worlds can also be found in literary works in Berio's time. For instance, Jorge Luis Borges's short story "The Garden of Forking Paths" unveils all the possible outcomes that lead to the murder described in the beginning of the narrative process. Berio explicitly mentioned the peculiar narrative of Borges' "The Library of Babel" akin to library of musical knowledge. See Berio, "Formations," in *Remembering the Future*, 9. Jean-Jacques Nattiez also describes Berio's disposition of diverse musical manifestations from different places on the planet, like the books in Borges's "The Library of Babel." In addition to considering an artwork as a world that encompasses all existing materials of our time, the inclusion of real and fictional or possible worlds, as well as a world that involves time and space share similarities in Borges and Berio's narrative conception. See Jean-Jacques Nattiez, "Luciano Berio: La musica del mondo, il mondo della musica," in *Luciano Berio: Nuove prospettive*, 35–47, especially at 38.

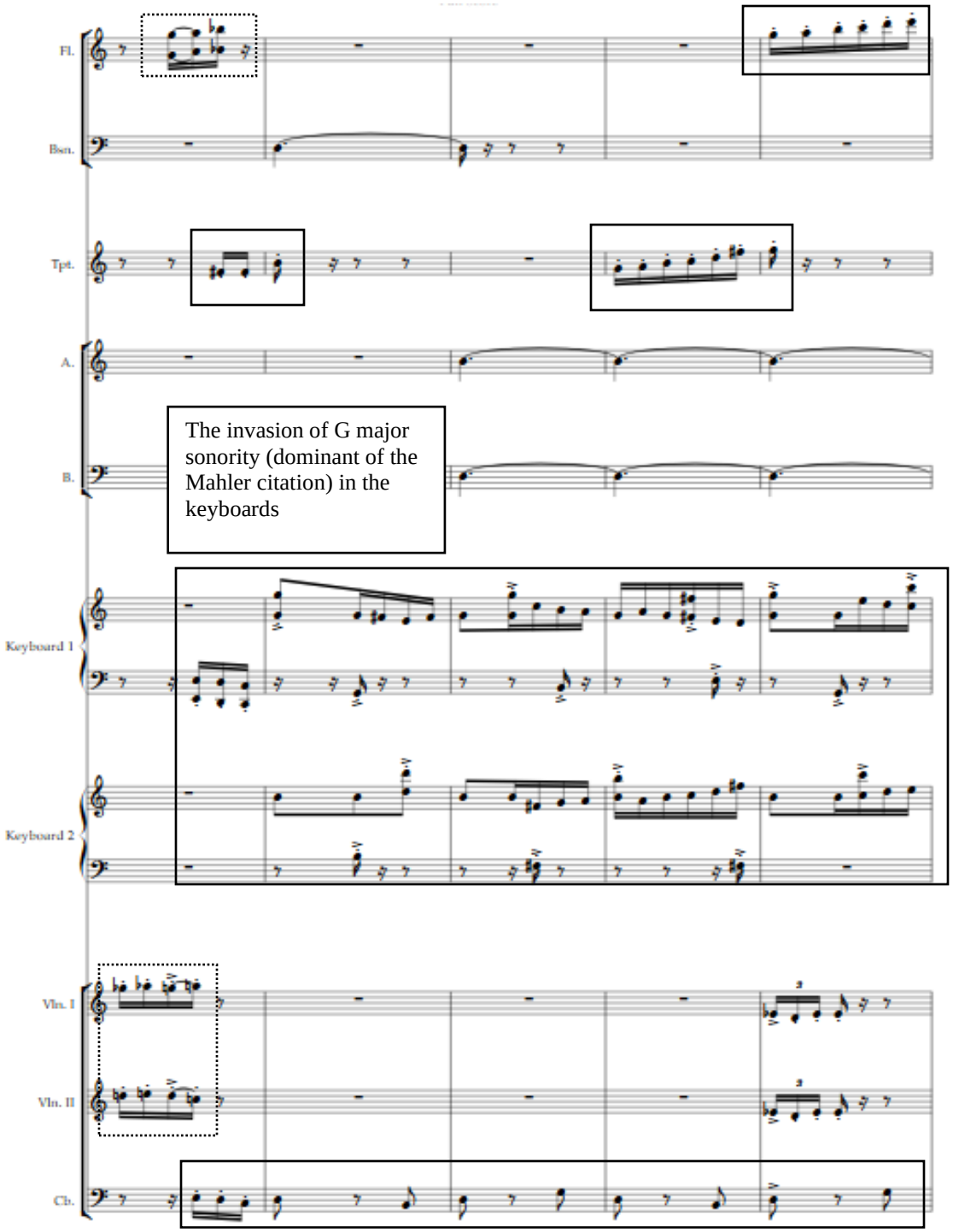


(solid line: Berlioz's citation; dotted line: Mahler's citation from Symphony No. 2; bold line: Mahler citation from Symphony No. 9; dashed line: combination of the citations of Berlioz Mahler Symphony No. 2)

Example 3.9: *Sinfonia*, 3rd mvt, rehearsal F, mm 3-8.

The interaction is not always a felicitous one. In rehearsal L, the Mahler cantus firmus interacts with figures from Triple Pas-de-Quatre of *Agon*. As Example 3.10 shows, the Stravinsky fragments are superimposed with those of the Mahler quotations. The *Agon* "character" disappears shortly and the G major sonority, the dominant of the Mahler cantus firmus, resumes. The "character" of *Agon* is rejected after the interaction.


Flutes
Bassoons
Trumpets
Alto
Bass
Keyboard 1
Keyboard 2
Violin A
Violin B
Contrabass
The combination of Mahler and Stravinsky citations to form a larger unit



(solid line: Mahler citation; dotted line: Stravinsky citation)

Example 3.10: *Sinfonia*, 3rd mvt, rehearsal L, mm 10–18.

The musical characters' behaviors are commented on by the text as well. For instance, in Rehearsal I, Stravinsky's quotation from *The Rite of Spring* appears with an emphasis on the ostinato between C and F♯ in timpani and the parallel fourths in the strings. After the text narrates "the earth would have to quake," alluding to "Dance of the Earth," the *Agon* "character" appears instead, followed by the narrator's commentary "it isn't earth" taken from Beckett's text. The vision of meta-theater indeed has a wider scope than the observation made by Hicks, according to whom only the singers in the movement are considered characters in the work.[31] In fact, all the elements in the movement, including the musical elements, musicians, the conductor and so on, are part of this self-reflexive "show."

The freedom within this conceptual model allows an open schema for the work by providing more combinations. Such practice reflects that Berio's ambition is not merely to illustrate a signification process regarding how music can make meaning, but to go even further to show the productivity of music as sign. It is similar to the openness of language discussed in the mid-century. The dictum "the infinite use of finite means" referring to how a finite number of linguistic items can generate an infinite number of sentences, received great attention in linguistics around the 1960s, especially concerning whether this openness is a property of language.[32] Berio knew about this hypothesis,

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[31] Michael Hicks, "Text, Music, and Meaning in The Third Movement of Luciano Berio's *Sinfonia*," 202–24.

[32] The idea of "the infinite use of finite means" was first suggested by Wilhelm von Humboldt in the 19th century. Chomsky further elaborates this idea in 1967 in relation to generative grammar to investigate the property of language. See Chomsky, *Cartesian Linguistics: A Chapter in the History of Rationalist Thought* (Cambridge: Cambridge University Press, 2009), 69–77. Openness became one of the features for universals of language as the linguist Charles Hockett observes. Openness means that we can transmit messages that have never been transmitted before. It is based on the assumptions that are quite similar to

which he discussed in his article "Meditation on a Twelve-Tone Horse."[33] Likewise, the musical materials in the third movement are generated according to a few principles: identifying the "distinctive features"; abstraction of the musical signs; allowing the musical features to react among themselves as if they were characters; commentary among the musical, textual and scenic levels. For Berio, one of the crucial distinctions between music and language is that a few rules can produce an infinite quantity of meaning in language but not in music. The third movement shows us a system that progresses from a system that relies on references to a system that relies on "rules": it starts with musical quotations from history and ends with a self-generating process by combining the musical features. Theoretically, infinite numbers of materials can be generated in this structure based on the finite means. Berio's attempt to prove the productivity of music seems to probe the possibility that music has similar properties as language. This reminds us of Berio's curiosity of how the ability to learn a language could be a point to explore the "universality of experience" in music.

If we say music lacks a codified "grammar" to create an infinite number of sentences as language does, the notion of meta-theater, which involves openness and aleatoricism, is an important means to compensate for the productive nature of

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what *Sinfonia* is showing: new messages "are freely coined by blending, analogizing from, or transforming old ones," and either new or old elements are "freely assigned new semantic loads by circumstances and context." Joseph Greenberg, "The Problem of Universals in Language," in *Universals of Language,* edited by Joseph Greenberg, second edition (Cambridge, MA: MIT Press, 1961), 1–29, Citation at 11.

[33] Berio discusses "infinite use of finite means" in relation to creativity in language. He mentions Chomsky's proposal of deep level of language overcomes the investigation of "linguistic performance" that hinders the creativity of language ("infinite use of limited means" [uso infinito di mezzi limitati] as he explicitly wrote). See Berio, "Meditazione su di un cavallo a dondolo dodecafonico," 39.

"grammar." Also, the introduction of meta-theater allows some element of chance in this mechanical structure, as if other factors or human decisions were involved. The free choices reveal the "field of possibilities" that history could have chosen instead of a single path that has led to where we are.[34]

The movement is indeed similar to a "generator" as Berio describes; [35] the musical references are introduced and churned in this huge machine, recombining the initial musical elements and features into new materials. The materials proliferate and the structure becomes a self-generating open-ended complex, gradually weakening the role of the composer. Just as the narrator asks the audience to have hope, especially the hope of resurrection (connecting to the title of Mahler's Second Symphony) in order to go on, the optimistic suggestion allows this historical machine to keep generating possibilities, leaving the movement open-ended. If the movement is a metaphor for Western music history, references from more recent works, such as Boulez's *Don* (1962) and Stockhausen's *Gruppen* (1955–57), appear at the end, implying that history has not been written in its entirety.

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[34] See Umberto Eco, *The Open Work*, 14. The "field of possibilities" is a sharp turn from Webernian serialism, as well as electronic music, which projects an "embryo" such as a three-note cell into all the developments of a piece. The limitation of this organic evolution is now replaced by totality in which meaning is evoked when possibilities are probed in a contingency. See also Berio, *Two Interviews*, 67–8. Such a "field of possibilities" induced by openness, as Eco and Pousseur would call it, forms a "philosophical canon" (similar to Berio's understanding of "polyphony") which reflects the tendency of contemporary science.

[35] Berio described the third movement as a "generator": "Ce movement est traité comme un 'container' ou, plutôt, comme un générateur, à l'intérieur duquel prolifèrent un grand nombre de réfèrences musicales, de Bach à Schönberg, de Beethoven à Strauss…" cited in Bayer, 72.

3.4 Meta-Music and Artificial Intelligence

The third movement of *Sinfonia* explores the "totality of form" to view the continuity of music history.[36] Such approach provides a descriptive analysis of past musical experiences in a work as totality. Jean-Jacques Nattiez notes that Berio's idea of totality is closely related to "the music of the world" and "the world of music," along with his strong desire to connect heterogenous elements to a unity.[37] The consideration of totality and the entire history is significant when we consider the diverse musical experiences in Berio's *Sinfonia* and *Coro*—the Western musical history in the former and the various styles of folk music of the latter. The inclusiveness of the entire musical "world" also reflects what Berio described in *Coro*: "between an African heterophony and myself […] you may find the whole history of music."[38] The totality of form is closely related to Berio's proposal of "Music Theory" [Teoria Musicale] (capitalized). It is an instrument used to analyze music historically from a distance and from a certain perspective, in such a way that musical pieces belong to a complex in evolution.[39] The exploration of totality of music permitted Berio to formulate what is called "meta-music" by integrating different musical experiences:

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[36] The totality of form could also be compared to the "totality of literature" discussed in the 1950s by literary critics René Wellek and Austin Warren. Their proposal of perspectivism saw all kinds of genres as a whole and "recognizes that there is one poetry, one literature, comparable in all ages, developing, changing, full of possibilities." They read literature as an integrated whole and examined the interrelation among genres over the course of the history, in their evolutionary pattern. René Wellek and Austin Warren, *Theory of Literature* (New York: Harcourt, Brace, and Company, 1949), 35.
[37] Jean-Jacques Nattiez, "Luciano Berio: La musica del mondo, il mondo della musica," 35–47.
[38] David Osmond-Smith ed, *Luciano Berio: Two Interviews* (New York: Marion Boyars, 1985), 136.
[39] Berio, "Meditazione su un cavallo a dondolo dodecafonico" (1965), in *Scritti*, 37–41.

> The answer for me is rather simple, and I intend to follow it constantly: to try to develop a music that could be the music of musics—as if in the field of communication one were to search for a language of languages, a music which could integrate, develop, use, represent many different musics, all of which could be identified in their own right, since there exist different levels of experiences.[40]

Berio's way of developing "meta-music" is not only a practice intended to develop and combine a wide range of musical materials, but also a mechanism that connects "musics," supported by a hybrid of contemporary thoughts in the twentieth century.

Although Berio's signification system is an illustration of meta-music to show the continuity of music history, the components and the work process in this system resemble artificial intelligence. The system, as exemplified in *Sinfonia*, involves identification and analysis of inputting materials, operation and creation, and the acceptance of chance (or human factors). All of these are similar to the concept of deep learning. Deep learning includes representation learning that is "a set of methods that allows machine to be fed with raw data and to automatically discover the representations needed for detection or classification."[41] It often involves multiple levels in which the raw input, collected from non-linear units, is transformed to a higher, slightly more abstract level. The movement of *Sinfonia* demonstrates that a system, taught with some principles, can adapt to a large number of unstructured new information and provide output as a result. The system involves hierarchies to transform the raw input (the quotations) into more abstract

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[40] Berio, *Interviste*, 78.
[41] Yann LeCun, Yoshua Bengio and Geoffrey Hinton, "Deep Learning," in *Nature*, vol. 521, issue 7553 (2015): 436–44.

representations: decomposition of inputs into musical features (identification), re-arrangement of the musical features (analysis and reasoning) and creation of new materials (production). In fact, the distribution of the human and machinic agency was an issue for the avantgarde composers in the technologically infused Cold War era, as reflected in electronic music and aleatory music.[42] Berio's "music generator" can be seen as a continuation of compositional models from the 1950s.

The artificial intelligence shown in the movement is rather rudimentary and cannot be compared to natural language processing or advanced algorithm in deep-learning methods of the twenty-first century. However, what has been achieved in the movement to simulate a human brain processing musical materials and the vision of creating it were still ambitious and futuristic in the late 1960s. Berio's development of his own semiotic system did not stop in *Sinfonia*. His later choral piece *Coro* further explores the existence of innate musical ability of humanity based on human cognitive understanding of language, which also shows traces similar to artificial intelligence. If *Sinfonia* deals with the "cooked" side of music, i.e., the learned, cultured, Western art music, the folk elements in *Coro* (1974–75) show us the "raw" side of music from diverse cultures.

3.5 The Exploration of "Universality of Experience" in Coro

[42] See Jennifer Iverson's discussion on human and machinic agency in postwar electronic music. Jennifer Iverson, *Electronic Inspirations: Technologies of Cold War Musical Avant-garde* (Oxford: OUP, 2019). Iverson emphasizes the question of the role of human in the postwar world. Her discussion also includes Berio's *Thema* and the role of Cathy Berberian's voice in electronic music.

The organizing principle of Berio's signification system was investigated further in *Coro*, a choral piece that encompasses pastiches of folk songs and different modes of "setting to music" such as African heterophony and counterpoint.[43] This discussion below will not reiterate the principles of the signification system mentioned above. I will focus on the two modifications in *Coro* that facilitate the productivity of musical and textual elements. The first one is the application of recursion from rules of the same musical techniques, so that infinite materials can be generated from the finite number of these "rules." The second one is the use of a variety of devices to connect sound and meaning, so that new musical and textual elements are always incorporated. The devices include onomatopoeia, sonic pun, semantic ambiguity, and nonsense syllables.

The symphonic work *Coro* is a piece for forty voices and instruments, including folk songs that are pastiches of a particular style or transcription of some musical models.[44] Two diverse musical and textual styles alternate with each other; various folk poetry is sung in folk musical style while the setting of the text by Pablo Neruda corresponds to a more contemporary musical style reminiscent of electronic music.

Existing studies on *Coro* focus on the adoption of folk music, especially the African hocket, and the political connotation of the piece. David Osmond-Smith provides a summary of how folk music and the hocket from Central Africa are incorporated in the piece.[45] James Davis uses a historical perspective to focus on the connection between

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[43] See Author's note: http://www.lucianoberio.org/node/1434?1011856635=1 (Accessed on Sept 5, 2019)
[44] Berio, *Interviste*, 154.
[45] David Osmond-Smith, *Berio*, 82–84.

Coro and the political turmoil in northern Italy during 1960s to 1980s.[46] Martin Scherzinger relates Berio's adoption of the African hocket to Deleuze and Guattari's new model for politics.[47] Concerning compositional techniques, Ivanka Stoianova discusses various amplification methods in Berio's setting of folk songs and the Neruda text, including the interaction between texts and musical settings, the variety of phonetic sonority as timbres of the text, and the variation of speed and texture.[48] Stoianova explains that the internal and external variations of the melodic fragments enhance the development of materials and constitute the totality of the symphonic work. Again, how the entire work functions as a signification system using the two media is still unknown. In addition, although Scherzinger mentions that the African hocket has been adopted due to its peculiarity of creating a melody, how and why this technique was explored by Berio in relation to the "universality of experience" and the "universal musical grammar" has not been fully explained. My discussion below focuses on how hocket is a significant means to keep generating new materials in *Coro*.

Berio's utopian vision to search for a common musical "language" that would allow music and musicians to speak universally is at the core of *Coro*.[49] Unsurprisingly,

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[46] See more details of "Years of Lead" in James Davis, "'Come and See the Blood in the Streets': Luciano Berio, 'Coro', and the Affective Staging of the One-Crowd," in *Music and Letters*, vol. 100, issue 4: 685–712. See the influence of "Years of Lead" on the Italian literary scene and the Calvino-Berio collaboration in Toni Geraci, "Lisabilité de l'espace social dans *La vera storia*," in *Le théâtre musical de Luciano Berio* volume 2, 467–478.

[47] Scherzinger proposes that Berio's musical *modus operandi* of using individual elements with their own identity to constitute the whole resonates with Deleuze and Guattari's concept of multitude that values multiple voices ("multiple cry") in the dividual of a community (One-Crowd). See the analysis in Martin Scherzinger, "Luciano Berio's *Coro*: Nexus between African Music and Political Multitude," in *Luciano Berio: Nuove Prospettive*, edited by Angela Ida de Benedictis (Florence: Casa Editrice Leo S. Olschki, 2012), 399–432.

[48] Ivanka Stoianova, *Chemins en musique*, 181–198.

[49] See Osmond-Smith ed., *Two Interviews*, 78–9.

Berio adopts a variety of folk songs—the musical versions of myths which have been transmitted through the oral tradition. Myths were widely studied in the twentieth century especially for their formation and *a priori* experience.[50] To Berio, melody is an element that manifests the *a priori* experience in a community. He believes that melodies reflect the natural collective creation in a group starting from zero—they are born "spontaneously within collective groups or in a stylistic frame when all the 'parameters' of music are at peace, and start 'singing' together…"[51] He sees melody as a meeting point for socio-cultural classes, especially those found in work songs, sung by choruses of laborers trying to pass the time.[52] Such a perspective provides support for the use of folk songs in *Coro* regarding the topics of work and love. Both topics are universal and concerned with relationships among people.

Simha Arom's discovery of hidden melodies in African hockets further strengthens the relation between melody and the hypothesis of "universality of experience." Arom discovered that the horn ensemble of an African tribe Banda-Linda always follows a structural model under the surface of polyrhythmic hockets, which remains unaware to

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[50] Apart from the *a priori* experience reflected by the content of myths, the systemic derivation of myths transmitted from generations to generations also reveal that humans are born with cognitive capacity to re-create and modify myths similar to language. Some examples that address to myth and language include Lévi-Strauss's study of Bororo myth in *The Raw and The Cooked* and Vladimir Propp's *The Morphology of Folktales* discussed in the next chapter. In literary theory, the archetypal study was largely influenced by the idea of the collective unconscious, which suggested that literature is reconstructed mythology, with structural principles derived from myths. Archetypal literary criticism focused on narrative and symbolic structure from the perspective of the totality of literature. It was a way to reveal the similarities of genres and their pattern of evolution holistically. See Northrop Frye, *Fables of Identity: Studies in Poetic Mythology* (NY and London: Harcourt Brace Jovanovich, 1963), 15.
[51] Osmond-Smith ed., *Two Interviews*, 78–9.
[52] Osmond-Smith ed., *Two Interviews*, 78–9.

the musicians.[53] Arom's discovery inspired Berio to search for the existence of a "universal musical grammar."[54] In the 1960s, linguists proposed the idea of universal "deep structure," referring to the existence of an underlying universal "deep grammar" shared by all languages.[55] The existence of linguistic universals thus implies that humans are equipped with genetically determined linguistic ability to process and create language, as evinced by Chomsky's suggestion of "linguistic competence" in our language faculty.[56] Linguistic competence, which refers to the set of rules with which one produces language, was not new to Berio. Around the 1950s and 1960s he felt a need of identifying the deep structure related to the organizing principles in music, akin to generative grammar.[57] This is probably the reason that multiple organizing principles of music became the subject for Berio's investigation. Different musical organizing techniques taken from different cultures and periods, such as canon, motet, lied and counterpoint, were adopted in *Coro* to join musical elements. The crucial technique among them is the African hocket.

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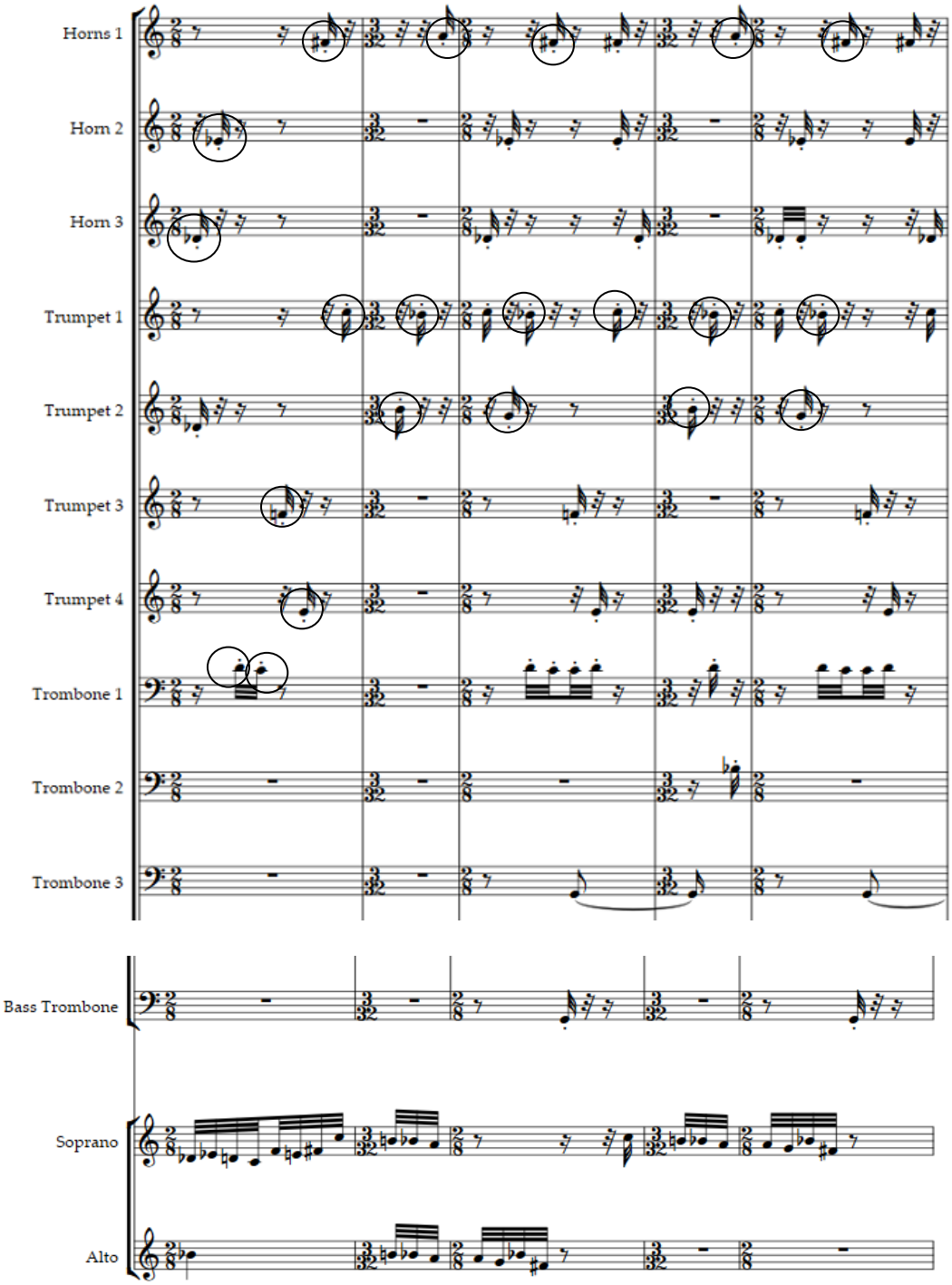
[53] See Simha Arom, *African Polyphony and Polyrhythm*, translated by Martin Thom, Barbara Tuckett and Raymond Boyd (Cambridge: Cambridge University Press, 1991), 313–504.
[54] The discussion on universal musical grammar and the innate musical competence was not new in ethnomusicology. Through studying the music of an African tribe of the Transvaal, the Venda, John Blacking understood that universal musical competence is "the innate or learned capacity to hear and create patterns of sound which may be recognized as music in all cultural traditions." The Venda, as Blacking showed, do not consider anyone unmusical. They even constantly invent musical conventions by creating new features and re-creating foreign music. See John Blacking, "Towards a Theory of Musical Competence," in *Man: Anthropological Essays Presented to O F Raum*, edited by EJ De Jager (Cape Town: Struik, 1971), 19–34, citation at 21.
[55] Dwight Bolinger, *Aspects of Language* (New York: Harcourt, 1968), 18.
[56] Chomsky distinguished between linguistic competence and linguistic performance—what a speaker actually says is his linguistic performance, which does not necessarily reflect what he knows about the language. What a grammarian needs to focus on, we are told, is the speaker's mental grammar (linguistic competence) rather than the speech that is produced (linguistic performance). See further explanations in Noam Chomsky, *Aspects of the Theory of Syntax* (Cambridge, MA: MIT Press, 2014), 1–65.
[57] Berio, "Meditazione su un cavallo a dondolo dodecafonico," in *Scritti*, 37–41.

3.6 Hocket as the "Grammar" to Generate Infinite Materials

The musical techniques combine musical parts (e.g. canon, imitative counterpoint, heterophony, the Istrian scale) are formulaic mechanisms to organize sound. The African hocket is the most prominent in the work. It first appears in Episode IX after the Indian chant. Arom discovered that in the horn ensemble of the Banda Linda group, a silhouette melody can be deciphered from the hocket by tracing the winds, and this melody is captured in the sopranos and altos as shown in Example 3.11.



(The woodwinds are not shown in the example. The A notes of the soprano in the third and the fifth measures are obtained from the clarinet and the flute parts which are not shown here.)

Example 3.11: *Coro*, Episode IX, mm 22–26.

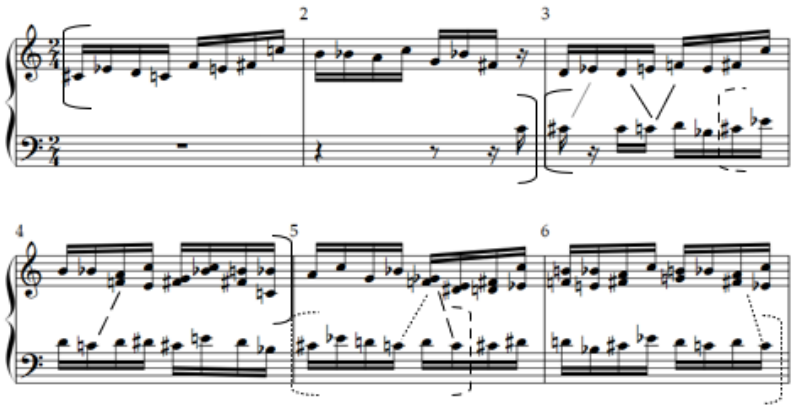
The elaborate use of the African hocket even combines with other musical techniques in Episode XI to provide new pitches. Example 3.12a shows that in the first two measures of Episode XI the piano part outlines the silhouette melody created by the hockets. The silhouette melody further develops in two ways: on the one hand, the alto part sings in parallel to the piano melody with augmentation and some inflections. On the other hand, the melody proliferates in piano by means of canon, as cited in Example 3.12b, so that the melody superimposes itself multiple times at different points of entry. Reciprocally, the canon played by the piano provides more choices of pitches for the hockets in return, so that the hockets become denser in texture from measure 3. In measure 8, the hockets in the winds continue with rhythmic variations in nearly every measure. The hockets now provide a different, layered melody to the piano part. Some independent melodic or rhythmic figures are also formed during the process as the offshoots, such as the chromatic figures of the chant singing “avavavaya” that recall the Indian chant and the pattering of syllables that appear before.

More pitches provided to the hocket by the canon in piano

Silhouette melody formed from the hocket

Change of harmonic pattern in piano due to the rhythmic shift in the hocket

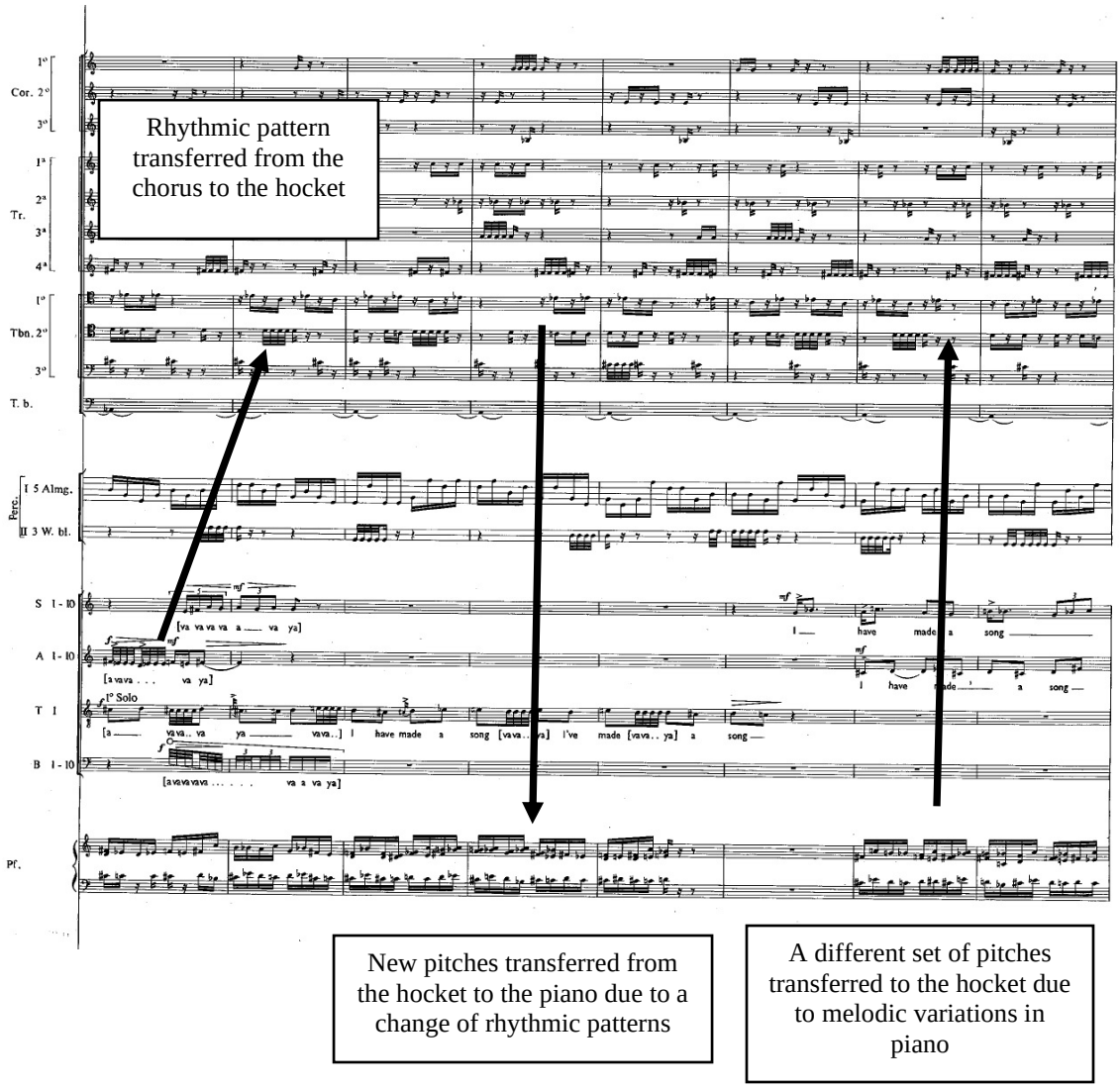
Example 3.12a: *Coro*, Episode XI, mm 1–8.



Example 3.12b: *Coro*, canon in the piano part (Episode XI, mm 1–8).

Example 3.12: *Coro*, Episode XI, mm 1–8.

The implication here is not the expansion of pitches available or the change of harmonic and rhythmic structure, but the recursion of the musical techniques by which new materials can be generated continuously. The contrapuntal technique is applied several times on the same melodic materials to make the section proliferates with new pitch collections. The hocket is also applied multiple times to incorporate old materials and create new melodic materials. In fact, the bouncing between the hocket and the counterpoint is conceptually similar to a hocket. This “meta-hocket” constantly sends the melodic materials back and forth between the piano and the winds after each musical operation. Other materials, such as the melody sung by vocals, become the offshoots of this meta-hocket. The bouncing property of the hocket allows the musical narrative to “keep going” by incorporating new elements in a relay along the flow of time. Berio even includes more parties in this exchange. Example 3.13 shows that the hocket involves one more party and takes place among the winds, the voice and the piano, bouncing back and forth the melodic and rhythmic materials, a relay that continues till the end of the episode.



Example 3.13: *Coro*, Episode XI, mm 9–16.

Such self-reference is related to the recursion of grammar discussed by Chomsky and other linguists in the 1960s. Recursion, as we understand it in computer programming, is a procedure of calling itself so that the process is self-embedding. In relation to the productivity of language, linguists have long discussed whether our language system can form an infinitely long sentence. The idea of recursion in grammar

is arguably one of the proofs of "infinite generative capacity" of language since the process is iterable without limit.[58] Consider a sentence consisting of a noun phrase and a verb phrase (S → NP + VP). A noun phrase can be formed by an adjectival phrase and another noun phrase (NP → AdjP + NP'), which can further introduce another embedded noun phrase that involves an adjective and another noun phrase.[59] The recursive property in production rules renders language generative without limit. In this way, even if our arsenal of words is finite and only a few sentence structures are involved, the resulting sentences can be endless.[60] In terms of machine learning, the application of recursion in the movement can be compared to recursive, deep neural network which is often seen in natural language processing to handle embedding sentence structures.[61]

The idea of applying recursion to expand music materials seems to be Berio's proof of the productivity of music as well. Again, it is a proof of "infinite use of finite means" focusing on the organizing procedures. Perhaps the African hocket alone is not enough to prove humanity's ability to operate musical elements. Berio further makes the hocket self-referential to show the possibility of building potentially infinite hierarchies on this procedure. On the upper level, the alternation between the folk sections and the contemporary musical setting of Neruda's poetry can be considered as an abstract use of hocket that exchanges musical and textual elements across the episodes.

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[58] Noam Chomsky, *Aspects of the Theory of Syntax* (Cambridge, MA: The MIT Press, 1965), 142.
[59] Imagine an infinitely long sentence by using as many adjectives as one can, or a sentence that involves an infinite number of relative clauses (e.g. "I think that you see that I suspect that you believe that…").
[60] The idea of recursion can be found in literary works, notably Borges's stories such as "The Library of Babel" in which the narrator finds that the books in the library repeat periodically in certain patterns even though they are limited in length.
[61] See the explanation of recursive neural network (RNN) and its relation to natural language processing (NLP) in Yoav Goldberg, *Neural Network Methods for Natural Language Processing* (San Rafael, CA: Morgan & Claypool, 2017), 215–220.

However, “grammar” alone is not enough for the composer to make his music productive. There are also “phonetic” and “semantic” dimensions, i.e. sound and meaning in the work, that Berio explores to make the work generative.

3.7 Sound and Meaning as Generative Impetus

Unlike the third movement of *Sinfonia*, *Coro* does not include a cantus firmus to direct a continuous narrative. Instead, new musical and textual materials are generated from the old materials of previous moments through the “game of sound and meaning.”[62] Apart from the mix-and-match of the music and the text, I argue that a variety of sonic and semantic relations, such as onomatopoeia, pun, commentary, association, and imitation, can be found in the work to create an evolving narrative. The myriad of ways Berio uses to play with sound and meaning continuously provides new materials that churn the machine of musical “grammar.”

All over the work, the pervasive sonic and semantic play introduces new elements. For instance, in Episode XXVII, meaningless phonetic syllables are pattered and conjugated along the instrumental hocket until the phonetic permutation comes to a meaningful phrase: “we were poor” ([wi] [wɜ] [pɔ]). The pun of “poor” and “pour” triggers the imagery of “showers” as well as the hocket as the onomatopoeia of rainfall. The syllabic play arrives at a random combination of “el di-a o-sci-la ro-de-a-do,” a

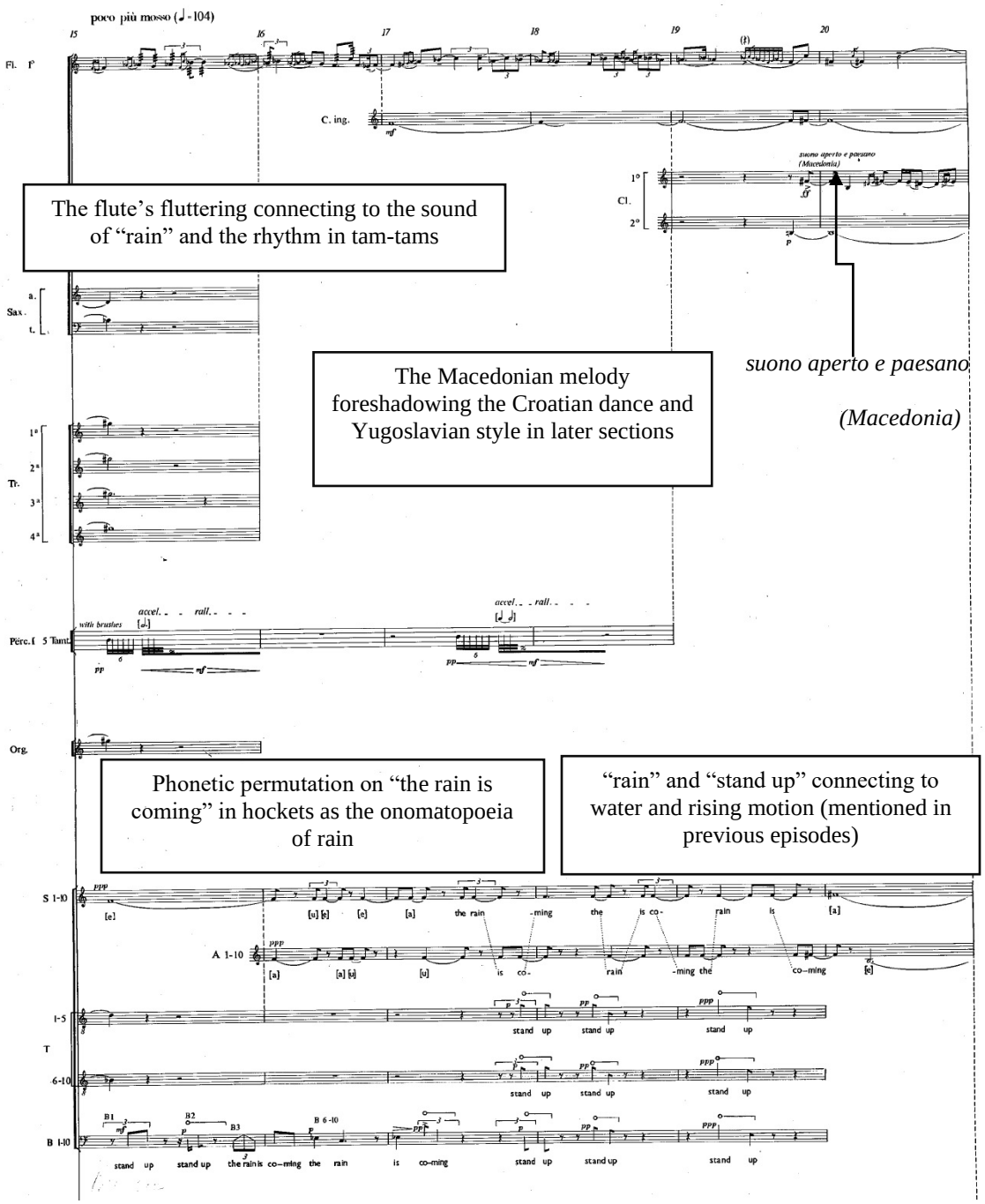
[62] Berio explains that the “game of sound and meaning” in *Coro* is realized by the combination of text and music: the same text recurs with different music whereas the same musical model is used with different texts. See Berio, “*Coro*,” in “L’ora di là dal tempo, momenti di spiritualità nella musica contemporanea,” La Biennale di Venezia, Ricordi, 1995. Text manuscript housed in Paul Sacher Foundation.

fragment of Neruda's poetry in Episode XXVIII. The meditative mood of Neruda's text is set to an eight-part motet with repetitive figures reminiscent of *talea* and *color*. The transition of the musical setting and the general mood between the episodes are directed by the change from the phonetic play to the semantic meaning of the text.

These musical and textual elements further connect to one another across episodes. For instance, a series of metonymies can be found in Episodes V–VI. In Episode V, as shown in Example 3.14, while mentioning the sky and then the rain, the flute starts to flutter as an imitation, leading to the hocket that shatters the syllables across the voices like the rain, as well as a Macedonian melody played by the flute. At the same time, a new pattern, the brushing of tam-tams, is introduced to imitate the rhythm. The pattern of rapidly repeated notes continues to spread in Episode VI in the recurring text by Neruda, "venid a ver la sangre" throughout the whole work. A Croatian dance melody built on the Istrian scale is developed in Episode VI in response to the Macedonian melody of the previous episode.[63] The lively mood quickly becomes ominous when the text reaches "what a chill, what a wind" followed by "the death comes." The rapid repetition of syllabic singing on /de/ from "death" is a feature of traditional Croatian

[63] Berio mentioned that he adopted a Yugoslavian mode in *Coro*. The Yugoslavian mode in question could be the Istrian scale, which originated in Croatia. The Istrian scale is a mode characteristic of Istrian music. It is a style of polyphonic writing as demonstrated in Episode VII. Folk songs in the Istrian scale often are sung in two parts with the lower part lowered down a second or a third. The two parts sometimes have unison moments, and at the unison finale one of the two voices lowers additionally for a second or a diminished third. One of the types of the Istrian scale "tarankanje" is known for the characteristic syllable singing (ta-na-na or ta-ra-ra) which imitates the sound of instruments, such as the flute and "sopele" shawm. These features can be found in the dance of Episode VI. See descriptions and video published by UNESCO, "Two-part Singing and Playing Istrian Scale": https://ich.unesco.org/en/RL/two-part-singing-and-playing-in-the-istrian-scale-00231 (accessed Aug 9, 2019).

singing (the Istrian scale), as well as a sonic pun to the instrumental fluttering and patter singing from the previous episode.



Example 3.14: *Coro*, Episode V, mm 15–20.

The reference among the patter singing, syllabic singing, fast repeated notes, as well as Sprechstimme and glissandi, often imitate one another in a fashion similar to a musical pun. The series of events across several episodes are brought out by the metonymic relations between text and music. On the other hand, texts in *Coro* are also materials of development and transformation. The folkloric texts introduce a number of "motifs" at the beginning episodes: a voice, dance, death, red eyes, crying, the rising motion… These "textual motifs" recur and develop into various images through metonymic relations. For example, the rising motion ("rise up woman") leads to "carried up to the skies" (Episode III). Then, the skies lead to "rain," (Episode V) which introduces the fluidity of blood in Neruda's poetry. The color of blood connects to the red flowers (Episode XXIII), which in turn reminds us of the "red eyes" (Episode I), or transform into the "white flag" and the "black flag" (Episode XXIV) as the red color's permutation. The metonymic relations and the permutations go on and on to form multiple paths, mingling and combining new and old images in different ways to amplify these.

The musical and the textual elements behave as if characters interacting between each other. Sanguineti, who calls himself the "text manager" of Berio's work *A-Ronne* (1975), differentiates between "music setting of word" [messa in musica della parola] and "stage setting of word" [messa in scena della parola] in Berio's pieces.[64] The former is similar to transcription so that the verbal expression amplifies and transcribes the meaning of the text. The use of text in *Coro* belongs to the latter "stage setting of word"

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[64] Edoardo Sanguineti, "La messa in scena della parola" (1982), in *Ideologia e linguaggio*, edited by Erminio Risso (Milan: Feltrinelli, 2001), 172–177.

in which these sounds interact and become part of the "scene."[65] The constant formation and re-formation of textual and musical elements to Sanguineti are a double process "of raising from sound to meaning, and lowering from sense to sound, through a perpetual game of analysis and synthesis, composition and decomposition, structuring and de-structuring of the word."[66] The sound narrative creates a "plot" based on the meaning-seeking process of the "sound characters." The oscillation between something meaningful and meaninglessness of the sound materials eventually becomes the underlying impetus of the episodes to bring the narrative forward. Such technique is a modification of *Sinfonia* in which a cantus firmus is adopted to guarantee a narrative flow.

Coro can be seen as another project of artificial intelligence which combines automation and chance. The guiding principles in this machine of artificial intelligence include a variety of musical setting techniques, musical and textual permutations, the metonymic relations to connect elements, and so on. There is still no clear indication of innate musical ability to justify the hypothetical "universal musical grammar" in *Coro*. Yet, the positive side of this experiment is the reinforcement of Berio's vast system to incorporate diverse musical experiences, which he calls "language of languages":

> I do not believe that Adam, in that famous garden, ever received the divine gift of a universal musical grammar, eventually doomed to destruction in the Tower of Babel… Now and then music

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[65] Claudia di Luzio sees Berio's use of "messa in scena" as an allusion to the Catholic Mass (messa) and another term for a stage production (*mise en scène*). Claudia di Luzio, "L'opera è aperta: Luciano Berio's Experimental Music Theater from His American Years," in *Crosscurrents: American and European Music in Interaction, 1900–2000*, edited by Felix Meyer, et al (Basel: Paul Sacher Foundation, 2014), 451–63, especially at 454. This is probably related to the liturgical connotation in various collaborations between Berio and Sanguineti such as *Passaggio* and *Laborintus II*.
[66] Sanguineti, "La messa in musica in parola," 173.

> sends out hesitant cues as to the existence of innate organism which, if fittingly translated and interpreted, may help us pinpoint the embryos of a universal musical grammar. I do not think that such a discovery can be useful to musical creativity, nor to the utopian prospect of a perfect, common musical language that will enable musicians to speak and be unanimously spoken. But I do think that it could contribute to exploring musical experience as a "language of languages," establishing a constructive interchange between diverse cultures and a peaceful defense of those diversities.[67]

Stefano Oliva suggests that Berio's "language of languages" refers to Saussure's *langage* which refers to the universally found "language faculty" (*faculté du langage*) in humans.[68] Although the search is not a successful one, the exploration ultimately sets the stage for his compositions, in which the productivity of generating materials share some similarities with that of language ("infinite use of finite means"). Such "language of languages" recalls Berio's explanation of "music of musics" cited in the previous section. And this "meta-music" or "meta-musical language" becomes a new way to reimagine the genre "chorus" by injecting new ideas to put voices together.

3.8 Structure as Composer

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[67] See Luciano Berio, "Translating Music," in *Remembering the Future* (MA, Cambridge: Harvard University Press, 2006), 60.
[68] Stefano Oliva, "Luciano Berio and the Problem of Musical Language," in *Rivista italiana di filosofia del linguaggio*, vol. 14, no. 1 (2020), 24–32.

As in *Sinfonia*, *Coro* illustrates a system that becomes self-generating toward the end. As Berio explains, the piece is an "open project" that could continue to "generate ever different situations and relationships."[69] Different combinations of the musical and textual elements generate different images and situations as the narrative continues. The last episode gradually fades into silence, as if the piece could continue endlessly. The productivity of materials, again, echoes the property of "open-endedness" of language, a term coined by the American linguist Charles Hockett in the 1960s. The property of "open-endedness," same as productivity or creativity, comes to light when humans "continually creat[e] new expressions and novel utterances by manipulating their linguistic resources to describe new objects and situations."[70] It describes the "limitless ability to produce and understand totally new utterances" in language. The whole idea of *Coro* reflects that the composer did not seek the equivalence of a natural "syntax" in music. Instead, the composer aimed to demonstrate how a series of principles can build up a structure so that it is productive and open-ended.

If Berio is devising a musical system that is able to self-generate, what is the role of the composer then? Both *Sinfonia* and *Coro* involve a narrator who appears to be the composer of the work—the subject "I" who provides a reflexive commentary on the composition. The subject "I" decides what should be included in the third movement of *Sinfonia*. In *Coro*, the subject "I" keeps re-creating the bad song he has made: "I have made a song… I often do it badly… It is so difficult to make a song, to have wishes

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[69] See "Work Introduction" of *Coro*: https://www.universaledition.com/luciano-berio-54/works/coro-1745 (Retrieved on Feb 11, 2020).
[70] George Yule, *The Study of Language*, the third edition (Cambridge: Cambridge University Press, 2006), 10–11.

fulfilled… I often return to this song… I often try to repeat it." This song is explicitly described as a "song-to-be" for its incompleteness in an earlier version of text.[71] The unfinished song and the unfulfilled desire become a loop so that the subjects "I" always needs to repeat the same creative process.

The use of the first person reflects the influence of the Italian *neoavanguardia* literary movement in which the subject finds himself, as a "cognitive agency" to establish connection to the world. He has to deal with his own expressive structure rather than his own subject which is his ineffable being (see the summary of *neoavanguardia* in Chapter 1).[72] It is the musical structure that the subject "I," i.e. the role of composer, faces as if the composer were standing in front of his work. In both pieces, the expressive structure and the "behaviors" of the musical materials respond to the insatiable subject "I", giving in to his desire to create the Scherzo and the "bad song" he has made (unfulfilled desire), so that the verbal and musical conversations are recursive to a point when the reiteration becomes an automation.

Therefore, the work speaks for and listens to itself. Berio created a structure that dominates and supports everything that happens to carry it on. The huge machine repeats itself to modify old materials to create new ones like a critique, so that the structure resembles a self-contained system that encompasses automatic feedback.

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[71] The unfulfilled desire of writing a "good" song is more obvious in the earlier version of *Coro*: "Here I am as I have made ready a bit of song/ I wonder why my song-to-be that I wish to use/ My song-to-be that I wish to put together/ I wonder why it will not come to me… It is lovely to have wishes fulfilled/ But they all slip past me." See the text manuscript on *Coro* housed in the Paul Sacher Foundation.
[72] See Edoardo Sanguineti, "Il Trattamento del materiale verbal nei testi della nuova avanguardia," in *Ideologia e linguaggio*, 77–107.

3.9 Voice and the "Theater of the Mind"

Berio provides the sketch of the harmonic progression of the whole work as in Figure 3.3. He explains that one of the harmonic functions is to imitate the formants of vocal sounds in relation to acoustic resonances.[73] The episodes involved are the interludes in which Neruda's poem is set. The sketch reveals that the harmonies are presented in four layers according to their registral areas. These layers are proportionally distributed from the lower register (low frequency) to the higher one (high frequency). They seem to simulate the harmonic partials of speech sound, with the fundamental frequency, the first, second and the third formants in terms of acoustics. Indeed, the sound effect in these episodes resembles electronic music in which phonemes were often used to model music timbre.

[73] Berio, *Interviste*, 153.

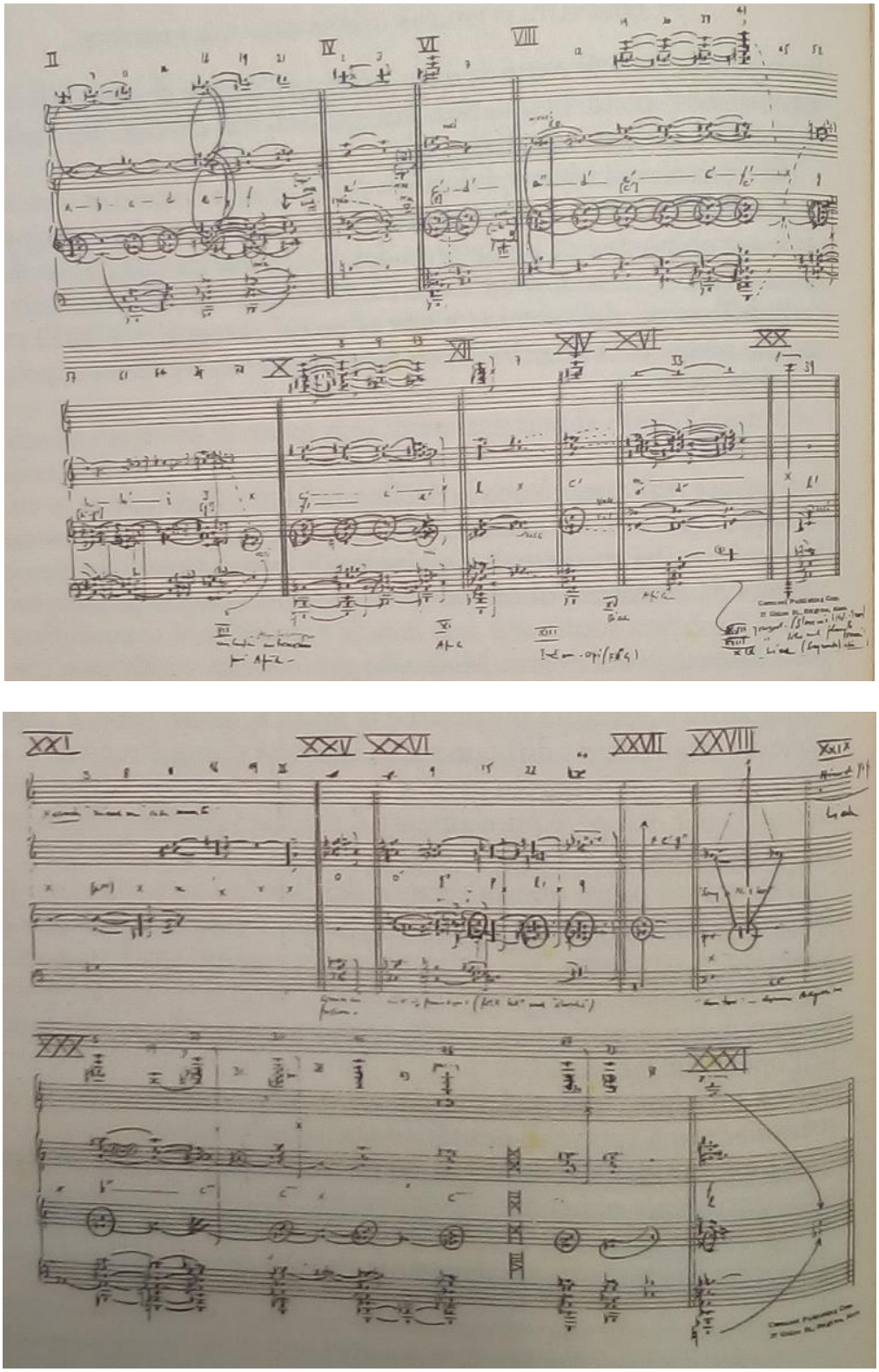

Figure 3.3: Berio's analysis of *Coro* (1983). Reproduced from Berio, *Interviste*, 152.

This meta-song of *Coro* is "sung" by a huge voice created by the imitation of vocal formants. This huge voice further supports the claim that the whole work is modeled from a human mind. The voice is similar to self-talk which directs one's stream of thoughts. From the perspective of collectivity, this voice carries the memory from our ancestors through the folk elements. If the work is all within a voice, all the images projected in the work may be located in the unconscious of the subject "I," the self-contained system, who created this song.

Berio explained his works *A-Ronne* has a tenuous connection with "theater of the ears" or "theater of the mind" of the sixteenth-century madrigals.[74] Commentators later on adopted the idea of "theater of the mind" to describe Berio's other works such as *Visage*, *Passaggio*, and *Laborintus II*, since these works activate the audience's imagination to create a drama in their mind.[75] Indeed, "theater of the mind" can be applied to *Sinfonia*, *Coro*, as well as *Thema (Omaggio a Joyce)* discussed in the previous chapter. Images are suggested in the audience's mind in which voice becomes an important element. Voice is intuitive as the medium of semiosis—its meaning is instantaneous and does not need other semiotic relations to explain it.[76] It is not surprising that Berio turned to voice, melody and song to search for the most primitive ability in man. Voice can take the role of narrator, can serve as the interface between the theater of the creation process and the theater of the performance in *Sinfonia*. It can also

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[74] See Author's note of *A-Ronne*: http://www.lucianoberio.org/a-ronne-authors-note?1747386730=1, accessed Jan 1, 2022.
[75] See Richard Causton, "Berio's 'Visage' and the Theatre of Electroacoustic Music," in: *Tempo*, 194 (Oct., 1995), 15-21; David Osmond-Smith, "Voicing the Labyrinth: the Collaborations of Edoardo Sanguineti and Luciano Berio," *Twentieth-Century Music*, 9/1-2, 63-78.
[76] See more explanation of Berio's view of voice in his article "Del gesto vocale" (1967), in *Scritti*, 58–70.

be an embodiment of one's unconscious or the medium that unveils it. Voice becomes the stage of the theater of the mind for the projection of images in both *Sinfonia* and *Coro*. Berio's explores the potential of vocal music in multiple ways: in its conventional use, voice is the vehicle of sound and meaning, expressivity and materiality. Throughout the years Berio's pieces became explorations of the voice's potential to convey sound and meaning, including the theatrical works *La vera storia* and *Un Re in ascolto* discussed in the following chapters.

Berio started his investigation of sound and sense from linguistic concepts to find commonalities between music and language. Yet the analogies to him only proved to be illusory and non-transferable at the end.[77] The linguistic concepts eventually turned into inspirations for Berio to crystalize his ideal model of sound and sense into a structure drawing from a wide range of twentieth-century concepts.

The adoption of structuralist thoughts and the search for the "musical universal" derived from philosophy of language would strengthen two ways of thinking in his future works. First, Berio's new model built up by structuralist ideas rethinks the old genres and conventions. Apart from symphony and chorus, the search for the meta quality of a particular musical genre (e.g. lied, opera, chorale) or components of musical or theatrical events (e.g. "story," "listening," "recital") would continue to be his future direction. Second, the theory of linguistic universals studied by transformational-generative

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[77] Berio, *Interviste*, 86.

grammarians is closely related to the study of patterns of the mind. The connection between language and mind will lay a foundation for Berio to continue to explore his "theater of the mind" in relation to the unconscious.

The perennial problem between music and language, as well as between sound and sense, however, received utopian responses in the 1960s and 1970s without a concrete conclusion. In the second half of the thesis, I will examine how Berio expanded his semiotic model to his music theaters.

Interlude: Music Theaters in Italy

The second part of this dissertation focuses on Berio's innovation in music theater in the 1980s. I examine how Berio's theatrical conception, while influenced by contemporary theatrical theories, continued to explore the underlying concepts of linguistic structure. Specifically, Berio's works reflect structuralist and poststructuralist theories—especially those of Claude Lévi-Strauss, Jacques Lacan, Roland Barthes and Jacques Derrida—in which language is considered to be an essential medium for shaping perception and cognition on individual, interpersonal and collective levels. Language becomes a medium to form the self-reflexive identity of an individual or a group of people sharing a similar culture. What is more, these theories become a vehicle for the composer to reflect on the elements of conventional nineteenth-century opera, such as story, characters, temporality of plots, set pieces and so on.

In Berio's two theatrical works *La vera storia* [The true story] and *Un Re in ascolto* [A king listens], when music is connected to language and functions as the medium of the psyche, the relationships between music, language and theater point towards Lacan's notion of "drama of the unconscious" and Barthes's "feminine space" (a space of absence and desire). The relations between music and language forms a self-referential representation that evokes theater directly, allowing the audience to seek truth and self-awareness in the unconscious. The fluidity of semiotic relations between sound and image, the multiple possibilities of interpretation, and deconstruction of the hierarchy between sound and silence bring about the works' self-critique. These notions also direct

Berio's music theater into the age of poststructuralist interpretation by challenging the logocentrism of a central plot and set pieces in an opera.

In the second half of the dissertation, I examine *La vera storia* and *Un Re in ascolto* and explain how these works further explore the relations between music and language as sign through the drama of the unconscious in the context of psychoanalysis. I elaborate how Berio's introduction of structuralist and poststructuralist thoughts brought him to reimagine the nature of the nineteenth-century Italian opera. Furthermore, I contend that "voice," in both its material representation and as the embodiment of the characters, is crucial in the semiotic structure of the two works. Before I begin, I provide an overview of twentieth-century experimental music theater.

While opera did not return to its golden age, new directions in music theater took its place in the twentieth century. As Eric Salzman and Thomas Desi explain, music theater is "music-driven where…music, language, vocalization, and physical movement exist, interact, or stand side by side in some kind of equality but performed by different performers and in a different social ambiance than works normally categorized as operas or musicals."[78] There is normally no separation between stage and instrumental ensemble in music theater; the physical and gestural elements inherent in the music-making *are* the action.[79] In addition, music theater is often characterized by anti-realism and being an "anti-genre," i.e. a refusal to conform to the traditional genres and categories.[80]

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[78] Eric Salzman and Thomas Desi, *The New Music Theater: Seeing the Voice, Hearing the Body* (New York: Oxford University Press, 2008), 5.
[79] Björn Heile, "Toward a Theory of Experimental Music Theater: 'Showing-doing,' 'Non-matrixed Performance' and 'Metaxis'," in *The Oxford Handbook of Sound and Image in Western Art*, edited by Yael Kaduri (Oxford: Oxford University Press, 2016), 335–55; here 336. Some other discussions surround the properties of experimental music theater in the second half of the twentieth century include Angela Ida De

Beyond technological innovations of stagecraft and stage design, light and audio elements, music theaters embraced new forms of musical and artistic representation. The creative imagination was demonstrated by the interdependence of theatrical elements so that the underlying interrelations behind the apparently fragmented parts violated the authority of that "I see what I hear, and I hear what I see" germane to traditional opera. This practice henceforth subverted the univocal despotism of one element ruling over the others in the opera tradition, which was favored by political theater in Italy. Brecht's "political theater," for instance, profoundly influenced Giacomo Manzoni and Luigi Nono, who created *La Sentenza* (1960) and *Intolleranza* (1960) respectively to elicit participation from the audience regarding political issues. Italian music theater in the 1960s and 1970s favored revolutionary situations, with political topics showing human collectives, bearing the assumption that revolution is the "principle of society's historical development, of the actualization of its destiny, of its own existence as a living organism."[81]

Benedictis's analysis on the criteria of music theater, the comparison between experimental music theater and "postdramatic theater," whether music theater can be considered as "composed theater," how much could be transferred from performance analysis and theater studies and so on. Here I have chosen two most oft-cited definitions by Heile and Salzman and Desi. For others, see Angela Ida De Benedictis, "Analyzing New Music Theater," in *New Music Theatre in Europe: Transformations Between 1955–75*, edited by Robert Adlington (London and NY: Routledge, 2019), 294–318; Vicenzina C. Ottomano, "Theater as Problem: Modern Drama and Its Influence," in *New Music Theatre in Europe*, 52–76; Robert Adlington, "Music Theater Since the 1960s," in *The Cambridge Companion to Twentieth-Century Opera*, edited by Mervyn Cooke (Cambridge: CUP, 2005), 225–43; Matthias Rebsotck and David Roesner ed., *Composed Theatre: Aesthetics, Practices, Processes* (Bristol: Intellect, 2012).

[80] Adlington, "Music Theater Since the 1960s," 229–30.

[81] Giulio Carlo Argan explains his opinions on music theater while commenting on Luigi Nono's *Intolleranza*. See Giulo Argan, "Intolleranza 1960 e il teatro d'avanguardia," in *Avanti!* (May 18, 1961), cited in Luigi Nono, *Nostalgia for the Future: Luigi Nono's Selected Writings and Interviews*, edited by Angela Ida de Benedictis and Veniero Rizzardi (Oakland: University of California Press, 2018), 210-1.

The experimental music theater of Italy was conceived as an instrument with which "truth" could be accessed through musical processes to reveal different aspects of reality. The truth is not only achieved by the content, but also by the way of forming it, especially by compelling the audience to confront decision-making that imitates reality. In other words, the truth of content and the truth of form could not be separated, nor could the abstract opposition between art and truth. The truth of content and the form can be seen in the self-referential quality of the performance itself, i.e. the content of the performance is the performance in the concert hall. Bruno Maderna's *Hyperion* (1964) and Berio's *Recital for Cathy* (1972) show similarities that both describe the preparation of a performance. Along with the fragments describing the psychological state of the performer, a complete aria is introduced, suggesting the musical time of the "performance" shared by the audience.

Such "theater of ideas," as Nono explained, is closely linked to a movement toward a new human and social conditions of life after the world wars.[82] Similar to modern drama, new music theater was no longer concerned with "story," but with narrative that forces the audience to heed their unconscious through artificial image and sound, recalling music theater's role of a "sounding unconscious."[83] Reduced by the disillusionment of wars or of the failed revolution, artists practiced escapism or built ideal worlds that could exist only in art. Music theater became a utopia challenging the Aristotelian mimetic world (the authority) by abandoning the conventional story with

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[82] See Nono, "Possibility and Necessity of a New Music Theater," in *Nostalgia for the Future*, 209–23, especially 213.
[83] Salzman and Desi, *The New Music Theater*, 339.

conflicts and resolution. Given its close relationship to the context, situation became the central component in many of these works. The audience is presented a collection of events as a collage of different situations and is forced to take action.

Music theater possesses a "meta-textual" level of music theater, which "embraces the whole concept/composition of a music-theater piece."[84] At this level, we find the message intended to be sent to the audience after adding up the compositional idea, staging, piece and performance. However, the semiotic function of these music theaters has not yet been fully explored. Music theater is constituted not merely by the adoption of various acoustic and scenic elements, but also by the dynamic relations among them. Music, text, and other elements in music theater, whether intratextually or intertextually, form different relationships with each other. The dynamic conception and the inter-referencing of multiple theatrical constituents render music theater fluid. Such dynamicity includes the compositional process, which no longer was an *a posteriori* collaboration among musician, composer, poet and director, but a simultaneous work-in-progress. Music theater, for Berio, is an attitude towards "a discovery or a re-evaluation of the dramaturgy inherent to the *symbolic* behavior."[85] In the context of music theater, symbols operate by convention and accumulation in relation to social and artistic norms. They can be the roles of a soprano or a bass, the use of specific instrument or the staging. The past operatic experiences already provide conventional use of "operatic elements"

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[84] Salzman and Desi, *The New Music Theater*, 322.
[85] See Berio, *Scritti*, 45–46.

for Berio to be re-invented in his music theaters. Thus, every music theater to him is a "theater of theaters"[86] since every of its symbol is a re-invention and a critique of its past.

The notion of semiosis has been incorporated into theater theory using Charles Peirce's triadic system—object, interpretant and representation—since theater always involves real objects on the stage which are not the same as the viewer's interpretation.[87] In order to produce meaning, even for a realist theater, theater must use signs to communicate, such as signs of nature (rain, mountain) and society (costumes, language).[88] Without signs, they cannot communicate. The Russian semiotician and folklorist Petr Bogatyrev went so far as to say that "all theatrical manifestations are then signs of signs or signs of things."[89] And it is the process of signification that expresses *theatricality*, i.e. what theater can do. However, music theater differs fundamentally from literature or theater in terms of semiosis, since it involves music, which has a its own way of signifying. So, how was Italian music theater related to the use of sign? Sylvano Bussotti's *La Passion selon Sade* (1965) can help us answer this question. The work was an experimental theater of the 1960s that anticipated the new music theater of the coming decade. Based on a sonnet by the sixteenth-century French poet Louise Labé (1526–

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[86] Berio, *Scritti*, 51.
[87] Some of the literature related to theater semiotics are: Fernando de Toro and Mario Valdes, *Theater Semiotics: Text and Staging in Modern Theater* (Toronto: University of Toronto Press, 1995); Erika Fischer-Lichte, *The Semiotics of Theater*, translated by Jeremy Gaines and Doris L. Jones (Bloomington: Indiana University Press, 1992); Marvin Carlson ed., *Theater Semiotics: Signs of Life* (Bloomington: Indiana University Press, 1990); Domenico Pietropaolo, *Semiotics and Pragmatics of Stage Improvisation* (London, NY: Bloomsbury Academic, 2016), 35–54; Marco de Marinis, *The Semiotics of Performances* (Bloomington: Indiana University Press, 1993); Keir Elam, *The Semiotics of Theatre and Drama* (NY: Routledge, 2002), 5–28.
[88] "Sign" here refers to any entity that creates meaning. It is the basic unit of meaning. "Symbol" is a type of sign, whose "relation to their objects is an imputed character." Charles S. Peirce, *The Writings of Charles S. Peirce: A Chronological Edition*, Vol. 2 (Bloomington: Indiana University Press, 1982), 56.
[89] Cited in de Toro et al, *Theater Semiotics*, 69.

1566) and the writings of the Marquis de Sade, it displays the transformability of "theatrical objects" in an open form so that text, characters, instrumental music, scenic action are connected in a subtle way similar to happenings. For instance, the sonnet begins with the initial "O" in the first ten lines.[90] This letter "o" has several connotations, such as roundedness, mouth-shaped and being a letter "o" in any language. The roundedness and the mouth-shaped of "o" connects to the "silent scream" and "the image of a primitive pronunciation in an attempt to communicate," which echoes the search of love and passions of the work.[91] It is also linked to the predominant use of organ (*o*rgan*o*) in the work as well as the ambiguous identity of the protagonist ("o" meaning "or" in Italian refers to the dual persona of Justine-Juliette).[92] The theatrical components can be decomposed into abstract features and connected in various ways across different media. The connection among theatrical components by their inherent features permits a dynamic conception of theater across space and sound. The fluidity of the visual and aural representations as well as that in scenic actions become prominent in the theatrical works in this period. I will return to this point in the discussion of *La vera storia*.

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[90] The few lines toward the end are especially notable: *O laughter, forehead, hair, arms, fingers, hands!/ O poignant lute, bow, viol, singing voice!/ All flames within the furnace that destroys/ This one poor woman.* The fragmentation of a woman figure that intermingles with vocal and instrumental parts are properly reflected in the conception of this total theater.

[91] Luigi Esposito, "La Passion selon Sade," in *Un Male incontenibile: Sylvano Bussotti, artista senza confini* (Milan: Bietti, 2013), 99–112, citation at 102.

[92] For more descriptions of these symbolic connections, see Raymond Fearn, *Italian Opera Since 1945* (New York: Routledge, 2013), 101–108.

Chapter 4: From Structuralism to Poststructuralism: Myth, Psychoanalysis and Signification in Berio's *La vera storia*

In this chapter, I continue to explore Berio's "linguistic projects."[1] This led him to experience with "one of the most real and permanent conditions of music, which is to constantly pursue a utopia of language." If Berio admitted that these linguistic projects were "doomed to failure," he also valued them for their capacity to "express emotions, to represent spiritual and intellectual landscape," and to discover "new temporary relationships between sound and meaning." I show how meaning is created in *La vera storia* through the exploration of myth, psychoanalysis, and signification—three areas that are closely related to the structure of language. While Calvino's "combinative" process of narrative and the Lacanian psychoanalysis have not yet received its due attention by commentators of *La vera storia*, I illustrate how these theories which focus on narrative, language and the unconscious are closely related to the dramatic representation of the work. By examining how meaning is created in relation to our unconscious, I demonstrate Calvino's combinative narrative to uncover the hidden "truth," Lacan's proposals of mirror stage, "Name-of-the-Father," and talking cure can be traced as the dramatic elements or narrative procedure of *La vera storia*. The work further relates to Berio's "linguistic projects" to probe the existence of "universality of experience." The composer, as I illustrate, invites us to perceive the hidden truth, i.e. the

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[1] See Berio's "linguistic projects" in Berio, *Interviste*, 85–86.

"myth," of this true story through the fluid relations among theatrical elements, and the presence or absence of specific musical features, motifs or pitch sets. Lastly, I explain how the two parts of *La vera storia*—the first as an opera and the second as a music theater—are a diptych of the same story that analyzes itself and reflects a stark contrast between a structuralist and a poststructuralist approach of theatrical work. The juxtaposition of these two approaches becomes a critique of the essential elements of opera.

Berio's exploration of music and language continued into the late 1970s and early 1980s. Berio started from the isomorphism of phonetic sounds and the grammatic structure between music and language, and he continued to expand his research to the structural formation of the two semiotic systems. Just as semiotics and structuralism have been applied in various disciplines, I show that Berio's musical exploration has extended to multiple realms including theater in relation to myth, psychoanalysis, narrativity and signification. Around the same period, issues around poststructuralism which began in the 1960s was widely discussed, remaining an influence in a wide range of subjects, such as literature, politics, art, and cultural criticism. The relations between sound and sense as well as between the musical-piece-as-text and audience were inevitably challenged, as we can see in Berio's *La vera storia*.

La vera storia is a collaboration of Berio and the Italian postmodern novelist Italo Calvino (1923–1985).[2] The stage work consists of two independent parts narrating the

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[2] Italo Calvino is known for his intricate narrative that resembles a labyrinth. The libretto of *La vera storia* was not entirely written by Calvino (Berio created the libretto according to Calvino's idea). For the details of the extent Calvino participated and the dynamics between Calvino and Berio, see Yves Hersant,

same text: the first part in an opera and the second part in music theater. Modeled after Verdi's *Il trovatore*, the first part describes a series of events typical for opera as well as folktales, with topics ranging from condemnation to murder, abduction, revenge, a love triangle, and a duel. The first part of *La vera storia* narrates the story of a commander, Ugo, who has executed Ada's father during the rite of a festival. Ada abducts Ugo's elder son Ivo out of revenge. Years later, without knowing they are siblings, Ivo and Luca fall in love with Leonora. Luca has hurt Ivo after a duel and has been taken to prison where he will be executed. The operatic events provide a paradigm of elementary conflicts expressed in conventional operatic form, including arias, duets and choruses.

The second part encompasses the same text taken from the first part but in a disarrayed order presented in nine scenes.[3] Though it includes the same characters who appeared in Part 1, Part 2 focuses more on the collectivity, encompassing anonymous passersby and their multiple body doubles. While Part 2 appears to be a collective memory retold by a group in the community, the composer has made stark oppositions through the transfiguration of the two settings: Part 1 consists of elements similar to a

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"Calvino librettiste," in *Le théâtre musical de Luciano Berio* vol. 1, 453–466. As a writer who was so influential on Berio, it is not surprising that some of Calvino's narrative styles and literary visions can be found in *La vera storia* or in Berio's works in general. The most obvious is the adoption of a main story line to unravel diverse independent sub-plots that are subordinate to the main story, as in *The Invisible Cities*, *The Castle of Crossed Destinies* and *If on a Winter's Night a Traveler*. The details in the main story and those in the sub-plots are interwoven so that the boundary between reality and fiction is often blurred. The worlds of the story and the story-within-the-story constantly interact and interweave so that they become unified. Such narrative structure, as we discussed, can be found in Berio's *Sinfonia* and *Coro*. Similarly, the boundary between the real time performance and the performance-within-the-performance is often blurred in Berio's music theater, including *La vera storia* and *Un Re in ascolto*.

[3] See Berio's description in the author's notes: http://www.lucianoberio.org/node/1386?1970718913=1 (Accessed on Sep 11, 2019).

folktale, whereas Part 2 involves limited coherent narrative but a reflection on Part 1; Part 1 presents a reality whereas Part 2 is dream-like.[4]

Current studies focus on diverse aspects in the work, including the use of folk elements, its relations with Verdi's *Il Trovatore*, the narrative structure, and the social commentary implied in the work. Ute Brüdermann and Claudia di Luzio focus on the historical aspect of the work. They trace the work from its genesis, the collaboration between Berio and Calvino, the reception, the narrative structure, and its association with the social and political turmoil in Northern Italy from the 1960s to the 1980s, known as the "Years of Lead" [anni di piombo], and the death of the anarchist worker Giuseppe Pinelli.[5] Ivanka Stoianova investigates the alienation effects of *La vera storia* in relation to the Brechtian epic theater. She observes that the musical and textual citations in Part 2, along with the musical cliché, thwart the certitude of an author who traditionally provides the "truth."[6] Luca Zoppelli relates Berio's *La vera storia* to Verdi's *Il Trovatore* through folk materials and "myth" (the two terms nearly interchangeable) and discusses the folk materials in detail, whereas Brüdermann compares the two works in terms of plots and individual musical elements.[7]

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[4] Ibid.
[5] Ute Brüdermann, *Das Musiktheater von Luciano Berio* (Frankfurt am Main: Peter Lang, 2004); Claudia di Luzio, "Looking back on *La vera storia*: Critical and Documentary Introduction, in *Le théâtre musical de Luciano Berio* Volume 1, 409–430. See more details of "Years of Lead" and the death of the anarchist Giuseppe Pinelli in James Davis, "'Come and See the Blood in the Streets': Luciano Berio, 'Coro', and the Affective Staging of the One-Crowd," in *Music and Letters*, vol. 100, issue 4 (2019): 685–712. See the influence of "Years of Lead" on the Italian literary scene and the Calvino-Berio collaboration in Toni Geraci, "Lisabilité de l'espace social dans *La vera storia*," in *Le théâtre musical de Luciano Berio* volume 2, 467–478.
[6] Ivanka Stoianova ed., *Chemins en musique* (Paris: Richard-Masse, 1985), 301–329.
[7] See Luca Zoppelli, "Dramaturgie structurale? Nouvelles observations sur le rapport entre *La vera storia* et *Il trovatore*," in *Le théâtre musical de Luciano Berio*, Vol. 1, 479-499.

Concerning the music analysis, commentators (David Osmond-Smith, Luzio and Angela Carone) observe the eight-note pitch set in the work. Osmond-Smith notes that Ivo's line in Part 1 underlines the four missing pitches while Carone mentions the complementary pitch collection of the global set in Luca's line.[8] Yet both of them are unable to explain the implication of the characters' pitch collections in relation to a deeper understanding of the conceptual model in the work. Osmond-Smith attempts to relate the music to the dramaturgy in another article "Nella festa tutto? Structure and Dramaturgy in Luciano Berio's *La vera storia*."[9] While he points out various notable harmonic and melodic pitch fields in relation to the dramatic context, there are some illuminating yet unexplained observations that I would like to expound on: the enchained minor thirds pervasive in both parts, the choice of the eight-note pitch set, and the mobility of stylistic elements in Part 2 are indeed closely related to some core conception in the work.

While often focusing on one single aspect in the work, the existing literature lacks a holistic study on the connections among these diverse topics. Also, the reference of Calvino's important essay on myth and literature as well as the strong allusion to Lacan's theory of language in *La vera storia* have been overlooked by commentators. Unlike the existing analyses that examine the surface level of the drama, my analysis aims to provide an explanation of the deeper level of the conceptual models in the work. This chapter explains how narrative is constructed in *La vera storia* connecting to the

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[8] David Osmond-Smith, *Berio* (Oxford: OUP, 1991), 104; Carone, "*La vera storia*: organizzazione dei materiali sonori," 443–444.
[9] See David Osmond-Smith, "Nella festa tutto? Structure and Dramaturgy in Luciano Berio's *La vera storia*" in *Cambridge Opera Journal*, vol. 9, issue 3 (1997): 281–294.

interrelations among the study of myth, psychoanalysis, semiotics, and music theater, so that the theories and discourses surrounding these topics become materials for Berio's dramatic model. The chapter explains how Berio's music theater is renovating the old model of opera to express meaning through diverse theatrical elements. Finally, after digging into the deeper conception employed in the work, some analytical details proposed by Osmond-Smith and Carone can be explained.

Berio explains that the aim of this ambitious project is to "approach the essence of opera theater in its prime elements" and to suggest that a "true story" is always different from what meets the eye, since there always is another story that is even truer.[10] It is well-known by commentators that Berio was deeply inspired by Vladimir Propp's *The Morphology of Folktale*.[11] Propp's analysis sees folktale as a language system in which components, similar to morphemes, can be displaced and substituted according to inherent rules that are formed through generations.[12] The narrative functions and stereotyped characters can be found in Part 1 of *La vera storia* which, similar to *Il Trovatore*, consists of conventional sub-plots of folktale and Italian opera: condemnation, abduction, revenge, a love triangle, a duel, a prison scene, sacrifice and so on. The

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[10] Luciano Berio, *Remembering the Future* (Cambridge, MA: Harvard University Press, 2006), 109.
[11] Berio explicitly explained how his later theatrical work *Outis* (1996) adopted Propp's model. See "Morfologia di un viaggio," in *Scritti*, 301–3.
[12] Vladimir Propp proposed that Russian folktales were based on the combinations of these basic structural elements, so that a new folktale can be created by using new names, a new order, and new plot details based on these fixed functions. From the perspective of syntagmatic relation of narrative elements, folktale was considered to be an abstract linguistic system which consists of a logical structure that governs the basic units, similar to the morphological principle in language. Such system reflected humanity's creativity and our ability to form rules and patterns unconsciously to express new ideas with old materials. Propp reduced Russian folktales into thirty-one common narrative functions (such as interdiction, trickery, victory and rescue) and seven character functions, namely the villain, the dispatcher, the helper, the princess, the donor, the hero and the false hero. See Vladimir Propp, *Morphology of Folktale*, translated by Laurence Scott (Austin: University of Texas Press, 1968).

characters, too, are common in folktales: condemner, the mother, brothers who become enemies, lovers involved in a love triangle, the priest, and a ballad singer as the narrator.

Berio's reference to Propp's model in *La vera storia* is also pointed out by Luzio.[13] While attention is given to the movable structural components in a narrative to produce new meanings,[14] I would like to focus on the relationship between narrative and human's unconscious ability of formulating structures. Before I go into details of the text and the music, let us look at Calvino's essay "Notes toward a definition of the narrative form as a combinative process," which provides a guideline for us to interpret *La vera storia*.

4.1 Narrative Structure in Folktale and "Combinative" Process as Narrative Form

Considering the relation between the topic of folktale and Calvino, the choice of folktale is not a fortuitous one but instead a reflection on the study of folktale in the mid-century.[15] The relation between myth, folktale and ritual has been debated especially regarding the ways that collective consciousness can be traced to them. Calvino explains how combinations and permutations of narrative elements become a narrative device in his essay "Notes toward a definition of the narrative form as a combinative process"

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[13] Luzio, "Looking Back on *La vera storia*," 415.
[14] Luzio, "Looking Back on *La vera storia*," 415.
[15] Calvino is known not only for his unconventional narrative form, but also for his recreation of folktales, as seen in many of his works, particularly his collection of 200 *Italian Folktales* (*Fiabe italiane*) inspired by Propp's proposal of narrative function.

(1970), which has not yet received attention by commentators of *La vera storia* so far.[16] By playing the combinative game of elements to exhaust all possibilities, something revelatory speaks to the unconscious of the storyteller, so that a previously buried idea is unearthed in the tale-making process. Calvino believes that when a folktale is told repeatedly, there is always a hidden section, a silence or linguistic void, as the aftermath of a taboo in the unconscious of the collective memory. He calls this hidden section the "myth" of every story. The writing of folktales is thus a self-discovery process which allows us to invent and to rediscover the words and events, i.e. the secret truth, that had been removed from the collective and individual memory. Through the repetition of storytelling, myth "obliges the fable to retrace its own steps even when it had originally set foot on a path that seemed to take it in a completely different direction."[17]

The retelling process of the same text in Part 2 of *La vera storia* seems to suggest the transmission or the remembrance of the folktale by a community. So then, where is the myth? Aside from the parts sung by the ballad singer (*cantastorie*) as narrator, two missing parts and a missing character in Part 2 have not yet received discussion so far: the part of "The Revenge" [La Vendetta] regarding an imaginary, intimate conversation between the father and the son, and some phrases from "The Sacrifice" [Il Sacrificio] of Ivo. Berio's sketch shown in Figure 4.1 illustrates that Berio intentionally left out the text of the two scenes in Part 2. Although the sketch has been included in several discussions of *La vera storia*, it often serves as a piece of background information to show the text is

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[16] Italo Calvino, "Notes Toward a Definition of the Narrative Form as a Combinative Process," translated by Bruce Merry, in *Twentieth Century Studies*, vol. 3 (1970), 93–101.
[17] Calvino, "Notes Toward a Definition of the Narrative Form," 98.

re-arranged or how the musical and textual elements are re-used in the second part.[18] The missing scenes are not explained in these discussions. Also, except for the concluding scene in Part 2 in which all the major characters appear to comment on the plot, the father Ugo is missing in Part 2. The missing parts, I suggest, are the "myth" of this folktale when remembered by the group, which are expressed in, as Berio describes, an "elliptical way typical of Calvino."[19]

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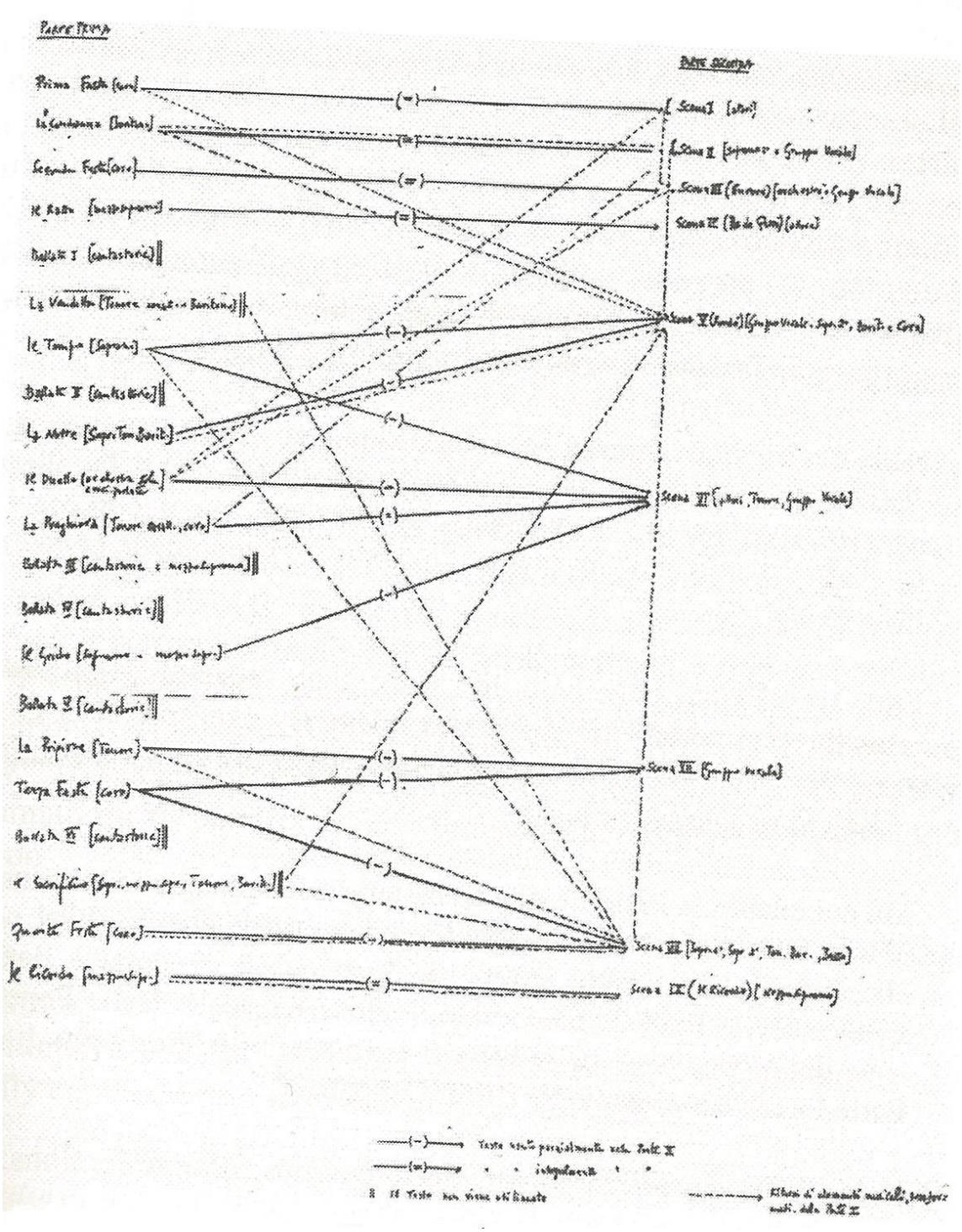
[18] See Stoianova, *Chemins en musique*, 301–29; Osmond-Smith, *Berio*, 103; Luzio, "Looking back on *La vera storia*: Critical and Documentary Introduction," 417.
[19] Berio, *Interviste*, 220.

A clearer version has been reproduced in Osmond-Smith's publication (below).[20]



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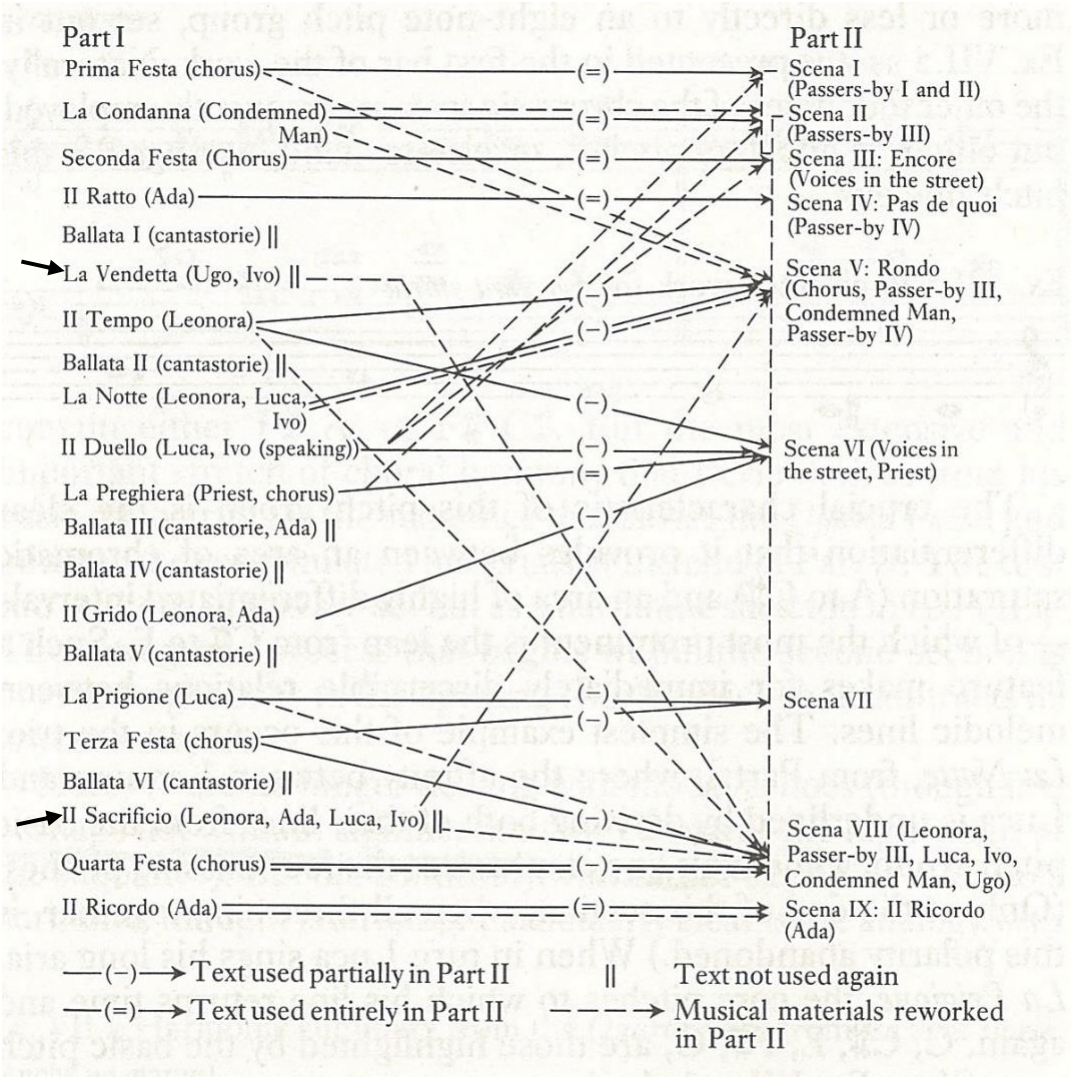

Figure 4.1: *La vera storia*, Berio's mapping of Part 1 to Part 2 (1982). The sketch reproduced from Luzio, "Looking back on *La vera storia*: Critical and Documentary Introduction," in *Le théâtre musical de Luciano Berio*, vol. 1, 417. Original sketch published in the programme of the first performance at the Teatro alla Scala, Milan, 1982. Typed chart reproduced from Osmond-Smith, *Berio*, 103.

The scene of "The Sacrifice" contains the following line: "Every command has taste of lead/ My eyesight is obscure"[21] and the execution of Luca. The mention of lead alludes to the "Years of Lead" due to the conflicts between the right-wing and the left-wing activists. Calvino also affirms that the theme of "obscure years" (another name for this time period) was the genesis of the libretto.[22] The execution of Luca is hence an allusion to the death of the anarchist Pinelli involved in the incidents. The missing scenes of Part 1 in Part 2 suggest that revenge and sacrifice, values important to our ancestors, are inherited in the hidden part of our memory. These human behaviors are half-forgotten or left unspoken but stored in the collective memory.

As Calvino explains, the hidden memories or myth cannot be told as it exists in spoken word; it needs a series of many-valued signs—a rite in special locations and seasons. An unspoken myth hides in a linguistic void as well as in expropriated symbols, signs and borrowed words that speak to one's subconscious in dreams, verbal slips, and so on. A rite is a process in which symbols and signs evoke the past memory of a collective and of an individual. In *La vera storia*, the omnipresent theme "festa," which embodies "an anthropological theme of sacrifice"[23] so dear to Calvino, is the center of the whole work; it is a recurring theme which connects the two parts. The piazza in which the festa takes place is timeless ("What was there is still there. What will be there still lives." Part 1, "Prima Festa") as in one's subconscious, which is also transformed into different

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[21] "Ogni commando ha sapore di piombo. La mia vista s'oscura."
[22] Calvino described the work as "l'impronta degli anni oscuri in cui è stato scritto" [the imprint of the obscure years in which it was written]. Italo Calvino, program notes of *La vera storia* by Teatro alla Scala, Edizioni Teatro alla Scala, 1982, 31.
[23] Berio, *Remembering the Future*, 110.

locations of the building and barrack-prison. Apart from the piazza, symbolism is pervasive in the entire opera theater: black wing, prison, the five body doubles, cage, chain, shell, shadow, walls, volcanoes… All these symbols have strong evocative power to suggest and recall images of misfortune, death, repression or the repressed self in the unconscious as in dreams and memory.

However, the presence of symbols is not enough to call forth the hidden memory. A narrative process is required to direct one to reach his or her subconscious through symbols. As I suggest, the absence of the father in Part 2, illustrates how the hidden memories, the "true" story, are retrieved through a psychoanalytical narrative process.

4.2 Mirror Stage and the "Name-of-the-Father" in La vera storia

The exploration of myth intersects with psychoanalysis based on the assumption that the narrative structure of a re-telling process reflects our unconscious. Recovering the hidden part of these folktales was examined by psychoanalysis in the early twentieth century. According to Freudian theory, myth, as a way of relief repression and fear, is a self-conscious fiction that is sometimes as close as one could get to the truth. If the patient's past is not retrieved by memory, the psychoanalyst is allowed to create a fiction as a hypothesis that would hopefully be accepted as the truth.[24] On the other hand, Carl Jung attributes to mythology and the history of civilization the possibility to solve the

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[24]See Hans Blumenberg, *Work on Myth*, translated by Robert Wallace (Cambridge, MA: MIT Press, 1990), 57 and 94.

secrets of neurosis and psychosis. Jungian theory asserts that a myth serves "to circumscribe and give an approximate description of an *unconscious core of meaning*."[25] Both mythology and psychoanalysis deal with the irrational, the interpretation of metaphorical language, and the mystery of how a certain narrative is formed. For Claude Lévi-Strauss, shamanism and psychoanalysis were forms of cure: the psychoanalyst and the shaman recreate a myth that the patient has to live. In the case of psychoanalysis, a sufferer of neurosis creates an individual myth that consists of elements drawn from the past. In the case of shamanism, the patient conforms to a social myth, i.e. rituals that are transmitted from the past.[26] More importantly, both psychoanalysis and shamanism establish transference to the patient by means of symbols, which carry message directly to his unconscious. Whether on the individual or the collective level, while the images and recollections are accumulated in a lifetime or in the tradition of a culture, the unconscious structures them according to its law and thus transforms them into language. In the field of psychoanalysis, Lacan follows Lévi-Strauss's idea: through the recollection of the patient's personal history, anamnesis allows the patient "to reorder past contingencies by conferring on them the sense of necessities to come," and is necessary for the patient to attain the truth in his unconscious.[27]

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[25]Carl Jung, "The Psychology of the Child Archetype," in Carl Gustav Jung and Karoly Krenyi, *Jung and Kerenyi: The Science of Mythology*, trans. Richard Francis Carrington Hull (London and NY: Routledge, 2002), 90.

[26] See Claude Lévi-Strauss, "The Effectiveness of Symbols," in *Structural Anthropology*, translated by Claire Jacobson and Brooke Grundfest Schoepf (New York and London: Basic Books, Inc., 1963), 186–205. See also Ino Rossi, "The Unconscious in the Anthropology of Claude Lévi-Strauss," in *American Anthropologist*, vol. 75, issue 1 (1973): 20–48.

[27] Jacques Lacan, "The Function and Field of Speech and Language in Psychoanalysis," in *Écrits: A Selection*, translated by Bruce Fink (New York, London: W. W. Norton and Company, 1977), 31–106, citation at 48.

The re-ordering of text in *La vera storia* calls for a Lacanian psychoanalytic reading. The new musical and scenic arrangements create overtones of new images and new situations that speak to the interiority of the characters at some point. These dramatic elements particularly recall Lacan's proposal of mirror stage, the Name-of-the-Father, and talking cure, which are all related to his famous dictum "the unconscious is structured like language." Part 2 is played by the anonymous passersby (Passersby 1–4) along with the five identical body doubles derived from Passerby 1. There are a series of seemingly nonsense events in Scene V in particular: a) Passerby 3 feels an enemy inside her heart as though it were her brother;[28] b) The fragmentation of her body and the "chains of power" are felt;[29] c) Leonora and Ada, who first appear embracing each other, are separated in Scene VI; d) Passerby 3 is able to cast her own shadow to another person as though it is detached from her body;[30] e) Her answer is like her "arm" or "weapon" [arma] that intersects with other people's crime, and her arm/weapon knows how to stop in time;[31] f) Passerby 3's word becomes clearer and her hand is able to hold another person.[32] All these evoke Lacan's theory of mirror stage of an infant, especially Lacan's

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[28] "Who has an enemy had always had it with him inside himself, like a brother" [Chi ha un nemico l'aveva già da sempre con sè dentro di sè, come un fratello.]

[29] "A question in the dark A puff a puff that flies, his mouth to his eyelashes, Chains of power and the night The words the eyelids the lips the teeth and the nail that claws me The night the wind brushes against your mouth." [Una domanda nel buio Un soffio un soffio che vola, la sua bocc'alle sue ciglia, Catene del potere e della notte Le parole le palpebre le labbra i denti e l'unghia che m'artiglia La notte il vento sfioran la tua bocca.]

[30] "I see that my shadow abates on you as if it were detached from my body." [Vedo che la mia ombra si abate su di te come se si staccasse dal mio corpo.]

[31] "My answer is my arm that crosses with your crimes. My weapon/arm can stop in time!" [La mia risposta è il mio braccio che s'incrocia coi tuoi delitti. La mia arma sa fermarsi in tempo!]

[32] "The clearest word is my hand that holds you tight." [La parola più chiara è la mia mano che ti stringe.]

metaphor of the infant's rivalry as his unified Self, the fragmented body, the sentiments of aggression, and the self-alienation.[33]

As previously observed, the father, Ugo, is left out in Part 2; he is absent throughout the re-ordering process except for the concluding scene where all the major characters make their final comments. The lack of the father figure (phallus) further echoes Lacan's theory and his explanation of "the-Name-of-the-Father" which breaks the imaginary unity between the infant and the mother.[34] For Lacan, as well as Freud, the primal Other is the father in the Oedipal triangle. The taboo of incest makes the father become the triggering agent of the Law, which signals also absence and repression. When the child discovers that it is the father who possesses the phallus which satisfies the mother's desire, he starts to find substitutions of one signifier (the mother's desire) for another signifier (the Name-of-the-Father). Such fundamental lack induces the child to recognize the other's lack and desire, leading to the separation of the subject from others. Through the Name-of-the-Father, the mother-child unity is broken, which initiates one's ability to exchange symbols and to signify (the Symbolic order in Lacan's theory).

As Lacan's famous dictum "unconscious is structured like language" goes, it is not that we speak through language, but that language speaks through us, since our unconscious has a built-in structure that resembles linguistic rules. It is the signifying chain through which all desire passes. In this way, other people's language at the same time speaks through our unconscious, so that our unconscious is also the discourse of the Other that is never reconciled. We are forced to speak a language that consists of our own

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[33] See Lacan, "The Mirror Stage as Formative of the I Function," in *Écrit*s, 3–9, especially 5–6.
[34] See Lacan, *Écrits: A Selection*, translated by Alan Sheridan (London: Tavistock Publications, 1977), 67.

desires and the desires of others—a reproduction of the discourse of our "fathers." Therefore, "the-Name-of-the-Father" that initiates our language ability, for Lacan, condemns us so that we are forced to reproduce our fathers' discourse:

> It is the discourse of my father, for instance, in so far as my father made mistakes which I am condemned to reproduce… I am condemned to reproduce them because I am obliged to pick up again the discourse he bequeathed to me, not simply because I am his son, but because one can't stop the chain of discourse, and it is precisely my duty to transmit it in its aberrant form to someone else.[35]

Ada's curse on Ugo can be informed by Lacan's condemnation through language: the revenge for "tearing up" each other is inherited "from beast to beast" over generations, and he will live in fear forever. In Lacan's theory, once the reproduction of "father's speech" (the use of symbol) is initiated, it cannot be stopped, as alluded to in the text "The route arrives at a point where nothing can stop" and create a "chain of anxiety." Activity in our unconscious, including the development of the mirror stage, is reflected in our language as well. When the condemnation is retold in Part 2, the personal pronouns and gender are often confused in the reported speech, recalling Lacan's explanation of how an infant's incorrect use of pronouns reflects his misunderstanding of the Self and the Other. The confusion of pronouns in Part 2 among "tu" [you], the female "lei" [she] and "padre" [father] particularly reflects the process of self-alienation: "…da belva a

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[35] Jacques Lacan, *The Seminar of Jacques Lacan: Book 2: The Ego in Freud's Theory and the Technique of Psychoanalysis*, edited by Jacques-Alain Miller, translated by Sylvana Tomaselli (Cambridge: Cambridge University Press, 1988), 89.

belva tu belva padre lei belva figlio che tu hai sempre fatto vivere nell'ansia se sai anche tu quest'ansia del padre…" (Part 2, Scene IV) (c.f. Part 1: "…da belva a belva io belva madre che hai fatto vivere sempre nell'ansia se sai anche tu quest'ansia del figlio…")

Language as the agency of subjective constitution is seen more clearly in Scene V when Passerby 3 identifies her ego by differentiating the Self from the Other. Fragmented words are combined in a stream without punctuation, akin to the technique known as stream of unconsciousness narration. The text also hints at the separation of words and the separation of objects: "Like tearing up the words that separate the things And every gaze and every gaze lives in suspicion…" One differentiates faces (or gazes) in the external world in a way parallel to how he separates words from a stream of sounds.

While Part 2 of *La vera storia* is a retelling of Part 1 in a disordered way, from another perspective, it is also a demonstration of Lacan's psychoanalytic theory on the formation of one's ego in the mirror stage, illustrated in the same text but through different references. These dramatic aspects align themselves with Lacan's theories and metaphors and sets them on the stage. In fact, Lacan describes the mirror stage as a *drama*:

> The mirror stage is a drama whose internal thrust is precipitated from insufficiency to anticipation—and which manufactures for all the subject, caught up in the lure of spatial identification… and, lastly, to the assumption of the armor of an alienating identity, which will mark with its rigid structure the infants entire mental development.[36]

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[36] Lacan, *The Seminar of Jacques Lacan: Book 2*, 6.

Lacan's proposal of mirror stage does involve a series of events, a place (the body) and a character (the subject) that make it a "drama of unconscious." The drama is directed by the force of drive and desire induced by insufficiency and anticipation, which makes a contrast with the mechanical displacement of narrative structure in folktales. The two narrative representations demonstrate two ways of telling a story.

4.3 Crossing the Walls: Talking Cure in La vera storia

La vera storia integrates in its dramatic unfolding aspects pertaining to Lacan's talking cure. Similar to Freud's talking cure, Lacan's talking therapy implies a dialectical exchange between the subject and the analyst through the medium of language. To reach out for the "truth" hidden within his unconscious, the subject is encouraged to speak of himself as if he were another person, so that he can distance himself from his subjective ego and desire.[37] The analyst facilitates the subject's recognition of his ego through dialogue: in recollecting and re-structuring his own past, the subject can obtain the "truth."

In an actual therapy process, the subject is taught to apprehend himself as an object in order to split his ego.[38] The analyst sometimes converses as if he knew the truth in the subject's unconscious. In Lacan's metaphor, half of the subject's ego passes over to the other side of the "wall of words," which separates the subject and the analyst. The

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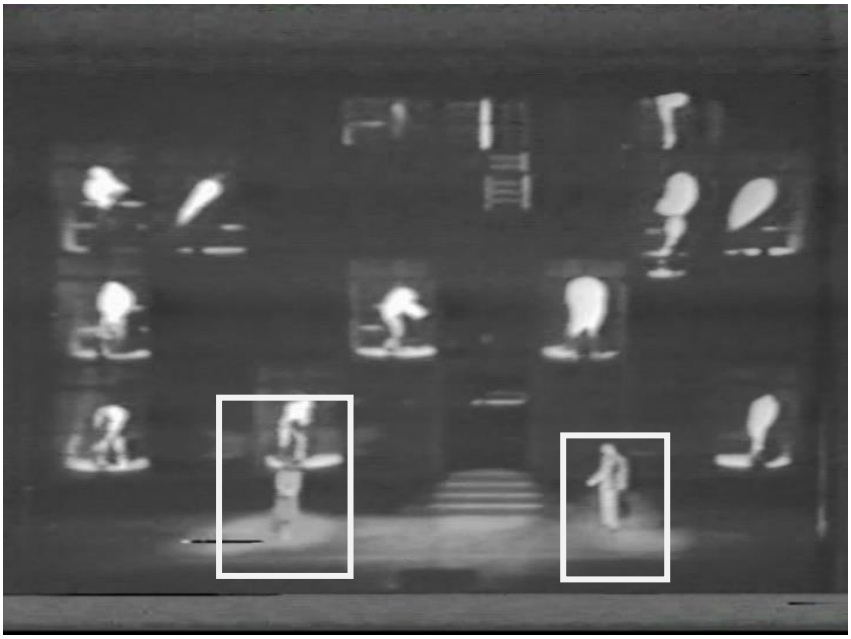
[37] See John P. Muller and William J. Richardson, *Lacan and Language: A Reader's Guide to* Écrits (New York: International Universities Press Inc, 1982), 70.
[38] Muller and Richardson, *Lacan and Language*, 91.

emerging truth is not immediately discernible in the subject's speech, but remains contained in a larger text of his unconscious. Other people's choice of words, speaking styles or intonation are often assimilated in the subject's speech. Here the function of the analyst is to assist the subject to find his own voice. The analyst's intervention in the subject's speech directs him closer to the truth: as in Lacan's metaphor, half of that half of the ego passes through the wall. Each time, a new layer of reality is added, so the subject can experience an awakening in his own Self.

By going to the other side of the wall, the subject experiences the truth of reality. The whole conversation becomes a system of relays: the subject utters the speech which contains the discourse of others, whereas the analyst moves across the two sides of the wall, i.e. to adapt the subject's speech and to speak as if he knew the "truth." After the exchange, the subject goes on to speak in a new reality. The process of articulating the past is hence an intersubjective one in which the subject's speech includes the speech of the analyst and vice versa.

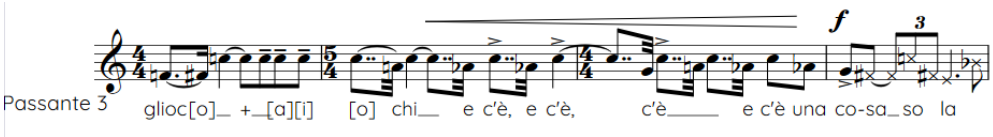
The Lacanian talk therapy is alluded to in Part 2 of *La vera storia* through the characters and stage directions: the passerby is split into five body doubles on the outset and later two of them climb over the prison wall. The staging aligns with the metaphor of "wall of words" of talking cure as well. Scene V is performed with the staging of a huge wall in which two groups of acrobats, separated by a ladder in the middle, dance and perform tricks. The staging corresponds to the activity of egos in the two people's unconscious, as shown in Figure 4.2. Switching on and off the light of the cells in which the acrobats are dancing allows for variating their number on stage. This suggests that the egos pass over the wall to reach the other person's unconscious.



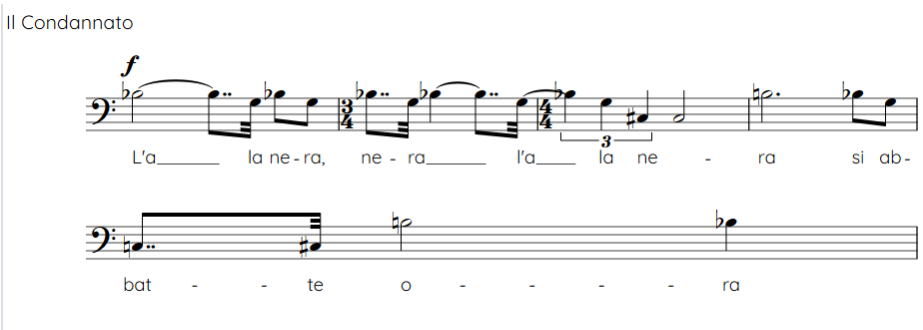
(Actress on the left: Passerby 3; Actor on the right: The Captain)

Figure 4.2: *La vera storia*, Teatro alla Scala, March, 12, 1982. Acrobats performing on both sides of the wall. Staging by Maurizio Scapparo, sets by Carlo Tommasi. Reproduced with kind permission of Teatro alla Scala, Milan.

The musical treatment also refers to the psychoanalytical process. In Scene II of Part 2, Passerby 3 sings an angular melody in quasi-Sprechstimme to retell a story from her memory. When she is trying to recall the scene, the repeating falling minor third occurs in her melodic line. She narrates "there's…there's" [c'è… c' è], as shown in Example 4.1, reminding her the image of the "black wing": [l'ala nera] and multiple words that are set in a chain of minor thirds in the condemnation of Part 1, such as "the death" [la morte], "my life" [la mia vita], "it splits" [si spezza], and "the truth" [la verità]. Example 4.2 shows the beginning of "The Condemnation" in Part 1: "The black wing is flapping over me." This black wing acts here as the symbol of the curse.



Example 4.1: ***La vera storia*****, Passerby 3's narration (Part 2, Scene II).**



Example 4.2: ***La vera storia*****, the symbol of "the black wing" (Part 1, "La Condanna").**

The falling third continues to invade her melodic line until the phrase "the death" [la morte], as shown in Example 4.3. At this point the vocal group starts to sing the section on "the black wing," repeated by her in her angular and half-singing style as well as her frequent use of major seventh, as in Example 4.4. She continues to narrate the story until she mentions "on him" [su lui]—a hint at the father. Through the repetition of the melodic figure "on him," she is able to recall more information from her memory: "perhaps on us," "tomorrow," "if the city continues to be under nightmare…" The melodic figure of "su lui," a motif consisting of tritone, minor third and semitone, becomes a pivot for her that triggers her memory. We should also note the dynamics between Passerby 3 and the vocal group. They sing in dialectical relations. The vocal group first guides Passerby 3 to sing "the black wing" with an emphasis on the tritone. When Passerby 3 continues to bring out "on him" [su lui] and "perhaps on us tomorrow"

[forse su noi domani], the vocal group picks up the same text. The vocal group then cries out recitations with various questions and comments: "If it isn't true?" [se non è vero?], "Who is the law?" [chi è il legge?], "Who is he?" [chi è lui?], "The festa is blood" [la festa è il sangue] and so on. The interaction between Passerby 3 and the vocal group evokes a subject dialoguing with her unconscious as she recalls a memory. Passerby 3 retrieves her memory of the father by a slip of the tongue. The vocal group, which acts as her unconscious, continues to unearth her hidden memory. She tries to remember the events and the general impressions of these events (nightmare and injustice). When she remembers through the process of narration, her words help to dig deeper into her unconscious. The talking cure is rendered with the Sprechstimme and its melodic line characterized by angular melodies with the frequent use of major seventh, tritone and minor third, irregular rhythm, fluctuating dynamics, and sudden accented tones. I will use the term "musical idiolect" to refer to the personal singing style central to one's identity. The linguistic term "idiolect" refers to the speech habit or distinct use of language unique to a person. Berio expresses his interest in the deeper problem of music and language, including each individual's own "system" of listening, use of musical language, and so on.[39] Passerby 3's "musical idiolect" reflects her agitation and the instability of her mental state at the moment.

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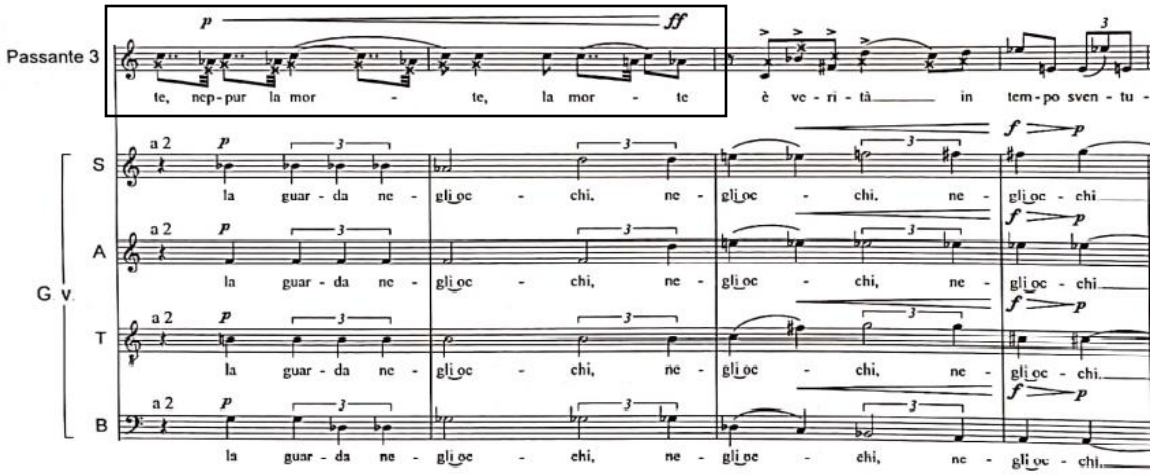
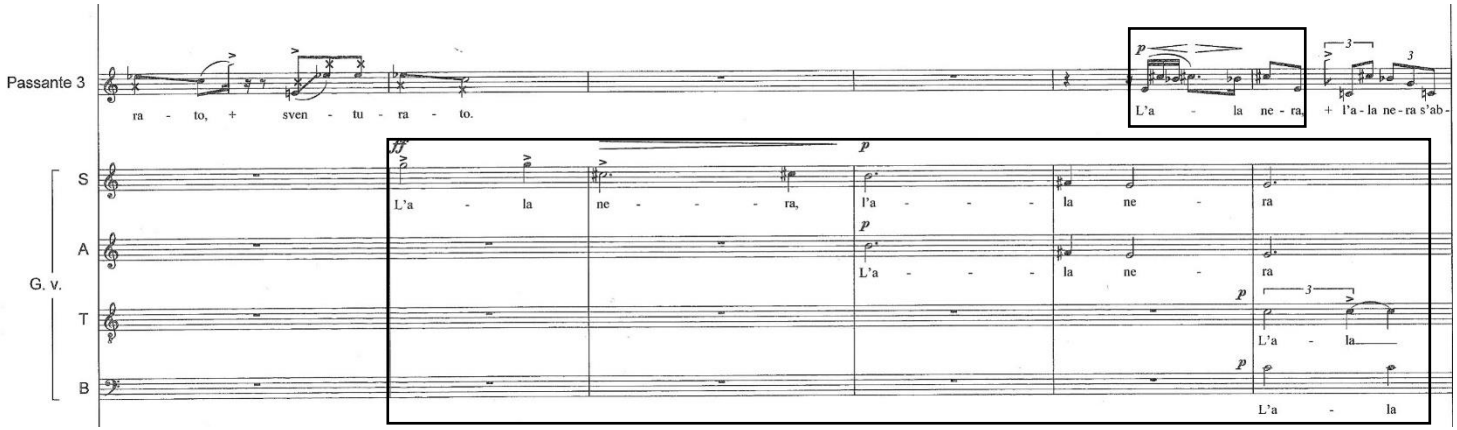
[39] Berio also related a person's musical idiolect to his own adoption of double articulation and distinctive features, which shows that he never abandoned the association between music and language based on humanity's innateness and universality. See Berio, *Interviste*, 85–6.

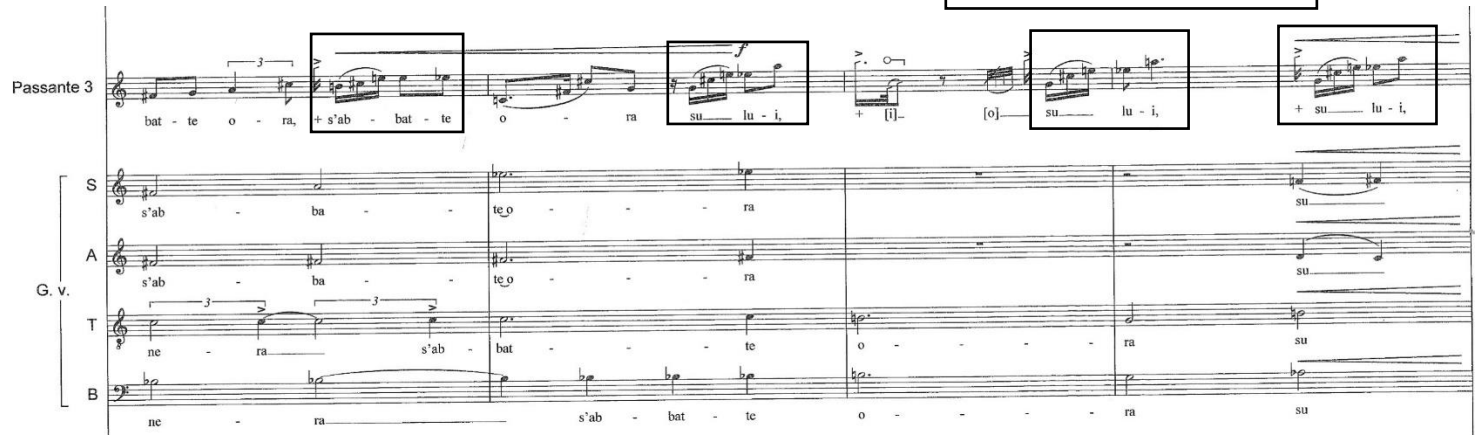


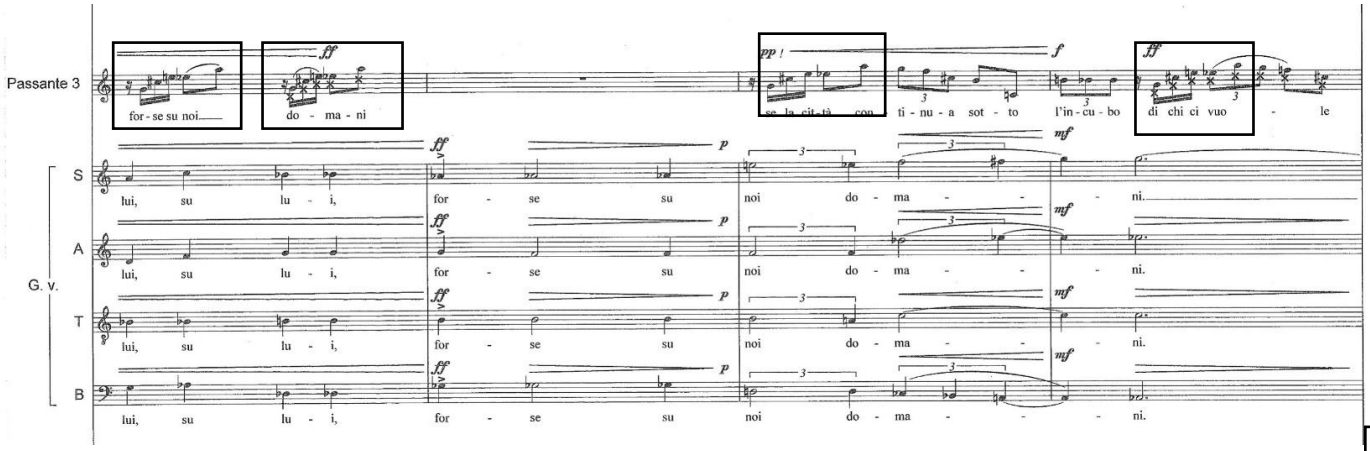
Example 4.3: *La vera storia*, the repeating falling minor third set for "the death" (Part 2, Scene II).

Rehearsal B:



Melodic variation derived from the figure of "the black wing"

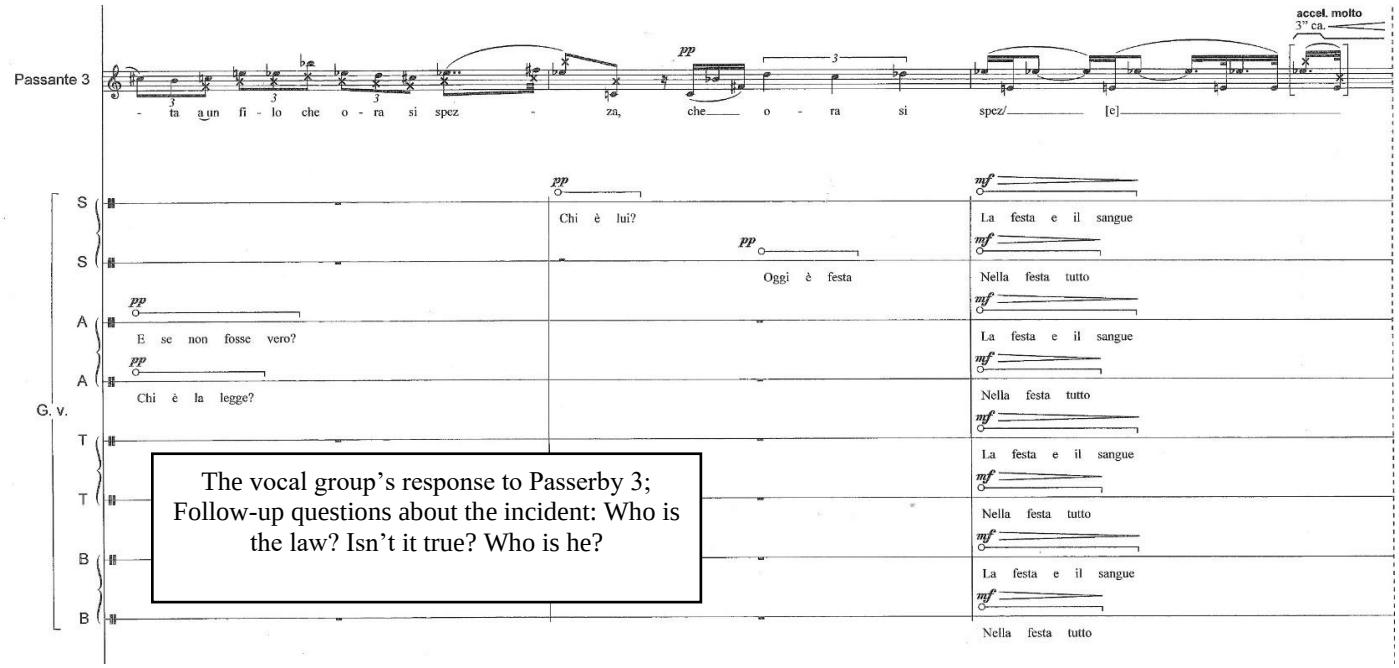




More details from Passerby 3's memory: "perhaps us," "tomorrow," "if the city continues to be in nightmare" through the melodic figure of "on him"

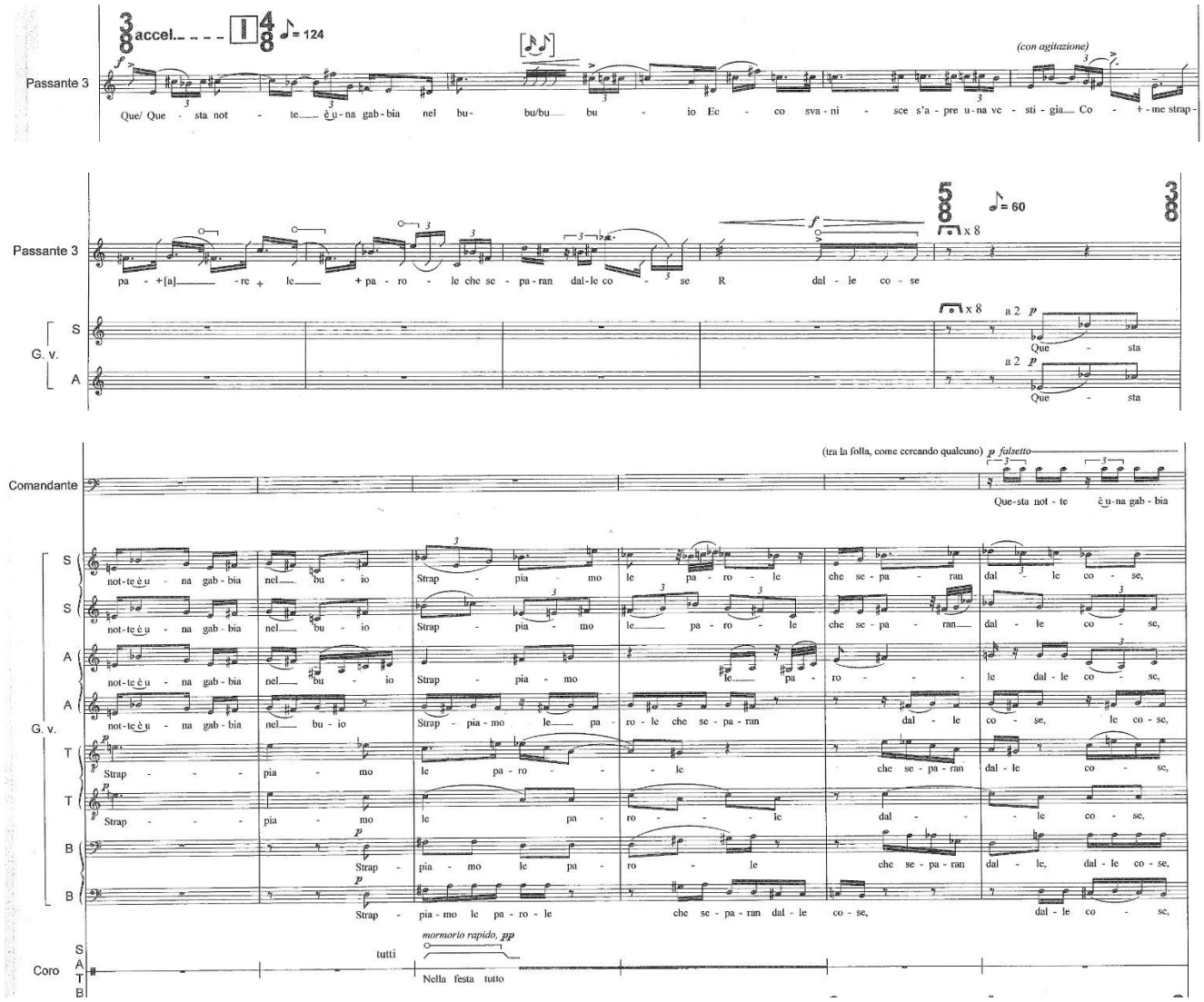
The vocal group picking up Passerby 3's text

Rehearsal D:



Example 4.4: *La vera storia*, Part 2, Scene II, rehearsals B and D.

The slip-of-tongue of the falling minor thirds by Passerby 3 recalls the memory of death through the symbol of the black wing. In Scene V, the interaction between Passerby 3 and the anonymous vocal group emphasizes even more this dialectical relationship. It also involves another character, the Captain [Il Comandante], who interacts subtly with Passerby 3 and the vocal group. Example 4.5 shows that Passerby 3 narrates events about "this night" ("This night is a cage in darkness…" [Questa notte è una gabbia nel buio]) while her part centers on semitones, minor thirds, tritones and major sevenths. The vocal group then picks up the narration of "this night," which develops into eight parts. The Captain joins to repeat Passerby 3's text with his own singing style, which is less angular and without any Sprechstimme. He further introduces a new line: "chain of anxiety that screeches and hangs" [catena d'ansie che stride e s'impiglia]. The vocal group continues to elaborate on the Captain's words and brings out another new line about the "night": "touching the night and the wind the mouth" [toccare la notte e il vento la bocca] using the same musical materials from the previous phrase (as highlighted). The repetition of musical materials guides the vocal group to associate the new information with the old one. The Captain picks up the phrase "touching the night" [toccare la notte] again with his own singing style. Such dialectical relations among the three parties continue in this section.



Continuation of the narration "this night" by Passerby 3; Elaboration of Passerby 3' text by the vocal group

Passante 3

pa - +[a] - re + le + pa - ro - le che se - pa - ran dal - le co - se R dal - le co - se

G. v. S

a 2 p Que - sta

G. v. A

a 2 p Que - sta

Comandante

(tra la folla, come cercando qualcuno) p falsetto

Que-sta not - te è u-na gab - bia

G. v. S

not-te è u - na gab - bia nel bu - io Strap - pia - mo le pa - ro - le che se - pa - ran dal - le co - se,

G. v. S

not-te è u - na gab - bia nel bu - io Strap - pia - mo le pa - ro - le che se - pa - ran dal - le co - se,

G. v. A

not-te è u - na gab - bia nel bu - io Strap - pia - mo le pa - ro - le dal - le co - se,

G. v. A

not-te è u - na gab - bia nel bu - io Strap - pia - mo le pa - ro - le che se - pa - ran dal - le co - se, le co - se,

G. v. T

p Strap - pia - mo le pa - ro - le che se - pa - ran dal - le co - se,

G. v. T

p Strap - pia - mo le pa - ro - le dal - le co - se,

G. v. B

p Strap - pia - mo le pa - ro - le che se - pa - ran dal - le, dal - le co - se,

G. v. B

p Strap - pia - mo le pa - ro - le che se - pa - ran dal - le co - se, dal - le co - se,

Coro S A T B

tutti

mormorio rapido, pp

Nella festa tutto

Different text set in the same music to elicit more from the memory

Comandante

nel bu - io Ca - te - na d'an - sie che stri - - - - de e s'im - - - pi - glia, e s'im -

G. v.

S: che se - pa - ran dal - le co - - se

S: che se - pa - ran dal - le co - - se

A: che se - pa - ran dal - le co - - se

A: che se - pa - ran dal - le co - - se

T: che se - pa - ran dal - le co - - se

T: che se - pa - ran dal - le co - - se

B: che se - pa - ran dal - le co - - se

B: dal - - - - - le co - - se

Comandante

pi - glia

G. v.

S

S

A

A

T

T

B

B

Toc - ca - re la not - te il ven -

Toc - ca - re la not - te il ven -

Toc - ca - re la not - te il ven - to

Toc - ca - re la not - te il ven - to

Toc - ca - re la not - te il ven - to

Toc - ca - re la not - te il ven - to

Toc - car la not - te il ven - to

Toc - car la not - te, toc - car il ven - to

Coro

S

A

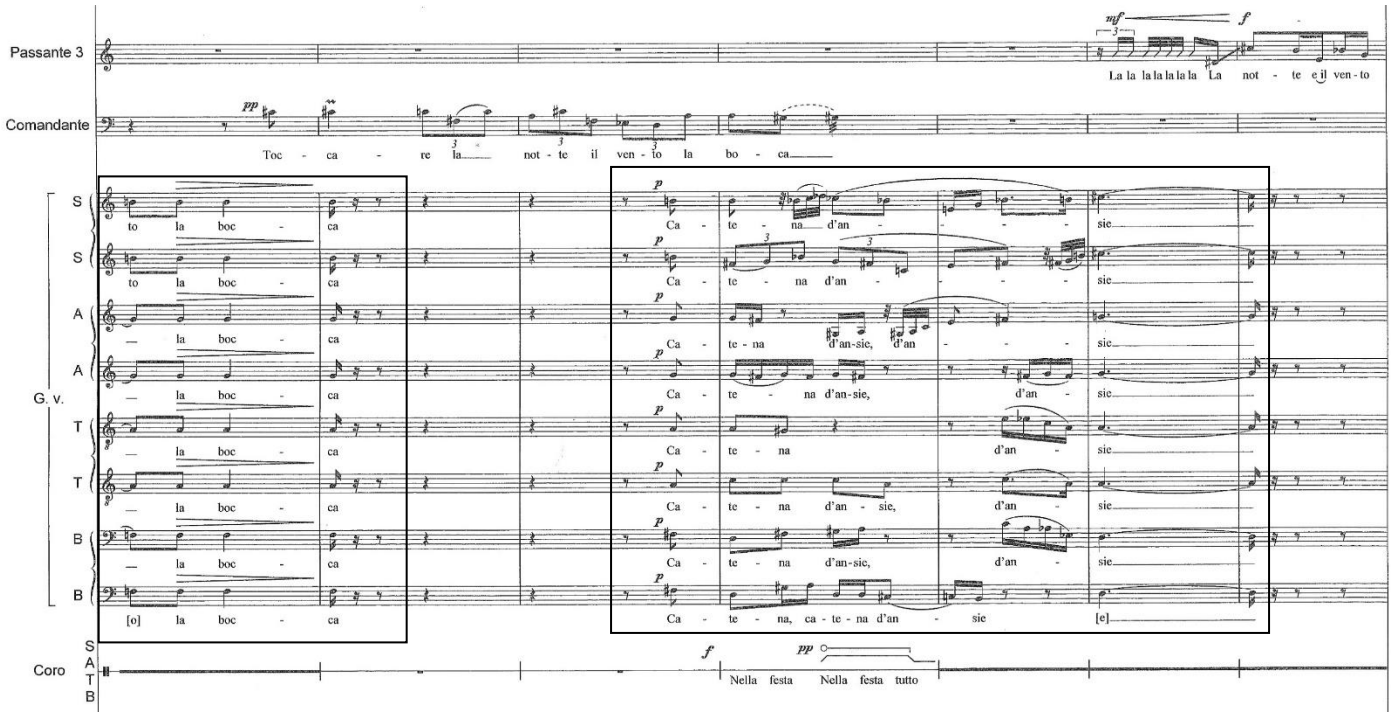
T

B

(tutti)

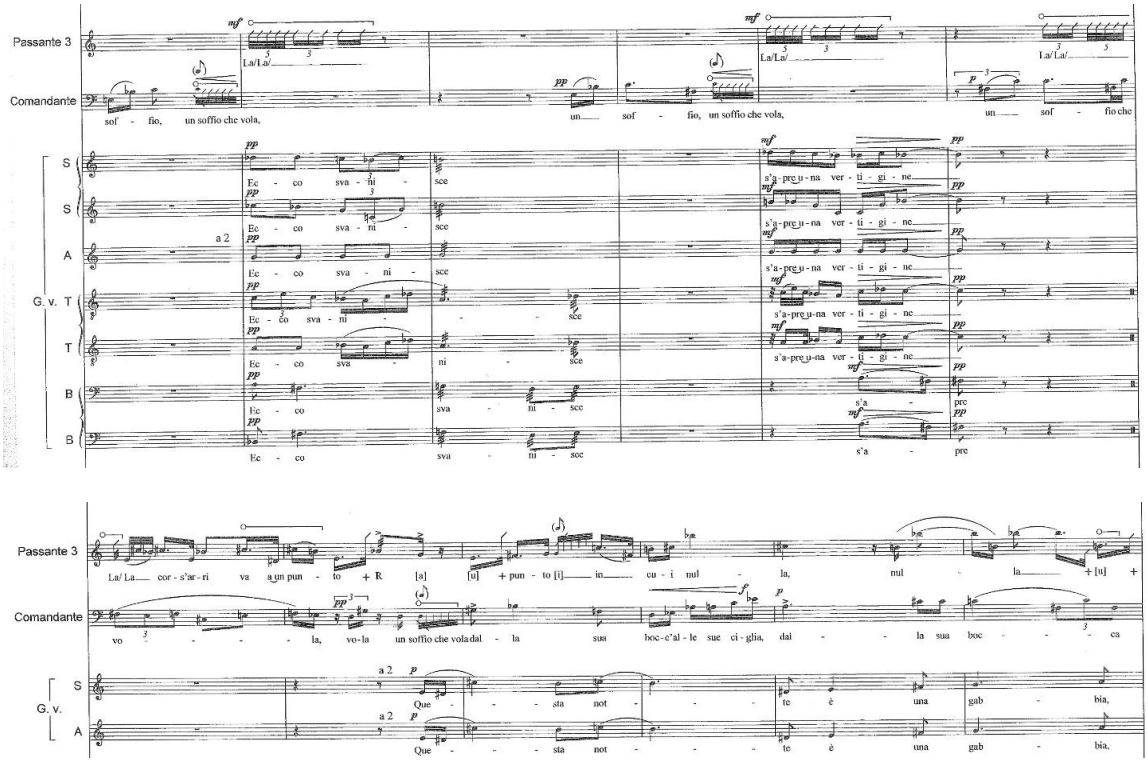
mormorio rapido, pp

Nella festa tutto



Example 4.5: ***La vera storia*****, Part 2, Scene V, rehearsal I.**

In addition, whereas the Captain's "musical idiolect" is a less angular melody without any Sprechstimme at the beginning, he sometimes adapts Passerby 3's singing style of stuttering and angular melody. Example 4.6 shows that the Captain picks up Passerby 3's Sprechstimme style to patter "a blow that flies" [un soffio che vola]. After several exchanges, Passerby 3 is able to provide more information about "the night."



Example 4.6: *La vera storia*, Part 2, Scene V, rehearsals L and M.

The interactions among Passerby 3, the Captain and the vocal group, along with the body doubles and the wall in the stage direction, resemble the Lacanian talking cure. The stuttering Passerby 3 is the patient, the vocal group that guides Passerby 3's speech is her unconscious, and the Captain who functions as the mediator is the analyst. While

Passerby 3 is talking about "the night," the Captain intervenes to guide her to retrieve more details from her memory. Her narration and her unconscious go back and forth to elicit more information and her sentiments about the night. Sometimes, in order to make her speak more, the Captain picks up Passerby 3's text and imitates her singing style as if he were speaking to her unconscious directly. The conversation is dynamic and the speech of the participants always encompasses the speech of one another. Apart from the slip of the tongue and the talking cure mentioned previously, the "myth" inside the work is further revealed through a psychological complex.

4.4 The Father's Trace

If Part 2 is a textual re-ordering of Part 1, why is the father Ugo left out? In fact, is the father really absent in Part 2? Let us take a look at Ugo's part in Part 1 and examine his "musical idiolect." The eight-pitch collection C-C♯-E-F♯-G-A-B♭-B so pervasive in the whole work is observed by most of the commentators.[40] I call this collection Set A. What is so peculiar in Ugo's part, singing in tenor, is the use of the pitch members that are complementary to Set A, i.e. D-E♭-F-A♭ which I call Set A'. Instead of a leitmotif, Ugo's repeating minor thirds, as shown in Example 4.7, is his "musical idiolect" which is consistent throughout his singing. His idiolect includes a chain of minor thirds, pitches from Set A' and the vocal type of tenor.

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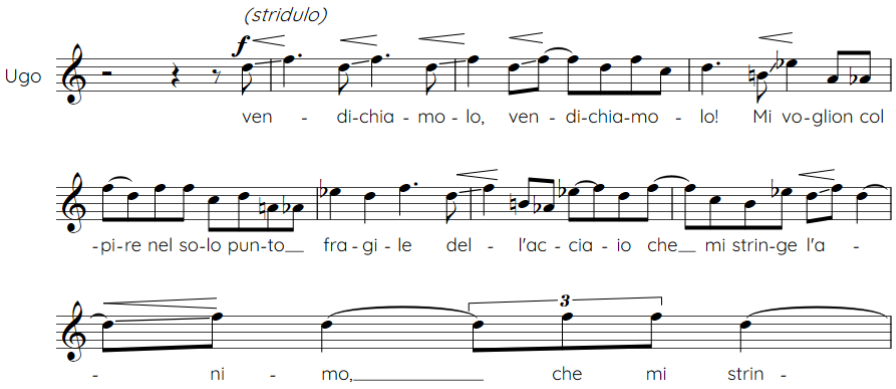
[40] Stoianova, *Chemins en musique*, 301–29; Osmond-Smith, "Nella festa tutto?" 281–294; Pestelli, "Luciano Berio. Archetipi cancellati e avventura creative," 17–47; Luzio, "Looking back on *La vera storia*," 409–30.



(some pitches that do not belong to Set A' functioning as appoggiaturas)

Example 4.7: *La vera storia*, Ugo's characteristic singing (Part 1, "La vendetta," mm 1–9).

The father's singing starts from F-D and spreads to the members of E♭-A♭ of Set A'. The use of Set A' causes the portrayal of the father to stand out from the rest of the work. This father's trace is found in Part 2 Scene V during the mirror stage. Example 4.8 shows that in Scene V the soprano sings "whoever has an enemy has always had it with him, within himself, like a brother" [chi ha un nemico l'aveva già da sempre con sé, dentro di sé, come un fratello] while the tenor solo sings against it with "chains of the power of the night, the words the eyelids the lips the teeth and the nail that claws me" [catena del potere della notte, le parole le palpebre le labbra i denti e l'unghia che mi artiglia]. Set A' appears in the first tenor among the vocal group with motifs ranging between the two extremes of E♭ and A♭. The musical embodiment of the father, sung by a tenor, is distinct from other parts of the group as if the father's voice cannot be reconciled with other voices in Passerby 3's unconscious. The motives derived from E♭

and A♭ keep repeating in the tenor part in melodic variations. Therefore, even though the father is not present in Part 2, his identity is manifested in other musical features, i.e. the voice type of tenor and the pitch set that he often uses.

Example 4.8: ***La vera storia*****, Part 2, Scene V, rehearsal A.**

If the father's absence in Part 2 appears to be a "lack" in Lacan's theory, the use of pitches from Set A' justifies this "lack" by symbolizing the father's absence. The use of Set A' signals the imagined absence of the phallus, corresponding to what Lacan regards as *objet petit a*, the father's trace. Incidentally, the sonority of the minor third of Ugo's singing overlaps with the repeating minor third of the symbol "the black wing" (See Example 4.2) in Part 2. That is to say, the black wing, the condemnation, the death, and the father are connected and recalled through the chain of minor thirds. This connection provides an explanation for Osmond-Smith's observation of the pervasive minor thirds in the work yet it has been left unexplained.[41] In fact, the connection between Ugo and the black wing, as Angela Carone notes, is seen in Berio's manuscript, appearing in the setting of "the black wing" [l'ala nera] using the members of Set A' in the scene "La Condanna."[42] The father's trace is closely associated with death and condemnation that is passed on to posterity.

Berio also connects music and language based on Lacan's discourses on the unconscious. According to Lacan, it is through the medium of language that the Self differentiates itself from the Others. This can be seen in his concept of Symbolic Order and the incorrect use of the pronouns by infants as discussed above. In Scene V which alludes to the mirror stage, the eight parts of the vocal group are developed into a complex, with overlapping layers in rehearsals J and K. The textural layer is inviting the

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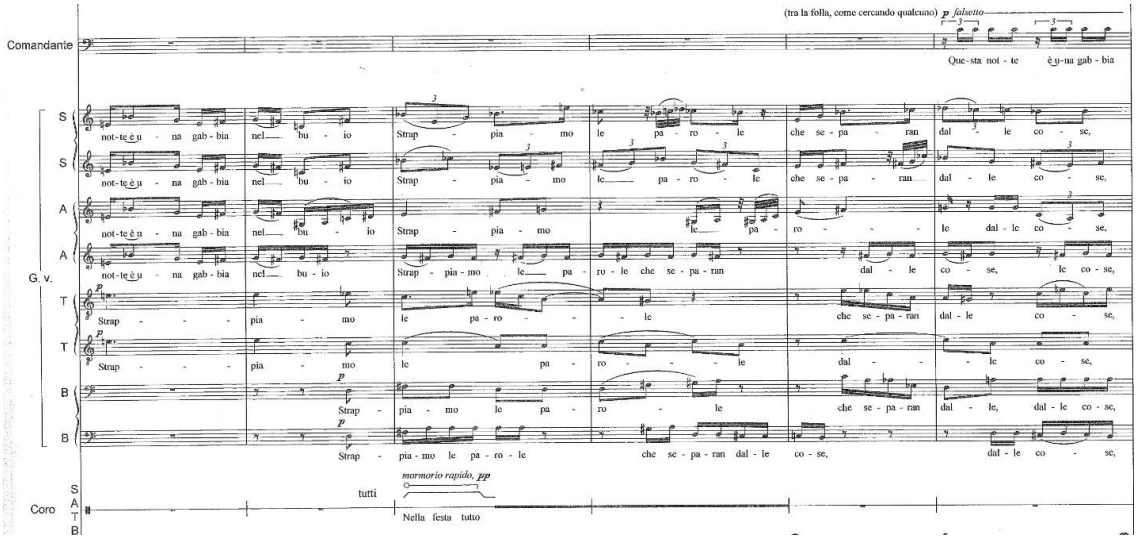
[41] David Osmond-Smith does note that the chain of minor thirds is prominent in the whole work, especially that it proliferates to other pitches in several instances; however, he does not show how it is related to the dramaturgy in general. See David Osmond-Smith, "Nella festa tutto?", 281–294.
[42] Angela Carone, "'La vera storia': organizzazione dei materiali sonori," in *Le théâtre musical de Luciano Berio* vol. 1, edited by Giordani Ferrari (Paris: L'Harmattan, 2016), 431–452, music example at 437.

listener to mimic the action “tearing out the words that separate from the things” (see Example 4.9). Also, the sopranos, altos and basses develop their parts centering on E-G-B♭-C♭-D. On the other hand, the melodic variations of the tenor parts are based on the poles E♭ and A♭ (two members from Set A’), which is a stark contrast from the rest of the chorus. The father’s identity in the tenor part is incompatible with the multiple voices of the Other.



Example 4.9: *La vera storia*, Part 2, Scene V, rehearsal J.

Furthermore, the triplets in the sopranos, the dotted rhythms and the syncopations in multiple voices generate rhythmic complexity in the polyphony, which requires the audience’s listening skills to catch the beats.[43] Reciprocally, Lacan sees the analysis of

[43] Giorgio Pestelli raises an insightful suggestion that the condemnation in Part 1 is scattered into the vocal group (which he calls “madrigal group”) in Part 2. This way of rewriting Part 1 is most likely plausible based on the dramatic idea of the work. However, Pestelli does not specify where and how the condemnation is found in Part 2. See Giorgio Pestelli, “Luciano Berio. Archetipi cancellati e avventura creative,” in *Luciano Berio: Nuove Prospettive*, edited by Angela Ida De Benedictis (Florence: Leo S. Olschki, 2012), 17–47, especially at 31.

the patient's speech by the analyst as a piece of *polyphonic music*: "analysis consists in playing in all the many staves of the score that speech constitutes in the registers of language."[44] The analyst's task is to punctuate, as with a metric beat, and to discern the multiple registers of the subject's musical score.[45]

The trace of the father, as characterized by his musical idiolect based on the motivic idea surrounding E♭ and A♭ in the tenor part, is gradually assimilated in rehearsals N and O. In the stage direction of Scene VI, after the mother and the girlfriend (Ada and Leonora) are separated (initially embracing each other), the dialogue is recited mechanically (*recitando meccanicamente*) with a clear diction devoid of any Sprechstimme or angular melodies. In Example 4.10, voices from the crowd recite that "my shadow" flaps on "you," as if the shadow were detached from "my body." The subject, the Passerby, is now able to identify herself and recognize the laws of language i.e. the Symbolic order in Lacan's theory.

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[44] Lacan, *Écrits*, 78.
[45] Muller and Richardson, *Lacan and Language*, 72.

1ª Tr. 2ª

Arpa

Pf. 1º

Pf. 2º

Tre voci *) tra la folla

Voce 1ª *(recitando meccanicamente)*

Vedo che la mia ombra si abbatte su di te come se si staccasse dal mio corpo.

Example 4.10: *La vera storia*, Part 2, Scene VI, rehearsal B.

By the end of the Scene VI, the stage direction requires the whole building to explode with lights, "presence" [esplode di luci e di *presenze*] and violence. After that, the instruments play freely on a repeating chord while the vocal group cries out "the time in pieces" [il tempo in pezzi], "shattered into pieces" [fratumato], "here we live in the time of the origins, of volcanoes…" [ecco abitiamo nel tempo delle origini, dei vulcani…], as shown in Example 4.11. The lighting and the music that appear in full force suggest the state of "truth," i.e., the Real Order in Lacan's theory. The Real Order in psychoanalysis is ineffable, noumenal, and even associated with primordial experience. The absolute truth in the Real Order lacks the symbolic opposition between "presence" and "absence"; there is only presence. As mentioned in the text, the origin of time contains "our wounds," and the prison stays in the characters' memory forever (Scene VII). The psychoanalytic process directs the individuals to uncover their *a priori* experience about the violence.

M

Cor. 1º 2º 3º — a 3 Flzg. — (respirare a piacere) — *f*

Tr. 1ª 2ª 3ª — a 3 Flzg. — (respirare a piacere) — *f*

Tast. — tremolo — *ff*

Pf. 1º — *ff*

Pf. 2º — *ff*

Perc. 2ª — T. t. (bacchetta metallica) — *fff*

Improvvisamente tutto l'edificio esplode di luci e di presenze.
Esplode anche la violenza. Si rivedono fugacemente il
Comandante, Passante 2 e il Prete, come dei complici.
Solo Ada e Leonora sono rimaste immobili.

M

Vl. I — tutti un. — (arco a piacere) — *pp*

Vl. II — tutti un. — (arco a piacere) — *pp*

Vle.

Vc.

Cor. 1º 2º 3º — a 3
Tr. 1ª 2ª 3ª — a 3
Tast.
Pf. 1º
Pf. 2º
G. v.
S — a 2 *(sempre urlato)* — ecco — a 2 — ecco — a 2 — nel groviglio dei secoli.
A — a 2 *(sempre urlato)* — ecco — 1º il tempo degli oceani, — a 2 — ecco — a 2 — nel groviglio dei secoli.
T — 1º *(sempre urlato)* — frantumato, — a 2 — ecco — 2º abitiamo il tempo delle origini, — a 2 — ecco — 1º e delle foglie, — a 2 — nel groviglio dei secoli.
B — 1º *(sempre urlato)* — Il tempo in pezzi, — 2º logoro: — a 2 — ecco — a 2 — ecco — 1º dei vulcani, — a 2 — mentre il tempo di fuori è una poltiglia — a 2 — nel groviglio dei secoli.
Vl. I
Vl. II

Example 4.11: *La vera storia*, Part 2, Scene VII, rehearsal M.

4.5 A Semiotic Approach in La vera storia

Regarding the dramatic elements, whereas Part 1 tended to focus on concrete people and things, Part 2 appears as a combination of the abstract qualities in these elements. For instance, the father is recalled not by his name but by his "musical idiolect" (the pitches, the chained minor third and the tenor vocal type). Table 4.1 shows the connection between the images and symbols between the opera of Part 1 and the music theater of Part 2. For instance, "lovers" have an implication of "union" and "fire" contains the quality of "brightness." In terms of semiotics, the second column refers to the connotation, i.e. the secondary, cultural meanings of signs, of the images of the first column. These reconfigurations even involve the crossover of media. For instance, "duality" and "union" are presented as stage direction of Ada and Leonora "melting into each other," or the instrumentation of piano duet in Scene VI.

Table 4.1: *La vera storia*, concrete entities in Part 1 and abstract qualities in Part 2.

Opera in Part 1	Music Theater in Part 2
• Duel, two brothers • Lovers • Female/male protagonists • Fire • Parade • Abduction, revenge	• Duality • Union • Soprano-ness, tenor-ness • Brightness/darkness (negative form) • Crowd • Suspicion, sadness, fury, anxiety

Let us recall how Berio and Nono describe music theater: the former saw it as an attitude to discover the dramaturgy inherent in symbolic behavior, and the latter a total

commitment on a social and *structural-linguistic level*.[46] The re-configuration of these abstract qualities is similar to distinctive features in phonology we have discussed in the previous chapters. As concrete speech sounds are divided into phonetic features (e.g. "p" is analyzed as bilabial, stop, explosive consonant), images in Part 1 are decomposed into "features" which can be combined to form new situations. The re-structuring of these features-as-signs often renders dream-like imagery without a logical semantic sequence. The re-configuration of the abstract qualities is also the reason why Luzio notices that the stage figures are often "generalized" and split up in these "dream theaters." To her the identity of these stage figures can only be viewed in an associative manner.[47] Images are often combined syntagmatically by means of metonymy in the work. During the talking cure discussed above, a series of images are listed out by the Captain and Passerby 3 after they mention "chain of anxiety": "the mouth", "the ear", "the seashell", "a breath that flies", "lip", "teeth" and so on (Part 2, Scene V). An image connects to the next one by some inherent properties such as being a part of body, similar shapes or the same location, so that new images are always introduced in a series.

Metonymy is also a means to connect musical elements. For instance, a prominent motif in Scene IV, D-A-B♭-F♯-E first appearing in the accordion, is repeated and spreads to other instrumental parts and develops into its own melodies and own styles, as shown in Example 4.12. The same material is then distributed to other instrumental parts as in a relay. Each part keeps its autonomy and develops its own new material. The style of

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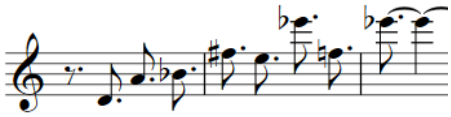
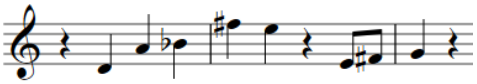
[46] See Berio, *Scritti*, 45–46; Nono, *Nostalgia for the Future*, 228.
[47] Claudia di Luzio, "Tranmnahe Welten—weltnahe Träume Zum Verhältnis von Traum und Wirklichkeit im Musiktheater von Luciano Berio und Bruno Maderna," in *Traum und Wirklichkeit in Theater und Musiktheater* (Anif, Salzburg: Verlag Mueller-Speiser, 2006), 342–56.

waltz or the use of specific instruments (such as accordion) no longer suggest dance or other conventional association. They function as diverse tone qualities that are connected to the previous motivic idea.

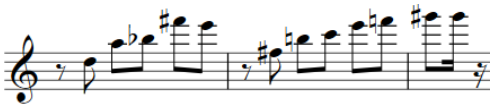
Accordion on the stage (mm. 6)



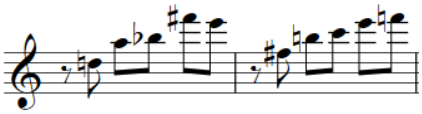
Trumpet sord. wa-wa (mm. 21)



Violin sord. Waltz (mm. 30)



Flute (mm. 48)



Example 4.12: *La vera storia*, various melodic elements and musical styles connected by the same motif (Part 2, Scene IV).

From the psychoanalytical perspective, this signifying chain functions as the Lacanian simile of a necklace which "hooks onto a link of another necklace made of links."[48] Such syntagmatic relations connect diverse stylistic elements in a chain of

[48] Lacan, *Écrits*, 145.

metonymy, reminiscent of Berio's explanation that Part 2 breaks the stylistic barriers and embraces musical plurality in the music theater.[49] By breaking the conventional associations of certain musical styles, the arbitrary relation between signifier and signified is again challenged. Ivanka Stoianova suggested that the Brechtian alienation effect is a result of the co-existence of various musical styles in Part 2 of *La vera storia*.[50] However, the irony is that if alienation effects are really the focus in the listening process, the audience needs to first recognize and conform to the conventional associations of diverse musical styles and cultures. This only enhances the arbitrary connection between signifier and signified, which is exactly what Berio's model opposes. From how these musical elements are presented, the musical styles can be heard as pure musical techniques connected by a motivic chain without any connotations associated with the plots. Although alienation effects are still present, they appear to be an overtone with different degrees of familiarity.

Another way of exploring metonymy in syntagmatic relations is through melodic variations. Melodic variations appear more often in Part 2 than in Part 1 and especially when Passerby 3 re-tells the incident about the "night." The motif initially set for "the black wing" [l'ala nera] appears in Scene V again to connect the memory about "the night." The passage in Example 4.13, all sung by Passerby 3, shows the melodic variations of the motif of "the black wing" in various instances so that new melodic and textual information are introduced. As shown in Example 4.13(f), the new part in the variation even becomes independent and starts another melodic phrase to bring in a new

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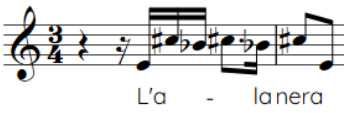
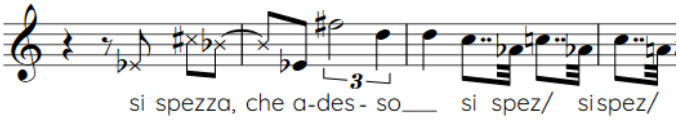
[49] See Berio, *Remembering the Future*, 110–111.
[50] Ivanka Stoianova ed., *Chemins en musique* (Paris: Richard-Masse, 1985), 301–329.

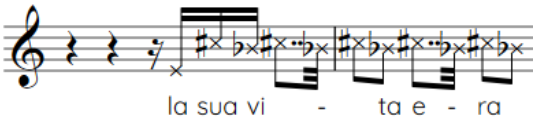
textual element (touching the night the wind): see Example 4.13(g). Here, a chain of signs is created and the melodic variations always introduce new information on the basis of old information. The chain of metonymy is created by Passerby 3's recalling about the night initiated by the symbol of black wing.



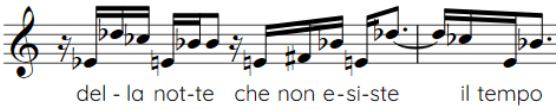
a: Scene II, rehearsal B



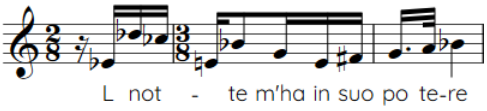
b: Scene II, rehearsal C



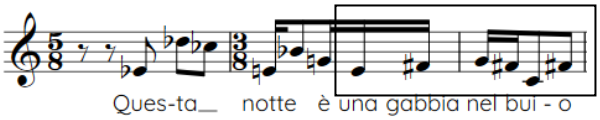
c: Scene II, rehearsal D



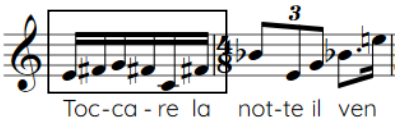
d: Scene, rehearsal A



e: Scene V, rehearsal F



f: Scene V, rehearsal J



g: Scene V, rehearsal K

Example 4.13: *La vera storia*, melodic variations based on the motif of "the black wing."

To summarize, contemporary discourses on narrative and language, including Propp's model of folktale, Calvino's "combinative" process and Lacanian psychoanalysis, are superimposed as the dramatic model. The similarities among them, such as nonlinear retelling process, hidden secret ("myth"), condemnation, the figure of father (also referring to ancestor or authority) become the connecting points in the drama. These connecting points allow diverse elements to align and create multiple levels of experience in this "theater of the mind" regarding a collective memory. Furthermore, some metaphors in Lacan's psychoanalysis, such as the mirror stage, wall of words and the father's voice, are employed in the work as dramatic and musical elements in different situations linked by a chain of metonymy.

4.6 Voice as the Animation of the World of Signs

As in other works by Berio, the significance of voice in *La vera storia* is manifested in multiple ways, both acoustically and conceptually. The arbitrary relations between certain voice types (SATB) and characters in Part 1 are broken by recalling the vocality (*sopranilità* and *tenorilità* as described by Berio[51]) in Part 2. Within the context of the talking cure, characters' identity is recognized according to their registers, vocality, singing styles, and their "musical idiolects." In other cases, the vocal specificities are communicated through timbres and vocal expressions; they are collective or peculiar singing styles and characterized by expressions such as Sprechstimme, Passerby 3's stuttering singing and *urlando, stridulo...* etc. Berio sees all these operatic elements in a meta-theatrical way. He tells us that these vocal specificities are like pseudo-characters who already have been theatricalized in the operatic tradition as "ready-made."[52] On the other hand, voice is expressed conceptually in the "Name-of-the-Father." The emphasis of voice is reminiscent of the Father's voice which inherently sticks to *logos* itself. The father's voice as a command resembles God's voice. Even if the father is dead in the work, the voice embodies his absence, which is "a stand-in for an impossible presence, enveloping a central void."[53]

Luzio further explains that in Berio's works, voices as acoustic elements are "correlated to words and images in a continually mobile relationship and with varying

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[51] Berio, *Remembering the Future*, 110–111.
[52] Berio described that the theatricality of *La vera storia* is close to Brecht. See Berio, *Remembering the Future*, 109. It is also inspired by Lionel Abel's theory on meta-theater. Berio explained that contemporary theater presents things and situations as if they had been extracted from a drama that has already taken place. The drama "consists in presenting capable characters who were once drama, who must now retrieve their memory" (Lionel Abel). See Berio, "Problemi di teatro musicale," 53.
[53] Mladen Dolar, *A Voice and Nothing More*, 53.

degrees of familiarity and distance."[54] Adding to Luzio's description, I suggest going back to Calvino's article "Notes toward a definition of the narrative form as a combinative process" to see the semiotic functions of voice in *La vera storia*. As Calvino puts it, apart from the rite which provides symbols, the *voice* of the storyteller would "animate the world of signs into a fluid narrative discourse within which each word acquired new values" and "transmit them back to the ideas and images which it was supposed to refer to."[55] There is a peculiar narrative voice in Part 1—the six ballads sung by Sicilian *cantastorie*, who in the old days often started the ballad by singing "Now I tell you the true story of a specific king, sorcerer, of our time."[56] Berio describes Part 1 as a tableau of signs in which the ballad singer is able to explain things well and expertly convey meaning using a very special vocal technique.[57] The six ballads, along with the musical, textual and scenic components provide a whole list of "motifs" for the work, as shown in Table 4.2. The images, musical parts and the building materials in the scene include concrete elements: musical instruments, musicians, characters (father, son and policeman), cemetery. These images are further decomposed to abstract qualities such as semantic features or morphemes in Part 2: electric-ness of instrument, arresting people, tearing action, jealousy, rivalry… etc.

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[54] Claudia di Luzio, "Reverberating History," in *Luciano Berio: Nuove Prospettive*, edited by Angela Ida De Benedictis (Florence: Leo S. Olschki, 2012), 267–89, citation at 268.
[55] Calvino, "Notes Towards a Definition of the Narrative Form," 94.
[56] Berio, *Interviste*, 236.
[57] See Berio's interview in 1978, cited in Stoianova ed, *Chemins en musique*, 316.

Table 4.2: *La vera storia*, tableau of signs for the six ballads.

Ballad	Accompaniment	Text	Scenic Action
Ballad 1	Electric guitar	"We" are forced to tear each other off between father and son like beasts.	A ballad singer accompanied by three rock musicians. An old man flanked by the crowd; the arrest supported by Ugo.
Ballad 2	Accordion	if "we" manage to establish a starting point of our sufferings "we" would envisage the consequence that we no long feels.	A ballad singer accompanied by an accordion player. The ballad singer and the accordion player pushed away by the policeman
Ballad 3	Keyboard and band (esp. piccolo)	Nobody knows who the other is. It is a crime.	The ballad singer brought away by the police; the procession [The band probably shown in the action]
Ballad 4	Pianola	Rival brothers, tyrant fathers, revenge, jealousy, fury, mothers who implore, dramas of honor, rebellions… in every catalogue of similar issues always encompass a hidden story.	The ballad singer as a beggar and accompanied by a pianola Leonora and Ada embracing each other.
Ballad 5	Violin + Accordion + recorded voice of the ballad singer	The song makes a long journey that drives away all the voices that are not in the song.	Leonora and Ada "melting into each other" in their embrace. A passer-by figure singing in half-darkness and accompanied by a violin and an accordion.
Ballad 6	Strings + Saxophone + Trumpet	The story/history [storia] repeats itself and the festa is over.	A battlefield turning into a cemetery; a woman singing among the dead bodies

The six ballads are demarcated from the rest of the story. They are frozen sections that provide all the musical, textual and scenic signs to the whole work. The folk singer's role is to "animate the world of signs" in the work by her voice. Why does the world of signs need to be animated? This question can be considered along Adriana Cavarero's

examination of the concept "*phone semantike*" derived from Aristotle's *Poetics*.[58] According to Aristotle, *logos* refers to a combination of words into meaningful message; it is *phone semantike*, or "signifying voice."[59] *Phone* means voice or vocality, whereas *semantike* refers to meaning that is produced by language. *Logos* is only formed when *phone* and *semantike* meet. Without language, voice is a lack of meaning and reason (although Berio may not agree to this point). Calvino's explanation of the need of a voice to animate the world of signs can be understood similar to the formula of *logos* being *phone semantike*. Once the system of signs is activated by voice, the theatrical elements as characters have their free will and reasoning to interact with one another. They become theatrical signs and associate among themselves to form a chain of metonymy.[60]

Another voice which animates the world of signs is the father's voice. The father's voice is remembered in Part 2 through the chain of minor thirds, the "tenor-ness" and the use of pitches from Set A' (i.e. the four missing pitches of Set A). These three components are continuously combined with other elements to form the chain of metonymy. As shown in Example 4.14, the repeated minor third recalling the father's voice is pervasive in Part 2 and is interwoven with other signs in the piece, such as the

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[58] Adriana Cavarero, *For More Than One Voice: Toward a Philosophy of Vocal Expression*, translated by Paul A. Kottman (Stanford, CA: Stanford University Press, 2005), 33–41. While Calvino's essay can be explained with Cavarero's re-examination of *phone semantike*, incidentally, the introduction of Cavarero's book includes her discussion on Calvino's short story "Un Re in ascolto."

[59] For Aristotle's discussion on *phone semantike* as "signifying voice," see Aristotle, *Poetics*, 1457a5–30.

[60] Berio admits that his idea of music theater was indebted to Brecht's evolutionary view of the means and criteria that govern music theater. All the elements in *La vera storia* to him have already been theatricalized to start with. See Berio, *Remembering the Future*, 110–111.

sign of Sprechstimme, the sign of saxophone timbre etc.[61] This is also how the father's absence becomes the underlying driving force of the metonymic chain in the work. To Lacan, the symbolic father is a pure signifier since it is one of the minimal elements of signifying network.[62] This can be seen as the father's voice's having gradually become a pure signifier in Part 2. The "Name-of-the-Father" has become a sign which is everywhere in everyone's speech.

In that respect, *La vera storia* is based on a mechanism that recalls Bakhtin's polyphonic novel, which reveals a plurality of consciousness assembled into a single perspective: something not new to Calvino.[63] These voices are interpenetrated so that no single voice can be singled out from others.[64] Thus, Passerby 3 needs to "tear the words" in order to separate hers from those of others in Part 2. The gradual assimilation of Ugo's "musical idiolect" also explains the discrepancy in Osmond-Smith and Carone's observations. The former notices Ivo's use of Set A' while the latter observes that the set is used by Luca.[65] In fact, Ugo's peculiar use of Set A' in his singing first spreads to his

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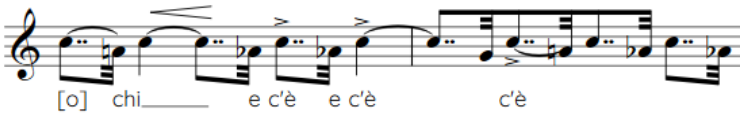
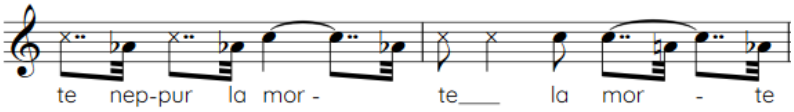
[61] Other examples include the saxophone part in Scene IV, the first soprano, the horn and Passer-by 3's melody in Scene V, the tenor saxophone part in Scene VI, alto saxophone part in Scene VII, the father's (Ugo) melody in Scene VIII, and Ada's melody in the final scene.
[62] Russell Grigg, *Lacan, Language, and Philosophy* (Albany: State University of New York Press, 2008), 30–31.
[63] Calvino referred to Bakhtin and his writings on carnivalism on the program notes. See Italo Calvino, program of *La vera storia*, Teatro alla Scala, 1982, 30.
[64] The similarity between *La vera storia* and the trend of metafiction in the same period cannot be ignored either. As Patricia Waugh explains, metafictional novels, which Calvino excels in particularly for his *If on a Winter's Night a Traveler* (1979), often reveals a fundamental opposition between the construction of the fictional illusion and the illusion itself. Metafiction explores fiction through the tension between the construction and the destruction of illusion while a "stylization" which enables other voices to be assimilated is revealed. See discussion in Patricia Waugh, *Metafiction: The Theory and Practice of Self-conscious Fiction* (Abingdon: Routledge, 1984), 42–44.
[65] See David Osmond-Smith, *Berio* (Oxford: OUP, 1991), 104; Carone, "La vera storia: organizzazione dei materiali sonori," 443–444.

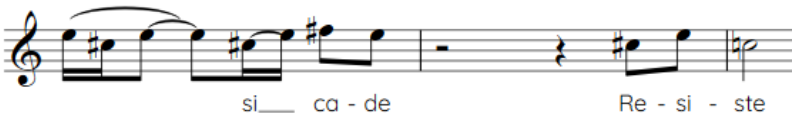
son Ivo in “La Vendetta” of Part 1. Ivo’s pitch collection is gradually assimilated by Leonora and Luca who initially adopt Set A as their pitches.



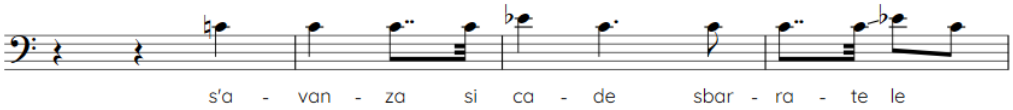
a: Passerby 3 (Scene II, rehearsal A)



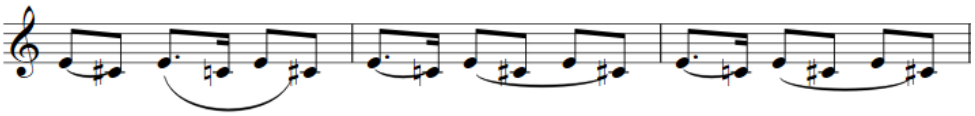
b: Passerby 3 (Scene II, rehearsal A)



c: Luca (Scene VIII, rehearsal A)



d: Ivo (Scene VIII, rehearsal A) (The glide between C and E♭ also recalls the father’s “musical idiolect” as shown in Example 4.6)

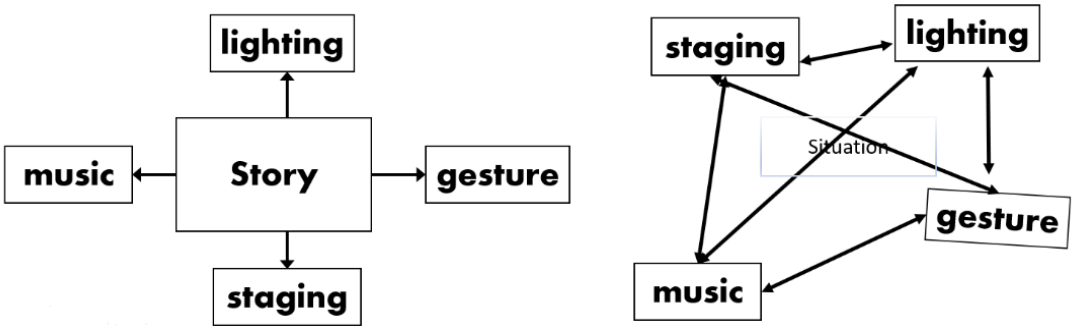


e: Tenor saxophone (Scene VI, rehearsal G)

Example 4.14: *La vera storia*, the father’s sign embedded in other characters’ “voice.”

To Berio, traditional opera, especially nineteenth-century Italian opera, was a collective creation or a collective memory inherited from the past, similar to myth and

folk songs.[66] In this type of opera, "story" is weighed over the music and the text, i.e. the Aristotelian dramatic model. This hierarchical relation is subverted in music theater: here, plot, music and text develop hand-in-hand to create the meaning induced by the differences among these theatrical signs. The signs derived from text, music, staging, lighting, costumes, actions are brought together by means of metonymy, so that the arbitrary relations in operatic conventions, such as the set pieces, character functions, plots, are challenged. The association of signs becomes the driving force in the music theater and is presented in a long chain of signifying processes. Separate situations and tableaux, such as the talking cure and mirror stage, are brought out as an overtone of the theatrical presentation through displaying a series of signs and the tension they are directing, as shown in Figure 4.3.



a story-oriented approach in opera

a semiotic approach in music theater

Figure 4.3: *La vera storia*, story-oriented approach in the "opera" of Part 1, and semiotic approach in the "music theater" of Part 2.

[66] The "collective creation" of operatic tradition is superimposed to the collective memory in the work. The conventions of operatic experiences become collective memory on the modern stage, aligning with Brecht's advocation, in a platform that allows discourse for everyone. See Berio, "Of Sounds and Images," translated by David Osmond-Smith, in *Cambridge Opera Journal*, vol. 9, issue 3 (1997): 295–299, citation at 243.

Now the hierarchy between "story" and its periphery is inverted, such that dramatic elements come before the evocation of an ambiguous situation as a hidden "story." The infinite combination of signs that evokes multiple interpretations of the one situation touches upon the key message of *La vera storia*: every catalogue of similar issues always encompasses a hidden story (Part 1, Ballad 4).[67] If the music theater in Part 2 is a critique of the operatic form in Part 1 when the text is retold, it is a critique of the logocentrism of opera, with a clear origin and destination to tell a "story," as the essence of the genre. As Gordano Ferrari observed in *Passaggio* (1962), Berio's dramaturgy is not built based on a story, but on the second level of reading a story.[68] Dramaturgy is found at the time when audience make sense of the fluid relations among the theatrical symbols.

4.7 Music Theater as a Thought Process

Lacan's "drama of unconscious" is closely related to Berio's "imaginary theater" or "theater of the mind." The musical process of Berio's music theater is not only a way of writing but is also self-referential to the thinking process. As he explains:

> Music theater… is not always explicit and it does not necessarily produce action but, rather, thought. In practice it tends to be self-referential. When its experience expands beyond the boards

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[67] Such model is similar to the "new strata of meaning" of Berio's *Thema (Omaggio a Joyce)* and some other phonetic compositions in the 1950s (see Chapters 1 and 2). Phonemes are put together by their similarities while semantic meaning appears as the periphery of the sonic representation.
[68] Gordano Ferrari, "Berio e lo spazio drammaturgico," in *Nuove prospettive*, 445–57.

> of the stage, this does not occur by means of an illusory psychological extension of the stage space, but by means of our processes of thought.[69]

In such a musical theater, the elements appearing on the stage are turned into a stream of thoughts: they appear to the audience's mind as mental images. The temporal quality of music allows perception to be prolonged so that we are able to re-read and re-listen to what is presented, each time in a different way.[70] The loose referentiality of music allows visual and audio signs to be assigned new values from new situations so that "the global design and the narrative trajectories establish a relationship, however dialectical or antagonistic, with the music."[71] The fluid relations of signs further permit the music theater to express, analyze and comment upon itself through a musical process.

Therefore, the music theater in *La vera storia* does not entirely direct a stream of unconscious in a structuralist way as in *Sinfonia* or *Coro*; the referential functions are fluid and always replaced by a new function. During the long process, no element can stand alone without reference to another element. What is crucial are the differences among these referential relations and the context in which these signs appear. For instance, the fight, the glance, the polyphony evoke the mirror stage only when they are placed in this "right" order and "right" context. The play of differences echoes how semiotic relation was conceived in post-structuralist philosophy, particularly Jacques

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[69] Berio, *Remembering the Future*, 120.
[70] See Berio, "Of Sounds and Images," 296–297. It is also how Berio commented on Verdi and Wagner's treatment of music, action and content. Whereas most of the Italian melodrama contains singing activity, based on a single type of song, that reduces musical thought to the minimum, Wagner's musical discourse illustrates not only a vast mythologic and musical process but also an analysis tool for the understanding of symbols in that process. See Berio, "Verdi?" in *Scritti*, 121-127.
[71] Berio, "Of Sounds and Images," 296.

Derrida's proposal of *différance*: it is a "systematic play of differences, of the traces of differences, of the spacing by means of which elements are related to each other."[72] In *La vera storia*, the presence of the father's image as lacuna induces the chain of signifiers by leaving a "trace" that is omnipresent in the whole part. This inverts the traditional hierarchy between presence and absence, similar to the Derridean chain of signification as the trace of presence-absence.[73]

The music theater in *La vera storia* is a long deferral of manifesting the semiotic relations and a prolonged process of discovery on the side of audience. It is through the musical process that the "myth" is uncovered by the absence of the father and the absence of the scenes "The Revenge" and "The Sacrifice" in Part 2. For Berio, the function of music theater is to offer a space that opens the "time relation between what we see and what we hear, in a space that must be *discovered*, since it is part of a process and not an *a priori*."[74] It is a discovery process from the side of the audience, similar to the talking cure.

La vera storia is a work on our collective as well as our individual unconscious.[75] The work further relates to Berio's "linguistic projects" to probe the existence of

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[72] Jacques Derrida, *Positions*, translated by Alan Bass (Chicago: University of Chicago Press, 1972), 27.
[73] Jacques Derrida, *Of Grammatology* (Baltimore: John Hopkins University Press, 1976), 71.
[74] Berio, *Remembering the Future*, 110–111.
[75] The issue of collectivity, again, is connected to the operatic and other musical conventions in the history. Italian opera, especially those in the nineteenth century, to Berio, belonged to the people since it was "the musical equivalent of a dialect, a cultural meeting point, and a primarily emotive instrument of social understanding that was at times no more sophisticated than songs, marches, hymns and fireworks." Berio, "Of Sounds and Images," 297–298. The convergence of social and individual unconscious, as Talia Berio explains, is related to the ritual quality of musical gesture. Talia Berio, "'A lei la parola taciuta'. Testo e subtesto di *Cronaca del Luogo*," in *Le théâtre musical de Luciano Berio* vol. 2, 241–268, especially at 242. Such rituality in a group is evoked not only by all known materials from the operatic conventions, but also by church music, folk tunes, or ballad singing, which unravels the very core of one's love, respect, sacrifice

"universality of experience." The political connotation is the starting point of this narrative game since it is Berio's conviction that music theater should connect to the reality to acquire meaning.[76] The "truth" is hidden among the fluid relations of theatrical signs, a narrative connected by metonymy, and an oscillation between presence and absence. If narrative structure was seen as a form of language in the twentieth century, *La vera storia* can be seen as an experiment set by the composer to allow the audience to perceive the hidden "truth" unconsciously. If "universality of experience" does exist, this "true story" should speak to our interiority directly through the manipulation of musical, textual and theatrical elements, assuming that we are born with a faculty to process the interrelations among these theatrical signs. Meaning is perceived intimately at the very moment of the epiphany.

La vera storia demonstrates a "travel from opera to music theater."[77] The two parts of the work compare how meaning is created through two different tactics (a structuralist and a post-structuralist) to deal with theatrical elements, i.e. the shuffling of rigid model of theatrical functions of a nineteenth-century Italian opera versus an experimental music theater utilizing fluid referential relations among theatrical signs. The fluidity of symbols and values, the multiple readings of the overlapping stories of a social myth and the Lacanian psychoanalytic process, as well as the deconstruction of an

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and fear through their daily activities. The overlaying of politics and art has been a recurring message in Berio's work, such as the third movement of *Sinfonia* as we have seen.

[76] Berio, *Remembering the Future*, 108.

[77] Berio, *Remembering the Future*, 110–111.

operatic form, render the work a stylized narrative. The work can be considered as experimental to probe the existence of "universality of experience" so that the audience are able to uncover the "truth" through the interrelations of the theatrical signs.

La vera storia has brought Berio's music to another stage of the poststructuralist musical conception. The work subverts the logocentrism of "story" in traditional opera by democratizing all theatrical elements as equal. Such poststructuralist tendency is much more developed in his next collaboration with Calvino, *Un Re in ascolto* [A King Listens] which explores the role of listening in music.

Chapter 5: The Language of Listening: *Un Re in ascolto*

This chapter will continue to explore the next Berio-Calvino creation *Un Re in ascolto* [The King Listens], which premiered two years later in 1984. I examine how *Un Re in ascolto* was entirely composed on the basis of a poststructuralist challenge to the binary opposition, which lies at the foundation of structuralism. By examining Barthes's theory of listening, I explore how Berio's music theater reflects the underlying conception of language, i.e. the poststructuralist as a vehicle for sound and meaning. I describe how the self of the protagonist Prospero is shaped by the deconstruction of a series of hierarchical binary oppositions such as presence over absence, sound over silence, Self over Others, and "nowness" over "non-nowness." Silence and the patchwork of sounds and voices that make up the character's absent body in the work, I argue, decenter sound and the textualized self that traditionally form the core of a musical discourse. And such deconstructionist approach to portray the self, as I conclude, is a means in this music theater to critique the traditional operatic form, which adopts rigid set pieces. By examining Barthes's theory and Berio's own understanding of listening and language, I also argue that the hypothesis of "deconstructionist" listening as the musical design in this work is closely related to Berio's search for "universality of experiment." In this utopia, humanity is endowed with the innate "musical competence" to filter all forms of listening via their unconscious, analogous to the hypothesis of linguistic competence in the twentieth century.

While binary opposition in structuralism always encompasses a dominating member as the "core," i.e. the "presence" of certain qualities over their "absence," the core is no longer reliable from the perspective of poststructuralism, since it is destabilized or decentered. Its rejection is reflected in the decentering of the hierarchical binary opposition between "presence" and "absence." For instance, a phonetic sound is defined by the presence or absence of certain qualities, such as "nasal," "dental," "labial," and so on. Similarly, oppositions such as "raw" and "cooked," "good" and "bad," "nature" and "culture" are used to classify a group of ideas. From the perspective of structuralism, there is always a preferred side of these oppositions, such as "presence," "positive" or "good," which are regarded as the core.

During the poststructuralist period, philosophers and critics including Jacques Derrida, Michel Foucault and Julia Kristeva questioned the hierarchical relation between the core and the periphery in the oppositions.[1] In particular, poststructuralists recognized that the limits of knowledge played a significant role in this hierarchy, and the challenge is always defined by small differences in processes. The aim is to open up the core (the preferred side of the oppositions) and shift our perception of truth and value. If what attracted Berio to structuralism regarding music and meaning was the scientific view of language as we saw in the previous chapters, "meaning" in *Un Re in ascolto* is captured in the wider senses of language through thought and experience. As Berio suggested,

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[1] See this motif as central for poststructuralism in James Williams, *Understanding Poststructuralism* (Chesham: Acumen, 2005), 1–24; Vincent B. Leitch, *Cultural Criticism, Literary Theory, Poststructuralism* (New York: Columbia University Press, 1992).

music theater is an experience, which is created by means of our processes of thoughts.[2] More specifically, *Un Re in ascolto* is presented through the receptive side of communication—listening.

Un Re in ascolto, a music theater consists of two parts, was adapted from an eponymous short story written by Calvino, along with references from Shakespeare's *The Tempest*, W. H. Auden's long poem *The Sea and the Mirror* (1944, a commentary on *The Tempest*), and F. W. Gotter's Singspiel *Die Geisterinsel* (1802) which was inspired by the same work of Shakespeare.[3] Calvino admitted that his own "Un Re in ascolto" was inspired by Roland Barthes's discussion of "listening."[4] Barthes described different forms of listening and how they relate to our interpretation as well as the power relations among people as they become whole in the act of listening. It is also the act of listening that rendered Berio's adaptation an "imaginary theater" [teatro immaginario] or "dream theater" [Traumtheater] that would happen in one's mind.[5] In this chapter, I continue to explore Berio's "linguistic projects" according to the three areas in this thesis: (1) the relationship between music and meaning according to the contemporary linguistic thought; (2) how new ideas relating music and meaning rejuvenate conventional music

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[2] Luciano Berio, *Remembering the Future*, Cambridge, MA: Harvard University Press 2006, p. 120.
[3] This is another Berio's piece showing "a commentary of commentaries" so that the work is a maze of intertextual references. It reflects Calvino's discussion on levels of reality to superimpose multiple experiences and connect them with the subject "I." See Italo Calvino, "Levels of Reality in Literature," in *The Uses of Literature*, translated by Patrick Creagh (San Diego: Harcourt Brace Jovanovich, Inc., 1986), 101–121. For more details of other literary sources in the work, see Matthias Theodor Vogt, "Listening as a Letter of Uriah: A Note on Berio's Un re in ascolto (1984) on the Occasion of the Opera's First Performance in London (9 February 1989)," in *Cambridge Opera Journal*, vol. 2, issue 2 (1990), 173–85.
[4] See Roland Barthes, "Listening," in *The Responsibility of Forms: Critical Essays on Music, Art, and Representation*, Richard Howard (Trans.), Berkeley and LA: University of California Press 1985, 245–260.
[5] As Angela Ida De Benedictis points out, the label "Traumtheater" mentioned in Berio's article that explains the genesis of *Un Re in ascolto* ("Un nascita di un re") refers to "teatro immaginario" found in Calvino's sketch of the libretto. See Berio, "Un nascita di un re" (1984), in *Scritti sulla musica* (Turin: Einaudi, 2013), 270–272, footnote "d."

genres (3) whether there exists "universality of experience" regarding humanity's innate ability to process music. These three areas are discussed along with the two main themes in Berio's *Un Re in ascolto*: the representation of the textualized self and the notion of listening.

5.1 "All Forms of Listening" in Un Re in ascolto

Berio's *Un Re in ascolto* is adapted from Calvino's short story about a king who extends his listening to every corner of the palace out of the fear that his reign may be overthrown.[6] Berio made his own version by changing Calvino's king into the king of a theatrical production—an impresario, Prospero, who dreams of his other self, rehearsing and auditioning several characters for a new work. The new work is self-reflexive; it describes a king who extends his ears throughout his entire palace in hopes of learning about the conspiracy of a revolution. The Director [Regista], who has the role of the alter ego of Prospero, instructs the comic character Friday [Venerdì] to play his part, whereas Pianist [Pianista], Singers [Cantanti], Soprano and Mezzo-soprano are rehearsing and auditioning the musical parts. Prospero desires Mezzo-soprano's voice after she comes to sing an audition for him. In Part 2, Prospero's Wife [Moglie], Doctor [Dottore], Nurse [Infermiera], Lawyer [Avvocato], along with the Singers, gather around Prospero's deathbed to bid him farewell while intending to usurp him by asking him to sign a will. In

[6] Calvino's short story "A King Listens" is included in the collection *Under the Jaguar Sun* (1982). The three short stories "Under the Jaguar Sun," "A King Listens" and "The Name, the Nose" are dedicated to the senses of taste, audition and olfactory. See Italo Calvino, *Sotto il sole giaguaro* (Milan: Garzanti, 1986). English translation: Italo Calvino, *Under the Jaguar Sun*, translated by William Weaver (Orlando: Harcourt Brace Jovanovich, Inc., 1988).

the final audition, Protagonist [Protagonista] appears and sings the final aria accusing Prospero and declaring her freedom from him.[7]

The idea of *Un Re in ascolto*, according to Berio, is to describe how things happening around Prospero, through his listening, have proliferated in different directions and have transformed him.[8] The work, as hinted at by Prospero's description of the theater he is rehearsing, is a form of theater that "could contain listening in all kinds of forms" (Part 1, Duetto II). Both Calvino and Berio admitted that Barthes's conception of listening provided a theoretical framework for them to craft their works.[9] Barthes differentiates listening as a psychological act from hearing as a physiological phenomenon.[10] He further categorized three types of "listening": The first one is an "alert" as an animal listens to signals in the nature. The second is the "deciphering" of codes by the ear—I listen the way I read. The third type is "listening like a psychoanalyst."

Barthes's theory of listening centers on the notion of rhythm of presence and absence. To him, a sign is the oscillation between something noticeable and unnoticeable, recalling the undulation of something familiar and unfamiliar that Berio was exploring in his early years (discussed in Chapters 2 and 3). Barthes further explains that the three types of listening parallel the stages in one's growth. A child experiences the first stage of

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[7] Although Berio mostly discussed Bertolt Brecht, Lionel Abel and Samuel Beckett's influence in his career, some of his works, especially *Un Re in ascolto*, evoke the plays of his compatriot Luigi Pirandello. Apart from metatheater, Berio's emphasis is on the power reversal between the creator and the created. The autonomy of the characters in a stage work is an obvious allusion to Pirandello's *Six Characters in Search of an Author* (1921).
[8] Berio, "Dialogo fra te e me" [Dialogue between you and me] (1984), in *Scritti*, 273–279, citation at 273.
[9] See the genesis of *Un Re in ascolto* in Berio, "Un nascita di un re" (1984), in *Scritti*, 270–272.
[10] See Barthes, "Listening," 245–260, especially at 245.

listening when he identifies indices which inform him about the mother's presence and absence. When he learns to make his own sign, he goes through the second stage of listening to decipher a deeper meaning or something hidden in a sign concealed in reality, such as hermeneutics. Sometimes the deciphering of a "secret" can be connected to religious revelation and interpretation of messages from God, especially regarding the future and transgression. Listening is an intimate act in which a believer internalizes exterior sounds and voices into pure conscience in order to reach the sin in his heart. This is probably the reason Berio's works often express a certain level of sacredness or rituality. He admitted that what attracted him to the Bible was the impenetrability and the impossibility of understanding its universal meaning and general design.[11] Such uncertainty provides him with a vast space for interpretation. To him, Moses's crossing the Red Sea is not a miracle, but an "act of the mind" revealing God's message. Talia Berio also notices that Berio's conception of space is intrinsically connected to the rituality of the musical gesture. She argues that the secular approach in Berio's works from *Coro* onwards often recasts the sacredness of religion and theology as a conceptual figure.[12]

The act of listening, construed as a psychoanalytical process, and in hermeneutics, reaching one's conscience as a religious revelation, is also significant in *Un Re in ascolto.* The work begins with Prospero's dream of another theater in which there exists another self whom he does not know. The self is *singing* some music that he does not remember [Un teatro dove un io che non conosco canta. Canta la musica anche non ricordo e che io

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[11] See Berio, "Ofaním ["… Da musicista laico…"]," in *Scritti*, 280–281.
[12] See Talia Berio, "'A lei la parola taciuta.' Testo e subtesto di Cronaca del Luogo," 242–243.

adesso vorrei cantare non ricordo…]. He then dreams of a rehearsal directed by the Director to the performers. Prospero's fear and apprehension are brought out by the clown's slip of tongue ("the shadow of the mother waking you up in the tempe(st)") and a series of events beginning with the oscillation of different signals. When Prospero first admitted his fear of betrayal by the performers in Concertato I (starting from rehearsal 19), various events happen: (1) A series of alternating high and low pitches, and the mechanical repetition of the responses "Sì," "No," and "Così" by the performers; (2) The combination of random lines sung by the performers which make a meaningful message to Prospero (similar to the "combinative" process in *La vera storia*): "new strange foreboding after nine years of power"; "after a while in this magical night something will come into action"; (3) Evocative images like an army of clouds, rippling water and a tempest, and; (4) the hymn-like chorus that awakens Prospero's guilt of his tyranny.

Prospero deciphers these signs to be God's sacred message about his sin during these nine years. The revelation then directs him to "the other part of the wall" [altra parte del muro], referring to Lacan's "wall of words" between the subject and the analyst during the talking cure discussed in the previous chapter.[13] Access to "the other part of the wall" brings the piece to a climax in Part 1 where orchestra and chorus come to full

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[13] See Jacques Lacan, *Écrits* (Paris, 1966), 282. "The other part of the wall" (Concertato I) also appears in Auden's *The Sea and The Mirror*: "That this world of fact we love/ Is unsubstantial stuff:/ All the rest is silence/ On the other side of the wall;/ And the silence ripeness,/ And the ripeness all." Auden. W. H., *The Sea and The Mirror: A Commentary on Shakespeare's* The Tempest, edited by Arthur Kirsch (New Jersey, 2003), 4. The mention of "wall of words" by Berio seems to refer to both Lacan and Auden's text. It refers to Lacan's psychoanalysis to initiate a talking cure (similar to that in *La vera storia*) through self-talk. It also connects to Auden's metaphor of wall in relation to the idea of silence.

force, like the tempest.[14] Prospero's inner voice about the fear is then heard in a silent moment. His deepest fear is uncovered in Concertato II (starting from around rehearsal 72) in the midst of silence when the music suggests *pp* or *ppp* along with dim stage lighting. Indeed, silence is ubiquitous throughout the work, closely related to Prospero's self and how he listens to his inner voice. To understand what silence means to Prospero, let us first take a look at his identity and his voice.

5.2 The Corporeality of Voice

Discussions surrounding *Un Re in ascolto* center on the genre of new music theater and the use of set pieces in the work. Berio designed a new way of theatrical representation *azione musicale* (discussed below) for this music theater. Yet the set pieces in the work surprised Massimo Mila, who mocks at the work as "una vera opera" [a true opera].[15] After watching the first performance in London, another critic, Matthias Theodor Vogt, also claimed that he could not see the transcending quality of the theatrical form but only sees a collage of disparate elements in a conventional opera.[16] Arman Schwartz focuses on the use of voice and claims that voice itself is reborn in the

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[14] In Calvino's letter to Berio describing their mind mapping process, Berio mentioned that he wanted something like Verdi's *Don Carlos*, which involves the music that would become a tempest, i.e. something with the full orchestra or perhaps two choruses so that two levels will merge into one. See Italo Calvino, "A proposito di *Un Re in ascolto* (due lettere inedite di Italo Calvino a Luciano Berio)," in *Berio*, edited by Enzo Restagno (Turin: EDT, 1995), 135–141, especially 140.
[15] Massimo Mila criticized *Un Re in ascolto* for its reliance on stereotyped elements of opera, particularly the set pieces: aria, duets and concertato. Mila, "*Un Re in ascolto*: una vera opera," in *Berio*, 107–112.
[16] See also Vogt, "Listening as a Letter of Uriah," 184–5.

work.[17] The tremendous power and the provocation of voice makes opera focusing on singing again to regain its status. Similarly, although Björn Heile observes the dehumanized nature of the work, he agrees that *Un Re in ascolto* is derived from its conflict between the dramaturgic structure and the demands of the plot.[18]

To explore the provocation and dehumanization of voice, both Schwartz and Heile examine the "phenomenal" ("phenomenal" in Carolyn Abbate's term and "diegetic" in film music) nature of the performance in *Un Re* and the singer's crossing of the boundary between the phenomenal and the noumenal.[19] Schwartz and Heile aptly suggest the significance of voice in *Un Re*. Yet it is crucial to understand the use of voice in relation to Prospero's identity in order to make sense of the role of the set pieces in this music theater. Ivanka Stoianova correctly observes that the music of Protagonist, Prospero's character who frees herself from his control, consists of the curves of a certain number of intervals which form the basis of Prospero's arias.[20] The musical and dramaturgical strategy of building up Protagonist is the adoption of "amplified repetition" or pre-programming which defines the coherence and teleology of the work. I will go further to discuss in the later section how the formation of Prospero and Protagonist's arias are fundamentally different, which can be considered as a critique of the portrayal of character in opera.

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[17] See Arman Schwartz, "Prospero's Isle and the Sirens' Rock," in *Cambridge Opera Journal*, vol. 15, issue 1 (2003): 83–106.
[18] See Björn Heile, "Prospero's Death: Modernism, Anti-humanism and *Un Re in ascolto*," in *Le théâtre musical de Luciano Berio,* vol. 2, 145–160.
[19] See Schwartz, "Prospero's Isle and the Sirens' Rock," 83–106; Heile, "Prospero's Death," 145–160.
[20] Ivanka Stoianova ed., *Chemins en musique* (Paris: Richard-Masse, 1985), 334–367.

In Calvino's original story, the king is not able to leave his throne, although he listens ceaselessly to every noise in his palace, fearing a conspiracy. The whole palace is under his aural surveillance, such that even the most isolated areas of his kingdom become his "palace-ear."[21] The idea of palace as ear is transformed by Berio into Prospero's "stage-ear" in that his listening extends to every territory of the stage. If the unconscious is the locus in which psychoanalytical listening takes place, we can go so far as to say that the stage within his dream represents the unfolding of a psychoanalytic process, wherein Prospero pursues his identity by listening to his own voice. In this context, who is Prospero and who are the other characters? We should recall that the whole music theater happens in Prospero's dream in which Prospero's other self is *singing* in an unknown theater. Thus, the whole work is communicated through a *voice* in Prospero's unconscious where the voice is the theater itself. The dream is a visual event directed by the "acoustic images" one perceives by the ear.[22] These sounds are never solicited. Rather, what appears in Prospero's dream is derived from the amalgam of what he hears in his surroundings along with what he listens to in his unconscious.

One of the musical features in *Un Re* is a fluid, less structured writing style. The instrumental parts sound directionless, with doubling appearing randomly and motives in fragments so that they emerge, disappear, or repeat in variations. There are often abrupt changes of dynamics and articulations, as well as alternating detached passages, long running sections, and sustained moments. In addition, the vocal lines of all characters

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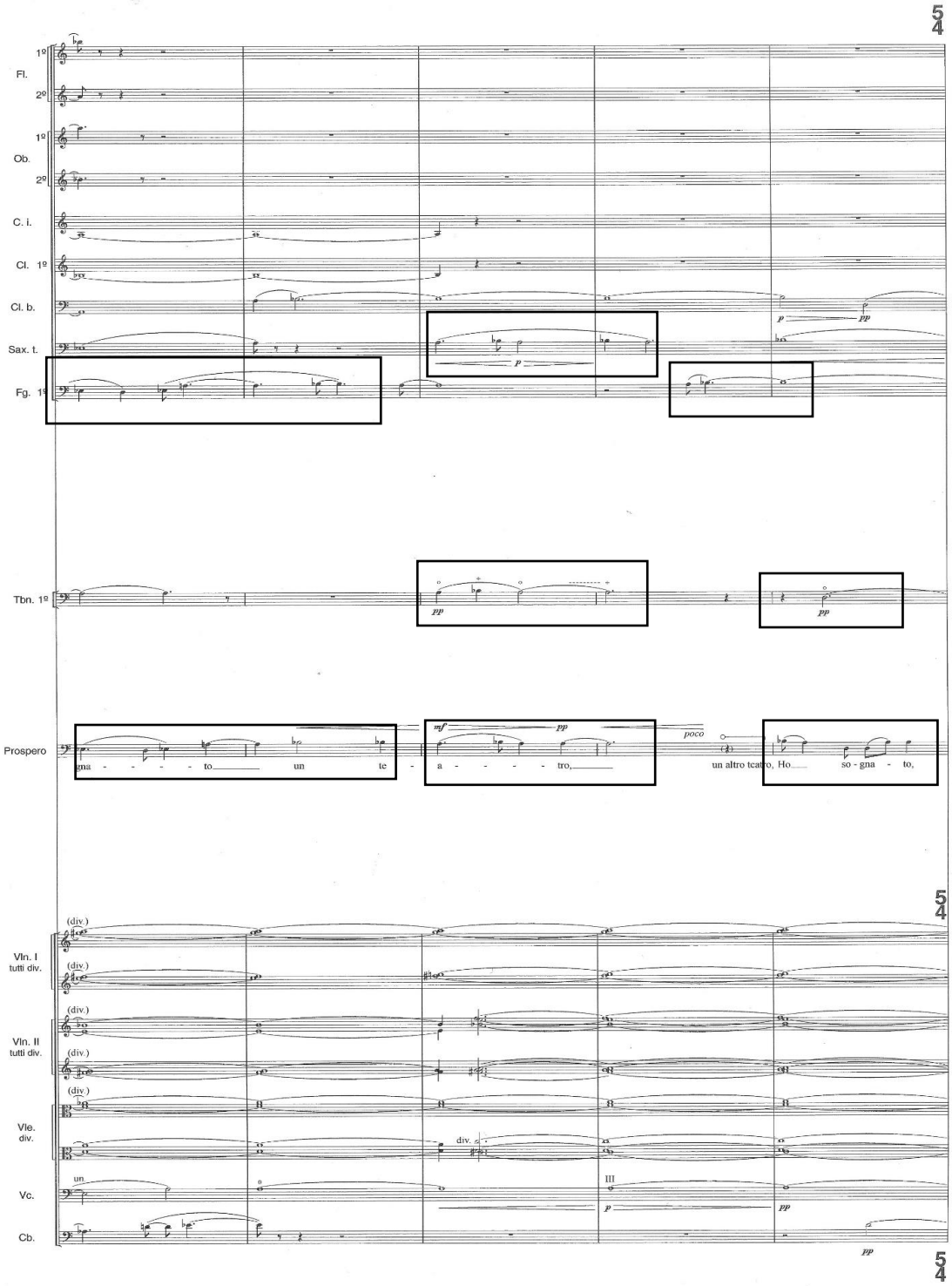
[21] Calvino, "A King Listens," 38.
[22] See Barthes, "Listening," 257.

often consist of melodic segments from instrumental parts creating a patchwork. For instance, in the beginning of the piece, although Prospero's monologue resembles the bassoon line, it also adopts segments from other instrumental lines (as shown in Example 5.1). For most of the characters, their vocal lines are also either shaped from segments of the instrumental parts or from imitation of other characters.



Example 5.1: *Un Re in ascolto*, Part 1, Aria I, mm 5–9.

If Prospero's dream is full of acoustic images that he involuntarily hears in his surroundings, the directionless instrumental music represents the environmental sounds that reach his ears. These unsolicited sounds become Prospero's own voice and the voice of other characters he projects in his dream. Formed naturally from these sounds and driven by his intimate sentiments that direct how he interprets them, they unconsciously become the voices in the dream. To expand on Carlo Ciceri's observation of the heterophonic compositional style in the arias,[23] I would suggest a programmatic interpretation of the heterophonies in this work—reverse the hierarchy between the vocal parts (especially for Prospero) and the instrumental accompaniment in our listening experience. Contrary to the convention that instrumental parts in opera are often accompaniments that harmonize and support the singing, the voices in *Un Re in ascolto* in opera can be considered in reverse order, as the source from which the instruments shape lines. That is to say, the voice becomes secondary to the instruments.

While the texture of the work appears heterophonic, we can relate this feature to Prospero's dream state. Prospero and the others' singing in his dream reflect his passive hearing and selection of segments that connect as a vocal line by adding passing tones, appoggiaturas and so on. Using this logic, Prospero's identity is vaguely and passively shaped by the surrounding sounds rather than by his own will. Echoing the reference to *The Tempest*—"we are such stuff as dreams are made on, and our little life is rounded with a sleep"—in the work, Prospero's "body" is formed from the surrounding sounds

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[23] Carlo Ciceri, "Aspetti del pensiero melodico in *Un Re in ascolto*," in *Le théâtre musical de Luciano Berio* Volume 2, 79–115.

that come into his ears. Likewise, the singing voice tells us that the materiality of the body comes from the throat and the singing organs.[24] These musical qualities that form the grain of the voice become the materials and images of the dream. Not only does Prospero hear the sounds of the lake, the forest and the leaves that constitute the timbre of the theater, he also hears the "grain" resulting from the air flow and friction among speech organs, "the edges of voice that brush against each other" ("sfiorare col lembo della voce," Part 2, Aria VI). Indeed, the seemingly directionless instrumental parts often combine with and "brush against" one another. Such frictions of the "throat" of his corporeal theater leads him to hear the "shadow of his voice" ("voce l'ombra"), allowing him to reach the dark side of his unconscious.

Example 5.2 shows the beginning of Aria II in which different timbres are created by various playing techniques in the brass, namely the wa-wa effect and the effects created by the plunger in trombone and the mute in horns. While different timbres are played and clashed simultaneously, the vocal line consists of pitches that overlap with the pitches from different instrumental parts, which results in the "grain" formed by the instruments after "brushing against" one another. The relation between the voice and the instruments is not entirely heterophonic in this case; the vocal line is a collage of pitches taken from the instruments, echoing Prospero's search for "a voice among voices"

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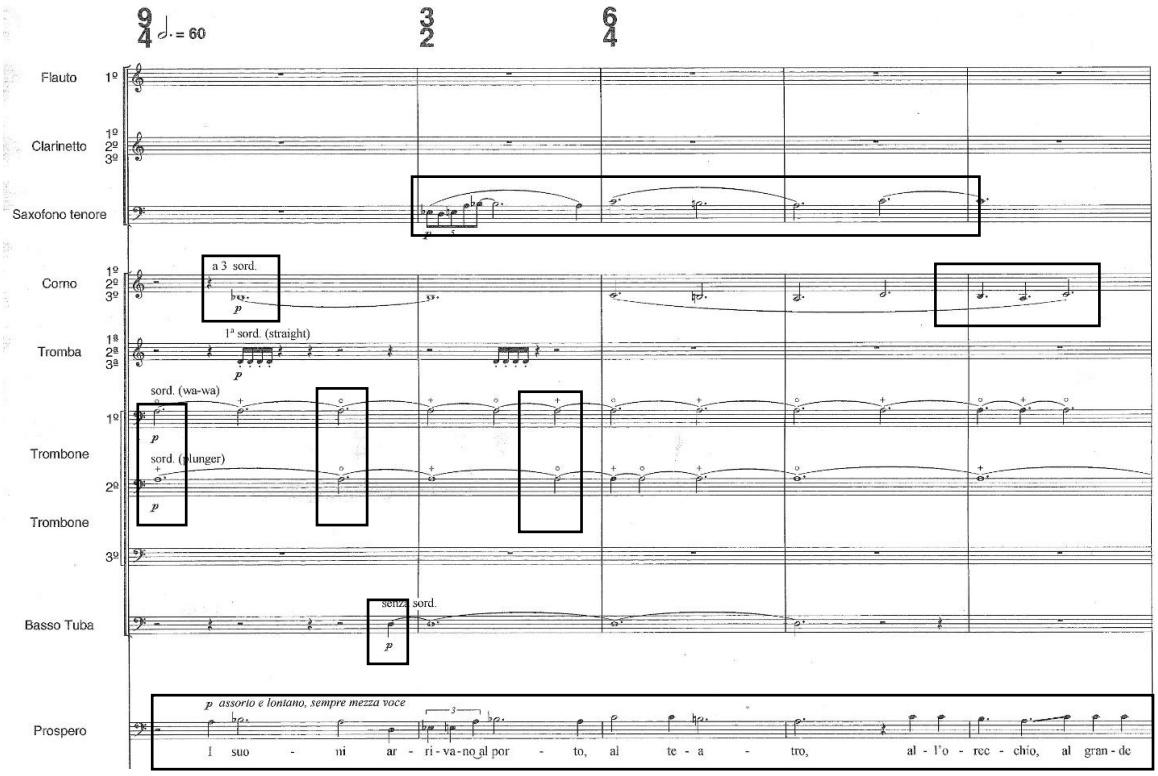
[24] Barthes, "Listening," 255; See also Roland Barthes, "The Grain of Voice," in *The Responsibility of Forms*, 267–277. The production of this "grain of voice" is even described as a pleasure in Calvino's original version, since it articulates the individual difference: "A voice means this: there is a living person, throat, chest, feelings, who sends into the air this voice, different from all other voices. A voice involves the throat, saliva, infancy, the patina of experienced life, the mind's intentions, the pleasure of giving a personal form to sound waves. What attracts you is the pleasure this voice puts into existing: into existing as voice; but this pleasure leads you to imagine how this person might be different from every other person, as the voice is different."

throughout the work. Indeed, his vocal part is drawn from disparate pitches from the instruments, i.e. a voice hidden in the instrumental voices. The resulting sonic effects, along with the soft dynamics in the instruments, reflects what Prospero hears in the dream. He interprets the sounds as something from afar (*assorto e lontano*).



Example 5.2: *Un Re in ascolto*, Part 1, beginning of Aria II.

If *voice* is the medium that inaugurates the relation to the Other, then voice also reflects Prospero's relationships with the people surrounding him. Prospero consciously searches for two voices: the voice of conspiracy that "speaks of him," and the female voice for the role in his new stage work. Prospero's fear that his kingdom on stage might be overthrown drives him to search for the former, whereas the latter reflects his desire

for the voice of the Other. Ironically, the search for power and desire becomes a curse, leading to his death and the usurpation of his power. His desire and fear are mentioned explicitly in Part 1, Aria II: "I am looking for something that comes to me saying among the sounds and I don't know if I should wait with desire or fear." Fear and desire form a dynamic relation with his unconscious through listening—what is heard from Others forms his ego, while his fear and desire in the unconscious shape how he listens to Others in return.

5.3 Silence as the Absent Body

In order to resolve his insatiable need and sense of feebleness, Prospero is looking for a "voice among voices" (Part 1, Aria III). However, this voice does not exist without silence: it is "a voice hidden among the voices in silence, in the reverse, in the depth, in the backdrop of canvas, in the garden of the night…" [una voce nascosta fra le voci nascosta nel silenzio, nel rovescio, nel profondo, nel fondale di tela, nel giardino di notte…] (Part 2, Aria VI). Silence is pervasive throughout the whole work: it is not only a state but is also entangled in Prospero's desire and anxiety, the dark side of his unconscious. It exists on the other side of the "wall," in the tranquility before the tempest and in the "mother's shadow" (Part 1, Duetto I). It also appears in Prospero's feeling of trepidation about his disempowerment along with the "memory to the future" [ricordo al

futuro] as he reflects on his life on his deathbed.[25] Silence is found in various significant moments, especially as complex and hidden sentiments in Prospero's unconscious are uncovered. So what does silence mean in relation to Prospero's listening to his unconscious?

If, for Barthes, a sign consists of the "intentional reproduction of a rhythm," it is through the oscillation of the *marked* and the *non-marked* that a message is conveyed.[26] The term "markedness" has been used widely in structural linguistics, especially in phonetics, phonology and semantics.[27] Linguistic features are described in binary oppositions to signal the presence or absence of a specific quality with the dominant type as "non-marked" and the non-dominant as "marked" (since the latter is more noticeable).[28] The ideas of markedness and its rhythm are foundational to discourses of communication and structural linguistics.

Such pattern of presence and absence of sound can be applied in Prospero's listening as well.[29] Prospero is listening to the rhythm of sound to make sense of the signal: a series of alternating high and low pitches, and the mechanical repetition of the

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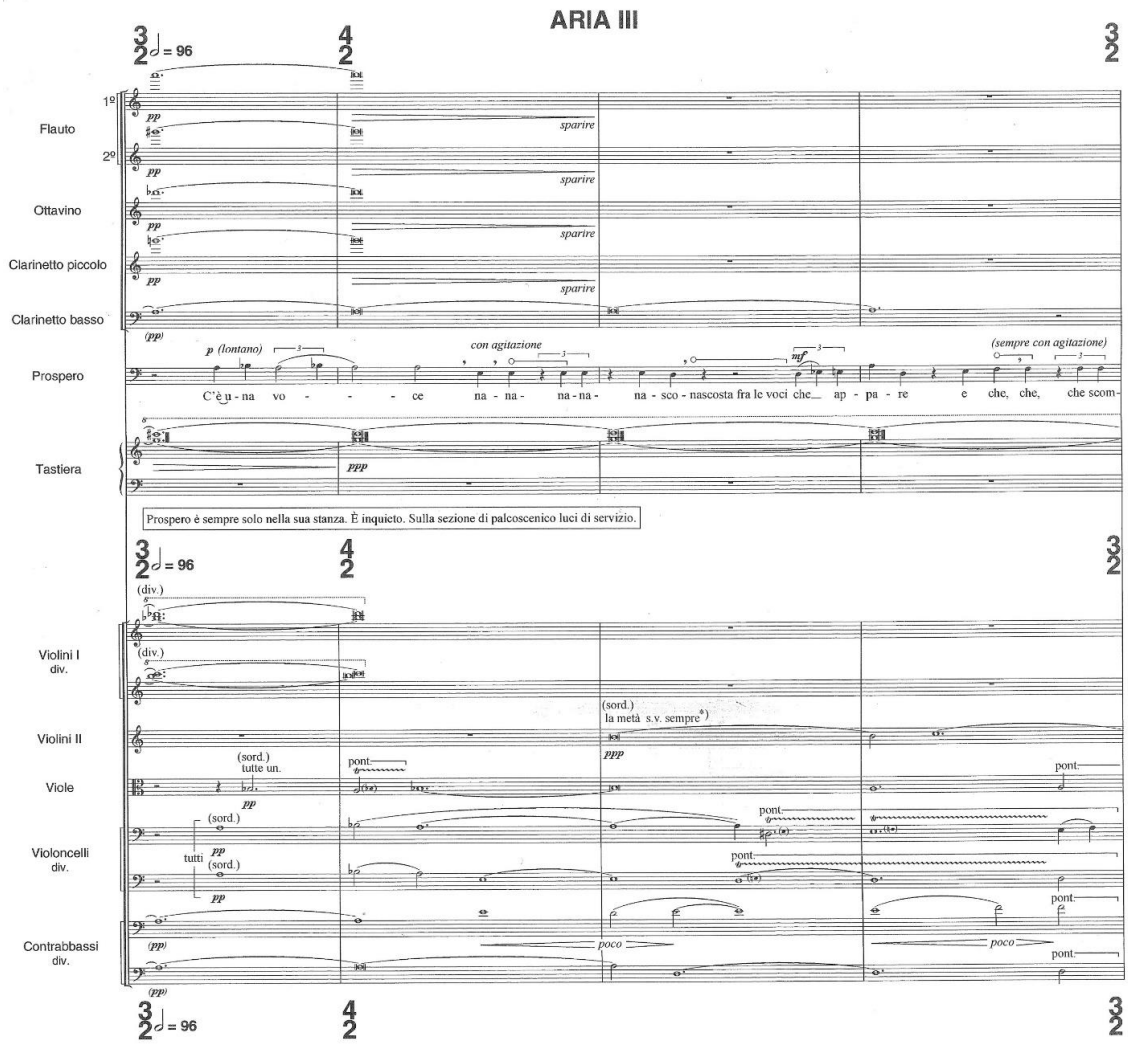
[25] The libretto references to silence include: "Silence, the injured person cries while the clown doubles the meaning of what he does…" "… all the rest from the other side of the wall is silence." "What a silence. New foreboding after nine years of power up there ready to destroy…" (Part 1, Concertato I). "… the silence is filled by the voice as if there was a silence inside the music that wants to be heard." (Part 1, Duetto II) "… shadow of the mother, wake up in the storm… that we love is the immaterial stuff. Silence silence, Ecc." (Part 1, Concertato II). "… the memory guards silence remembrance of the future" (Part 2, Aria VI).
[26] See Barthes, "Listening," 248.
[27] See Edwin L. Battistella, *Markedness: The Evaluative Superstructure of Language* (Albany: State University of New York Press, 1990), 2.
[28] For instance, to examine the nasality of a phonological pair, an /m/ sound in English is considered marked while an /l/ is considered non-marked, drawing our attention since there are less nasal than non-nasal sounds.
[29] Barthes also considers listening as a language since "listening speaks." The way of listening is a form of communication. Barthes, "Listening," 258–59.

responses “Sì,” “No,” and “Così” by the performers. These signals then reach his unconscious in silence: it is suggested in the work textually as well as musically by appearing in the sections with dynamic markings *p* and *pp*, notably in Friday’s nonsense recitation with the Mime (Part 1, Duetto III) and when Prospero first realizes that there is “a hidden voice” (Part 1, Aria III). Example 5.2 shows the beginning of Aria III in which Prospero starts to question his identity in an internal monologue. He doubts that his voice is really his own; there should be one single voice hidden among other voices. Apart from the dynamic markings from *p* to *ppp*, the strings are required to play *con sordino* and *sul ponte*, while the winds are gradually fading out. The D minor sonority builds up from double basses, then cellos, violas and second violins, which corresponds to the spatial perception that Prospero’s voice is sung as if from *lontano*. This time, the vocal part is not shaped by concrete melodic fragments from the instrumental parts as in the previous examples, but is derived from the pitches of the long-held notes in the strings. The relation between the voice and the instruments seems to relate to Prospero’s monologue, “there is a voice hidden among voices,” with the former “voice” as the vocal part and the latter “voice” the instrumental. After the winds fade out, Prospero becomes agitated in this silent moment, and becomes more and more agitated throughout the aria. His agitation is indicated in the expressive marking *con agitazione*, as well as the recitation *sul fiato* (measure 3 in Example 5.3) which fills up the blanks between phrases.



Example 5.3: *Un Re in ascolto*, Part 1, beginning of Aria III.

If meaning is conveyed through the oscillation between marked and non-marked, the alternation between presence and absence of sound gradually forms a message that speaks to Prospero's interiority, with the non-marked one, i.e. silence, being dominant. However, silence does not appear independently in the work, but rather co-exists with Prospero's repressed emotion and is always suggestive of the latter. The hypnotic,

undulating pattern between silence and sound unlocks these repressed emotions from the unconscious. Recalling the identity of Prospero and his voice in the dream: Where does it come from? His voice consists of the sounds coming into his ears when he dreams and is driven by his fear and desire to form its images. It is in silence that Prospero finds his inner voice, "a voice hidden among the other voices, in *silence*, in the reverse […] in the garden at night, in the wood, in the lake…" (Part 2, Aria VI). His existence in the dream is shaped by and relies upon these sounds, without a concrete body, the way a meaningful shape appears at the intersection of branches in a tree without an independent identity.

If silence is absence, sound is commonly believed to be presence—the marked one that attracts attention. Silence in *Un Re*, however, is contrary to this belief since Prospero pays attention to it and is marked by it. Among the silence of night, an undulating pattern of evocative imagery emerges, including the wounded man's cry [il ferito piange] and "sea of music with the vibrating strings" [il mare di musica […] dalle corde che vibrano]. The fluid and repetitive motion creates tension that anticipates a slippage, resulting in a deviation from the stability of the status quo. The tension is then broken by the silence which awaits an imagery to emerge deep from the unconscious.[30] Silence becomes a desire—a driving force of waiting, "listened" to by Prospero as he searches for the right voice in the audition. This is a silence like the waiting for the singing [silenzio come fosse un'attesa. L'attesa del canto] (Part 1, Duetto II) yet at the same time "inside the music there is a silence to be heard" [dentro alla musica ci fosse un

[30] In Calvino's original tale the image of the palace is described as a clock. The repetitive and rhythmic patterns provide a sense of continuity and stability, which have similar ideas as fluidity in Berio's version.

silenzio che vuoi farsi udire]. Silence seems to be the medium of the unconscious, a driving force as well as a destination. It is not simply an absence, but an entity that is dominant in Prospero's attentive listening. It is silence that comes out in negative from a thing filled with voice and music.[31]

Prospero's listening is often externalized. This posture reflects his deconstructionist conception: it compels the subject to renounce his inwardness by deconstructing itself.[32] In simple terms, the analytical method of deconstruction rejects any settled form of knowledge by decentering the core of binary opposition. The limits of the boundary in these oppositions could be defined as follows: when listening to a theatrical work in a conventional sense, we pay attention to the music in the midst of the silence. Instead, *Un Re in ascolto* shows us a mobile system revolving around a focal point which is the silence, a void, in addition to the absence of the protagonist's concrete body.[33]

From the perspective of structuralism, if the presence of sound occupies a more significant position than the absence of it, such presence is no longer the core of this distinction. Prospero's pursuit of silence decenters the core of the sound-silence

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[31] Berio explained to Calvino in their mind-mapping stage that "silence comes out in the negative from the moment everything is filled with the voice and the music, as if there was silence inside the music. Therefore, the music should be heard inside the music in a way that the scene comes out inside the scene." See Calvino's letter to Berio, in *Berio*, 135.
[32] See "deconstructionist listening' in Barthes, "Listening," 259.
[33] The deconstructionist reading is also found in Auden's *The Sea and The Mirror*. As Kirsch explains, Auden yearned to transcend dualism, as in Auden's own words "All the striving of life is a striving to transcend duality." Auden believed that "all experience is dualistic" in this world. Yet man is neither pure spirit nor pure nature, but "a tension between their two opposing polarities." Quoted in Kirsch ed., "Introduction," in *The Sea and The Mirror*, xix. Similarly, the opposition between art and life in Berio's Prospero is penetrating with one embedded in the other. The tension and the conflict between them are the real reason for the revolution and his death.

opposition, as well as the dichotomy between external sounds and his inner voice. By reversing the hierarchy of sound and silence, the representation of silence also deconstructs the hierarchy of presence and absence of Prospero's self. The existence of Prospero's body is questionable, since his voice is a patchwork of sounds and his kingdom on the stage has no tangible existence, like an empty theater (Part 1, Duetto II). Prospero knows very well that his kingdom is invisible and impalpable (Part 2, Aria IV) and that the center of his body and his stage are nothingness, silence, and absence.[34] Yet, it is precisely this nothingness that initiates and propels the whole structure around him.

From the poststructuralist point of view, the core is not more reliable and significant than its outer boundaries, which are always unclear and often unable to be defined. We can see this blurry boundary between sound and silence in *Un Re*, in which silence is not always an absolute absence of sound. Whenever Prospero listens to his inner voice he hears it in the silence, such as the quiet moment when the deepest fear of his performers' usurpation appears. However, the parts are played softly (*pp* or *ppp*, and the instruments are *con sordino*) rather than in absolute silence. It is "heard" in the midst of sound in the murmur of the forest and the calm before the tempest (Part 1, Concertato I). If the rhythm of sound and silence becomes signals and eventually language, the hierarchical relation between them is subverted since they are seen as equally significant when forming a rhythm. *Un Re in ascolto* tells us that silence is not the distinct opposite

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[34] Dani Cavallaro explains that in Calvino's story the king "personifies the deconstructive concept of the absent centre as theorized by Jacques Derrida," namely "the ambiguous notion of a focal locus that is simultaneously representative of a whole complex structure of continuous permutations." It is this focal point, around which the structure revolves, that is "fixed and immobilized." A similar idea is found in Berio's version. See Dani Cavallaro, "Empire of the Senses," in *The Mind of Italo Calvino: A Critical Exploration of His Thought and Writings* (Jefferson, NC, 2010), 186–187, citation at 186.

to sound but rather *a part of* sound that generates meaning, a construction of the musical discourse rather than an independent existence. The deconstructionist listening does not limit itself to the distinction between sound and silence, but includes oppositions between the Self and the Other.

5.4 Interior Monologue as Auto-Affection

Berio's *Un Re in ascolto* can be considered as the textualization of the autobiographical self, a writing style that was common in the postmodern novel. This type of novel articulates the "de-faced" self—the disfigurement of the self and the personification of the voice and the name.[35] This type of story often happens in dreamlike displacement as if it were experienced by another person. The quest for the truth of one's self depends on what kind of subject "I" is selected from—the one single or one multiple "I" persists in the work.[36] In *Un Re in ascolto*, the characters surrounding Prospero are the multiplication of Prospero's self which constitutes his self-perception and identity.

The multiplication of the self can be illustrated through Derrida's idea of auto-affection regarding the listening of the Self and the Other. Auto-affection refers to one's self-experience through listening to his or her own voice. Simply speaking, when we speak, we can hear our affection through our voice since it reflects our emotions and the

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[35] Paul de Man, "Autobiography as De-Facement," in *The Rhetoric of Romanticism* (NY: Columbia University Press, 1984), 81. See also the discussion of the self in literature in Ihab Hassan, "Quest for the Subject: The Self in Literature," in *Contemporary Literature*, vol. 29, issue 3 (1988): 420–37.
[36] See Hassan, "Quest for the Subject: The Self in Literature," 422.

situation of our body. When we hear ourselves speak, it is an auto-affection—a self-experience affected by the signifier, i.e. our own voice, without any exterior distraction. The self-experience is articulated through the voice and repeated along the continuity of time, so that the nuances along time are felt by the self and constitute the self-presence of the living present. To Derrida, voice is unique in the sense that it is a unity of *sound* from the world and *phone* from the interior (in the phenomenological sense).[37] He even goes so far as to claim that the universality of the pure experience of auto-affection guarantees that no consciousness is possible without the voice. For him, the voice *is* consciousness.[38]

Derrida's conception provides us with a basis to understand Prospero's identity and self-perception. Prospero's being and self-presence manifest themselves through his voice by an interior monologue, which is in line with Derrida's idea of hearing-oneself-speaking. His monologue unifies the sounds from the outside world and is driven by his inner voice. It is not only that his voice reveals his affection through musical expressions; his self-experience is also influenced by the timbre of his own voice, thus producing itself as pure auto-affection. Prospero's part is constantly sung *con agitazione* (Aria I, II), and becomes even more agitated after he begins to fear his usurpation (Aria III, Concertato III and Aria VI); (For Aria III, see Example 5.3). He experiences the agitation in his voice, and the feeling is reinforced every time he hears himself. The peculiarity of vocal quality can also be felt from the wide range of expression markings on voice: for instance, the Director's *impaziente*, *aggressivo* and *ironico* singing in Duetto I, *come un suggeritore*

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[37] Jacques Derrida, *Voice and Phenomenon: Introduction to the Problem of the Sign in Husserl's Phenomenology*, translated by Leonard Lawlor (Evanston, Illinois, 2011), 68.
[38] Derrida, *Voice and Phenomenon*, 68.

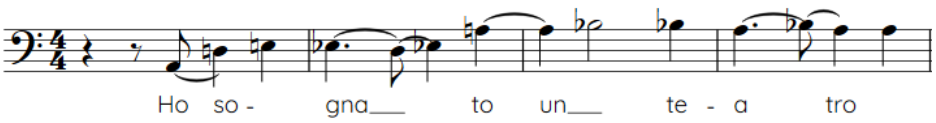
for Friday in Concertato II, and Friday's *con uomoriso* and *improvvisamente serio* in Duetto III.

However, Derrida tells us that such auto-affection manifested by hearing-oneself-speaking is not concerned only with the Self; the voice also encompasses traces from others. When we hear someone else speak, we also repeat the other person's utterance immediately to our inner selves in the same way that we produce an utterance. That means we are also reproducing the auto-affection from the other person through listening. We identify the difference between ourselves and others through auto-affection within ourselves. During a period of time, however short it is, there is always an alterity, consisting of heterogeneity, which appears in self-identity through the manifestation of the interior monologue. Derrida further concludes that all forms of auto-affection are fundamentally *hetero-affection*. Through the dialogue in one's voice, *a self is produced*.

Prospero's auto-affection is also hetero-affection since his self-experience is perceived based on his own voice and that of the people around him in his dream. His perception of self is reflected in the musical representation of his monologues and his interaction with other characters, which are expressed through two ways of melodic development. Prospero's monologues, as represented in his arias, center on A-B♭.[39] Prospero's vocal part is developed in two ways. One way is the vertical incorporation of pitches from the heterophonic instrumental parts, which suggests his hearing of the

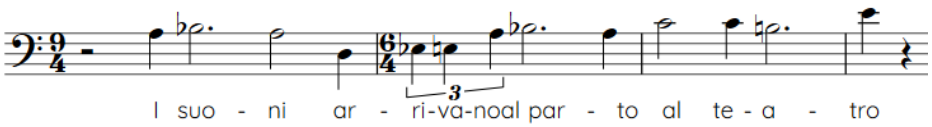
[39] The motif A-B♭ is associated with Prospero's identity in the work. When Prospero is in his deathbed, his aria is nearly reduced to this motif. As Berio described, the two notes A and B♭ becomes Prospero's tomb at the end. See Berio, "Dialogo fra te e me," in *Scritti*, 277.

sounds surrounding him, as explained above. The second way of melodic development is through horizontal stepwise motion, or intervals that are specific to Prospero, i.e. semitone, minor third, tritone and perfect fifth. Through these two ways, the pitch set of Prospero C♯-D♯-E-F-F♯-G-A-B♭ is gradually developed. Whereas the pitches are the material that form Prospero's voice-body, the intervals that are associated with Prospero's identity are his "musical accent" (or "musical idiolect") which was what Berio was exploring in his composition.[40] The tendency to use certain intervals is similar to Prospero's unconscious, which chooses how the sounds coming to his ears are perceived, and hence constitutes his inner voice. Example 5.4 shows the beginning of each of Prospero's five arias (Aria V is excluded since it is sung by Protagonist). The five arias are connected by the motif A-B♭ which is associated with Prospero's identity, and his voice is largely developed through his usual use of semitone, major second, minor third, tritone and perfect fifth.

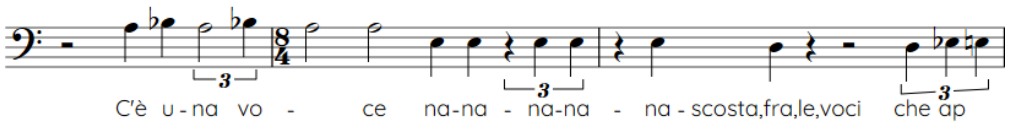


Aria I

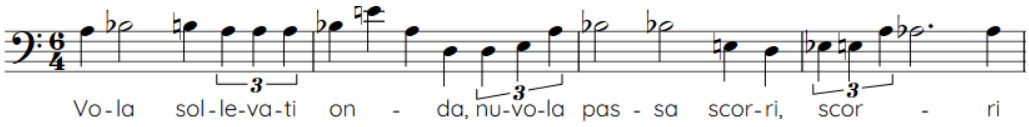
[40] Berio was interested in the exploration of a deeper level of language, such as "how-when-why every individual has effectively his own system," which includes the system of listening, the system of his "musical dialect," the system of his own double articulation and distinctive features. His explanation refers to the notion of idiolect of linguistics which can be considered as an "accent" associated with a specific person, which is known as "idiolect" in linguistics. Indeed, the system of listening is exactly the area *Un Re in ascolto* is exploring. See *Interviste*, 85–6. See also the discussion of musical accent in the previous chapter on *La vera storia*.



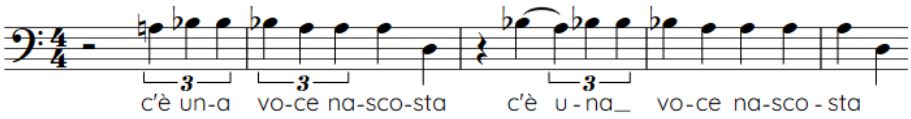
Aria II



Aria III



Aria IV



Aria VI

Example 5.4: *Un Re in ascolto,* Prospero's arias, openings.

The musical design of Prospero's vocal part in all his arias is consistent throughout. Recitation, Sprechstimme, and triplet rhythms are used in the arias as part of Prospero's musical accent. By contrast, other numbers which involve Prospero's interactions with other characters demonstrate different musical designs. Other characters

in the work are developed from Prospero: Director as Prospero's alter ego,[41] the clown Friday, Soprano, Mezzo-soprano, Wife and so on, so as their musical representations. While the melodic parts are also developed by the above two ways, short musical figures are often formed and repeated by means of melodic variations, or what Ciceri calls "intorno melodico."[42] The characters often pick up the musical figures and the speech from one another, so that their vocal melodies contain each other's musical and textual elements, infusing with their own accent.[43] Table 5.1 lists some of the "musical idiolects" by individual characters.

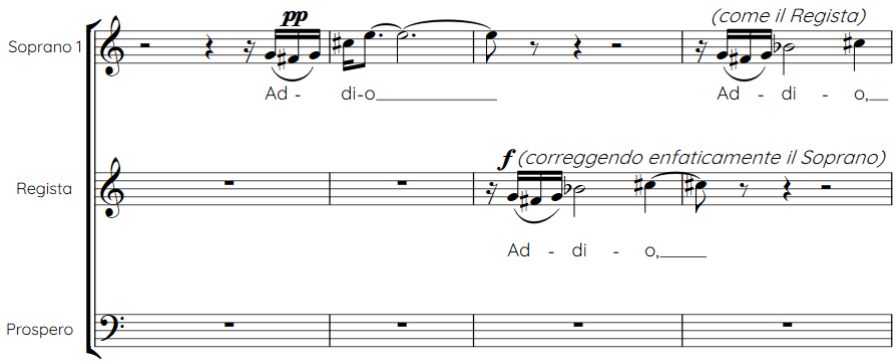
Table 5.1: *Un Re in ascolto*, characters and their "musical idiolects."

Characters	"Musical idiolects" ("Musical accents")
Soprano 1	melisma of E-C♯; grace note used along with phonetic syllables
Mezzo-soprano	neighboring note or minor third in dotted rhythm as ornament on syllables
Soprano 2	phonetic syllables; four-to-six-note ornament on a syllable
Friday	recitation
The Wife	rising major seventh

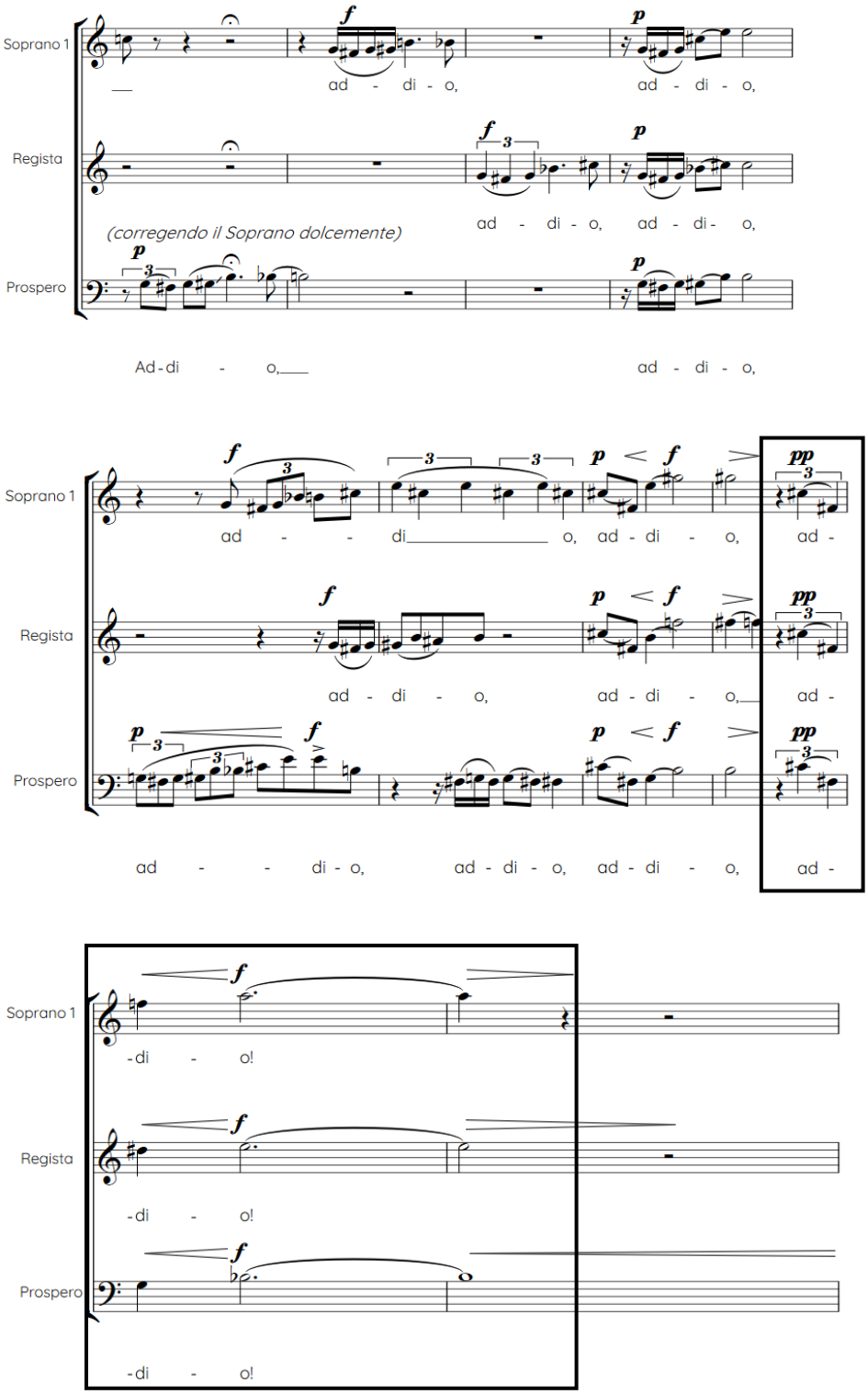
Example 5.5 shows one of the significant moments in the work: Soprano 1 sings "addio," a stereotyped expression in nineteenth-century Italian opera. She is corrected by

[41] Berio explained Director is Prospero's alter ego, the active and negative side of Prospero. Berio, "Dialogo fra te e me," 276. Director often reflects on Prospero's thoughts. Their dialogues are indeed similar to those between Marco Polo and Kubla Khan in Calvino's *The Invisible Cities*.
[42] Ciceri also relates such microvariation of the rhythmic-melodic cells to morphology in linguistics. While agreeing to his suggestion, I focus more on the signifying process resulted from the use of microvariation so that meaning of the self is created through a process. See Ciceri, "Aspetti del pensiero melodico," 91.
[43] This shows the influence of Mikhail Bakhtin's polyphonic novel regarding a plurality of consciousness. Bakhtin's polyphony of voices and his writings on carnivalism were referred to by Calvino on the program notes of *La vera storia*. See Italo Calvino, program of *La vera storia*, Teatro alla Scala, 1982, 30. See also the discussion of polyphony of voices in my discussion of *La vera storia* in Chapter 4.

the furious Director, as well as Prospero, who nevertheless appears to be more patient. While infusing their affection into their voice, the characters take turn to sing their versions. They pick up each other's melodic shape and show variations in it, adding layers to their own emotions and dynamics. Soprano 1 also incorporates her own accent of the melismatic E-C♯ motif as her intonation. The three characters finally join to sing "addio" together after their own elaborations. The projection of "addio" exhausts the pitch set of Prospero, C♯-D♯-E-F-F♯-G-A-B♭, in harmonic form, which reinforces the meaning of "addio" in Prospero's self-experience. Indeed, "addio" is remembered and repeated continuously in Part 2 by the off-stage chorus, who play the role of Prospero's unconscious.[44]



[44] Heile noticed the unusual repetition of the "addio" and suggests that it could be a way to blur the stage-world and the communication with the audience. See Heile, "Prospero's Death," 160. I would say that the emphasis of "addio" has multiple effects in the work: one is, as Heile suggested, that it engages the audience in the stage-world; another is that it alludes to the operatic convention and an invocation to Prospero until the expression speaks to his interiority at a point through repetitions.



Example 5.5: *Un Re in ascolto*, melodic variations of musical figure sung by different characters (Audizione I, rehearsal 41).

The technique of melodic variations adds nuance to the musical figures in Prospero's listening process throughout his interactions with others. The repetition of the same musical figures in different variations creates meaning of certain words and ideas, and the meaning of individual ideas form one's self-experience over time. The recurrence of certain expressions along the time span of the complete performance gradually forms something meaningful to Prospero's self-perception, particularly the performers' invocation of "Prospero" and the phrase "La mia…è mia" [My… is mine] during the rehearsals. Example 5.6 shows the recurring motif of a rising third for the invocation of "Prospero" and the phrase "La mia … è mia" which is often pivoted on F-F♯. The invocation of "Prospero" by the performers, as Berio explained, blurs the boundary between the reality and the rehearsal since this common expression in opera makes Prospero a part of the work, and such personification of name is common in the written self in literature.[45] The invocation always involves a third (see Example 5.6a) and appears at the end of a musical phrase, functioning not only as an invocation, but also as an incantation to invite the stage manager to join the fictional world. The repetition of "La mia" and its thematicity are observed by Schwartz as well.[46] The "La mia" phrase is sung in variations by multiple characters in Prospero's work. Soprano I first sings "La mia persona è mia… La mia lingua tace, il mio linguaggio è mio" [My persona is mine… My tongue keeps quiet, my language is mine] in Audizione I as part of the aria for the

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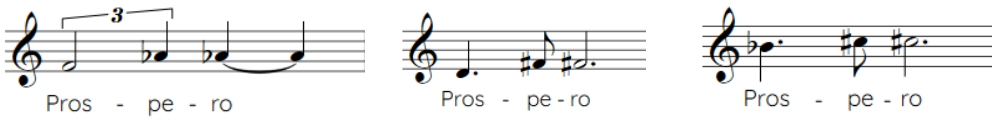
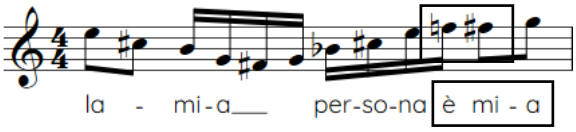
[45] Berio, "Dialogo fra te e me," 273.
[46] However, Schwartz takes the F-F♯-D-E motif from two examples and discusses the octatonic organization, which cannot be generalized to all "è mia" phrases in the whole work. Schwartz, "Prospero's Isle and the Sirens' Rock," 93–6.

audition. Mezzo-soprano sings “La mia bussola è mia” [My compass is mine] in Audizione II and Soprano II sings “La mia coscienza è mia” [My consciousness is mine], all with variations pivoting at F-F♯ (see Example 5.6b). The recurrence of these motifs and the text gradually lead to Prospero’s self-doubt.

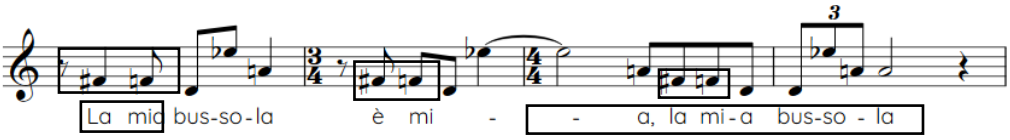


Audizione I Audizione II Audizione III

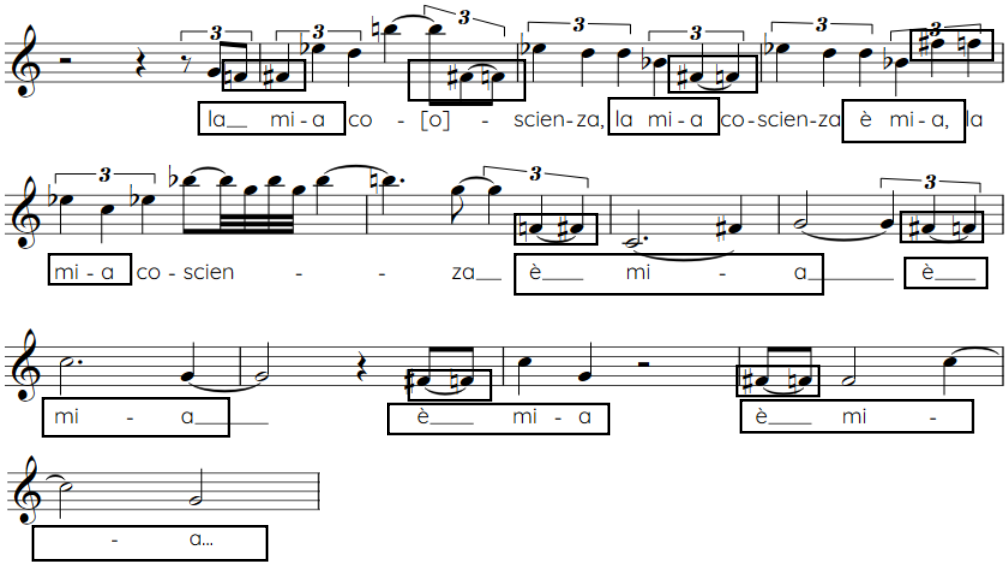
Example 5.6a: Invocations of “Prospero” in a rising third.



Audizione I (Part 1, rehearsal 37)



Audizione II (Part 1, rehearsal 122)



Audizione III (Part 2, rehearsal 37)

Example 5.6b: Variations of the "la mia" phrase.

Example 5.6: *Un Re in ascolto*, invocations of "Prospero" and variations of the "la mia" phrase.

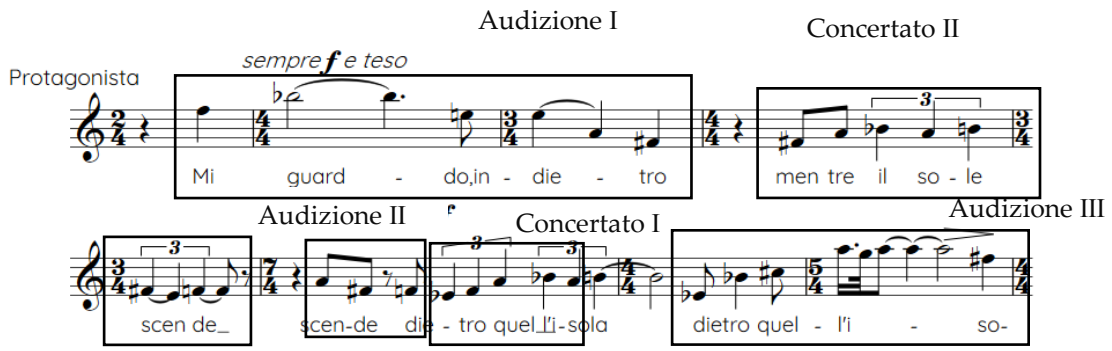
If the threat of the characters' autonomy becomes Prospero's self-experience in his dream, such tacit perception is a gradual process that takes time. The self-experience is formed through the musical process which allows "spacing." "Spacing" reveals differences and similarities among the musical figures, allowing Prospero to interpret the meaning of these musical materials, a notion that is closely related to Derrida's *différance. Différance* is a "systematic play of differences, of the traces of differences, of the spacing by means of which elements are related to each other."[47] While the music is constantly moving in the work, meaning lies in these small differences whenever they

[47] Jacques Derrida, *Positions*, translated by Alan Bass (Chicago: University of Chicago Press, 1972), 27.

recur. The traces of differences are remembered each time when the same materials come back. They are recalled by the similarities between them and the absence of the missing part.

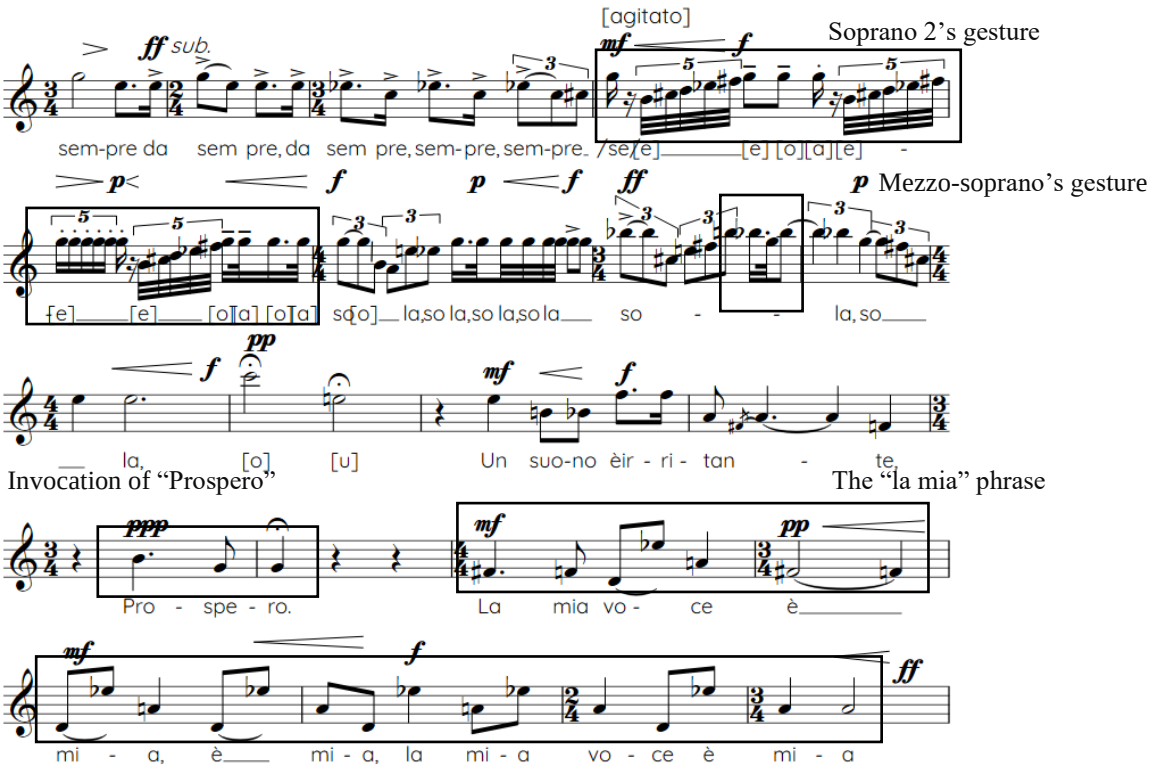
Why does Prospero die at the end? The real reason of his death is not sickness, but him being trapped in his own creation while his characters become autonomous. If Prospero's self is portrayed in his arias, the limited combinations of the pitch set and the intervals reveal the later arias to be nothing more than a repetition of old materials. Indeed, Prospero's final aria is dominated by melodic shapes containing A-B♭, sprinkled with some melodic shapes that have already been found in the previous arias.

The climax of Part 2 is Aria V sung by Protagonist—Prospero's own imagination of an "operatic being" which comes from his fear. Although Protagonist accuses Prospero of being dominating and declares freedom from him, she appears to be a soulless, mechanical being consisting solely of others' voices. Her aria is a collage of musical and textual phrases from the previous auditions and rehearsals. The aria is a dream within a dream; it is a stream of consciousness of what has happened in the dream. Example 5.7 illustrates the beginning of Protagonist's aria (Aria V) which consists of chunks of melodic and textual segments that have appeared before.



Example 5.7: *Un Re in ascolto*, Part 2, beginning of Aria V.

As the aria continues, there is less repetition of existing materials and more musical gestures that are specific to the characters in the work. The aria is developed based on Prospero's singing style, i.e. moving mostly in semitones, thirds, tritone and perfect fifths, combining with gestures from other characters. The melodic development follows the "rules" of Prospero's personal style while incorporating more freely new elements and become almost self-generating toward the end. The same pattern is seen in the text. After singing the existing textual phrases from the rehearsals, Protagonist uses the same sentence pattern to create new meaningful sentences that never appeared in the rehearsals: "Il mio teatro è mio. Il mio canto è pianto per te, Prospero…" [My theater is mine. My song is a weep for you, Prospero…] Example 5.8 shows that Protagonist generates her part by incorporating the musical gestures from the sopranos and Prospero's singing style.



Example 5.8: *Un Re in ascolto*, Part 2, Aria V.

If what is considered to be human is their creativity that is never exhausted, Prospero's death can be predicted; given the way his voice was created, the musical materials that make him who he is would soon be exhausted. The irony of the tragedy is that Prospero, a living, breathing person, becomes a mechanical being who can only repeat himself, whereas Protagonist, who only existed as Prospero's imagination, proves to be creative. Her productivity, similar to the dictum "infinite use of finite means" discussed in Chapter 3, renders her to be autonomous from the one who gave life to her.[48]

[48] The productivity of generating new materials in *Sinfonia* and *Coro* is discussed in Chapter 3. I compare how Berio's approach to keep creating new elements by combining existing musical elements and parameters is similar to the exploration of productivity in linguistics since the mid twentieth century,

The ability to generate new materials infinitely with the existing ones sets Protagonist free from her creator's control. The work can hence be seen as a critique of the creation of traditional operatic work; it deconstructs the opposition between the *creator* and the *created* by reversing the hierarchy of power.[49]

Let's consider the temporality of Prospero's representation of self. The theatrical representation in the work is often asynchronized. Past, present and future in *Un Re in ascolto*, as explained by the composer, merge continuously in the scene, text and music.[50] There is a sense of guilt evoked from the rehearsal (the past within the present), a fear of death in the waiting (the future within the present), and so on.[51] The revelation of Prospero's guilt, the overturn of his power, and the betrayal of Protagonist are often foreshadowed before they happen. For instance, Protagonist's aria in Part 2 is predicted in the duet between Prospero and Director in Part 1: "but it is also a delicate and invisible creature that is subdued by the imagination of the king, who sings… the queen betraying him, and that his kingdom is in danger" (Duetto II). Indeed, the atmosphere of death is

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especially the investigation of the dictum "infinite use of finite means" in sentence formation. See Chapter 3.

[49] The work also critiques on the sexual difference that men represent reason, logic and "semantic" whereas women are expected to be corporal, sensual and "phonic." Such distinction can be seen in Prospero being the creator and manager and Protagonist being a singer who only executes what is told. See Cavarero's discussion on Calvino's "Un Re in ascolto" concerning voice and gender issue. Cavarero, *For More Than Once Voice*, 1–7.

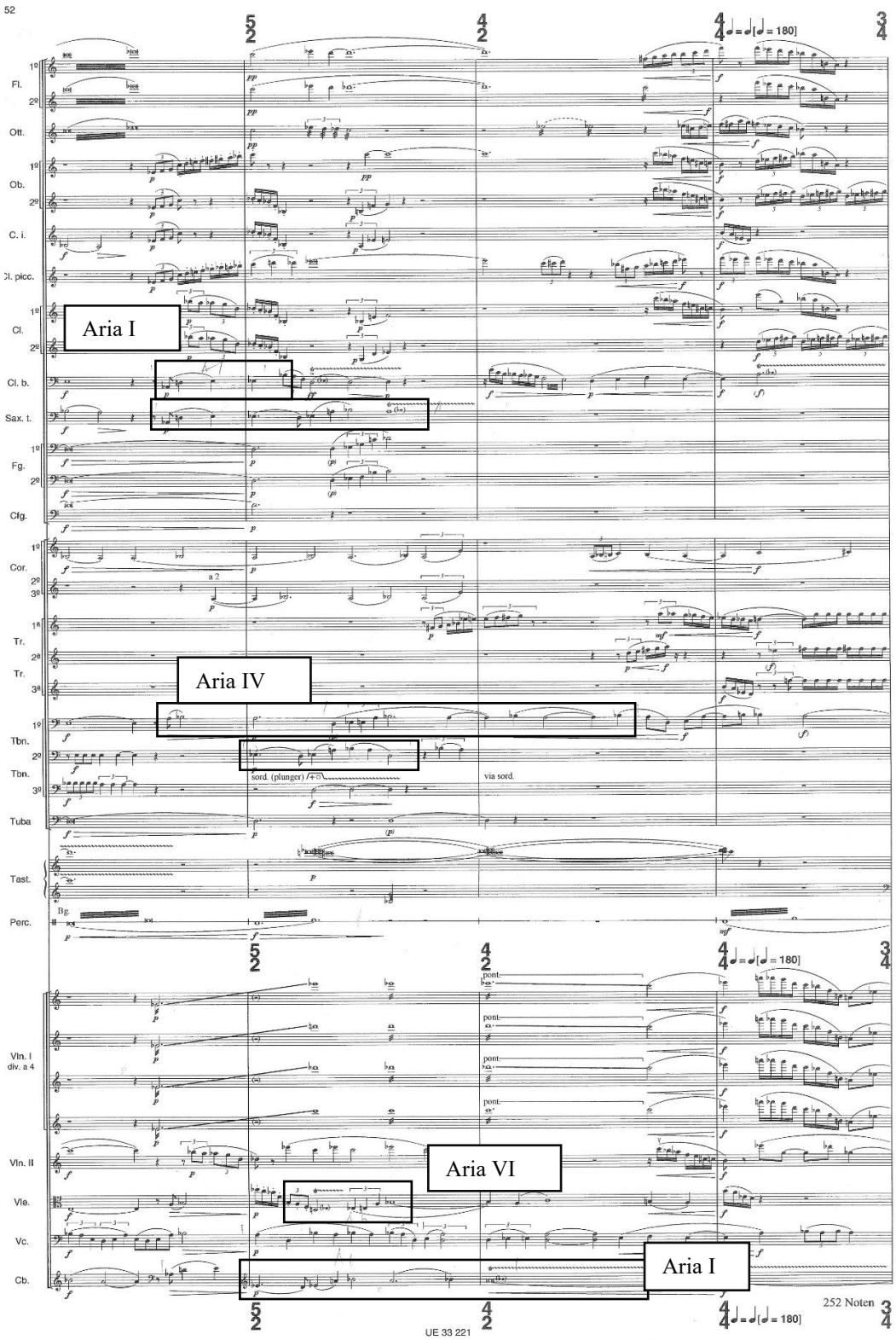
[50] Berio, "Dialogo fra te e me," 275.

[51] The temporal non-linearity of the narrative also reflects the view of literature in Berio's time, particularly Barthes's description of Sartre's novel *Le sursis* in which the narrative mode of the writing recomposes "a time which is undivided and homogeneous, the time of the narrator, whose particular voice, defined by highly recognizable contingent features, burdens the unfolding of history with a parasitical unity, and gives the novel the ambiguity of a testimony which may well be false." See Roland Barthes, *Writing Degree Zero*, translated by Annette Lavers et al. (New York: Hill and Wang, 1967), 84.

pervasive in the work, manifesting as absence, silence, darkness, emptiness, desertion, and many more. Prospero's reflection on death, betrayal, fear and desire is all intermingled in his representation of self: nine years in power (past), the rehearsal (present), the revolution and the death (future).

One example that shows the non-linearity of the work is Air, an instrumental set piece in the middle of Part 2. Prospero sits on his throne as a sad king while Soprano 2 comes in and dons a costume with the help of servants. As Ciceri notices, Air contains elements that the audience has already heard from Arias I, II and III and those that they are going to hear in Arias IV and VI.[52] Example 5.9 shows that fragments of Arias IV and VI that are not yet to appear at the moment co-exist with those of Aria I. That is to say, the elements from the past, present and future in the story appear to be non-linear during the linear musical process.

[52] Ciceri, "Aspetti del pensiero melodico in *Un Re in ascolto*," 114–115.



Example 5.9: *Un Re in ascolto*, Part 2, Air, rehearsal 30C.

Unlike a traditional nineteenth-century Italian opera, *Un Re in ascolto* does not present a character who is the center of a work, nor always live according to the linear progression of past, present, and future, but a textualized self in which Self and Others, "nowness" and "non-nowness" are intermingled through an evolving process. Such representation of self considers human reality as a text without boundaries. The *dé-bordement* of textuality, according to Derrida, requires us to efface signs every time until they come back against the background of oblivion.[53] Signs disperse in the system of *différance* so that discrete identities enter a circulation of finding and losing themselves. Indeed, in a Derridean sense, consciousness is always subject to the web of traces (as the metaphor of "echoes of gestures," Concertato IV)—traces of the death and destruction of identities. The traces lie in every instance that foreshadows the exhaustion of the materials and every instance in which musical and textual materials recur which gradually make Prospero think of his death. Death, as the death of Prospero, is a sum of transforming continuity rather than a definite result.[54]

Un Re in ascolto is another work of Berio's "linguistic" projects to show how music can convey meaning. It is not entirely connected by the set pieces as in a number opera, but by a continuous and evolving self, which shows a "becoming" process through nuances of musical and textual elements. The work also illustrates how the new music theater can be considered as a way to rethink the multiple binary oppositions in traditional opera from the perspective of structuralism. In *La vera storia*, Berio questions

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[53] Jacques Derrida, "Living On: Border Lines," in *Deconstruction and Criticism*, edited by Geoffrey Hartman (New York: Seabury Press, 1979), 83.
[54] Williams, *Understanding Poststructuralism*, 42.

the logocentrism of "story" and reworks the story-oriented compositional approach by creating a story that is purely connected by signs. *Un Re in ascolto* adopts a similar direction to challenge the logocentrism of set pieces, protagonist, and the temporal linearity in opera. It also questions the role of author—a response to Barthes's dictum "the author is dead." Furthermore, the deconstructionist approach in theatrical work is applied to the act of listening.

5.5 The "Meta-Language" of Listening

Paul de Man describes four distinct types of self: "the self that judges, the self that reads, the self that writes, and the self that reads itself."[55] *Un Re in ascolto* shows the self that listens to itself. Furthermore, it is a self-reflexive music theater in which the audience is listening to how the self listens to itself. There are two layers of listening in the work: one within the fictive world describing Prospero's listening in his dream, and another relating to the audience's listening. In addition to the deconstruction of sound and silence, Self and Others, "nowness" and "non-nowness," the way of listening to the textualized self of Prospero could also refer to the "deconstructionist" listening proposed by Barthes in the same chapter on listening. Deconstructionist listening, as Barthes suggests, "externalizes" the sonority instead of finding an inner coherent structure, thus compelling

[55] Paul de Man, "The Sublimation of the Self," in *Blindness and Insight: Essays in the Rhetoric of Contemporary Criticism* (New York: Oxford University Press, 1971), 39.

the listener to renounce "inwardness."[56] Instead of thinking about the meaning behind the sonority in music, i.e. deriving signification from the signifier, Barthes tells us to listen to the *shimmering of signifiers* from moment to moment, which "ceaselessly produces new ones from them without ever arresting their meaning."[57] The phenomenon of shimmering is called *signifiance* [signifying] by Barthes, who believed that "free listening" is endemic to our era.

If we as the audience are asked to concentrate on the *signifiance* at a very moment, how is Berio's music theater presented so that the audience is able to make sense of the work? To answer this question, let's look at the musical design and the suggestion of *azione musicale* by the composer.

Laura Cosso explains that there are three levels of musical perception in *Un Re in ascolto*.[58] The first level favors a global listening to the sonorous fact in relation to temporality and the flow of elements from the background and foreground. This type of listening involves mostly the presence of Prospero in his solitary state. The second level deals with the auditions that require a more analytical listening and transformation processes that highlight the rhythmic-melodic cells. The third level is the perception of sudden and unexpected events, such as the "cinematographic montage of images" in

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[56] Barthes, "Listening," 258–60.
[57] Barthes, "Listening," 258–60.
[58] See Laura Cosso, "*Un Re in ascolto*: Berio, Calvino e altri," in *Berio*, edited by Enzo Restagno (Turin: EDT srl, 1995), 53–65.

Prospero's theater. These are the moments of listening to the "availability towards the unexpected."[59]

The multiple levels of perception are closely related to Berio's proposal of a new way of theatrical writing—*azione musicale*—in which music and drama, directed by a musical process, comment on each other, grow estranged, remain indifferent or come into conflict, so that the narrative itinerary establishes a relationship between the two. His vision was to make his music theater a penetration between music and dramaturgy rather than a juxtaposition between them, i.e. "the musical comprehension of dramaturgy and the dramatic comprehension of music."[60] The interrelations between music and drama, however, are fluid so that different sections bring different components into focus. Berio even designed a "filtering" mechanism in his musical action: through careful control of the emphasis and suppression of musical, textual, and scenic elements, Berio manipulates the attention of the audience. Placing these elements in the foreground or background results in a semantic hierarchy.[61] In this way music acts as an agent that can reduce certain materials to merely acoustic sounds or to put certain materials in the spotlight, or even to emphasize significant actions while others remain irrelevant.

The three levels of perception explained by Berio can be found in the set pieces of the arias, the auditions and the concertato, respectively. The musical designs of the

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[59] Cosso, "*Un Re in ascolto*: Berio Calvino e altri," 61.
[60] Berio, "Problemi di teatro musicale," *Scritti*, 49.
[61] Berio described how his musical action highlighted text or music similar to the way that Schumann "filtered" Heine's poetry in *Dichterliebe* by emphasizing or suppressing certain parts of the music or text. In the original text Berio used a peculiar metaphor to describe the hierarchy of the "semantic bandwidth" as if the meanings were formants with layers of frequencies that can be "filtered." This reflects that Berio's conception of music and meaning often sticks to ideas of structural linguistics. See Berio, *Interviste*, 173.

listening experience even show the composer's attempt to make the audience "listen" to Prospero's self-perception, power relations, and the revelation of desire and fear. As I have discussed, Prospero's self is a combination of hearing environment sounds (the adoption of pitches from the instruments) and the listening to his self-talk (certain intervals that form melodic shapes). The design of the melody also shows how sounds relate to the temporality of Prospero's self-experience. The idea of musical action is more obvious in Audizione II sung by Mezzo-soprano. This is the moment when Prospero starts to question the existence of his own voice and to feel his desire for a beautiful one. Audizione II is a silent moment, free from instrumental parts except for piano as Prospero auditions the second singer for his new work. The peculiarity of Audizione II is that it is only accompanied by piano. This phenomenal song sung by Mezzo-soprano highlights the activity of singing itself: The music is emphasized in this part while scenic actions and the text are suppressed, so that all the attention is given to the beauty of the music and Mezzo-soprano's voice. The piano accompaniment is lyrical, a stark departure from the directionless flow of sounds of other parts of the work. If the music reflects what Prospero is listening in his dream, the lack of the other instruments shows that Prospero is concentrating on Mezzo-soprano's singing and the diegetic piano music during the audition. The complexity of rhythmic-melodic cells and every detail of the vocal articulation illustrate Prospero's analytical listening of the phenomenal song. What does Prospero's attentive listening imply? Schwartz believes that Prospero's listening to Mezzo-soprano belongs to the first type of listening in Barthes's categories, i.e. listening

to the environment similar to an animal. Prospero "hears these auditions as reliable indexes of the opera house."[62] However, if we consider how listening relates power relations in Barthes's theory, Prospero's attentive listening is much more than recognizing indexes. We know that Prospero is authoritative to his performers, but attentive listening can imply being powerless or inferior to the source. His attention on the beautiful audition initiates his disempowerment since he renounces his authority to the singer.[63] The focus on the musical details marks the imbalance of power between Prospero and the guest singer.

We can also find a similar fluid theatrical presentation of attentive listening in Berio's *Recital I (for Cathy)* in 1972 dedicated to and performed by Cathy Berberian. The work is set as a normal recital with the singer (soprano) acting as the stage performer. The work describes the singer's psychological states throughout the rehearsal and the performance. The singer experiences ever-changing emotions as she interacts with Accompanist (a piano accompanist), Wardrobe Mistress, Musicians and so on. The stream of consciousness is expressed alternately by her spoken monologue and a variety of excerpts from Berberian's own repertories, all functioning as an interior monologue in the original works. As in *Un Re*, her monologues are accompanied by disjunct instrumental segments, as if she is hearing sounds and voices, including those of her colleagues, in the concert hall. One song, "Avendo gran desio," stands out from the

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[62] Schwartz, "Prospero's Isle and the Sirens' Rock," 93.
[63] The peculiarity of Audition II is noticed by Schwartz and Heile as well. The phenomenal music in this audition to Schwartz creates an alienation effect to highlight *singing* in this work. Heile, for his part, noticed that the piano enters before the audition starts, suggesting a subtle slipping between the phenomenal and noumenal levels. Heile, "Prospero's Death," 145–160; Arman Schwartz, "Prospero's Isle and the Sirens' Rock," 83–106.

others in the midst of the piece. It is sung by the singer in full and is accompanied solely by piano. On the one hand, it can be considered as the phenomenal song in the performance-within-a-performance. On the other hand, the focus on the expressive quality of the music suggests the singer's concentration on her inner voice (as hinted at by the following spoken monologue: "Who hasn't taken a piece out of my life?"). The emphasis on the song itself in a frozen scene allows the singer and the audience to listen carefully, especially listening to how the singer is contemplating how her personal life and her identity as a performer intersect.

Another way of listening in *Un Re in ascolto* is to listen to the unexpected along with the visual images in the concertato. The full orchestra, the polyphony sung by multiple characters and the eventful scenic actions on the stage not only invite the audience to relate the audio to the visual, but also allow more possibilities through combinations. The characters experience their hidden fear and desire when unrelated elements are combined and form meaningful messages that speak to their unconscious. In Concertato III, while Doctor, Wife, Lawyer and Nurse stay around Prospero's deathbed, the chorus sings "addio, my friends" off-stage. Prospero's performers then pick up the words in the conversations along with the musical phrases that they are rehearsing. They start to reflect on the power relation after hearing the random phrases such as "perhaps all come to an end," "perhaps all are lost," "only he knows the drama that he is reciting in his head," "who is singing and who is listening." Musically, when the singers, Doctor, Lawyer, Nurse and Wife pick up each other's texts and musical phrases and repeat them in variations or nonsense syllables. Example 5.10 shows that their imitations come to a

point in which the F-F♯ motif and the pitches C-D-E♭-F-F♯ recall the “la mia” phrase sung by Mezzo-soprano in Audizione II. The pitches are then re-ordered in the celesta and the phrase “la mia bussola è mia” [my compass is mine] is remembered. This phrase which awakens the characters’ desire for freedom is also the phrase Protagonist keeps repeating in the climax of her accusation (see Example 5.8). The “la mia” phrase is then replaced with the text “it can be done” [ce la farà] and is amplified by Soprano 1, Mezzosoprano, Nurse and Doctor in unison, which brings the collusion of the characters to take over Prospero’s power.

Same as the phrase "La mia bussola è mia" sung by Mezzo-soprano

"Ce la farà" is amplified

La mia bus-so-la è mi - - a, la mi-a bus-so - la

Audizione II (Part 1, rehearsal 122)

Example 5.10: *Un Re in ascolto*, the "la mia" phrase from Audizione II is recalled (Part 2, Concertato III, rehearsals 11–12).

Also, at the moment of the revelation, the separation between Prospero's deathbed and the stage on which the performers are rehearsing disappears, and the chorus's singing of "addio" comes to the foreground. The performers come to realize that they are mere puppets and intend to fight for their independence. Such large-scale concertato allows more possibilities to combine musical, textual and scenic elements to create an unexpected message. This more holistic approach to hear the hidden meaning from all diverse elements on the stage is different from the previous one that requires the audience to concentrate on the musical details.

If the audience's way of listening was carefully designed by Berio, does it mean that the audience can never abandon structural listening? If so, does it contradict with Barthes's proposal of the free "deconstructionist" listening which only focuses on the moment being? The concept of structural listening, as Rose Subotnik described it, is "a process wherein the listener follows and comprehends the unfolding realization, with all of its detailed inner relationships, of a generating musical conception."[64] Structural listening requires the audience to remember the musical elements and make sense of their interrelationships in a certain timespan. The dilemma in *Un Re* was raised by Robert Adlington who argues that, contrary to the "disintegrative" tendencies of auditory experience in which hearing represents a particular threat to selfhood, in this work, the musical discourse invites structural listening, which requires the audience's assertion of

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[64] Rose Rosengard Subotnik, *Deconstructive Variations: Music and Reason in Western Society* (Minneapolis: University of Minnesota Press, 1996), 150.

control in the listening act.[65] This is because the narrative of the musical discourse requires a structural listening to uncover what is expected to be heard. Such an approach therefore creates a discrepancy with the narrative, in which the perception of sonic capacity unravels "the fictive constructions of autonomy and mastery that undergird systems of authority."[66] This conflict creates a dilemma between sound as a rendition of its determinate meaning and the musical discourse critiqued by the scenario. Adlington argues that Berio asks the audience to listen like Prospero does in the work, i.e. to master the surroundings by decoding an authorial meaning, thereby reinforcing one's authority, since Berio's musical presentation requires a structural listening of musical language.

It is indeed difficult for the audience to understand the narrative of *Un Re* through passive listening due to the high complexity of the musical and theatrical construct. The co-existing functions of the musical discourse as an exemplification of "free" listening as well as a critique on the narrative level also seem to be contradictory. While I agree with Adlington that the "disintegrative" tendencies of auditory experience are unrealistic in this work, I want to approach the issue through the lens of listening and language. I argue that, in his search for the existence of "musical competence," Berio shows his attempt to explore the universality of experience in humans to "filter" what to be focused on by adopting the idea of the presence and absence discussed in philosophy of language and psychoanalysis.

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[65] See Robert Adlington, "'The Crises of Sense': Listening to *Un Re in ascolto*," in *Le théâtre musicale di Luciano Berio* vol. 2, 53–78.
[66] Adlington, "The Crises of Sense," 59.

To Berio, listening, similar to language, is an intrinsic system in humans. He believes that everyone has their own system of listening, or "meta-language of listening" [linguaggio d'ascolto].[67] What he meant by "meta-language" was the structure, or a mechanism which consists of internal rules, that differs from person to person.[68] If the oscillation between presence and absence in listening turns into signals and eventually a message, it is also the basis for Berio's consideration of how people listen and process music. Absence is even considered to be the initiator in the process of listening to music:

> I think that listening to music tends to fill an empty space that is continually reforming in [the non-specialist]: not a negative or passive emptiness, but an active one—a sort of feminine space of the spirit that is there to be filled, precisely, by our cognitive growth. I sometimes feel that listening to performance is like being penetrated and invaded by music, and I have the sensation of an emptiness finally filled.[69]

The term *feminine space* is related to Barthes's description of absence. Absence, to Barthes, is historically something feminine. In the state of absence, the subject becomes feminine and gradually takes on the attributes of the absent object. It is an acknowledgement of weakness or powerlessness in relation to the desired object. The feminine absent space of listening is the space for the desired object, i.e. the music, when the subject is fully passive to it. Let's think again about Prospero: he himself is a

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[67] Berio, *Interviste*, 86.
[68] The metaphor of listening as a language recalls Barthes's claim that listening *speaks*, implying that listening does facilitate communication..Barthes, "Listening," 259.
[69] David Osmond-Smith ed, *Luciano Berio: Two Interviews* (New York, 1985), 32.

feminine space, especially when fully absorbed into Mezzo-soprano's singing in Audizione II. This situation echoes what Calvino scholar Dani Cavallaro comments: the king's voice in the original story is not entirely composed from the patchwork or the intertextual heteroglossia in his territory, but "epitomizes the idea of the *subject spoken by language* [his emphasis]."[70] Émile Benveniste also holds a similar view regarding the textualization of self in literature. As Benveniste articulates, it is "in and through language that man constitutes himself as a subject, because language alone establishes the concept of 'ego' in reality."[71]

Berio's mention of "feminine space" can also be read along with Barthes's discussion of the "true listening space" in relation to the singer's intimate sentiment of singing lied. This listening space of the lied is "the interior of the head" combining images and personal experiences.[72] In his head, Barthes sees the image of his beloved, who makes him lose himself. The remembrance of the beloved one hence allows him to

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[70] Dani Cavallaro, "Empire of the Senses," in *The Mind of Italo Calvino*, 187. This subject spoken by language also recalls the narrative approach discussed by Calvino regarding levels of reality. While moving along the infinite levels of reality, the starting point of the chain, according to Calvino, could be an ambiguous phantom "I" which refers to an empty space—an *absence* in order to create ambiguous references. It is the empty space "I" that becomes the momentum to move along the multiple levels of reality. See Italo Calvino, "Levels of Reality," in *The Uses of Literature: Essays* (San Diego, 1986), 113. In an earlier version of the libretto Calvino explained that there are three levels: A) the mind of the stage manager; B) the performance of a traditional opera performance, and; C) the events behind the scene. Italo Calvino, "Per *Un re in ascolto* di Berio: trattamento 1980," in *Romanzi e racconti* (Milan: Mondadori, 2006), 755–757. Ute Brüdermann's textual analysis explained how the boundaries in these three levels remain blurred in various ways, especially the ambiguous texts from diverse sources join the three levels during the set pieces. See Ute Brüdermann, "*Un Re in ascolto*—un lavoro musicale che racconta il suo diventare opera," in *Das Musiktheater von Luciano Berio* (Frankfurt am Main: Peter Lang, 2004), 146–170.
[71] Emile Benveniste, *Problems in General Linguistics*, translated by Mary E. Meek (Coral Gables: University of Miami Press, 1971), 224.
[72] "…but its [that of the lied] true listening space is, so to speak, the interior of the head, of *my head* [original emphasis]: listening to it I sing the lied with myself, for myself. I address myself, within myself, to an Image: the image of the beloved in which I lose myself and from which my own image, abandoned, comes back to me. The lied supposes a rigorous interlocution, but one that is imaginary, imprisoned in my deepest intimacy." Roland Barthes, "The Romantic Song," in *The Responsibility of Forms*, 286–292, citation at 290.

find his own image, which he once abandoned. The emptiness in his head is filled up with the image of the Other. Barthes's discussion of the lied and the imaginary imprisoned in one's deepest intimacy echoes Prospero's self-imploration in his five arias. The idea of adopting arias as set pieces in *Un Re in ascolto* could have been an inspiration from Barthes. These arias synthesize the images he experiences during the rehearsals and auditions, and they initiate an internal monologue. In this sense, listening, beginning with absence rather than presence, is a passive action. Such action allows sound to fill up the empty space in the audience's head, deconstructing the opposition between the Self and the Other and decentering the Self as the authoritative agent in the communication. This echoes Barthes's notion of "modern listening" which has been liberated from the conventional sense by achieving "free listening," which "circulates,… permutates,… disaggregates… the fixed network of the roles of speech."[73]

Absence, which is associated with Berio's belief that the act of listening occupies a feminine space, can even be manipulated by transforming the distortion of time into oscillation, producing rhythm and making an entrance onto the stage of language.[74] Berio's suggestion that listening to music fills the emptiness of his cognition resonates with Lacan's famous dictum that the unconscious is structured as a language. We passively absorb language since it is language that passes through our unconscious (see more discussion in Chapter 4).[75] To Lacan, language is always something to do with absence and loss. If listening can really be considered as a language, Prospero's listening

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[73] Ibid, 259.
[74] Roland Barthes, *A Lover's Discourse Fragments*, translated by Richard Howard (New York, 1978), 16.
[75] Jacques Lacan, "The Function and Field of Speech and Language in Psychoanalysis," in *Écrits: A Selection*, translated by Bruce Fink (New York, London: W. W. Norton and Company, 1977), 31–106.

can be compared to Lacan's signifier of a lack in the Other (the designated algebraic symbol S(Ⱥ)), which, in Mladen Dolar's explanation, is "the always-missing ultimate signifier which would totalize the Other" and "has an intrinsic relation with femininity and the nonexistence of the Woman."[76]

Berio's opinion on listening and the feminine space reflects a psychoanalytical conception that is based on the nature of language: a series of rhythms of absence and presence inside our mind driven by desire and initiated by emptiness. We should consider the function and peculiarity of this music theater which does not aim to show an Aristotelian drama for entertainment, but rather suggests drama in one's mind in order to direct the audience's unconscious to find the truth of themselves. Whereas Prospero listens to the grain of his voice, i.e. the body in his singing voice, the experience is also transferred to the audience to perceive something extra in music, a body vibrating with musical sound, or as Carolyn Abbate termed it, "unsung voices."[77] Such voices direct the audience to fill the desire in the listening space and encourage them to seek the mental reality of the unconscious.

Therefore, for the audience, the work itself is the "feminine space," much like Prospero's body. The work lets the music fill the audience's mind as if they were powerless to this "desired object." The work, as well as Prospero's body, is a space. It is the center of the imaginary theater, a listening space, a space where one searches for the inner voice, and a dream that reflects what we are made of. This space echoes Berio's

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[76] Mladen Dolar, *A Voice and Nothing More* (Cambridge, MA: MIT Press, 2006), 56.
[77] Carolyn Abbate, *Unsung Voices: Opera and Musical Narrative in the Nineteenth Century* (NJ: Princeton University Press, 1991), 3–29.

comment on the nature of Prospero: he is a character who is "perhaps real in appearance, but not in substance."[78] Prospero's search for his own voice is mirrored by the audience's experience as they listen. His body is an agent which transforms the dramatic representation into a process of thoughts that are projected in one's "imaginary theater."

Returning to the musical designs in *Un Re*, the function of musical action, as I suggest, is the composer's attempt to direct the audience's listening experience. Berio's direction presupposes that the audience has an inherent musical ability allows them to "filter" what comes to their ears, i.e. what to focus in the sound. It requires the audience to be submissive to the music so that the filtering mechanism can fully function. The association of language and the unconscious brings us back to Berio's search for "universality of experience" [universalità dell'esperienza] in music, especially how musical ability is related to the unconscious, similar to language ability that is pre-programmed in the brain. His hypothesis that humanity has an innate competence to produce and understand music was influenced by the suggestion of universal grammar in linguistics. As I discussed in Chapter 3, this is the utopia that Berio believed in yet could never reach. Although the investigation turned out to be inconclusive and did not bring him to the utopia of universal musical grammar, experiments such as this inspired him to explore how musical experience can be treated as a "language of languages" (or the structure of a communication system) connecting diverse elements.

Berio's conviction concerning listening confirms that he never repudiated the search for music and language, or the hypothesis that music functions similar to language

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[78] Berio, "Eco in ascolto," in *Berio*, 53–61, citation at 60.

made up of patterns of symbols and signals in our mind. We can see that Berio investigated the issue from the 1950s all the way to the 1980s by exploring music and language in relation to the unconscious. If we put Berio's listening and feminine space alongside Barthes's listening space and Lacan's name-of-the-father and desire, it suggests that Berio's idea revolves around an ability structured by inherent laws which unconsciously govern our listening. In fact, *Un Re in ascolto* illustrates Berio's utopian vision rather than providing a realistic musical system that enables us to abandon structural listening and replace it with our instinct of listening. The work is a depiction of a two-fold process of listening and the unconscious: the void of the unconscious is filled by music (or sound) to be heard, whereas inside the music there is the void of the unconscious to be heard ("The silence is filled by the voice as if in the music there was a silence that makes itself to be heard." Part 1, Duetto II). If music theater is self-referential, this is what the audience is expected to listen to: the secret of their unconscious, which is also the truth in themselves. If the composer really saw listening as a language, it was not a matter of whether we listen structurally to understand the story or to enjoy the sonic quality of music, although such grand vision of paradise is far from achieved.

How far away was Berio from his utopia? The paradox of Berio's dream lies in connecting "universality of experience" to a poststructuralist approach of creating meaning. Berio started his pursuit from the 1960s when he was deeply influenced by the search of universal grammar in linguistics. If one of the key ideas in structural linguistics

was to uncover "universal laws which make up the unconscious activity of the mind,"[79] this was precisely what poststructuralism rejects, i.e. to break the general laws with universal character. Structures of meanings to poststructuralists are not universal and do not reveal truths of human condition and society. They are in certain ways reflected in the listening experience of *Un Re in ascolto*: "all forms of listening" by Prospero and the different perceptive levels for the audience. Meaning is created from the context and the interactions of materials from the musical, the textual and the scenic levels. The challenge taken by Berio was to explore the universal experience of humankind from a system in which unified general laws can hardly be found. His hypothesis was that the inborn human ability is capable of making sense of all sounds that reach our ears moment by moment without a structural understanding, which is considered a huge leap in scientific discovery even by today's standard. When Julia Kristeva turned away from Chomsky's proposal of deep grammatical structures by showing that structures cannot be universal since the subject is a contingent form (which is similar to the case of Prospero),[80] Chomsky's belief in the universal communicability of truth received strong criticisms from some poststructuralists as well. The discrepancy is not saying that the poststructuralists are right and the structuralists are wrong; they are taking different perspectives to examine the issues. As the poststructuralists doubt the existence of universal laws, the intellectual discourses around language that Berio heavily relied on

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[79] Claude Lévi-Strauss, "Language and the Analysis of Social Laws," in *Structural Anthropology*, edited by Claire Jacobson and Brooke Grundfest Schoepf (NY: Doubleday and Company, 1967), 65.
[80] See Julia Kristeva, *Revolution in Poetic Language*, translated by Margaret Waller (NY: Columbia University Press, 1984), 37.

were also questionable. While Berio adopted the latest discourses to search for the universal experience of music, he seemed to get farther away from this utopia.

Sanguineti described how Berio cunningly turned the melodrama of *Un Re in ascolto* into its negation, exposing his revenge on the genre.[81] Indeed, although the work is reminiscent of nineteenth-century Italian number opera, the focus on silence and the weakening of some essential elements of opera, such as a linear "story" and well-developed characters, render the work an anti-opera. Berio admitted that *Un Re* was not only an *addio* to opera, but also a part of his long farewell to the genre, the "silent memory of the future," as the work stresses.[82] Similar to *Sinfonia* and *Coro*, *Un Re* rethinks the genre by injecting new structuralist ideas in it. *La vera storia* and *Un Re* repudiate the rigid and seemingly arbitrary framing of stereotyped plots and set pieces, but propose a way to connect a work by relations in a process, inspired by the linguistic turn in twentieth century.

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[81] Edoardo Sanguineti, "La Messa in scena della parola (1982)," in *Ideologia e linguaggio*, edited by Erminio Risso (Milan, 2001), 172–177, especially at 176.
[82] Berio, "Dialogo fra te e me," 279.

Concluding Remarks

What did the search of "the eternal path between sound and sense" mean to Berio? Even in the 1990s, after all his important works, when conceiving the term "semantics," Berio admitted that its attributes are "impossible subjects."[83] They can be approached and penetrated with different doors, although the doors could be sealed or the rooms are empty. The search was still a utopia to him—the connection between sound and sense remained an "eternal path." However, Berio stressed that the process of searching is much more rewarding than the result.[84] This is reflected in his development of "music of musics" as his compositional style. Although the search of universality of experience was doomed to failure, it led him to develop an approach to integrate different musics and incorporate them into a musical process.

Unlike those who apply Chomsky's linguistics in music, Berio rejected the possibility of applying transformational grammar in music from the outset. He recognized the fundamental difference between music and language, i.e. the signified and the signifier cannot be separated in music. In addition, Berio observed that when applying linguistics to music, the time-dimension in perception of a work is often forgotten.[85] I have shown in my dissertation that Berio turned to semiotics to explore the nature of language rather than applying grammatical rules in music.

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[83] Theo Muller and Luciano Berio, "'Music Is Not a Solitary Act': Conversation with Luciano Berio," in *Tempo,* No. 199 (Jan., 1997), 16–20.
[84] Muller and Berio, "Music Is Not a Solitary Act," 16.
[85] See Berio's discussion in Muller and Berio, "Music Is Not a Solitary Act," 17.

If there was something in common in the journey from *Thema (Omaggio a Joyce)* to *Un Re in ascolto*, it was Berio's attempt to break the arbitrariness between signifier and signified in music, i.e. how music sounds and how they are interpreted. This was the motivation for him to review the past musical conventions from the history. I have shown that, by breaking down musical, linguistic, and theatrical components into abstract features, sounds and their references are connected by their common properties in Berio's works. In addition, musical process is crucial in these works since it allows the time-dimension for these elements to establish referential relations among one another. As I suggest, such "delayed perception"[86] in the signification process is paramount in Berio's music in relation to its formation of form.

Furthermore, by this point I hope that it has become clear that Berio's exploration of "language" does not limit to the organization of a specific language, but also the human "linguisticality," i.e. the human capacity for language.[87] I suggest that Berio compared music and language through the lens of the unconscious and the innate human capacity. Through the examination of contemporary linguistics and philosophy around language, Berio appeared to strive for his greater "linguistic projects," whether there exists "universality of experience" in music similar to the hypothesis of innate linguistic competence. I examined how ideas of "linguisticality" in the mid-twentieth century onwards, including "infinite use of finite means," productivity of language, and Lacan's

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[86] Muller and Berio, "Music Is Not a Solitary Act," 17.
[87] See more about the meaning of "human linguisticality" in Martin Haspelmath, "Human Linguisticality and the Building Blocks of Languages," in *Frontiers in Psychology*, vol. 10 (2019), article 3056.

proposal that “the unconscious is structured like language,” can be traced in Berio’s works.

Whether the experiments are successful or not, Berio left us his exploration of sound and meaning in his musical journey across decades, reflecting how new music in the postwar period intersected with modern thoughts on language in the twentieth century. In addition, Berio’s quest for music and language covers a wide range of topics from linguistics and semiotics to theatricality, narrativity, psychoanalysis and philosophy. The interdisciplinary discussions provide theoretical basis in relation to multiple topics, including gestures, voice, corporeality, total theater, and musical signs that are yet to be further explored.

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