

A style discussion of *The Magic Marimba* by Hans Roosenschoon

by

Altus Hendriks

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Supervisor: Prof. A. F. Johnson

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Abstract

The Magic Marimba is an orchestral composition by the South African composer Hans Roosenschoon. Based on the opera *Die Zauberflöte* by W. A. Mozart, this work illustrates the composer's ability to fabricate an entire composition from existing material in such a way that is innovative and original. The concept of reimagining material from an existing source is fortified by a series of techniques employed by the composer to transfigure material into a new creation. It is the purpose of this study to examine these techniques and to provide a detailed description of the stylistic elements within which these techniques have been implemented. The stylistic elements that are considered in each of the three movements are structure, melodic content, harmonic aspects and texture. Fascinating features that resulted from this study include structural devices such as sound blocks that the composer utilised to harness the music structurally, manipulation techniques to alter melodic extractions from the opera to disguise the quotations and to recreate new and exciting gestures, the employment of intricate pandiatonic clusters created through the superimposition of all pitches from diatonic scales and the creation of the impression of dimensions through the textural landscape in this work that moves through various degrees of densities in order to evoke the sensation of tension and subsequent release. These concepts are thoroughly addressed and examined through multiple illustrated examples and graphs.

The study includes a brief historical overview of the composition and explains the political background as well as the composer's artistic response. This does not, however, form part of the primary focus as it is beyond the scope of this study.

This study serves as a foundation for further researchers who wish to do a stylistic analysis of any part of the composer's oeuvre.

Keywords

Hans Roosenschoon

The Magic Marimba

Die Zauberflöte

Sound blocks

Pandiatonic clusters

Textural dimensions

Rhythmic ostinato

Marimba

Intertextuality

Appropriation

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Chapter 1

1. Introduction

1.1. Personal motivation and background to the study

Being a classically trained pianist and composer has allowed me, through studying several modern-day compositions, to become acquainted with the works of numerous contemporary composers and their style of writing. As an undergraduate student at the University of Pretoria I played and studied various compositions of contemporary composers from countries across Europe and America but only a few from my native country, South Africa. My awareness of the musical treasures that sprouted from the traditions of South Africa was augmented by the discovery of Hans Roosenschoon's composition, *The Magic Marimba*.

The Magic Marimba, commissioned by the former Foundation for the Creative Arts for the bicentennial anniversary of Mozart's death, was premièred on 10 October 1991 by the Cape Town Symphony Orchestra under the baton of Omari Hadari (De Kock 1991). However, this composition was not merely a commissioned work. Its genesis lies in the politics that arose in 1990 that was initiated by a well-documented speech delivered by Barbara Masekela (resistance poet and head of the ANC's Department of Arts and Culture in London) at the Grahamstown Arts Festival. She dictated that a change should be implemented in the Eurocentric outlook of the festival to incorporate more localised productions and artwork:

[...] Eurocentrism of the old hegemony sees South African culture in terms of the emulation of models originated outside the continent [...]
Eurocentrism sees South Africa's cultural worth in terms of its ability to produce a "Die Fledermaus" which can rival the Vienna Opera [...]
But just as [...] black experience cannot be a clone of white experience, so white South African experience cannot be a clone of the experience of the USA or Europe – such a base is false, and represents an effete decadence when the nation as a whole has the resources to create something which is vibrantly our own [...] The inclusion of the people's voice is on the agenda, but a long struggle

remains before it accurately reflects the fact that it is the voice of the majority. It is one thing to espouse democratic ideals at this late stage, but what we want to see is concrete action (African National Congress 1990:4).

The article, *Marimbas move in on Mozart*, reporting on this speech delivered by Barbara Masekela, was the inspirational impetus for Roosenschoon to compose his work after becoming aware of the political events regarding art and artistry in the country (De Kock 1991). He used this headline as the conceptual origin and chose Mozart's opera *Die Zauberflöte* as the basis for *The Magic Marimba*. All material used in this work emanated from this opera. The first movement, for example, can be described as a fantasy flight that is solely based on Pamina's aria "*Ach, ich fühl's, es ist verschwunden*". Movement II is the culmination and manipulation of several melodic fragments from the opera against a pulsating backdrop of moving sonorities and ostinatos. The third movement is a mere instrumental adaptation of "*Bei Männern, welche Liebe fühlen*", the idea being that this movement should be as close to the original duet as possible (Personal correspondence on 6 August 2013).

According to the composer *The Magic Marimba* was never intended to be a politically-laden work interspersed with traditional African music elements. It can rather be seen as the composer's artistic response to a politically orientated subject. The composer, therefore, chose to base the work on an existing Western composition and employed definitive Western musical elements with hints of Africanism. Roosenschoon simply referred to it as the incorporation of African music "principles" rather than "elements". The literature review (section 1.6) elaborates on these principles. Even though these principles could be substantiated on a philosophical level, it is not apparent to the listener. The result of this composition can be described, to a certain extent, as the composer commenting on the artistic viewpoint of Barbara Masekela by saying that artistry is a medium that is globally relevant to all of humanity and should be viewed on a global scale. But since there was formal segregation between races at the time, the composer incorporated these African principles to represent the fusion of Western and African musical elements/principles rather than to incite isolation. Roosenschoon, therefore, composed a work that is a tribute to

Mozart but that also comments on a political front suggesting fusion of all forms of artistry as opposed to isolating them.

The approach to *The Magic Marimba* is quite similar to that of *Timbila* written six years earlier in 1985. *Timbila* is one of the pinnacles of cross-cultural elemental fusions of traditional African music and Western principles. Here Roosenschoon used a live Chopi¹ xylophone orchestra in combination with a symphony orchestra to provide the ultimate experience of the uniqueness of Africa's traditional music (Gerber 1986:6).

As a vehicle of expression the composer chose an orchestral medium that he had used several times. For Roosenschoon the orchestra had proven to be an important tool in communicating ideas and emotions and to provide both listener and performer with a valuable experience; this had always been an important aspect for him. Consequently Roosenschoon's compositional style has evolved from the more dissonant pallet of the 1980s to a more lyrical style following the 1990s (De Kock 1991). This is clearly audible in *The Magic Marimba* in spite of the implementation of thick textural sonorities and pandiatonic clusters (Personal correspondence on 6 August 2013).

Considering the background of *The Magic Marimba* and its influences, this study was both challenging and fascinating due to the features that culminate in this composition. The work contains stylistic elements/principles from different time periods and cultural groups that intrigued me as researcher. All these stylistic elements/principles are condensed within the scope of a single composition as mediated and seen through the stylistic perspective of a single composer.

1.2. Research statement

A stylistic analysis of the compositional techniques and musical idioms used by Hans Roosenschoon in his work *The Magic Marimba* composed in 1991.

¹ The Chopi are from Southern Mozambique and are known for their xylophone music. However, the Chopi xylophone orchestra, with its leader Venancio Mbande who performed at the première of *Timbila* in June 1985 was from the Wildebeesfontein North Mine near Rustenburg (Gerber 1986:6).

1.3. Aim and value of the study

The aim of the study is to find and interpret the unifying stylistic elements in the context of *The Magic Marimba* as they were utilised by Roosenschoon in his distinctive compositional style. Further objectives of this study are the following:

- To discover how Roosenschoon established a distinctive musical style in *The Magic Marimba* that might also be applicable to other works.
- To establish a research approach that would best convey the analytical viewpoint of *The Magic Marimba* and that can be adapted in further studies of the composer's work.

Since sources on the composer are limited, it was considered meaningful to discuss the stylistic palette of this composition. This gave new insight into the composer's overall oeuvre that might assist future studies on the music of Roosenschoon after 1990. The study may also be considered an informative inspiration for composers regardless of their style of composition.

1.4. Research methodology

According to Mouton (2001:165), this research can be classified as an empirical study that includes the examination of all the facets of the musical elements addressed. Mouton categorises this as Content Analysis (Category 13). The sources used for this study involved primary and secondary data of which the primary source was the score of *The Magic Marimba* (published by Hans Roosenschoon Publishing, 1991). This score was analysed in order to organise, classify, discuss and interpret the different building blocks that manifest this composition. Secondary sources included studies conducted by researchers on specific compositions and the stylistic traits of Roosenschoon. However, these sources are based on his work prior to 1990, but were deemed valuable in the pursuit of a similar study in spite of his stylistic changes subsequent to 1990 (De Kock 1991).

A discussion of the stylistic parameters of the composition forms the main focus of this study. These parameters are all forms of structure (both macro and micro), melodic aspects, harmony (including tonality) and texture (that includes orchestration and sound/colour combinations). Each chapter is devoted to a different movement of the composition together with an individual examination of each element in each movement. Any new formulated analytical approaches to any elements are discussed in the relevant chapters.

After sufficient research on methodology formulation had been performed, the following design was chosen to structure the research:

Form: Each movement was analysed to determine the macrostructure and how microstructures are adjoined to form these macro-organisations. The findings are presented in a table format where applicable, and assisted in the interpretation of other stylistic elements. A discussion of the structural units that constitute the movement precedes any form of tabular presentation. In cases where a table format is not functional the discussion of the structural elements only is provided. A discussion explaining the applied mathematical approaches to the structural formulation of the composition is also presented.

Elements that constitute the microstructures, such as melodic and textural aspects, are referred to in this section but are expanded on only in the relevant subsequent sections.

Pitch content: The focal point of this discussion relates to the melodic extractions from *Die Zauberflöte* and how the composer manipulated (Movement I) or restated (Movement II) these extracted fragments. The techniques employed by the composer to manipulate fragments from the opera are discussed in detail. Tabular illustrations of how these fragments succeed one another in relation to the original succession are presented. In addition the second movement's discussion includes an investigation of the formulation of the underlying rhythmic ostinato that is perpetuated throughout the movement.

Eventually there is a discussion of intertextuality. This discussion is included in the summary and discussion section of this dissertation (Chapter 5).

The Bärenreiter score of Mozart's *Die Zauberflöte* printed in 1970 was used as a comparative reference. This urtext allows a direct extraction of the relevant material from the opera.

Harmony: Included in this section is an investigation of the vertical spacing of harmonies. Most of the harmonies utilised in this composition are pandiatonic clusters (Personal correspondence on 6 August 2013). As a result of the uniqueness of these cluster harmonies, the researcher devised a new analytical approach that is discussed in the sections on harmonic practises. Harmonic functions reminiscent of the 18th century are presented by the traditional system of Roman numerals. There is also a discussion on the broad scope of tonal implications that is accompanied by these sonorities. A number of graphs illustrate the treatment of cluster harmonies.

Texture: This section involves the examination of the grouping of a selection of instruments at any particular juncture in the composition. A discussion of the superimposed layers of musical material, such as background, middle-ground and foreground material², together with their resulting orchestration is provided. Graphs presenting the density factor of areas are included.

1.5. Delimitations of the study

- This study is concerned exclusively with *The Magic Marimba* and no comparative study with prior or subsequent compositions was attempted.
- No comparative study between this composition and those of any of the composers deemed as influential to the style of Roosenschoon has been attempted
- Although it has been established that the background of this composition had a remarkable influence on its outcome, this study is not of a political or perceptual nature.

² It should be noted that the terms foreground, middle-ground and background material are not utilised in their Schenkerian sense but rather to classify the noticeability of the superimposed layers.

1.6. Literature review

A limited number of sources on the compositional output of Roosenschoon were available. These included only a few dissertations and articles on isolated works, together with the compositional techniques employed in these compositions. These sources formed the basis in understanding Roosenschoon's work. Sources concerned with analytical aspects in general and also those discussing stylistic features and relevant composition techniques of the 20th-century were also consulted.

Analysis according to Beard and Gloag (2005:12) is, in broad terms, to find the unifying elements within an overall structure and to examine them in isolation and in relation to one another. Furthermore, their functional interactions within the work as a whole are examined to discover their purpose and meaning in a composition. In addition, these elements are then considered and interpreted in various ways in the context of external influences. These influences comprise aspects such as the time period, political era, cultural milieu and geographical area in which a composition was written, combined with the composer's interpretation and usage of these musical elements (Beard & Gloag 2005:170). The study of these elements constitutes a stylistic analysis, which consists of technical features such as form, texture, harmony, melody and rhythm (Pascall 2001:638). Bent and Pople (2001:527) concur with this idea of style. They do, however, state that the analysis of music should be of an empirical nature in which the music itself is used as the starting point rather than the controversial external factors that eventually undergo many paradigm shifts and provoke numerous debates.

To better understand stylistic analysis and analytical approaches, various sources on the subject have been consulted. In *A Guide to Musical Analysis* Cook describes analytical methods that have been used since the Renaissance. These methods of analysis consist of the traditional method, Schenkerian method and its psychological approach to analysis, set-theory analysis, serial analysis and semiotic analysis. Of all these methods the main focus is on the traditional method where applicable, together with newly devised approaches. Other sources that were used are the works of Kostka (2011), Berry (1976), Dallin (1974), Lester (1989) and Persichetti (1978). These sources were chosen because they examine a large spectrum of features that are especially useful

and most appropriate to the study at hand. Dallin's book (1974), for example, discusses the following features: melody (the contour and organisation of 20th century melodic material and applied modes), harmony (structures of superimposed thirds, added/omitted notes, polychords and non-tertian structures), harmonic progression, rhythm and metre, tonality, cadences, thematic metamorphosis and imitation. The discussion of these aspects correlates with the treatment of material found in *The Magic Marimba*. Chapter 4 of Dallin's book (1974), *Techniques of Twentieth Century Composition* that discusses thematic metamorphosis was consulted frequently since Roosenschoon constructed large sections in *The Magic Marimba* from only one melodic figuration by simply rearranging or extracting pitches (Personal correspondence on 6 August 2013). This aspect is apparent in the second movement and relates to the ostinato.

A feature recurring in numerous compositions of Roosenschoon is the incorporation of musical quotations. The vast array of sources from which Roosenschoon drew and integrated his material is fascinating. An example can be seen in *If music be* (for tape collage), which is a homage to J. S. Bach and that incorporates material from Bach's *Crucifixus* and further quotations from composers such as Mozart and Dvořák (James 1986:110). Another example is *Ghomma* (1980) where the composer used a simple rhythmic pattern, derived from a Malayan song (AG ROS A LEM) to unify the diverse material of the composition. In *Architectura* (1986) the composer used the traditional song *Daar kom die Alibama* as a point of departure. Traces of the song, however, appear only at the beginning and end of the composition (Roosenschoon n.d.).

Roosenschoon used these melodic and rhythmic elements and internalised them to form part of his unique vocabulary. As part of the internalising process Roosenschoon frequently, regardless of the material chosen to form part of the melodic output, expressed his thoughts in a way that allows space for some form of South African music elements. Even though Roosenschoon does not regard himself as an African composer, he frequently combines African elements with his own tonal language to form a subtle expression of these African flavours often not perceptible to the objective listener (Geldenhuys 2005:363). Consequently this aspect of Roosenschoon's music has provoked some controversy (May 1992:782).

African musical principles in the music of Roosenschoon have been examined previously by researchers. Gerber (1986:3 - 4), in her essay, compiled a list of African musical elements that were gathered from researchers such as A. M. Jones, D. Rycroft, G. Kubik and R. Waterman. Many of these elements coincide with the principles applied in *The Magic Marimba*, one of which is Roosenschoon's striking rhythmic application that is reminiscent of traditional African music. Van der Sandt (1989:8) examined this rhythmic employment and corroborated his statements with examples from compositions such as *Katatura* (1977) and *Makietie* (1978). He describes one of the audible features in these compositions as a “*rhythmic vitality [which created] a sense of sustained propulsion*”. Roosenschoon also conveyed his viewpoint on this stylistic trait and asserted that “this pulsating rhythmical character” had become an increasingly typified feature in his music; he referred to it as a *perpetuum mobile* (Personal correspondence on 23 February 2014). Gerber (1986:31) concurs with this idea. She expanded her discussion by stating that these propelling rhythms, e.g. *Makietie*, applied in a cyclic manner conform to the traditional practises of African music. It is, therefore, a contributing factor in the African flavour conveyed by Roosenschoon. Similar examples can be found in the second movement of *The Magic Marimba*.

In spite of the African principles used in this composition, Roosenschoon's style is still firmly rooted in 20th century Western stylistic writing. In an article on the music of Roosenschoon, Geldenhuys (2005:363) offers a recapitulation on the style of Roosenschoon. He states that Roosenschoon had always, since his earlier years as a developing composer, infused a broad variety of styles and compositional techniques (that dominated the 20th century) into his own style. The evident preference for creating sonorous effects in his early compositions provided a platform for experimentation with colours, timbres and textures. This allowed Roosenschoon to develop his own harmonic vocabulary; the vertical and horizontal way in which he spreads a single sonority is quite striking. On the topic of harmonic progression and tonality, Kostka (2011:89) points out that as a result of the vast amount of experimentation concerning harmonic procedures, no general theory regarding chord roots could be established. Consequently, the researcher generated a newly devised harmonic approach when analysing the complex harmonic structures of this composition.

In conjunction with Kostka's findings on 20th century harmonic practises, Van der Sandt (1989:7) discusses an important aspect of Roosenschoon's style that still rings true in his recent compositions. This aspect is the way in which Roosenschoon employs the constant expansion and contraction of cluster chords. *The Magic Marimba* is largely fabricated from the pandiatonic cluster c4 - b5. The composer used this cluster and exploited the rotation possibilities of the pitches in order to create up to ninety potential derivatives (including octave displacements). Through this rotation of pitches he created the sensation of expansion and contraction (Personal correspondence on 6 August 2013).

Geldenhuis adds that Roosenschoon's treatment of horizontally placed material "... [is] not treated as themes to elaborate on in the traditional sense, but rather as organic musical objects being developed and displayed on different levels resulting in an easier accessibility of the music to the listeners, and in this way overriding to a certain extent the inherent complexity of compositional structure and design" (Geldenhuis 2005:363). Van der Sandt (1989:8-9) agrees and explains that Roosenschoon's music was often constructed and moulded into sound blocks with a conscious awareness of their timbres and textures. Although Roosenschoon's music, according to De Kock (1991), became more lyrical after 1990, the principle of sound areas can still be seen in *The Magic Marimba* (especially in the first movement) where fluctuating sound blocks of increasing or decreasing textural densities are alternated. The Polish composer Krzysztof Penderecki (1933 -) is one of the larger influential composers on the style of Roosenschoon and has also structured his music according to alternating sound blocks. This is evident especially during his former years with a composition such as *Threnody to the Victims of Hiroshima* (Steele 2007:13). A summary of other composers who had a remarkable influence on Roosenschoon's style is offered in *Composers in South Africa today*:

The influence of composers such as Ligeti, Penderecki and Lutoslawski is evident in his use of note-clusters, micro-tonal glissandi, controlled improvisation, exploration of instrumental and vocal colours and fluctuating textures and dynamics. This concern with colour and texture both influences and affects progression in the

same way that melody, harmony and rhythm have done in music in the past (Klatzow 1987:221).

Seeing that the above-mentioned composers had such a significant influence on Roosenschoon's work, it was deemed fit to become acquainted with the style characteristics of these composers and to investigate the studies that have been conducted on their music. An important source that was consulted is a study entitled *Lutoslawski and his music* by Steven Stucky (1981). The reason for this source's significance is the fact that Roosenschoon considers Lutoslawski to be one of the most influential composers on his musical style (Personal correspondence on 23 February 2014).

In Stucky's book on Lutoslawski he discusses the self-arranged stages of the latter's life and includes an examination of selected works from his later years. Before the discussion of these late works, he incorporates an inspection of the stylistic elements of Lutoslawski's late style, which is beneficial in understanding his work and the influence it had on Roosenschoon.

Gerber researched Béla Bartók's influence on the style of Roosenschoon, especially with regard to the use of the Fibonacci sequence and its employment in *Timbila* (1985) (Gerber 1986:31). This calculated means of structuring has always been an important component in Roosenschoon's work and different forms of mathematically derived constructions are present in *The Magic Marimba* (Personal correspondence on 6 August 2013). For a better understanding of how Bartók structured his music, this study also explores E. Lendvai's book, *Béla Bartók: An analysis of his work* (1971), and attempts to detect any mathematical applications in *The Magic Marimba*.

With a view to gaining a better perspective on the stylistic approach in Roosenschoon's earlier compositions, studies by S. J. Jacobs and E. Gerber were examined. The two works discussed in Gerber's essay are *Timbila* (1985) and *Makietie* (1978) and her findings on Roosenschoon's style offer a valuable compendium of characteristics from pre-1990, which was helpful in a further examination of his stylistic employment and development post-1990. Jacobs provides a broad discussion of the works of Roosenschoon between 1972 and 1983. Although numerous shortcomings are evident in this dissertation it has been of great use in referring to Roosenschoon's earlier works and in examining the compositional style of his former years.

Chapter 2

2. Movement I

2.1. Structure

The Magic Marimba is a composition based exclusively on material extracted from the opera *Die Zauberflöte* by W. A. Mozart. Roosenschoon chose Pamina's aria *Ach, ich fühl's, es ist verschwunden* as the source to fabricate the first movement of his composition. All aspects of the composition are influenced by this aria.

When considering the structure of this movement it becomes apparent that the composer did not formulate it through any traditional form of structuring. It can rather be described as a dual-stylistic envisioning that has been employed by the composer in alternating fashion. The macrostructure, accordingly, contains three main beacons that function as partitioning devices to announce the significant changes in musical content such as texture, harmony and style. These beacons are harmonic structures that can be located in measures 8, 154 and 209. Prior and subsequent to these harmonic beacons are sections employing either firmly rooted 20th century elements or musical constructions reminiscent of the 18th century. Consequently they divide the first movement into four distinct sections. The material occurring before measure 8 is an exact statement of the coda (m. 38⁴ - 41) from the aria *Ach, ich fühl's, es ist verschwunden*. This musical quotation is therefore reminiscent, in every sense, of the 18th century and functions as an introduction. In measure 8 Roosenschoon uses a cluster chord that contains all the scale degrees of an E \flat harmonic minor scale. It is from this point onwards up to measure 153 that

Roosenschoon employs 20th century compositional techniques. The E \flat minor triad used in measure 154 is one without any added members. This signifies the return to an 18th century musical pallet. Included in this section are three cadenzas for marimba with interjecting 18th century triadic accompaniment figurations. As an indication of the coda (m. 209), Roosenschoon returned to the E \flat harmonic minor cluster as a restatement of the one used in measure 8. The coda is a reprise of the 20th century elemental structures used in measures 8 - 153. In summation, the macrostructure consists of the following:

Measure	Content
1 - 7	Introduction (employing 18 th century stylistic writing)
8 - 153	Main body of the composition (employing 20 th century stylistic writing)
154 - 208	Section containing three cadenzas for marimba (employing 18 th century stylistic writing)
209 - 225	Coda (employing 20 th century stylistic writing)

Table 1: Macro structure of the first movement

The main focus of the study of the first movement is the large section (m. 8 - 153) that contains highly structured 20th century musical elements. As a structuring device, exclusively employed in this section, the composer utilises a series of alternating sound blocks of contrasting timbres and textures. Sound blocks, as described by Erickson (1975:186), are “[sound areas that] *may include many contrasting elements – short or long, loud or soft, bright or dull. The construction may be layered or not, as long as the total impression is of a single thing*”. This structural device gained prominence through the compositions of composers such as Cowell, Varèse, Ives and Xenakis. It was during the late 1950s and 1960s that composers such as Ligeti and Penderecki became eminent for moulding sound masses into sound blocks of varying colours, densities and complexities. They treated sound aggregates such as timbre, texture, register and rhythm as the primary constituents of their music. These elements served as the main components of structure in music in the same way that melody and harmony had in previous centuries (Schwartz & Godfrey 1993:166; 181-2). In the same way Roosenschoon states that his music is derived from sound colours comprising different textures, described by May (1992:782) as *sound painting*.

These sound blocks, each being only a few measures in length, contain specific textural images that have been predetermined by the composer in order to create either similarities or contrasts of varying degree. The length of each sound block has been meticulously calculated by using the aria, on which this movement is based, as a yardstick. This is achieved by utilising the rate of harmonic change as a means of determining the length of each sound block. If the quaver is used as the unit of progression in the aria, one will notice that the number of quaver beats per harmony

represents the number of measures per sound block in this movement. Or stated differently – each sound block’s number of measures is equal to the number of quaver beats per harmony in *Ach, ich fühl’s, es ist verschwunden*. This harmonic to quaver beat ratio can be observed in Figure 1:

Andante

i V⁷/iv iv⁶ vii⁵ i iv⁶

4

x⁷ i⁶ x xi⁷ a⁶

Figure 1: Harmonic analysis of measures 1 - 5 of the aria *Ach, ich fühl’s, es ist verschwunden* from *Die Zauberflöte*

In the first measure of Figure 1 the tonic harmony is spread across six quaver beats and in the second measure the harmonies are divided into quaver beats of 3 + 2 + 1, etc. The first sound block in the section between measures 8 - 153 is therefore also six measures long while the second sound block is three measures in length and then two measures, etc. Table 2 illustrates the harmonic exposition of measures 1 - 25² from the aria that has been used for this construction.

Harmonic layout of the aria	g: i	V ⁷ /iv	iv ⁶ ₄	vii ^o ₅ ⁶	I	iv ⁶	V ⁷	i ⁶ ₄	V
Quaver units per harmony	6	3	2	1	3	3	3	3	3

vi ⁷	G ⁺⁶	V	vi ⁷	Fr ⁺⁶	V	v	V ⁶ ₅ /V	V ⁴ ₃ /III		
								Bb: V ⁴ ₃	I	V ⁷
2	1	3	2	1	2	1	3	3	8	1

vi	I ⁶	vii ^o ₅ ⁶ /ii	ii ⁶	vii ^{o7} /V	V	V ⁶ ₅	I	vii ^o ₃ ⁴	I ⁶	IV ⁶
3	2	1	3	3	3	2	1	2	1	1

I ⁶ ₄	V ⁶ ₅ /V	I ⁶ ₄	V ⁷	I ⁶ ₄	V	I	V ⁹ /ii - V ⁷ /ii	ii	V/V	V ⁹ /iii - V ⁷ /iii g: V ⁹ /V - V ⁷ /V
1	1	9	1	1	1	6	6	2	4	6

Bb: III g: V - V ⁷	i ⁶ ₄	V	i ⁶ ₄	V	ii ^o ₅ ⁶	V	ii ^o ₅ ⁶	V ⁷	vii ^{o7}	i	vii ^o ₃ ⁴
3	3	5	1	3	3	3	3	3	2	1	2

Table 2: The harmonic representation of *Ach, ich fühl's, es ist verschwunden*, measures 1 - 25²

The quaver units illustrated in Table 2 are representations of the exact length, in measures, of each sound block in measures 8 - 153. By this means Roosenschoon calculated the smaller structural

units that govern the largest section of this movement. After measure 153 this method of structuring is no longer employed.

Another form of structuring that the composer applied in the section from measures 8 - 153 is time structuring through tempo manipulations. In this section there are numerous tempo change indications for subsequent sound blocks. The reason for this is that the composer attempts to achieve time uniformity between measures, regardless of what the time signature is. In other words, the composer applies tempo changes between sound blocks for all measures to be equal in length even if there are time signature changes. This allowed the composer to avoid the excessive use of quintuplets, sextuplets, septuplets, etc. (Roosenschoon 1991:ii). Through simple mathematics an accurate time estimate can be obtained for each sound block. This, however, is only theoretical and not necessarily practically orientated.

The first sound block (m. 8 - 13) has a tempo indication of $\text{♩} = 66$ with a time signature of 3/4. This tempo indication states that 66 crotchets are to be played in one minute (60 seconds). Therefore, by the following simple equation, the length of each measure can be calculated in time:

- $(60 \text{ sec.}) \div (66 \text{ ♩}) = 1 \text{ ♩ in } 0,91 \text{ sec.}$
- $0,91 \text{ sec.} \times 3 \text{ ♩} = 2,73 \text{ sec.}$

Consequently, each measure in the first sound block has a duration of 2,73 seconds.

The third sound block (m. 17 - 18) has a tempo indication of $\text{♩} = 88$ and a time signature of 4/4:

- $(60 \text{ sec.}) \div (88 \text{ ♩}) = 1 \text{ ♩ in } 0,68 \text{ sec.}$
- $0,68 \text{ sec.} \times 4 \text{ ♩} = 2,73 \text{ sec.}$

Sound block four (m. 19) has a tempo indication of $\text{♩} = 152$ and a time signature of 7/8:

- $(60 \text{ sec.}) \div (152 \text{ ♩}) = 1 \text{ ♩ in } 0,4 \text{ sec.}$
- $0,4 \text{ sec.} \times 7 \text{ ♩} = 2,76 \text{ sec.}^3$

This indicates a highly structured process that has been meticulously calculated to control the spatial dimension of time in this movement. When Table 2 is observed, it can be noticed that not all sound blocks have the same number of measures. This means that even though every measure has the same length, there are larger units (such as sound blocks) that are not equal in length. If the length of one measure of the first four sound blocks is calculated and multiplied by the number of measures in each sound block, it will be seen that time differences occur. Sound block 1 consists of 6 measures. If multiplied by 2,73 seconds, a total time length of 16,4 seconds is achieved. Using the same equation, sound blocks 2 (m. 14 - 16), 3 (m. 17 - 18), and 4 (m. 19) on the other hand will only be 5,45, 5,46 and 2,76 seconds in length respectively.

Evidently there are sound blocks that have similar lengths whereas others have significantly different lengths all together.

Structural coherence, in its simplest form, is the ordering of musical elements so that the arrangement thereof can be perceived according to their repetition, contrast, variation and development (Deri 1968:87-90). The way in which Roosenschoon achieves structural unity and contrast is through textural similarities and differences between selected sound blocks together with recurring melodic fragments extracted from *Ach, ich fühl's, es ist verschwunden*.

In conjunction with the opening phrase of the movement, there are numerous instances where the composer refers to the material of the aria's coda. These instances of revocation are very important to the overall structure of the movement. Seeing that the largest part of this movement consists of sound blocks with contrasting elements, a sense of familiarity, stability and structure is

³ The reason for the length of this measure being inconsistent is for practicality reasons. The older mechanical metronomes did not have a setting of 154 (which would have resulted in the correct length). As a result the composer had to choose the closest setting which was 152 beats per minute.

acquired through the numerous references to this material. This is only possible, however, as a result of the opening phrase being a faithful transcription of the coda from the aria. The repetition allows the listeners to familiarise themselves with the material and enable them to identify the altered reiterations. In summary, the opening phrase can be seen as a point of reference and the ultimate structural force that unites this movement.

In addition to the reiterated melodic material that creates structural unity, one also finds texture and timbre playing an important role in the creation of structure. Certain sound blocks are alike as a result of similarity between their textures or timbres. Measures 8 - 13, 98 - 103 and 209 - 225 are perfect examples of this phenomenon. All are nearly identical because of their likeness in texture, as explained below.

The composer utilises certain gestures to remind the listener of previous events. These gestures include the following:

- Repeated/pulsating chord structures, especially when employed in the string section (Figure 2). This practice is employed or evoked in measures 8 - 13, 19, 20, 29 - 31, 44, 74 - 79, 86 - 92, 98 - 103, and 209 - 225.

The image shows a musical score for measures 29-31. The tempo is marked as *♩=66 trem. a punta*. The score is for five string parts: Violin 1 (Vln. 1), Violin 2 (Vln. 2), Viola, Violoncello (V'celli), and Contrabasso (C'bassi). The key signature has one flat (B-flat) and the time signature is 3/4. The music features a pulsating chord structure in the upper strings, with repeated chords in the Violin and Viola parts. The lower strings (Cello and Bass) play a rhythmic accompaniment of eighth notes. A box containing the number '29' is located at the bottom left of the score.

Figure 2: Repeated chord structures in measures 29 - 31

- Uneven pulsation of pitches to create texture (Figure 3). This can be seen in measures 20 - 22 and 44 - 46.

The image shows a musical score for a brass section. It includes staves for Trumpets (Trbe. 1, 2, 3), Cornets (Corni 1, 2, 3, 4), Trombones (Tbni. 1, 2, 3), and Tuba. The score is in 3/4 time and features dynamic markings such as *f*, *fff*, *sim.*, and *off sim.*. The notation shows a complex rhythmic and melodic structure with uneven pulsation of pitches across the measures.

Figure 3: Uneven pulsation of pitches in measures 20 - 22 (percussion section omitted)

- Written out tremolos (Figure 4). This occurs in measures 8 - 13, 53 - 60 and 98 - 103.

The image shows a musical score for woodwinds and strings. It includes staves for Flute (Fl. 1, 2), Oboe (Oboi. 1, 2), Clarinet in G (Cl. ingl.), Clarinet in Bb (Cl. basso), Bassoon (Bas.), and Flute (Fag. 1, 2). The score is in 3/4 time and features dynamic markings such as *f*, *mf*, and *dim.*. The notation shows a complex rhythmic and melodic structure with written out tremolos across the measures.

Figure 4: Written out tremolos in measures 53 - 57

All these aspects are employed as structural devices by the composer.

2.2. Melodic content

Melodically this movement was also fabricated from Pamina's aria *Ach, ich fühl's, es ist verschwunden*. The first 7 measures, as discussed, are an exact restatement of the coda from the aria. From this point onwards up to measure 153 each subsequent sound block is melodically based on a selection of specific material that has been extracted from this aria. These chosen melodic fragments were obtained by segmenting the aria's material into fractions of the composer's choosing and were then used to formulate new material for each sound block. These fragments succeed in either a rearranged fashion or they occur in consecutive order as they appear in the original aria. There are also numerous occasions where a continuous strand of aria material is interrupted by material from the coda. Despite the fact that the movement is based on this aria, very few of these fragments are clearly recognisable. This is attributed to a range of manipulation techniques used by the composer to obscure these melodic segments deliberately. It is only after the E \flat minor chord in measure 154 that the melodic material becomes apparent to the listener and that the melodic fragments are identifiable.

To show exactly how the succession of material in measures 8 - 153 relates to the material in the aria, the researcher included Table 3 to illustrate this procedure. Table 3 shows the ordered placement/succession of fragments selected from the aria. Blue blocks are continuous strands of aria material. Red highlighted blocks represent the interruptions of the continuing strand of aria material by segments from the coda. Yellow highlighted blocks are interjections by material other than those forming part of the consecutive strand of aria material. The green block signifies the restart of the aria's material.

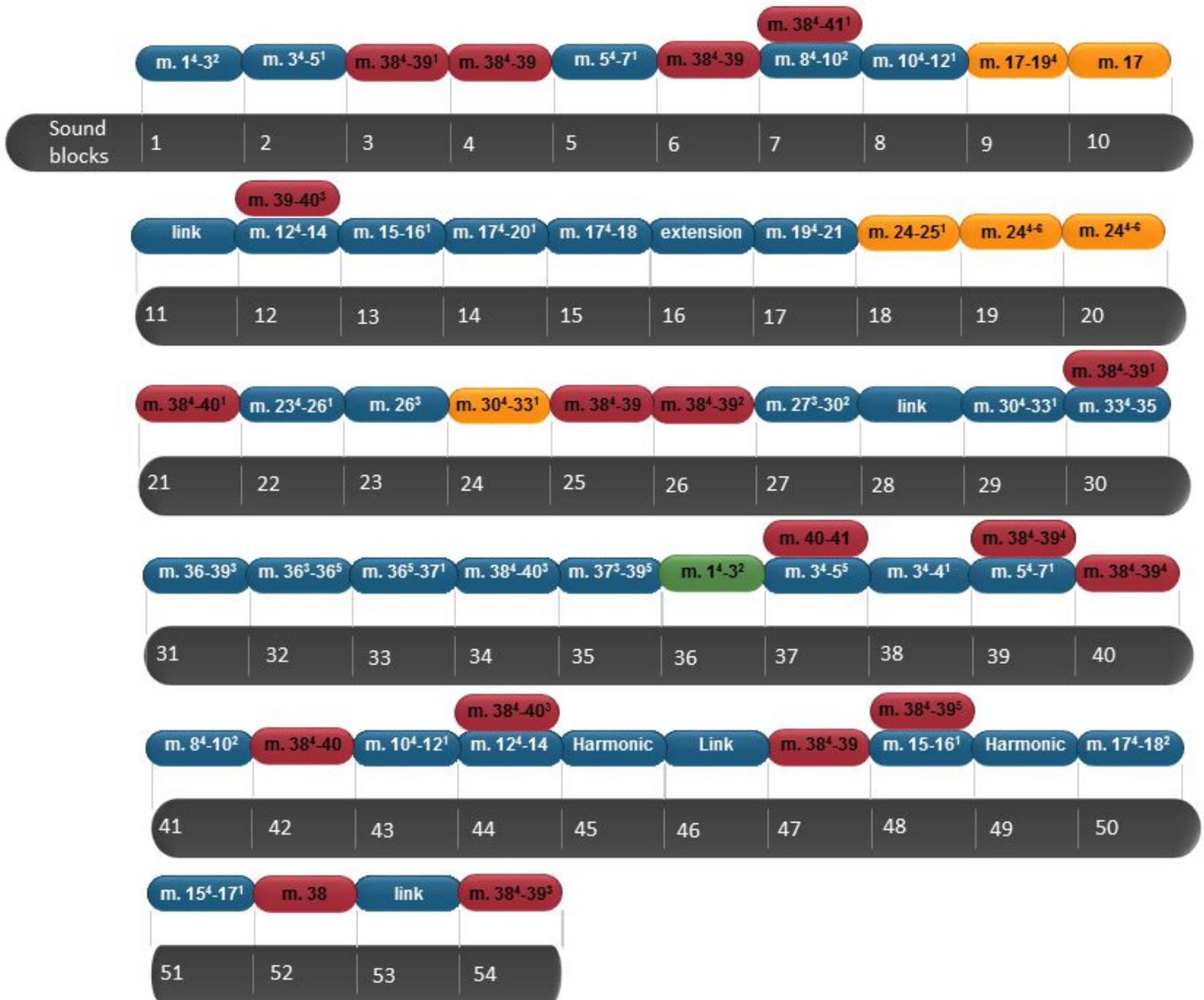


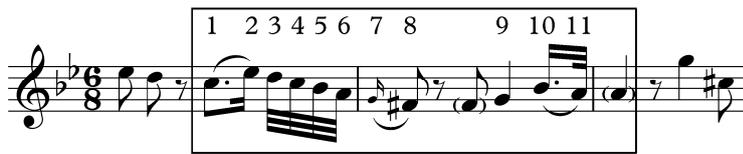
Table 3: Illustration of the succession of aria material in subsequent sound blocks

In this table it is clear that the numerous references to the coda material are vital to the structure of this movement. In certain sound blocks simultaneous usage of material forming part of a continuous strand as well as coda material has been employed. Other references to the coda material are interruptions of ongoing material. Further interjections in the continuous strand of

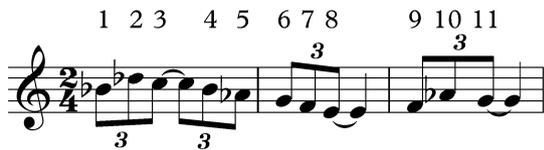
aria material are kept to a minimum. It can also be noticed that the aria is employed adjacently one-and-a-half times and is again reintroduced, as we will see, after the section of measures 8 - 153. Some of the smaller sound blocks function as links between larger ones or are extensions of a preceding sound block. Sound blocks 45 and 49 seem to be exceptions where only harmonic structures are employed without any reference to aria material.

It is important to note that this employment of aria material lies at the foundation of an intricate web of compositional procedures. The most fascinating of these is the way in which Roosenschoon creates a sense of melodic structure in a textural landscape. In spite of these ongoing strands of aria-based material, adjacent sound blocks can still create either a sense of unity or contrast. A sense of vast contrast is occasionally created by the composer even if there is a continuation of original aria material from one sound block to the next. This is attributed to the way in which the composer utilises textural divergences between sound blocks. Therefore it is clear that any alterations made to the original material extracted from the aria either contribute to the texture of a sound block, or are a constituent thereof. This, in turn, can lead to a conclusion that stipulates that sound blocks are constructed from a textural perspective rather than a melodic one.

The methods employed by Roosenschoon to transform aria material can be grouped into six main groups. These groups are rhythmic manipulations of aria material, formulation of textured sound blocks from aria fragments, pitch selections from aria segments, permutations of aria fragments, retrograde of selected passages from the aria and the simultaneous use of aria segments. Of these methods rhythmic manipulation seems to be the most predominantly used technique. The first occurrence of this technique can be seen in the second sound block (m. 14 - 16), which is a modification of measures 3⁴ - 5¹ from the aria. Figure 5 illustrates this relationship between these two extracts. It can be noticed that only the rhythms have been altered and that the pitches form part of an exact transposition from the selected aria fragment:



- Measures 3 - 5 from *Ach, ich fühl's, es ist verschwunden*



- Measures 14 - 16 from *The Magic Marimba* (organ)

Figure 5: Comparison between melodic fragments from *The Magic Marimba* and *Ach, ich fühl's, es ist verschwunden*

The next technique used by Roosenschoon is the formulation of textured sound blocks that are based on material from the aria. There is no hierarchy of melody and accompaniment present in these sound blocks and the intention is for lines to fuse together to form the texture. In some of these instances the composer dismembered the elements of the aria material to form part of different aspects of the texture. This technique can be seen in the first sound block of the movement (m. 8 - 13) as illustrated in Figure 6:

The image displays a page of a musical score for measures 8 through 11. The score is arranged in a standard orchestral format with multiple staves for different instruments. The instruments listed on the left include Picc., Fl. 1.2, Oboe 1 and 2, C. Ingl., Cl. picc., Clar. 1 and 2, Cl. basso, Sax., Fag. 1.2, C'fag., Trbc. 1-3, Corni 1, 2, 3, 4, Tbn. 1, 2, 3, Tuba, Organo, Gr.c, Vln. I and II, Violo, V'celli, and C'bassi. The score includes dynamic markings such as *ff* and *diminuendo*, and performance instructions like *hard stick i.v.* and *soft sticks*. The music is written in a key signature of two flats and a 2/4 time signature. The page number '2' is in the top left, and '28' is in the top right.

Figure 6: Measures 8 - 11 from sound block 1

If the above excerpt is studied it becomes clear that the pitch selections for the contrapuntally layered passage are based on measures 1⁴ - 3¹ from the aria. In the enlarged illustration of the horn part below (Figure 7), a comprehensible comparison can easily be made:

Measures 1-3 from *Ach, ich fühl's, es ist verschwunden* Transposed pitches of measures 1-3

Figure 7: Comparison of the pitch content of measures 1⁴ - 3² from *Ach, ich fühl's, es ist verschwunden* and measures 8 - 13 (horn section) from Movement I

In Figure 7 the comparison is made with the second horn but on closer examination one notices that all horizontally placed pitches were derived from this aria segment. The vertical pulsating cluster chords in Figure 6 are rhythmic augmentations of the pitch selections. This procedure is illustrated in Figure 8:

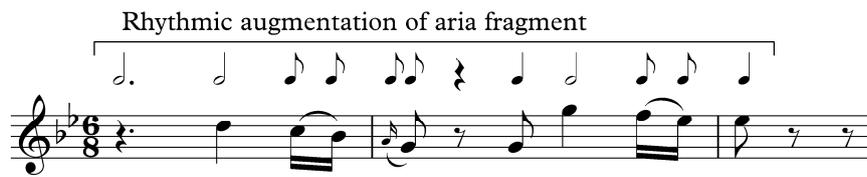


Figure 8: Rhythmic augmentation of measures 1⁴ - 3¹ from the aria

The next two techniques used by the composer are pitch selections and permutations (reordering of musical elements) (Ottermann & Smit 2000:190). These techniques are used occasionally only and can be observed in sound blocks 42 (m. 116 - 121) (Figure 9) and 3 (m. 17 - 18) (Figure 10) respectively.



Figure 9: Pitch selections from the aria segment

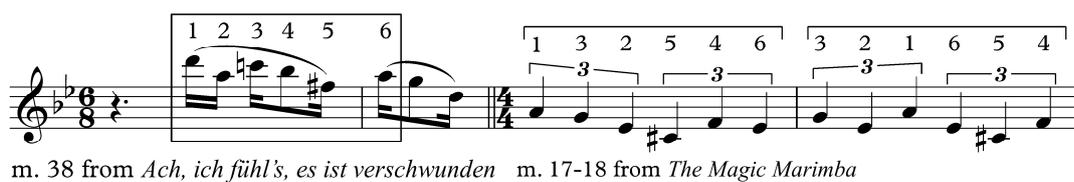


Figure 10: Permutation of pitches from the aria selection

Another technique used by Roosenschoon, which links up with the previous technique, is the use of retrograde. A fine example can be found much later in the score in sound block 34 (m. 86 - 90). This sound block can be divided into two parts that consist of an initial statement (not in retrograde) of measures 38 - 39 from the aria (Figure 11) followed by measures 38⁴ - 40³ in

retrograde (Figure 12). In the initial statement there are also interjections of pitches from the first measure of the aria extract. The red letters illustrate the interjecting pitches which is used in retrograde:

m. 38-39 from *Ach, ich fühl's, es ist verschwunden*

m. 86-90 from *The Magic Marimba (marimba I)*

Figure 11: Initial statement of sound block 34 (Part 1)

Figure 12 illustrates the second part of sound block 35 which contains retrograde. This figure indicates that retrograde is not strictly applied but the general movement is one of reversed order.

m. 38-40 from *Ach, ich fühl's, es ist verschwunden*

m. 91-94 from *The Magic Marimba (marimba I)*
(transposed)

Figure 12: Retrograde in sound block 34 (Part 2)

The last technique used by Roosenschoon is the simultaneous use of two or more segments from the aria. In sound block 12 (m. 38 - 40) (Figure 13) the melodic material as well as the accompaniment are all derived from different segments from the aria.

The musical score shows five staves: Organo, Violins (1 and 2), Viola, Violoncello, and Contrabass. The Organ part starts with a *mp* dynamic and features a triplet of eighth notes. The Violin 1 part is marked *unls.* and *div. in 3*, with a tempo of $\text{♩} = 168$. The Viola part is marked *unls.* and features a triplet of eighth notes. The Violoncello and Contrabass parts are marked *pizz.* and feature a triplet of eighth notes. The tempo for the lower strings is $\text{♩} = 112$ with a *poco a poco crescendo* marking. A rehearsal mark **37** is placed at the beginning of the lower string parts. A *(3+2)* marking is present above the Organ staff.

Figure 13: Measures 38 - 40 from Movement I

In the above excerpt (Figure 13) it can be seen that the prominent melodic material is played by the first violins and organ. The fragmented organ part is a rhythmically adapted and transposed version of the flute material from the coda of the aria while the first violins, in counterpoint with the organ, are based on measures 12⁴ - 13³ from the aria. This can be observed in Figure 14:

The figure shows two musical examples. The first example shows measures 39-40 from 'Ach, ich fühl's, es ist verschwunden' (measures 1-12) and measures 38-40 from 'The Magic Marimba' (organ) (measures 1-12). The second example shows measures 12-13 from 'Ach, ich fühl's, es ist verschwunden' (measures 1-12) and measures 38-40 from 'The Magic Marimba' (violins I) (measures 1-12). Both examples are in 6/8 time and show a melodic line with a triplet of eighth notes.

Figure 14: Organ and first violin parts from sound block 12

The accompaniment for these two melodic fragments occurs in the viola part that consists of semiquaver triplets. This passage is a rhythmical transformation of measures 13⁴ - 14 from the aria (Figure 15).

m. 13-15 from *Ach, ich fühl's, es ist verschwunden*

m. 38-40 from *The Magic Marimba* (viola)

Figure 15: Viola part from sound block 12

All transformation techniques described above together with textural/timbre differences from one sound block to the next create the unfamiliarity of the original succession of material that becomes clearer later on in the movement.

If the rest of the movement is considered, it will be noticed that these broadly illustrated examples and classifications of techniques are a mere overview of the methods used by the composer. Within these classifications there are numerous different shades of the application of these techniques.

Further examples of sound blocks containing rhythmic manipulations of aria material can be located in sound blocks 5 (m. 20 - 22), 6 (m. 23 - 25), 8 (m. 29 - 31), 13 (m. 41 - 42), 15 - 16 (m. 44 - 46), 17 (m. 47 - 49), 18 (m. 50 - 52), 21 (m. 62 - 64), 22 - 23 (m. 65 - 66), 29 (m. 80 - 81), 41 (m. 112 - 115), 43 (m. 122 - 124), 50 (m. 143 - 145), 52 (m. 149 - 150), and 54 (m. 152 - 153).

The rhythmical manipulations employed by Roosenschoon are quite diverse. In the textured sound block 5 (Figure 16) the third trumpet plays the melodic material which is a rhythmic augmentation

of measures 5⁴ - 7¹ from the aria. The melodic pitches are interspersed with semiquaver rests integrated with the uneven pulsation of the other instruments in the sound block:



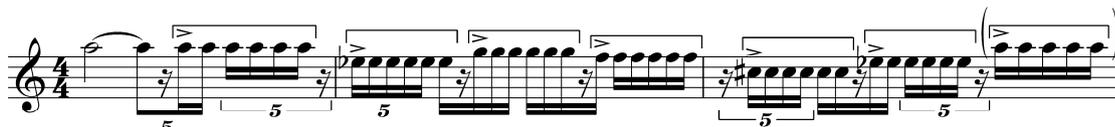
m. 5-7 from *Ach, ich fühl's, es ist verschwunden* m. 20-22 from *The Magic Marimba* (3rd trumpet)

Figure 16: Melodic analysis of sound block 5 (m. 20 - 22)

In sound block 6 (Figure 17) the pulsating first trumpet is a rhythmic adaptation of the first violins in measures 38⁸ - 39² from the aria:



m. 38-39 from *Ach, ich fühl's, es ist verschwunden*



m. 23-25 from *The Magic Marimba* (1st trumpet)

Figure 17: Melodic analysis of sound block 6 (m. 23 - 25) – 1st trumpet

Melodic pitches that consist of six semiquavers spread across adjacent quintuplets are interspersed with semiquaver rests. The right hand part of the piano (Figure 18) is a permutation of the pitches used for the first trumpet while the left hand part (Figure 19) is reminiscent of the viola and cello parts of bars 38⁴ - 39 from the aria.



m. 38 from *Ach, ich fühl's, es ist verschwunden*



m. 23-25 from *The Magic Marimba* (Piano R.H.)

Figure 18: Right hand part of the piano in sound block 6



m. 38-39 from *Ach, ich fühl's, es ist verschwunden* (viola & cello) m. 23 from *The Magic Marimba* (Piano L.H.)

Figure 19: Left hand part of the piano in sound block 6

In sound block 13 (Figure 20) the marimba is employed melodically for the first time but its prominence is not fully exposed before sound block 24.



m. 15-16 from *Ach, ich fühl's, es ist verschwunden* m. 41-42 from *The Magic Marimba* (marimba)

Figure 20: Sound block 13 (m. 41 - 42)

In sound blocks 15 - 16 there are two adjacent statements of the same fragment, the second statement of which is transposed an octave lower (bracketed part) (Figure 21). Notice the rhythmic contraction of pitches. The first note is spread over a duration of seven semiquavers after which the second pitch has six semiquavers, etc.

m. 17-18 from the aria m. 44-46 from *The Magic Marimba* (viola pizz.)

Figure 21: Sound blocks 15 - 16 (m. 44 - 46)

In sound block 18 (Figure 22) the indicated pitches are played by the horns. This is one of the very few sound blocks that does not contain an exact transposition from the aria material. If the first interval in measure 24 of the aria is considered, one observes that the interval is a diminished seventh (an enharmonic major sixth). The interval used by Roosenschoon is a minor sixth. This is mainly because of the underlying harmony chosen for this sound block that is an F harmonic minor cluster chord. The E (instead of Eb) is therefore the leading note of the key.

m. 24-25 from *Ach, ich fühl's, es ist verschwunden* m. 50-52 from *The Magic Marimba* (horns)

Figure 22: Sound block 18 (m. 50 - 52)

Sound block 21 (Figure 23) is an important highlight in the first movement. Excluding the introductory seven measures, this is the first instance where one can hear that the melodic material used for this sound area carries a definitive Mozartian essence. From this point onwards melodic material extracted from the aria becomes increasingly more identifiable.



Figure 23: Sound block 21 (m. 62 - 64)

If sound blocks 22 and 23 are observed (Figure 24), it can be seen that in these sound blocks there are no key transpositions from the aria. The only differences are the rhythmical adaptations. It can also be seen that all the A's from the aria have been omitted in this movement; instead, those pitches have been used as pedal notes in the violas. In sound block 23 (marked B) the composer uses the triplet in measure 26 of the aria (marked A) as verticalisation.



Figure 24: Sound blocks 22 - 23 (m. 65 - 67)

In the examples above the rhythms have been altered in various ways to conform to a certain texture. The transpositions from the original aria are exact transpositions (or real transpositions) except for the isolated instance. Transpositions act in accordance with the selected harmonic structures chosen for each subsequent sound block. It should also be noted that the original aria is cast in compound time and it appears that Roosenschoon consciously avoided the use of compound time signatures in this movement in response. Of the 54 sound blocks, only six use a

compound signature while simple time signatures and irregular time signatures are prominent. This change of metre of the original aria material forms part of the techniques utilised by the composer to obscure the material. It is also apparent that most of the repeated notes from the aria have been omitted when carried over to this movement. This can be partly attributed to the use of simple, as opposed to compound time signatures. Most of the repeated notes used by Mozart in this aria occur within a dotted rhythm (such as a crotchet and a quaver). By changing the metre Roosenschoon chose not to include these repeated notes in an approach to further manipulate the material.

Sound blocks 1 (m. 8 - 13), 7 (m. 26 - 28), 19 - 20 (m. 53 - 61), and 38 (m. 98 - 103) are similar in nature. These sound blocks have been constructed to be presented as textural renderings where no hierarchy between melody and accompaniment is exploited. Sound block 38 is an almost exact replica of sound block 1 with both containing pulsating cluster harmonies and textural running semiquaver sextuplets underneath. The subject matter chosen from the aria to construct the textures from differentiates the two sound blocks. The first sound block utilises the material from measures $1^4 - 3^2$ whereas sound block 38 uses measures $3^4 - 4^1$. Yet these two sound blocks are regarded as nearly identical.

The texture from sound block 7 (Figure 25) is derived from two different aria selections. If the woodwind section of this extract is considered, it becomes apparent that the texture is horizontally divided into two parts by the oboe and cor anglais. The material for the flutes and piccolo is based on measures $38^4 - 41^1$ (first violins) from the coda, while the material for the clarinets and piccolo clarinet is conceived from measures $8^4 - 10^2$. This sound block, therefore, uses two techniques simultaneously since it is both purely textural and employs two aria segments concurrently.

Figure 25 shows a musical score for Sound block 7 (measures 26-28). The score is for a full orchestra and organ. The instruments listed are Piccolo, Flauti 1 and 2, Oboi 1 and 2, Clarineti in Sol, Clarineti in Fa, Clarinetto basso, Fagotti 1 and 2, Maracas, Timpani, and Organ. The music is in 3/4 time and features complex rhythmic patterns with many sixteenth and thirty-second notes. Dynamics include *f*, *mf*, and *rim.* A 'muta in Org' instruction is present for the organ part. The score is numbered 26 at the bottom left.

Figure 25: Sound block 7 (m. 26 - 28)

Sound blocks 19 and 20 (Figure 26) also consist of only textural fabrications based on measure 24⁴⁻⁶ from the aria. The instruments start off by playing trills of unequal entry after which the trills

are gradually slowed down into semiquaver sextuplets and quaver triplets. These tuplets are retrogrades of the aria fragment and are clearly visible in the second bassoon.

Figure 26: Measures 58 - 60 from sound blocks 19 - 20 (m. 53 - 61)

As discussed, Roosenschoon’s use of retrograde is unconventional in the sense that smaller divisions of a melodic phrase are each used in retrograde but the succession of the divisions still follow the order set out in the aria. This technique is also used together with interjecting permutations of selected pitches. Sound block 25 (m. 71 - 73) (Figure 27) is a perfect example of this procedure (the red highlighted notes indicate the permutations).

$\overbrace{1\ 2\ 3}^A$ $\overbrace{4\ 5\ 6\ 7\ 8\ 9}^B$ $\overbrace{3\ 3\ 2\ 1}^A$ $\overbrace{6\ 5\ 4\ 4}^B$ $\overbrace{3\ 2\ 2\ 1}^A$ $3\ 3\ 7\ 1$ $\overbrace{3\ 2\ 1\ 1}^A$ $3\ 3\ 2\ 4$

m. 38-39 (viola) from *Ach, ich fühl's, es ist verschwunden* m. 71-73 from *The Magic Marimba* (marimba II)

Figure 27: Sound block 25 (m. 71 - 73)

Another fine example occurs in sound block 9 (m. 32 - 34) (Figure 28).

m. 17-19 from *Ach, ich fühl's, es ist verschwunden* m. 32-34 from *The Magic Marimba* (piano)

Figure 28: Sound block 9 (m. 32 - 34)

In this sound block (Figure 28) three differently manipulated statements of the aria fragment are presented. The first measure consists of an inversion of the retrograde followed by the next measure containing only the retrograde of the same fragment but transposed down a semitone from the first measure. The last measure is a mere rhythmic manipulation of this fragment. Indicated with red brackets are adaptations of the initial interval of the aria selection (except for the last measure). This interval is expanded in each successive measure – dim. 4th – perf. 4th – perf. 5th.

Sound blocks 7 (m. 26 - 28), 30 (m. 82), 37 (m. 97), 39 (m. 104 - 109), 44 (m. 125 - 127), and 48 (m. 137 - 139) all contain fragments that have been extracted from different areas of the aria but are employed simultaneously. All these sound blocks contain segments from an ongoing strand of aria material together with fragments extracted from the coda. Sound block 39 (Figure 29) and sound block 44 (Figure 30) illustrate this procedure the most clearly:

The image shows a page of a musical score for an orchestra. The instruments listed on the left are Flute (Fl. 1.2), Oboe (Obol. 1.2), Clarinet (Cl. 1.2), Bassoon (Fag. 1.2), Contrabassoon (C'fig.), Corni (1, 2, 4), Trumpet (Trbn. 3), Tuba, Timpani (Timp.), Violin (1, 2), Viola, Cello (V'celli), and Double Bass (C'bass). The score is in 4/4 time and includes a tempo marking of $J=100$. Dynamic markings such as *p*, *fp*, and *pizz.* are used throughout. A specific section of the score, involving the Clarinet (Cl. basso), Bassoon (Fag.), and Contrabassoon (C'fig.), is highlighted with a black box. This section shows a rhythmic adaptation of material from an aria. At the bottom left, there is a small box containing the numbers '1 0 2'.

Figure 29: Sound block 39

In the excerpt above (Figure 29) it can be seen that bassoons play a rhythmically adapted rendition of measures 5⁴ - 7¹ from the aria while the bass clarinet and contrabassoon play a rhythmically altered version of measures 38⁴ - 39⁴ from the aria.

In sound block 44 (Figure 30) one finds a similar example; however, the material implemented is loosely based on the selected fragments:

Figure 30: Measures 125 - 126 from sound block 44

The prominent instrumental parts in these initial measures of sound block 44 (Figure 30) are the first piano and organ entries. The first piano's part is reminiscent of measures 12⁴ – 14 (Figure 31) from the aria:

m. 12-14 from *Ach, ich fühl's, es ist verschwunden*

Figure 31: Measures 12 - 14 from the aria

The top notes of the organ chords are indicative of measures 38⁴ - 40³ (Figure 32) from the aria:

m. 38-40 from *Ach, ich fühl's, es ist verschwunden*

Figure 32: Measures 38 - 40 from the aria

The musical elements employed in the section after measure 153 are reminiscent of the 18th century. By now the music has dissolved and clear references are made to the aria that is now recognisable. The section in measures 154 - 208 contains three cadenzas for marimba. Prior to the entry of the first cadenza a saxophone solo (m. 160 - 181) renders an adapted version of measures 1 - 7 from the aria. Even though the implemented material signifies the return of a Mozartian syntax, the orchestration suggests a paradox. This is an attempt to present a modernised account of the 18th century material through the use of instruments, such as the saxophone. The three cadenzas are rhythmically adapted versions of a continuous strand of material from the aria that has been segmented into three parts. The measures from the aria are m. 8 - 15, m. 17 - 30¹ and 30⁴ - 32. Including the saxophone solo, this section is an almost complete restatement of the entire aria. Dividing these cadenzas are triadic accompaniment figures that are highly reminiscent of the 18th century. In conjunction with the second cadenza a solo horn passage (Figure 33) states a fragment from the coda of the aria (measures 38 - 39¹):

The image shows a musical score for four instruments: Corno 1, Timp., Mbf 1, and Mbf 2. The Corno 1 part has a 'solo' section with dynamics p and mf, and a 'niente' section. The Timp. part has a 'lunga' marking and '(niente)'. The Mbf 1 part is labeled 'CADENZA II' and '(a) espressivo', with dynamics mp, mf, and f. The Mbf 2 part is labeled '(b)', with dynamics fp, p, mf, and f. There are also performance instructions: '2. muta in Clv' and '4. muta in Ing'.

Figure 33: Solo horn passage together with cadenza II (measure 199)

This melodic fragment returns once more in the coda (measures 209 – 225) that starts immediately after the third cadenza. The coda is a repetition of the material found in measures 8 - 13 of this movement with the addition of the same melodic fragment played by the horn in

measure 199. This extract is also employed in measures 214 - 216 in the trumpet part after which the music dies away, concluding with a single pianissimo violoncello and double bass pizzicato.

2.3. Harmony

The harmonic pallet utilised by Roosenschoon in the first movement of *The Magic Marimba* consists mainly of pandiatonic clusters. The term *pandiatonicism* was first coined by N. Slonimsky in his book *Music since 1900* to describe the free usage of the seven degrees of a diatonic scale in a melodic, harmonic and/or contrapuntal context (Kostka 2011:114). This implies that the composer had no obligation to adhere to any previously conceived theoretical system when using the diatonic scale. Clusters, as defined by Kostka (2011:62), are sonorities constructed by superimposing intervals of major or minor seconds or a combination thereof upon one another. One could, therefore, also refer to these sonorities as ‘secundal chords’ (Kostka 2011:62). Pandiatonic clusters are therefore the simultaneous vertical collective of the diatonic scale without being concerned with fixed chord progressions and their attached rules (such as voice-leading, dominant-tonic relationships, leading note treatments, etc.) (Kostka 2011:114). Even though there have been numerous theorising attempts of an analytical approach to these complex harmonies, none of them was found fruitful in this particular context due to the uniqueness of the harmonic construction of this composition. The researcher, therefore, devised a new system to analyse Roosenschoon’s harmonic usage in *The Magic Marimba*.

After studying the harmonic conception of this composition, it was found that there are three aspects that are paramount in analysing these pandiatonic clusters:

- The scale chosen to construct the harmonies from.
- The mode of the scale.
- The spacing of these cluster chords.

As already established, these pandiatonic clusters consist of a superimposition of all the scale degrees of a specific scale. Roosenschoon utilises mainly major, harmonic minor and ascending

melodic minor scales for his harmonic construction. Here are two examples (Figure 34) of how these cluster chords are formed:

All 7 scale degrees of C major

C major pandiatonic cluster chord

All 7 scale degrees of E harmonic minor

E harm. minor pandiatonic cluster chord

Figure 34: Examples of pandiatonic cluster formations

The different modes of the scales used by the composer are based on the principle of the modal syntax that predated major-minor tonalities. Therefore each scale has seven modes of which the original form of the scale represents the first mode. The second mode then starts on the second scale degree, the third mode on the third scale degree, and so forth. If these seven modes of any particular scale are superimposed, the resulting cluster harmonies are alike with the exception of a change in bass notes. It is also important to distinguish between the root and bass note in this context. For the purpose of this study the root is the initial note of any particular scale in its first mode and the bass note the lowest note of any of the second to seventh superimposed modes (Figure 35):

C major scale starting on D (mode 2, also known as the Dorian mode)

C major pandiatonic cluster chord on D

E harmonic minor scale starting on B (mode 5)

E harm. minor pandiatonic cluster chord on B

Figure 35: Cluster chords constructed from scales in different modes

Apart from the modes available to produce these cluster chords from, Roosenschoon uses a method of expansion that allows him to space a singular harmony in numerous possible ways. In personal correspondence with the composer (6 August 2013), Roosenschoon stated that the cluster c4 - b4 was used as the genesis for his harmonic vocabulary for *The Magic Marimba*. This cluster chord was expanded by rotating the chordal members through octave displacements but keeping the root/bass of the chord stationary (e.g. moving d4 - d5 and then e4 - e5 etc.). Through the constant expansion of this cluster chord, Roosenschoon achieved numerous possible cluster derivatives all resting on the same root/bass (Figure 36):

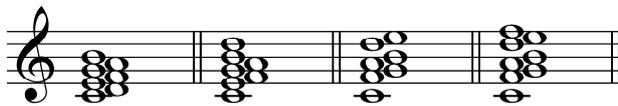


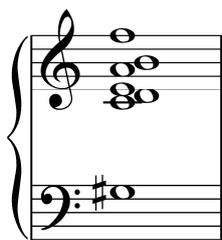
Figure 36: Expansion of cluster harmony c4 - b4

Figure 36 illustrates the systematic expansion of cluster c4 - b4 over an inactive root – c4. Note the expansion of the intervals between the top and bottom pitches of the cluster chords: a 7th – 9th – 10th – 11th. Figure 37 presents more examples demonstrating a possible expansion strategy of the cluster chord c4 - b4 over a range of two octaves:

Figure 37: Expansion of the pandiatonic cluster c4 - b4 over a range of two octaves

The expansion shown in Figure 37 illustrates the basis chord (marked as 1) along with its first 63 expanded derivatives. The chords have been grouped into seven groups, each representing a bigger interval distance between the root and highest notes of these cluster chords. This representation shows exactly how the outer interval is expanded with each subsequent group. The smaller brackets illustrate a further approach towards inner expansions of a group. This is achieved by displacing a chordal member up an octave followed by the succeeding member, each in isolation (e.g. d4 - d5 and then e4 - e5), and then ultimately the displacement of the combination of these members (e.g. d4 + e4 to d5 + e5). These inner expansions occur within the compass of the outer stationary intervals of each larger group. This approach is completely different to the method of inverting chords/triads of 18th and 19th century harmonic practices. One difference is that, as opposed to inversions, all the derivatives of the basis chord still rest on the same root/bass (e.g. c4).

Consequently the three features discussed above were included in the method of analysis. If the cluster chord in Figure 38 is considered, one notices that it is an encompassment of an A harmonic minor scale. But seeing that the bass note of the chord is G[#], it implies that the cluster is a collective of the seventh mode of the scale. Lastly, one could describe the spacing of the cluster according to the placement of scale degrees within this expanded cluster (i.e. [7 3 4 5 1 2 6]). The complete analysis looks like this:



aH - M7 [7 3 4 5 1 2 6]

Figure 38: Analytical method of cluster harmonies

The analytical method, therefore, work as follows:

- The first letter represents the scale collective of the cluster. Roosenschoon used only three types of scale in the entire composition – major, harmonic minor, and ascending melodic minor scales. Capital letters represent major keys and small letters signify minor keys. To differentiate between harmonic and melodic minor scales, a capital H (harmonic) or M (melodic) is used after the key indication.
- The information after the dash describes the mode that is used.
- The bracketed part is a spacing representation, illustrating the scale degree placements within the cluster.

The composer employs only these pandiatonic clusters in the section from measures 8 - 153 and again in the coda (m 209 - 225). Each subsequent sound block contains a new chord of the composer's choice that varies in scale selection, mode and spacing. After a thorough study of these cluster harmonies it was concluded that there are three distinctive ways that the composer applied these chords:

- Vertically
- Horizontally
- As a combination of the above

These categories are broad descriptions of the way in which the harmonies are used as textural entities. Examples of pure vertical placements of the cluster harmonies can be found in sound blocks 2 - 4 (m. 14 - 19), 8 - 9 (m. 29 - 34), 13 (m. 41 - 42) 18 (m. 50 - 52), 22 (m. 65 - 66), 26 - 28 (m. 74 - 79) 34 - 35 (m. 86 - 95) 44 (125 - 127) 48 (m. 137 - 139), and 50 (m. 143 - 145). Even though the context in which this first category has been utilised is different for each indicated sound block, the overall impression is of a vertical disposition. For example, if sound blocks 8 and 18 are compared one can observe two different employment strategies. In sound block 8 (Figure 39) the upper strings (violins and violas) play the cluster $e\flat H - M5 [5\ 3\ 6\ 1\ 2\ 4\ 7]$ over the chromatic low strings. The chords are somewhat sustained yet articulate:

♩=66 trem. a punta

Vln. 1

Vln. 2

Viola

V'celli

C'bassi

29

Figure 39: Sound block 8 (m. 29 - 31)

Sound block 18 (Figure 40) illustrates a different approach. Here one finds rapid pulsations of the harmonic structure fH - M5 [5 1 4 6 7 2 3]:

25

Clar.

Trbe.

Corni

Tbni.

Figure 40: Sound block 18 (m. 50 - 52)

Considering sound block 48 (Figure 41) one finds a similar approach to sound block 18 except for the fact that the cluster chord is not as rapidly repeated:

The image displays a page of a musical score for orchestra and piano. The score is organized into systems for different instrument groups. At the top, the tempo is marked as $\downarrow=44$ ($\rho=132$) with a $\frac{3}{4}$ time signature. The instruments listed include:

- Obol. 1.2
- C. ingl.
- Cl. picc.
- Clar. 1.2
- Cl. basso
- Sax.
- Fag. 1.2
- C'fg.
- Trp. 1.2
- Corn 1, 2, 3, 4
- Tbni. 1, 2
- Tbne. 3
- Timp.
- Mbf 1
- Xlf
- Mbf 2
- Cpn
- Piano 2
- Organo
- Vln. 1, 2
- Viole
- V'celli
- C'bassi

Dynamic markings such as *f* and *rim.* are present throughout the score. A rehearsal mark **1.3.6** is located at the bottom of the page.

Figure 41: Repetitions of cluster chord gH - M7 [7 1 6 2 3 4 5] in sound block 48 (m. 137 - 139)

Numerous examples of the horizontal placement of cluster chords occur throughout the first movement of this composition; however, this is best exemplified in sound blocks 17 (m. 47 - 49) (Figure 42) and 45 (m. 128 - 132) (Figure 43) respectively:

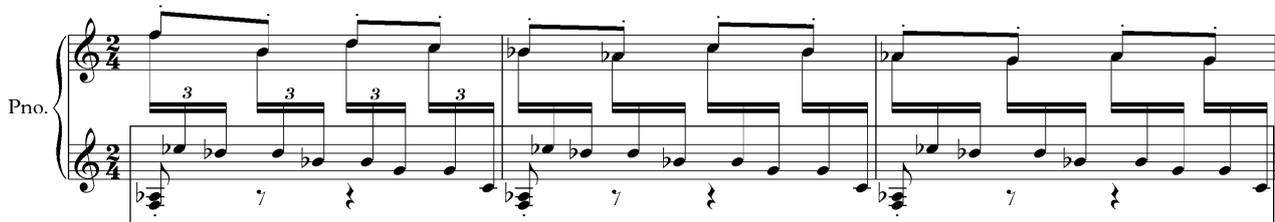


Figure 42: Horizontal placement of a cluster chord in sound block 17 (m. 47 - 49)

In Figure 42 there is a clear downwards horizontal stretch of the cluster harmony $A\flat - M6$ [6 1 3 7 2 4 5] in the left hand piano part. In sound block 45 (m. 128 - 132) there is a gradual build-up of the cluster chord through the irregular sustained entry of instruments (Figure 43):

The image displays a musical score for a symphony orchestra, specifically focusing on the woodwind and brass sections. The score is written in a 2/4 time signature with a tempo marking of quarter note = 112. The instruments listed on the left are Flute (Flc.), Flute 1 & 2 (Fl. 1.2), Oboe 1 & 2 (Ob. 1.2), Clarinet in G (C. Ing.), Clarinet in Bb (Cl. ploc.), Clarinet 1 & 2 (Cl. 1.2), Bassoon (Cl. basso), Saxophone (Sax.), Flute in C (Fag. 1.2), Clarinet in F (C' fag.), Cornet 1, 2, and 3 (Corn), Trombone (Timp.), Trumpet 1 (Trf 1), Trumpet 2 (Trf 2), Trumpet 3 (Trf 3), and Cymbal (Cym). The score shows a gradual build-up of cluster harmony across measures 128 to 132. Dynamics range from *f* to *ff*. There are markings for accents and breath marks. A specific figure, 'Fig. 1.2', is indicated in the Flute in C part. The score is enclosed in a black box at the bottom.

Figure 43: Gradual build-up of cluster harmony FH - M2 [2 5 3 4 1 6 7] in sound block 45 (m. 128 - 132)

Similar examples can be observed in sound blocks 19 - 20 (m. 53 - 61), 23 (m. 67), 29 - 30 (m. 80 - 82) 36 (m. 96), 43 (m. 122 - 124) and 47 (m. 134 - 136). These examples contain horizontal placements of cluster harmonies.

The last category of cluster employment is a combined exploitation of the above explained techniques. Sound block 1 is a prime example. The cluster harmony located in this sound block, e \flat H - M7 [7 5 1 2 3 4 6], is extended throughout the entire sound block (measures 8 - 13) through a series of chordal pulsations and contrapuntal manipulations of the cluster harmony. As seen in

the section on melodic practices the horizontally placed pitches are also pitch extractions from the aria. But they also form part of the harmonic exposition used in this sound block. Other instances of this technique can be seen in sound blocks 5 - 7 (m. 20 - 28) (Figure 44), 15-16 (m. 44 - 46), 38 - 39 (m. 98 - 109), and 44 (m. 125 - 127):

Figure 44: Sound block 7 (m. 26 - 28) (omission of non-pitched percussion instruments and organ)

Figure 44 illustrates the combination of a horizontal and vertical utilisation of the cluster chord FH - M2 [2 5 6 3 4 7 1]. The boxed instrumental parts provide a guide to the easy identification of the underlying cluster structure (Figure 45) of this sound block:

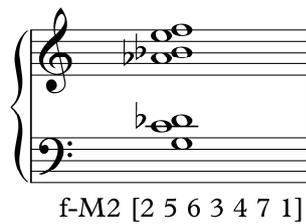


Figure 45: Harmonic analysis of m. 26 - 28

Once again, the horizontally spread pitches, as seen in the section on melody, are pitch extractions from the aria but also partially form part of the cluster chord. If the contrapuntal passages are examined, it can be seen that there are chromatic notes foreign to the cluster chord – E \flat s. The reason for the result of the non-harmonic notes is a change in the melodic-harmonic geographical relationship from the aria to *The Magic Marimba*. Consider the following fragment (Figure 46):

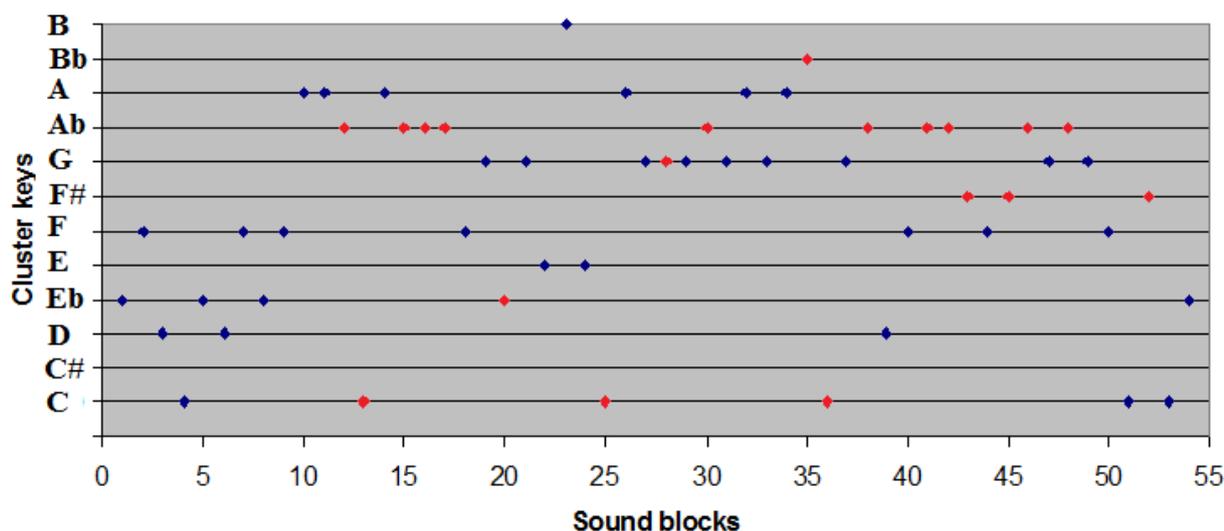


Figure 46: Harmonic illustration

In this example every note in the melody has an intervallic relationship with each chordal member. If pitches that are foreign to the harmony are used, non-harmonic notes will result (in this context the C and A). If this same melodic fragment is reharmonised with a G major pandiatonic cluster, all the notes in the melody are included in the cluster chord (including the C and A). Therefore, in order for a pitch to be foreign to a pandiatonic cluster, it has to be transposed to a different key. The melodic extract in sound block 7, played by the piccolo clarinet and clarinets I and II, are from measures 8⁴ - 10² from the aria. In the aria the fragment modulates from g minor to the relative major key – B \flat . The transposition of this melodic fragment in the

sound block is therefore from f minor to A \flat major over an f minor pandiatonic cluster. This explains the E \flat in the horizontal placement of pitches over the sustained cluster.

Another example is found in sound block 17 (Figure 42). The original material from the aria has been harmonised by mostly major chords (m. 19⁴ - 21¹ – g min: V⁹/V - V - i $\frac{6}{4}$ - V) but the melody clearly transitions from a D major disposition to G minor. In sound block 17 the melody has been transposed to transition from C major to f minor over an A \flat pandiatonic cluster. This influences the melody accordingly. The D and B \flat s, belonging to C major, are therefore the non-harmonic results. Consequently we can compare the key centres of both compositions to establish where in this movement this phenomenon arises. For this reason the author included Graph 1 that illustrates all cluster chords used in measures 8 - 153:



Graph 1: Cluster keys of all sound blocks in m. 8 - 153

In Graph 1 the cluster keys/scale encompassments⁴ (that can be a representation of their enharmonic counterparts as well) are illustrated as they are employed in each sound block. All blue marks are minor scales/keys used in a particular sound block while the red ones are major

⁴ In the context of the pandiatonic cluster chords employed in this composition, the terms *scale encompassments* and *keys* are synonymous since all pitches included in the chords are present in both scales and keys.

scales/keys. It is clear that in the course of these 54 sound blocks, cluster chords starting on all the chromatic pitches have been utilised, except those on C#.

From Graph 1 one can therefore deduce where non-harmonic notes will result. Non-harmonic notes occur in sound blocks containing a minor cluster chord together with a melodic fragment that was originally composed in a major key and *vice versa*. Most of the aria is written in a minor key (G minor) and briefly modulates to B \flat major in measures 8 - 18. Sound blocks 7 - 10, 12 - 14, 17, 41, 43 - 44, 48 and 50 - 51 are based on material from measures 8 - 18 from the aria. Of these, sound blocks 12, 13, 41, 43 and 48 are reharmonised with major cluster chords. The other sound blocks – 7 - 10, 14, 17, 44 and 50 - 51 – all contain non-harmonic notes as a result of the accompanying minor cluster chords. Similarly, the rest of the sound blocks harmonised with major cluster chords with superimposed melodic material extracted from areas outside measures 8 - 18 from the aria also contain non-harmonic notes. These are sound blocks 25 - 27, 20, 25, 28, 30, 35 - 36, 38, 42, 45 - 46 and 52.

The other conclusion that can be drawn from the graph above is the fact that one no longer works with harmonic progressions but rather with fleeting key changes. If harmonic progression can be described as a series of chord changes, then this succession of key changes can also be explained as key progressions. The graph therefore also demonstrates the numerous keys through which the section between measures 8 - 153 moves. However, these quick shifts do not create an evasion of any tonal centre to the point where they can be classified as being atonal. This is owing to the recurrence of keys throughout the movement creating a sense of key familiarity and stabilisation. When considering the overall key centres of the movement, it can be concluded that since the entire middle section, consisting of 54 sound blocks, is enclosed by two E \flat minor chord constructions and the coda is again announced by an E \flat minor cluster harmony, these harmonic pillars can be seen as the tonal stabilisers and on the whole, the overall key. There are also other sections in the movement that retain the key of E \flat minor and can be located in measures 182 - 207.

If the geography of the key structures is observed (Graph 1), one notices two interesting features: 1) most keys are geographically proximate but 2) are not closely related. Keys hardly move further than a third from one another (except for a few isolated instances) and are therefore not closely related (e.g. keys containing three flats will move to ones with two sharps, etc.). This is possibly an attempt by the composer towards further segregation of sound areas in order for each sound block to be heard as a separate entity within the context of a unified movement.

Remarkably it is the affinity for tension and release throughout the composition that generates drive. A series of unmoving pandiatonic clusters can easily become static, considering that each cluster chord is a complete encompassment of an entire scale/key. This means that a harmonic sense, if chordal structures remain unchanged, of tension and release becomes unattainable. Harmonic stasis of dense unmoving clusters has been overcome through a technique of chordal member rotation to achieve expansions from a basis cluster resulting in chords with varied ranges. This allows for certain intervals within the chord to become more exposed and audible. Therefore, as a result of the vertical arrangement of the cluster members, some chords sound more dissonant than others and as such achieve a certain level of more tension than other harmonies. Another technique employed by the composer is increasing the density of cluster chords through member doubling. An excellent example can be seen in sound blocks 1 and 2. Sound block 1 has the following harmonic structure (Figure 47):

Figure 47: Harmonic analysis of sound block 1 - $e\flat H-M7$ [7 5 1 2 3 4 6]

In the first measure of the above illustrated analysis one can see the employment of the cluster harmony together with all the chordal member doublings. The second measure contains a reduced version of the cluster in which all doublings have been removed. When the following sound block (Figure 48) is compared to the first sound block, it reveals fascinating features in the way in which Roosenschoon employs the cluster chords:



Figure 48: Sound block 2

The second sound block (as shown above) is stripped down to a drastically smaller range that excludes member doubling (Figure 49):

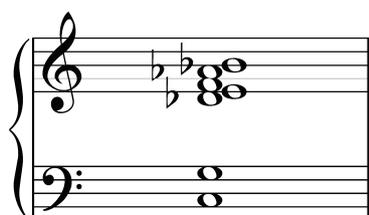
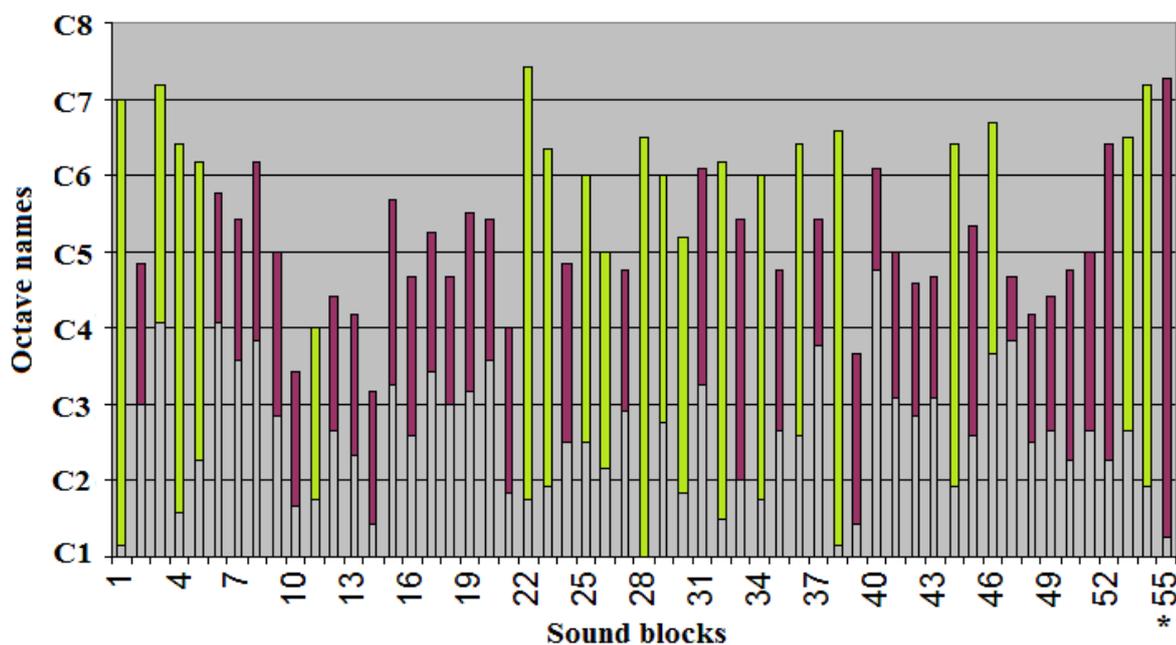


Figure 49: Analysis of sound block 2 – fH - M5 [5 2 6 7 1 3 4]

In Figures 47 and 49 one can see the large divergence from a very thick orchestral texture and expansive range of almost six octaves to a very thin texture and range of less than two octaves. The cluster employed in the first sound block includes numerous chordal member doublings, generating a thicker texture than sound block 2 where only the seven degrees of the encompassed scale have been used. The contrast is not only in its harmonic range but also in instrumental

texture. This means that the first sound block results in a higher tension level than sound block 2. If one applies this reasoning to this entire section containing the sound blocks, one finds a clear progression of areas of high and low tension. One can therefore say that the expansion of a cluster chord and its acquired range through chordal member doubling has an influence on the density of the chord and ultimately the tension level. Instrumental colour also has a contributing influence but is discussed in the section on texture (Section 2.4). Graph 2 provides a clear perspective on the range of each cluster employed in measures 8-153:



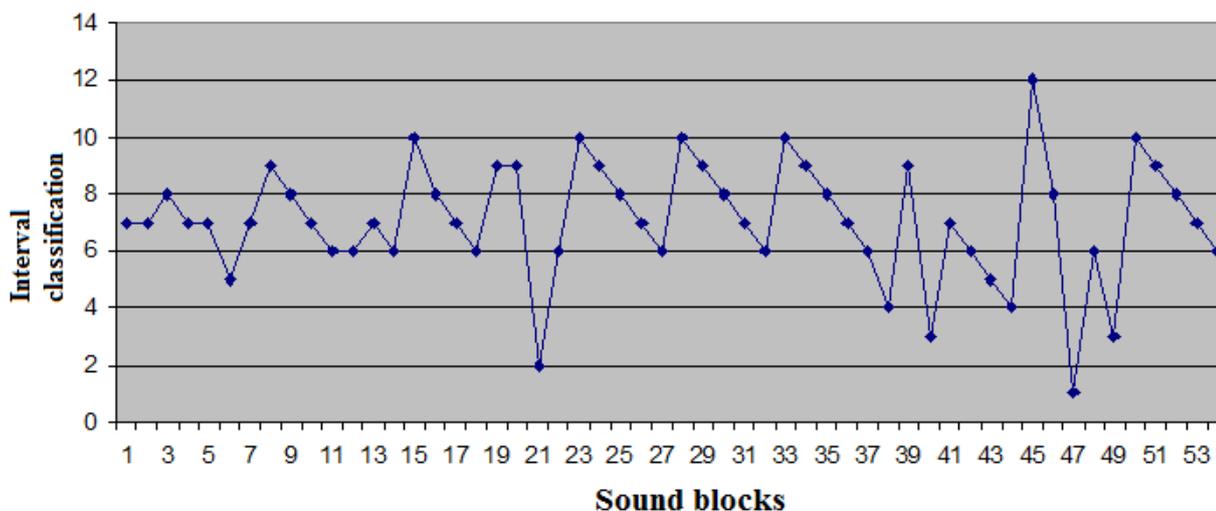
Graph 2: Ranges of all cluster chords from all 54 sound blocks

The way in which the analysis was conducted was to classify each analysed chord according to its outer interval distances and to map out each harmony accordingly. The Y-axis represents those categories through presenting the eight octave ranges. On studying Graph 2 one notices that there are cluster chords that stretch over ranges of seven octaves while others are a mere two octaves or less. The green bars represent chords that contain chordal member doublings while the pink ones represent those with only the seven degrees of the encompassed scale. As can be seen, the

* This does not represent the 55th sound block but rather a representation of the E \flat minor triad that follows the section containing the sound blocks.

majority of the chords with large ranges are those with member doublings and result in denser areas with more tension, resolving to the chords with less dense structures.

If all the cluster harmonies are simplified by removing the chordal member doublings it will allow access to the original chords and their spacing as chosen by the composer. This illustrates how each cluster chord expands or contracts in relation to its previous and subsequent cluster harmonies to avoid harmonic stasis. Graph 3 illustrates this process:



Graph 3: Expansion and contraction of cluster chords

All cluster harmonies were analysed according to their outer interval distances in the same way the first seven categories have been illustrated in Figure 36. It is apparent that there is a constant downward trend in the graph that signifies a constant contraction of chordal formations gravitating towards a basis chord. This constant gravitational pull towards a basis chord suggests directional movement of harmonic complexes that solves the problem of harmonic stasis and creates an entire spectrum of cluster chords, each sounding differently.

The harmonic usage after measure 153 takes on 18th century syntax. It is announced by the E \flat minor triad similar in orchestration to the one in measure 8 but without any added members.

Separating the three cadenzas in this section are triadic accompaniment figurations (Figure 50) reminiscent of the Classical era:

The image shows a musical score for measures 182-190. The instruments listed are Saxophone (Sax.), Trumpet (Timp.), Trombone (Mb), Snare Drum (Snatro), Violin (Vln.), Viola (Viole), Cello (V'celli), and Double Bass (C' bassi). The score features various musical notations such as dynamics (p, p poco crescendo), articulation (short strokes), and performance instructions (simile, div., unis.). The measures are numbered 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, and 190. The key signature is one flat (B-flat major/E-flat minor).

Figure 50: Triad figurations in measures 182 - 190

The following harmonies are used in these measures:

- $e\flat: i - i - i - I - iv^6 - vii^{\circ 4}_2 - i$ (over a tonic pedal)

Similarly, measures 192 - 198 and 200 - 207 consist of the following:

- $e\flat: Fr^{+6} - V - v - II^6$
- $G\flat: III - VII^6 - V^{\frac{4}{3}} - V^7 - I$
- $e\flat: V^{\frac{6}{5}} - i - vii^{\circ 4}_3 - i^6 - V^7/V - V^7 - i - N^6$

The key of E \flat minor in this section together with the E \flat harmonic minor cluster that enters directly after the third cadenza manifests the overall key of the composition. This last cluster, which announces the start of the coda, is a repetition of the one in measure 8 and is sustained until the end of the composition which ends with an E \flat pizzicato in the low strings.

2.4. Texture

Texture as described by Cope (1997:99) is the result of a combination of musical elements such as pitch, timbre and duration at any given point in time with the yardstick being the density of the sound area. Density can also be regarded as the simultaneity of a specific number of horizontal lines (Cope 1997:99). To analyse texture in terms of its density successfully, Cope (1997:99) suggests establishing certain parameters for the study. The extreme opposing parameters can be seen as 1) the densest texture, consisting of the largest number of pitches with different timbres being played as fast as possible, and 2) the thinnest texture that is a single pitch. Taking these extreme possibilities into consideration, and the fact that music can take on different shades in-between these extremities throughout a composition, the idea of possible texture progression emerges (Cope 1997:99).

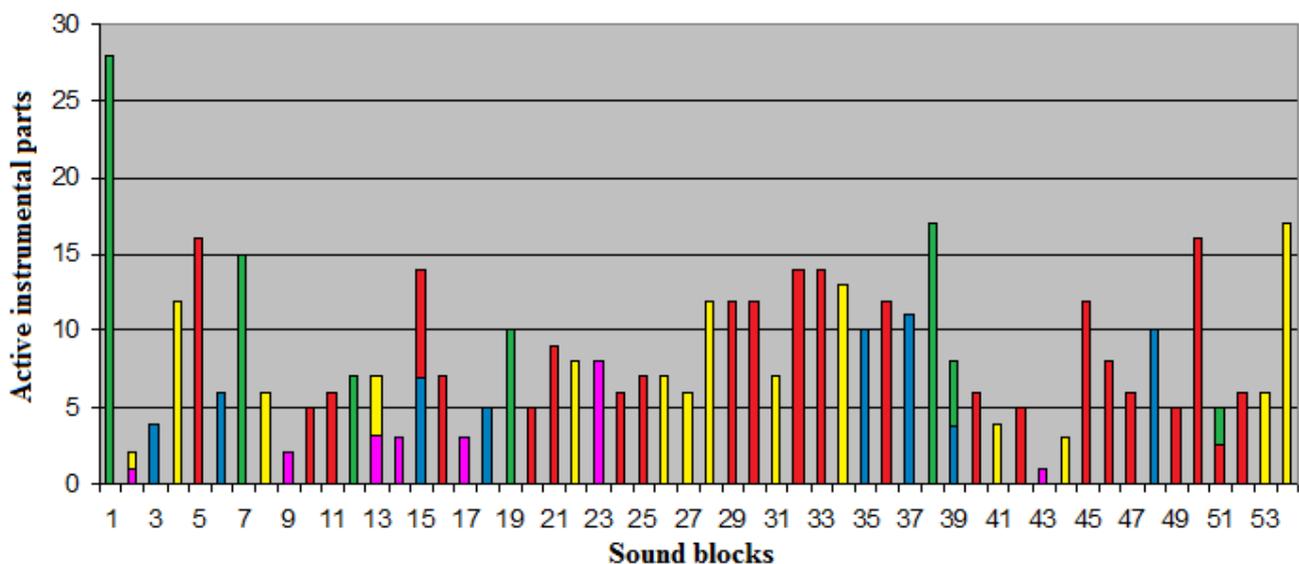
As established in the section on melodic practises, the employment of melodic material was adapted to conform to the outset of the textural principles of this movement. The textural contrasts/similarities create a sense of progression through areas that are highly dense, which ‘resolve’ to areas of transparency. This process plays a large part in the overall drive of this movement.

The following aspects were investigated with regard to the textural movement throughout the section from measures 8 - 153:

- How many instruments are employed in each sound block
- What the timbre of these instruments is
- The dynamics, rhythms and articulation of these instruments

In the section on harmony (section 2.3) it has been illustrated how cluster harmonies of higher and lesser densities succeed. The information gained through that study serves as the premise to this examination; yet it cannot be regarded as an identical procedure. The cluster density graph illustrates the harmonic structures employed in each sound block. Some chords have member doubling while others have none, despite the fact that melodic content is excluded. This study includes all instruments in any particular sound block, be it a melodic or harmonic component in order to gain an understanding of the textural densities.

If the above definition regarding densities is considered, it is apparent that the number of instruments active in each sound block together with their rhythmic material becomes significant factors in calculating the textural progression. Graph 4 illustrates this:



Graph 4: Textural density representation of measures 8 - 153

In the graph above (Graph 4) the number of active instrumental parts, as employed in each sound block, is illustrated. It was drafted through the information gathered by calculating each sound block's number of active instruments together with a rhythmic classification that has been indicated by means of a colour system. From this graph it can be seen how the densities from one sound block to the next either diverge drastically or are similar to the surrounding sound blocks. It

can also be seen that the majority of drastic changes in density occur near the beginning and end of the section between measures 8 - 153. The middle part contains a somewhat more gradual transitioning from one sound block to the next, but includes a few exceptions. These textural densities of greater or lesser tension levels generate the driving force of this section.

The colour scheme in Graph 4 indicates the rhythmic classification utilised in each sound block and is presented as follows:

- Sustained pitches, or giving the impression of sustained material
- Contrapuntal layering
- Repeated chord structures
- Rapid repetitions of pitches/chords
- Instruments playing rhythmically in unison (or the employment of a single instrument)

These broad classifications are only representatives of the general features in these sound blocks. They do not imply that the entire sound block consists of only one type of rhythmic pattern. These rhythms create the overall impression of each individual sound block and are contributing factors to the dimensional landscape. Taking this overall rhythmic layout into consideration, a further in-depth examination of the density levels of each sound block with respect to the surrounding sound blocks can be made. The contrapuntal layering creates the impression of being the densest when the rhythmic elements are considered. The sustained pitches, however, create a notion of being the least dense. These rhythmical aspects in combination with the number of active instruments are what ultimately constitute the density level. If sound blocks 28 and 29 are considered (Graph 4), for example, it can be seen that they both contain the same number of active instruments. However, sound block 28 contains repeated chord structures while sound block 29 contains only sustained pitches. Sound block 28 therefore sounds denser as a result of the more active rhythms.

These textural features have also been utilised along with other articulations in order to create a sense of some instruments being more prominent than others. As a result, these instruments 'stand out' in their dimensional surroundings. The elements that create the deepening aspect of the

dimensional aggregation, as explained by the composer (Personal correspondence on 23 February 2014), have been pointed out in the 2nd and 3rd aspects listed at the beginning of this section (timbre, dynamics, rhythm and articulation).

After an examination of the timbres utilised in the section between measures 8 - 153, it was found that the orchestra is employed, in an alternating fashion, according to its categorised families. These orchestral groups, as used by Roosenschoon are the woodwinds, brass, piano and organ, and strings. The percussion instruments are employed in combination with these groups and are not used in isolation. The orchestration of some sound blocks also involves incomplete orchestral groups. It is only in dense sound blocks that the composer used these orchestral groups simultaneously. If the timbre of these orchestral instruments is considered, it is noticed that as a result of each instrument's colour, or the collective timbre of an entire group, some instruments/instrumental groups are more prominent than others. The employment of the string section results in sound uniformity, if the articulation of the instruments is similar, where only the highest and lowest notes are easily perceptible. On the contrary, if a collective of brass or woodwind instruments, with similar articulation, is employed, each instrument can still be detected to a certain degree. This is truer for the woodwind instruments. Most percussion instruments tend to be more prominently audible.

Dynamics also plays an important role in highlighting certain instruments. It is even possible to shift the significance of one instrument (or instrumental group) to another by means of a crescendo/decrescendo in an instrument (or instrumental group). Articulation and rhythm are essential factors in the construction of any dimensional texture. If an instrumental group containing more active rhythms is coupled with instruments playing sustained pitches, the former draws more attention than the latter. Similarly, instruments with highly articulated passages are more prominent than a legato passage. All these aspects result in the creation of dimensions in this composition through layers of music that stand out from others. In this movement three of these layers are generally superimposed to form background, middle-ground and foreground elements. Usually each of these layers conforms to the following principles:

- Background: Sustained pitches (or instrumental parts containing less movement) and/or instrumental parts with softer timbres and/or dynamic levels in the context of the surrounding instruments.
- Middle-ground: Instrumental parts with slightly more movement, more articulation, more prominent timbres and/or louder dynamic levels.
- Foreground: Articulated instrumental parts with sharp timbres, active rhythms and loud dynamic levels.

These three dimensional categories are fixed over the two-dimensional aspects of metre (time) and pitch (range) (Personal correspondence on 6 August 2013). Figure 51 illustrates the method of acquiring dimensions:

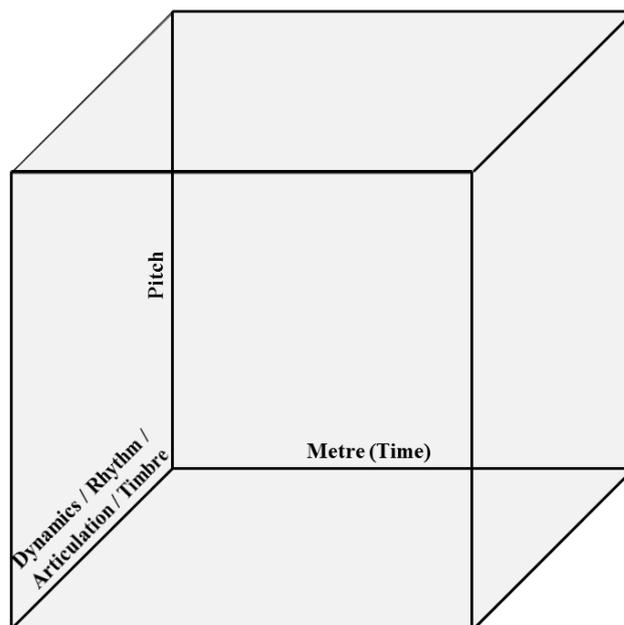


Figure 51: Dimensional representation in music

These principles are easily audible in areas of denser textures such as sound block 7. In Figure 52 it can be seen that the sustained woodwinds (red bordered parts) form part of the background material, the contrapuntal demisemiquavers (black bordered parts) form part of the middle-ground while the organ and percussion section stand out as the foreground material (green bordered

parts). The reason for this spatial placement, in this context, results from a combination of articulation and timbre. In this sound block the active demisemiquavers sound more prominent than the sustained pitches while the high articulation organ and percussion instruments are most prominent.

Figure 52: Dimensional layout in sound block 7

Another example can be seen in sound block 50 (Figure 53):

The image displays a page of a musical score for a symphony orchestra, identified as sound block 50. The score is arranged in a standard orchestral layout with multiple staves for different instruments. The instruments listed include Oboe 1 & 2, Cor Anglais, Clarinet in Piccolo, Clarinet 1 & 2, Clarinet Bass, Bassoon, Bassoon 1 & 2, Cor Anglais, Trumpet 1, 2, & 3, Trombone 1, 2, & 3, Tuba, Snare Drum, Horns 1 & 2, Horns 3 & 4, Piano 2, Organ, Violin 1 & 2, Viola, Violoncello, and Contrabass. The score is divided into measures, with specific measure numbers (e.g., 44, 112, 132) and dynamic markings (e.g., *f*, *sim.*, *sub.p.*) visible. A red rectangular box highlights a section of the score from measure 44 to 132, encompassing the Oboe, Clarinet, Bassoon, and Trumpet parts. A green rectangular box highlights a section of the score from measure 112 to 132, encompassing the Trombone and Tuba parts. The page number '14' is in the top left, and '70' is in the top right. The University of Pretoria logo is at the top center.

Figure 53: Dimensional layout in sound block 50

Again the sustained woodwind and brass sections form part of the background material while the more articulate string section forms the middle-ground. In this sound block, interestingly, the articulated strings take prominence over the entire woodwind and brass sustained pitches. The reason for this is the fact that the movement in the strings draws more attention than the sustained pitches. However, the crescendo in the brass and woodwind sections creates a shift in balance. This shift causes the attention to be drawn towards the sustained pitches rather than the articulated ones in the third measure of the sound block. It is clear that a shift in dimensional aspects within the course of one sound block is possible. It is also important to note that some dimensional elements that should be considered as audibly prominent factors can be dominated by what might be perceived as less prominent features (as seen in sound block 50). It all depends on the context in which they are used. This is again evident in sound block 44 (Figure 54):

The image shows a musical score for three instruments: Piano 1, Piano 2, and Organ. The score is for measures 125 and 126. Piano 1 has a complex melodic line with many notes. Piano 2 has a rhythmic accompaniment. The Organ part is marked 'non leg.' and has a more prominent, articulated accompaniment. A red box highlights the organ part in measures 125 and 126, and a green box highlights the piano part in measure 126. The score is numbered 112 at the beginning and 122 at the end.

Figure 54: Measures 125 - 126 from sound block 44

In this sound block (Figure 54) the organ is more prominent than the piano I. This is true even though the piano part is more active than the organ part as a consequence of timbre and articulation differences. The organ's timbre and articulation (non-legato) is more prominent than that of the piano (legato).

A similar situation can be seen in sound block 3 (Figure 55):

The image shows a musical score for measure 18 from sound block 3. The score is arranged in a vertical stack of staves. From top to bottom, the staves are labeled: Crt, 4 Tomt, 3 Cpl, Cpn, Piano 1, and Organo. The 4 Tomt and 3 Cpl staves are enclosed in a green rectangular box. The Piano 1 and Organo staves are enclosed in a red rectangular box. The Piano 1 part features a complex, rhythmic accompaniment with many notes and rests, while the Organo part has a simpler, more melodic line. The Crt, Cpn, and a bottom staff are mostly empty or have simple rests.

Figure 55: Measure 18 from sound block 3

In sound block 3 (Figure 55) the piano is audibly more prominent than the organ as a result of the articulation and rhythmic differences. The percussion instruments are most prominent, which can be attributed to their timbre and articulation.

In the section following measure 153 the composer successfully captures the Mozartian essence through sparse orchestral accompaniment figures. However, this is still presented in a modernised way through the incorporation of instruments such as the saxophone and the marimba. The accompaniment figures separating the three marimba cadenzas are predominantly string orientated (Figure 56):

Figure 56: Measures 178 - 190 from Movement I

In Figure 56 the string accompaniment figures can be seen together with the instrumental additions of the marimbas generating pedal points, and the bell tree. The bell tree ingeniously takes on the audible function of the harpsichord. All other partitioning sections are similar in texture to the above example with the addition of the oboe and horn respectively as melodic instruments, as well as the addition of percussion instruments such as suspended cymbals, claves, and triangle. This section can therefore be regarded as a modernised rendition of 18th century elements, yet retaining the essence of the time period. Consequently it gives the impression that all material has been diluted into this clear textural structures of reminiscence that are capitalised on as the composition progresses.

Chapter 3

3. Movement II

3.1. Structure

The second movement, similar to the first movement, is based on material from *Die Zauberflöte*. In this movement, however, we find an accumulation of extracts from the opera – all of which are related to the characters of Papageno and Papagena. Hence this movement can be described as a compendium of character-associated arias. Even though these material extractions contribute to the structure of the movement, they are not utilised as constructional devices as in the first movement. As a result no sound block constructions are present. The structure of this movement does not conform to any traditional formal structures, but rather represents a structurally free form within which the music has been harnessed through various methods. It can be argued that this movement is in the style of a fantasia. A fantasia, as defined by Otterman and Smit (2000:93), is a musical composition that seldom employs any strict musical form. However, this does not imply that structural coherence is absent. The composer was still able to employ methods to create a sense of structure throughout the movement. These methods include the recurrence of material extracted from the opera as well as of prominent motives. The employed material is not developed but is rather exploited through reiterated statements of various texture and timbre differences. These melodic extractions are discussed in more detail in the section on melodic aspects (section 3.2). Apart from the melodic fragments the seemingly free form is also tightly knit through a series of recurring motives. These recurring features are the following:

- A three chord motive
- The pan-flute motive

The first motive occurs at the beginning of the movement and consists of three tutti cluster chords played in a fanfare-like fashion. These chords bear a strong resemblance to the opening chords of the overture to *Die Zauberflöte* (Figure 57). Numerous references to these opening chords occur throughout the movement and become a binding element similar to how the material from the

coda of *Ach, ich fühl's, es ist verschwunden* is employed to create structural unity in the first movement.

Adagio.

Adagio.

Figure 57: Opening chords of the overture to *Die Zauberflöte*

If one compares the initial measures (m. 1 - 8) of this movement to the opening of the overture, it is noted that the three harmonic structures of both excerpts form a broken major triad if only the top pitches of the consecutive chords are considered (Figure 58). In *The Magic Marimba*, however, this ascending broken triad is reharmonised by three cluster chords:

The image displays a page of a musical score for measures 1 through 8 of movement II. The score is arranged in a standard orchestral format with multiple staves. At the top left, the tempo is marked as *♩ = 168*. A large Roman numeral **II** is centered at the top, indicating the start of the second movement. The score includes parts for Flute 1 & 2, Oboe 1 & 2, Clarinet in G major 1 & 2, Bassoon, Trumpet 1-3, Horn 1-3, Trombone 1-3, Tuba, Snare Drum, Maracas 1 & 2, Cymbals, Piano 1 & 2, Violin 1 & 2, Viola, Violoncello, and Contrabass. The woodwinds and strings are marked with *ff* (fortissimo) at the beginning of the movement. The percussion parts include specific instructions like *muta in Cr.* and *soft sticks*. The piano parts feature *ff* markings and a *i.v.* (ritardando) instruction. The strings have a *uniss.* (unison) marking. The score concludes with a *sol.* (solo) marking for the flute and a *sol. pizz.* (solo pizzicato) marking for the strings.

Figure 58: Measures 1 - 8 from movement II

In-between these three cluster chords are ascending semiquaver scale-like passages that resemble Papageno's pan-flute motive used throughout *Die Zauberflöte*. The three opening chords and the semiquaver scale-like motive have been utilised as prominent structural unification devices.

These motives are also varied and appear in different forms throughout the movement. On certain occasions they are only implied and not stated directly. Roosenschoon frequently segregates the melodic and rhythmic aspects of the three chord motive and employs them in isolation. This is apparent in the first reappearance of these motives that can be observed near the beginning of the movement just after the opening statement of the cluster chords (Figure 59):

24

10

19

Figure 59: Measures 10 - 25 from Movement II

In Figure 59 one finds examples of both motives employed subsequent to their initial statements. If the green boxed parts are observed it is noted that only the highest pitches of the three chord motive, forming a broken major triad, have been utilised. The violoncello part provides a clear statement of this example as opposed to the cor anglais part that consists of a permuted adaptation of these three pitches.

In measures 41 - 55 the three chord motive without the triadic top line is disjunctively spread over 15 measures and extended by the addition two more cluster chords (Figure 60). The characteristic short-long rhythmic placements of the opening chords are clearly visible:

The image shows a musical score for measures 39 to 55. The instruments listed on the left are Picc., Fl. 1.2, Sas., Clar. 1.2, Mbf 1, 2 Bog., Cpn., Piano 1, Organo, Vln. 1.2, Vielle, V'celli, and C'bassi. A red box highlights a passage in the Mbf 1 part (measures 41-43) with a dynamic marking of *mp*. A green box highlights a passage in the string parts (Vln. 1.2, Vielle, V'celli, C'bassi) from measure 41 to 55, with dynamic markings of *arco div.*, *div. ff*, *arco ff*, and *tutti arco ff*. The score includes various musical notations such as rests, notes, and dynamic markings like *p*, *mp*, and *ff*. A rehearsal mark '39' is visible at the bottom left of the score.

Picc.

Fl. 1.2

Oboe 1.2

C. ingl.

Cl. picc.

Cl. 1.2

Cl. basso

Sas.

Fg. 1.2

C'fg.

Trbe. 1 2 3

Corni 1 2 3 4

Tbni. 1.2

Timp.

Mbf 1

Xif

Mbf 2

Cpn

Piano 1 2

Organo

Vin. 1 2

Viola

V'celli

C'bassi

4.5

The image displays a page of a musical score for a symphony. The score is arranged in a standard orchestral format with multiple staves for different instruments. The instruments listed on the left include Picc., Fl. 1.2, Oboe 1.2, C. Ingl., Cl. picc., Clar. 1.2, Cl. basso, Sas., Fg. 1.2, C'fg., Trbe. (1, 2, 3), Corni (1, 2, 3, 4), Tbn. 1.2, Tbn. 3, Tuba, Timp., Hrn 1, Xif, Hrn 2, Cpl, Piano (1, 2), Vln. (1, 2), Viole, Vcell, and C'bass. The score is written in a key signature of one sharp (F#) and a common time signature (C). A green rectangular box highlights a specific section of the score, spanning from measure 41 to measure 55. This section is primarily composed of piano accompaniment, with the piano part (staves 1 and 2) showing a clear three-chord motive. The piano part is marked with dynamics such as *ff* and *f*. The string parts (Violins, Violas, Cellos, and Double Basses) also show a similar three-chord motive, with dynamics like *ff* and *mf*. The woodwind and brass parts are mostly silent or playing simple accompaniment during this section. The score includes various musical notations such as notes, rests, and dynamic markings.

Figure 60: Employment of the three chord motive in m. 41 - 55

If the opening statements of these chordal structures are again considered (Figure 58) it can be noticed that the last cluster chord is rhythmically placed on the off-beat. Roosenschoon capitalises on this feature in measures 61 - 64 (Figure 61):

The image shows a musical score for measures 63 and 64 of a string section. It includes five staves: Violin 1 (Vln. 1), Violin 2 (Vln. 2), Viola (Viole), Violoncello (V'celli), and Contrabasso (C'bassi). The music consists of chordal structures. In measure 64, there is a 'unis.' marking above the Violin 2 staff. A box containing the number '63' is located at the bottom left of the score.

Figure 61: Measures 63 - 64 (string section)

The composer applies the same principle in measures 90 - 94 (trombones) and measures 164 - 168 (organ and string section) (Figure 62):

The image shows a musical score for measures 164 through 168. It includes six staves: Organ, Violin 1 (Vln. 1), Violin 2 (Vln. 2), Viola (Viole), Violoncello (V'celli), and Contrabasso (C'bassi). The Organ part features complex chordal structures with 'mf' and 'mp' markings. The string section also features chordal structures. A box containing the number '164' is located at the bottom left of the score.

Figure 62: Measures 164 - 168 (organ and string section)

Interestingly, in these measures illustrated in Figure 62 the composer chose to invert the rhythmic placement of the chordal reiterations to long-short. Further employments of this motive can be observed in measures 73 - 80 (organ and string section), 145 (partial usage in the string section), 170 - 173 (organ and string section), 194 - 199 (woodwind section), 210 - 213 (organ), and 216 - 220 (woodwind section and pianos I and II).

The pan-flute motives as used by Roosenschoon are in close proximity to the three chord motive. Apart from the illustrated examples above, this can also be seen in measure 57 (woodwind section) (Figure 63), 61 - 63 (woodwind section), 123 - 125 (violin I) (Figure 64), 132 - 135 (violin I), 289 (piccolo and flutes), 252 - 253 (woodwinds and trumpets), and 159 (piccolo):

Figure 63: Measure 57 (Woodwind section) – expansion of pan-flute motive

In Figure 63 the pan-flute motive is expanded by changing the four semiquavers into a quintuplet of semiquavers. Figure 64 illustrates how the composer constructs bigger units from the pan-flute motive. This example also shows a directional change in the basic motive (also known as inversion).

The image shows a musical score for a string section, specifically measures 123 to 125. The score is written for five parts: Violin 1 (Vln. 1), Violin 2 (Vln. 2), Viola, Violoncello (V'celli), and Contrabasso (C'bassi). The Violin 1 part begins with the instruction 'arco' and plays a melodic line with a dynamic marking of '(mp)'. The other string parts (Violin 2, Viola, V'celli, and C'bassi) are marked 'div.' (divisi) and play a rhythmic accompaniment. The C'bassi part is marked '[pizz.]' (pizzicato). A box containing the numbers '1 2 3' is located at the bottom left of the score, indicating the measures shown.

Figure 64: Measures 123 - 125 (string section) – directional change (inversion) of the pan-flute motive

These motives were utilised to unite the movement structurally, together with repetitions of thematic moments from the opera. One finds a rhythmic ostinato in the second movement that is perpetuated throughout the second movement. This ostinato is constructed from only one aria from the opera and as a result creates a sense of structural unity. Structure through textural similarities, as described in the first movement, is not a viably exploited procedure in this movement. This is ascribed to the absence of sound blocks and the fact that more emphasis is placed on melodic material rather than texture. This aspect and further information regarding melodic elements constituting structural principles are discussed in the section on melody (section 3.2).

Because of the freedom in structure it is ineffective to present any structurally orientated information in tabular format. In summary there are three components that create structure in this movement:

- The two prominent motives
- Repetitions of melodic extractions
- The rhythmic ostinato, carrying pitches from only one aria from the opera

3.2. Melodic content

In the second movement one finds an additional feature to the series of fragments extracted from *Die Zauberflöte*. This aspect is the source of the continuum of perpetual drive throughout the entire movement and is referred to by the composer as *perpetuum mobile*. The underlying entity is a rhythmic ostinato of quavers that is extended through the entire movement. According to Schnapper (2001:782), a rhythmic ostinato consist of “*the regular repetition of a rhythmic structure to which other elements may be added*”. The rhythmic ostinato in this movement utilises Papageno’s aria *Der Vogelfänger bin ich ja* as the source of all pitches. The material is constantly varied through a series of manipulation techniques that allow the composer to recreate the material of the rhythmic ostinato continually. Initially these techniques are employed in an attempt to obscure any audible relation to this aria. It is not until measure 236 that the aria material comes to its full right in the piano and percussion section. This significant delay of recognition is achieved through the application of manipulation techniques that can be grouped into five categories that fully define the variation strategies. Furthermore, the composer utilises the four phrases of the aria as separate entities and varies them by means of these techniques (Figure 65):

Figure 65: Vocal line from the aria *Der Vogelfänger bin ich ja*

In the vocal line of Figure 65 the four symmetrical phrases are clearly marked. The numbering of the pitches is for explanatory purposes.

The first technique used by the composer is the employment of fragmented pitch selections (Figure 66):

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Phrasc A from *Der Vogelfänger bin ich ja*

1 2 3 7 8 9 12 13 14 16 17 18 20

Figure 66: Pitch selection and fragmentation

This employment strategy is observed in measures 8⁴ - 20 that sets the rhythmic ostinato in motion. The first 5 measures are illustrated in Figure 66. Another prominent example can be observed in measures 221 - 228 (Figure 67):

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Phrasc D from *Der Vogelfänger bin ich ja*

10 11 14 16 19 21 17 18 17 18 3 7 16 17 1 3

12 13 17 18 22 23 14 16 14 16 14 16 18 19 13 14

Measures 221-224 from movement II (violins I & II)

Figure 67: Fragmentation of pitch selections in measures 221 - 224

In this illustrated example (Figure 67) it is evident that the composer chose to utilise phrase D from the aria and through fragmenting the pitch selections recreated new material for the rhythmic ostinato. However, if one considers both violin parts it can be speculated first that what appears to be fragmentations in one instrument is actually also a continuation of a longer extract divided between both violins. The bracketed parts indicate the groups of pitch selections joined together to form a continuous ostinato pattern.

Subsequently the composer employs pitch selections, without fragmentation, to form newly constructed ideas (Figure 68); this is the second technique exploited by the composer:

Figure 68 consists of three staves of musical notation. The top staff is a bass clef staff in 2/4 time, labeled 'A' at the beginning. It contains 20 measures of music with a bracket above it. Below the staff are the numbers 1 through 20. The middle and bottom staves are treble clef staves in G major. The middle staff has two measures of music, with the first measure containing notes 1, 3, 4, 7, 8, 9, 14, 18, 20 and the second measure containing notes 1, 2, 5, 6, 8, 10, 11, 14, 15. The bottom staff also has two measures of music, with the first measure containing notes 5, 7, 9, 10, 11, 16, 17, 18 and the second measure containing notes 6, 8, 9, 10, 14, 19, 20.

Figure 68: Newly constructed ideas from the first phrase of *Der Vogelfänger bin ich ja*

Illustrated in Figure 68 are four newly created ideas formed through pitch selection. These were employed in isolation or in combination to form new rhythmic ostinato patterns. This technique is clearly visible in measures 72⁴ - 80 (Figure 69):

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Phrase A from *Der Vogelfänger bin ich ja*

1 3 5 6 1 3 5 7 8 9 11 13 14 15 2 3 5 9 13 14 15 16 17 3 4 7
Measures 72-75 from movement II (Flutes, clarinetes, violas, and cellos)

Figure 69: Rhythmic ostinato pattern formation through pitch selections – measures 72⁴ - 75

In the excerpt above (Figure 69) the rhythmic ostinato has been formulated through a series of pitch selection groups adjoined without any fragmentation.

A newly formed idea, created through pitch selection, is further varied through the gradual omission of pitches. This forms part of the third variation technique employed by Roosenschoon (Figure 70):

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
Phrase B from *Der Vogelfänger bin ich ja*

Pitch selections from phrase B

1 2 3 5 15 20 21

1 2 3 5 15 20 21 2 3 5 15 20 21 3 5 15 20 21 5 15 20 21 15 20 21 20 21 21

Figure 70: Illustration of the gradual shortening of a pitch selection pattern

Figure 70 illustrates the third technique where the first note of each subsequent shortened version of the pitch selections has been omitted. An example of this technique can be observed in measures 65 - 72 (Figure 71). Figure 72 illustrates the process of the formation of the ostinato pattern:

The image shows a musical score for piano, measures 65-72. It consists of four staves: two for the right hand (labeled '1') and two for the left hand (labeled '2'). The music is in 4/4 time. The first two measures (65-66) show a rhythmic ostinato pattern. From measure 67 onwards, the first note of the ostinato is omitted in subsequent phrases, as indicated by the 'sempre stacc.' marking. The tempo is marked 'poco a'.

Figure 71: Gradual shortening of the rhythmic ostinato in measures 65 - 67 through the omission of pitches

The image shows three musical staves illustrating the shortening process of the rhythmic ostinato. The first staff is labeled 'D' and shows a phrase in bass clef, 2/4 time, with measures numbered 1 through 23. Below it is the text 'Phrase D from Der Vogelfänger bin ich ja'. The second staff shows measures 7-11, 8-11, 9-11, and 10-11, illustrating the gradual shortening of the phrase. Below it is the text 'Measures 65-67 from movement II (pianos I & II)'. The third staff shows measures 1-3, 9-11, 14-16, 1-3, 9-11, 1-3, 9-11, 1-3, 9-11, illustrating the further shortening of the phrase. Below it is the text 'Measures 69-72 from movement II (pianos I & II)'.

Figure 72: Illustration of the shortening process of the rhythmic ostinato in measures 65 - 72

In the measures illustrated in Figure 70, measures 65 - 67 show that the first note of the group of pitch selections has been omitted in each subsequent collective. Measures 69 - 72 invert the omission process by removing one of the last notes of each group of pitch selections.

As the fourth technique, the composer rotates/displaces selected pitches from one metric location of a measure to a different position. Here is an example of pitch rotation from the outer sides to the middle of a collective of pitch selections (Figure 73):

D

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Pitch selections from phrase D

1 2 3 5 10 11 14

1 2 3 5 10 11 14 2 3 5 1 10 11 14 2 3 5 14 1 10 11 3 5 14 2 1 10 11

3 5 14 11 2 1 10 5 14 11 3 2 1 10 5 14 11 10 3 2 1 14 11 10 5 3 2 1 etc.

Figure 73: Illustration of pitch rotation to the middle of the pitch selections

An example of this fourth and last technique can be observed in measures 50⁴ - 56 (Figure 74):

Figure 74: Rotation of the pitches of the rhythmic ostinato in measures 51 - 56

If the piccolo part in Figure 74 is considered, it is noticed that only a select number of pitches have been utilised. These pitch selections are constantly rotated to sustain the rhythmic ostinato through the indicated measures. Figure 75 illustrates this process:

C

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

Phrase B from *Der Vogelfänger bin ich ja*

1 2 3 5 7 12 2 3 5 1 7 12 2 3 12 5 1 7 3 12 5 2 1 7

Measures 51-53 from movement II (piccolo)

Figure 75: Illustration of the rotation of pitches in the selected measures

These illustrated techniques are implemented by the composer to obtain enough material to structure these continuous perpetual ideas throughout the movement. These four techniques are also utilised as obfuscation devices that serve a similar principle as the techniques employed in the first movement. Although the pitches vary constantly, certain pitches or fragments recur and contribute to the structure of the movement. For example, the fragmented pitch selections of the rhythmic ostinato in measures 25 - 28 bear great resemblance to the rhythmic ostinato fragment in measures 221 - 228. Both use the same material and apply the same techniques.

Combined with these motives are brief moments of material extracted from the opera that mostly relate to the character of Papageno. The material employed in this movement has been extracted from numerous scenes from the opera and not only from one aria as in the first movement. After examining the melodic layout of the entire movement, it was found that material from the following scenes only was utilised (Table 4):

Scene	Characters involved	Comments
Overture		
2	Papageno	Aria: <i>Der Vogelfänger bin ich ja</i>
4	Queen of the Night	Aria: <i>O zitt're nicht</i>
5	Papageno, Tamino, and three ladies	Quintet: <i>Hm! Hm! Hm!</i>
8	Papageno, Pamina, and Monostatos	Act I finale ⁶
14	Queen of the Night	Aria: <i>Der Hölle Rache</i>
20	Papageno	Aria: <i>Ein Mädchen oder Weibchen</i>
21	Papageno and Papagena	Act II finale: Interlude and accompaniment to Papageno and Papagena's duet.

Table 4: Material extracted from the opera for Movement II

The colour labels in Table 4 are for explanatory purposes regarding Table 5.

⁶ The only extract from this large final scene of Act I that the composer used is where Monostatos and his minions capture Papageno and Pamina after which Papageno bewitches them with his magic bells to allow for their escape.

As can be seen, most of these scenes are related to the character of Papageno. In order to see how these extracts succeed throughout the movement, the researcher included Table 5.

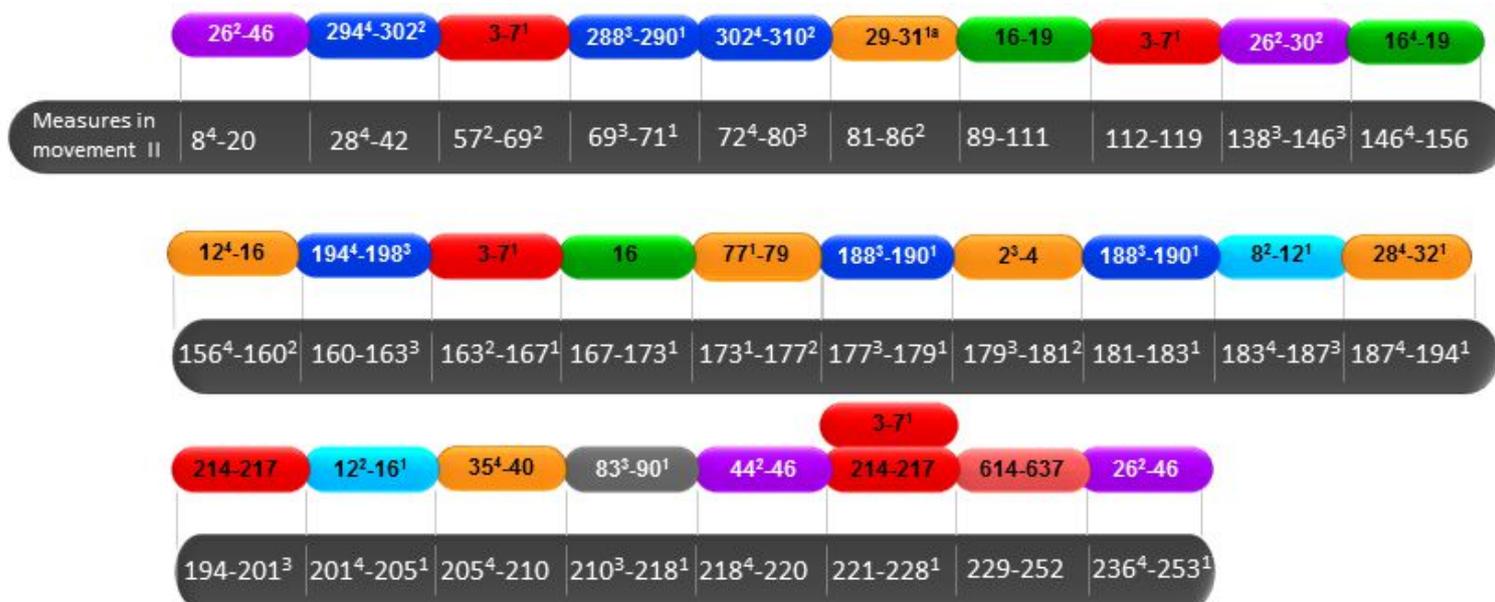


Table 5: Illustration of the succession of material extractions from the opera

The colour indications correlate with the colour labels in Table 4. Through the use of colour it is clear which scene's material has been utilised and to what extent. The repeated fragments contribute significantly to the structure of the movement. Although a number of different extractions are made in any specific scene, there are also some of these fragments that are repeated to serve a structural function.

How the composer employed these fragments throughout the movement is fascinating. Unlike the first movement, fragments from the opera are generally stated in their original form. No manipulation techniques have been used to obscure the employed segments. The chosen extracts are of short duration and are treated as direct statements from the opera. In isolated instances, extracts have been altered slightly through fragmentation. Selected extracts have been spliced together or even employed concurrently to form new and exciting moments throughout the

movement. The composer also created diverse colour changes right across the orchestra by dividing a fragment between instrumental timbres. All extracted segments are accompanied by the rhythmic ostinato and occasionally by one of the prominent motives (as discussed in Section 3.1).

If measures 72 - 80 are considered (Figure 76), one can see an exact statement of measures 302 - 310, scene 8 from the opera.

The image displays a page of a musical score for measures 72-80. The score is arranged in a standard orchestral format with multiple staves for different instruments. The instruments listed on the left are: Trbns (1, 2, 3), Corni (1, 2, 3, 4), Tbnl. 1.2, Tbn. 3, Tuba, Timp., Mbf 1, Xlf, Mbf 2, Cpl, Piano (1, 2), Vln. (1, 2), Viole, V'celli, and C'bassi. The score includes various musical notations such as notes, rests, dynamics (e.g., *ff*, *senza sordini*, *poco a poco dim.*, *p*, *mp*), and performance instructions. A specific passage in the Corni part, measures 76-78, is enclosed in a black rectangular box and labeled with the text "come da lontano". At the bottom left of the page, the number "69" is visible in a small box. At the bottom right, there are additional performance instructions for the strings and organ, including "div. V", "p", "delicato simile", "arco V", and "p (suoni reali)".

The musical score is arranged in a system with the following parts from top to bottom:

- Trbe.** (Trumpets): 1 and 2 staves. The 2nd staff has the instruction *con rord. (cup) 2.* at the end.
- Corni** (Cornets): 1 and 2 staves. A box highlights the first staff from measure 302 to 310.
- Tbni. 1.2** (Tenors): 1 and 2 staves.
- Tbnc. 3** (Tuba): 1 staff, with the instruction *(Tuba)* above the first measure.
- Toba** (Tuba): 1 staff.
- Timp.** (Timpani): 1 staff.
- Mbf 1** (Mellophone): 1 staff, with the instruction *mufa in Crt* above the end.
- Xlf** (Xylophone): 1 staff, with the instruction *mufa in Pto* above the end.
- Cpi** (Cymbal): 1 staff, with the instruction *mp* below the first measure.
- Cpn** (Cymbal): 1 staff.
- Organo** (Organ): 2 staves.
- Vln.** (Violins): 1 and 2 staves.
- Viola** (Viola): 1 staff.
- V'celli** (Violoncelli): 1 staff.
- C'bass** (Contrabass): 1 staff.

A box number **75** is located at the bottom left of the page.

Figure 76: Statement of measures 302 - 310, scene 8, from the opera in measures 72 - 80 in Movement II (woodwinds omitted)

In Figure 76 the stated material from the opera has been given to the horns while the violins and organ accompany with the three chord motive. The low strings play the rhythmic ostinato that is formulated through the application of the second manipulation technique.

A foremost example of where material from different scenes of the opera has been spliced together can be seen in measures 152⁴ - 160² (Figure 77). These measures are restatements of measures 16⁴ - 19 (black bordered area) from the overture, and measures 12^{4b} - 16 (red bordered measure) from scene 14. This technique has been employed predominantly throughout the greatest part of the movement.

43

The image shows a page of a musical score for a symphony orchestra. The instruments listed on the left are Flute (Fl. 1.2), Oboe (Ob. 1.2), Clarinet in G (Cl. ingl.), Clarinet in B-flat (Cl. ploc.), Clarinet in B-flat (Clar. 1.2), Bassoon (Cl. basso), Bass (Bas.), Flute (Fl. 1.2), Clarinet in G (C'ing.), Trumpet (Trbe. 1, 2, 3), Horn (Corn. 1, 2, 3, 4), Trombone (Tbn. 1, 2), Trombone (Tbn. 3), and Tuba (Tuba). The score is in 4/4 time. A red rectangular box highlights measures 152 through 157. In these measures, the woodwinds (Flute, Oboe, Clarinet, Bassoon, Trumpet, Horn, Trombone, and Tuba) play a melodic line that is a restatement of material from the overture and scene 14. The string parts (Violins, Viola, Cello, Double Bass) play a rhythmic ostinato. The score includes dynamic markings such as *ff* and *simile*, and performance instructions like *con sord. ord.* and *sola*.

Figure 77: Illustration of spliced material in measures 152⁴ - 157

Another example of where the composer spliced two different fragments from the opera can be found in measures 205 - 220 (Figure 78):

51

Musical score for page 51, measures 1-4. The score includes parts for Piccolo, Flute 1.2, Oboe 1.2, Clarinet in G, Clarinet in Bb, Clarinet in C, Bassoon, Bass, and Fagott 1.2/C'fagott. The woodwinds and strings are active, while brass and percussion are omitted. Dynamics include *f* and *simile*.

(Brass, percussion and strings omitted)

52

Musical score for page 52, measures 1-4. The score includes parts for Piccolo, Flute 1.2, Oboe 1.2, Clarinet in G, Clarinet in Bb, Clarinet in C, Bassoon, Bass, Fagott 1.2/C'fagott, and Violins. The woodwinds and strings are active, while brass and percussion are omitted. Red boxes highlight specific passages in the woodwinds and strings. Dynamics include *f*, *ff*, and *sub f*. Performance instructions include *ppizz.*, *arco div.*, and *div.*.

(Brass and percussion omitted)

different arias sung by the Queen of the Night whereas the third melodic fragment is from Papageno's aria that has been used for the formation of the rhythmic ostinato. This illustrates the usage of different material extractions from the opera joined together to form new gestures in the movement.

The section that follows (Figure 79) is a prime example of two fragments from the opera employed concurrently:

The image shows a page of a musical score for a symphony orchestra, page 101. The score is written for various instruments, including Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Bassoon (Fg.), Trumpet (Trbe.), Trombone (Tbne.), Tuba, Timpani (Timp.), Mute (Mbf), Cymbal (Cpl), Piano, Organ, Violin (Vin.), Viola, Violoncello (V'celli), and Contrabass (C'bassi). The Timpani part is highlighted with a red box. The score contains various musical notations, including dynamics (pp, p, f, ff), articulation (accents, slurs), and performance instructions (senza sordini, muta in Xif, muta in Mbf, muta in Cpl, col legno, p dolce, p pizz., p distinto). The page number 101 is visible in the top right corner.

Figure 79: Illustration of material extractions employed concurrently

In Figure 79 the two bordered areas show two distinct segments from the same scene from the opera. The black bordered measures are reminiscent of measures 214 - 217^{4a} from scene 5 (Figure 80) whereas the red bordered part iterates measures 3 - 5 from the same scene. Notice how the rhythmic ostinato in the *col legno* strings is also reminiscent of the accompaniment in measures 214 - 217^{4a} from the opera:

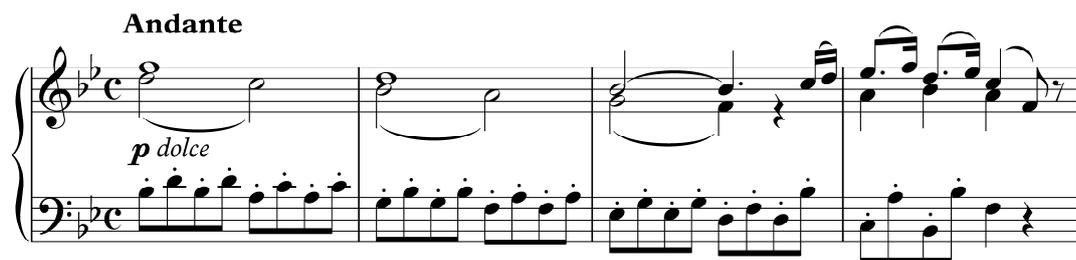


Figure 80: Piano reduction of m. 214 - 217^{4a} from scene 5 from *Die Zauberflöte*

An example of where the composer divides the material from the opera (m. 294⁴ - 320³ from scene 8) between instruments can be observed in measures 28⁴ - 36 (Figure 81). Here the composer utilises the melodic fragment played by the celesta in the opera to represent Papageno's magic bells, in a similar fashion between two percussion instruments – crotales and glockenspiel.

Figure 81: Comparison of measures 28⁴ - 32 from movement II and measures 294 - 298 from scene 8 from the opera

In the illustration above (Figure 81) it can be seen that the bracketed parts of the melodic extraction are played by the glockenspiel whereas the circled parts are played by the crotales.

All the melodic fragments utilised in this movement culminate in measure 229 with the substantial entry of the instrumental accompaniment of Papageno and Papagena's duet from scene 21. Shortly after the initial statement of the accompaniment there is an entry of a complete rendition of Papageno's aria *Der Vogelfänger bin ich ja*. Both these melodic extracts from the opera are sustained up to the end of the movement.

In the first movement melodic material is manipulated to form a constituent of the texture. However, here we find a conscious shift towards the emphasis of pitch content. This is the result of melodic extractions remaining intact without much alteration. It also ties in with the principle of the entire composition devised as having a constant affinity with clarity of musical content.

3.3. Harmony

The harmonic language of the second movement is based on the same principles as that of the first movement. Roosenschoon continues the construction of pandiatonic clusters through a collective of scale-specific pitches. The way in which the composer utilised these cluster chords are threefold:

- As part of the three chord motive heard throughout the movement.
- Through parallel instrumental doublings of ostinato patterns to form a horizontal placement of cluster chords.
- As underpinning harmonic structures for melodic fragments from the opera.

If the opening of the movement is considered, one can observe the three pandiatonic cluster chords, forming the three chord motive that is frequently employed throughout the movement (Figure 82):

The musical score shows three systems of two measures each. The first system is labeled '8va' and the second '8vb'. The chords are: dM-M7 [7 1 2 3 4 5 6], f#M-M5 [5 6 7 1 2 3 4], and aM-M3 [3 5 6 7 1 2 4].

Figure 82: Three pandiatonic cluster chords utilised in measures 1 - 8

In Figure 82 the first measure of each cluster representation includes all chordal member doublings while the second measure illustrates the basis chord. Differentiating these chords from those of the first movement are slight adjustments to the scale encompassments employed by the composer. Here Roosenschoon decided to utilise only ascending melodic minor scales for cluster constructions rather than harmonic minor ones. After a thorough study of the harmonic vocabulary of the entire movement, it was found that this is a constant trait. All major and harmonic minor cluster chord constructions have been excluded, except for one isolated major cluster that is discussed below. These three pandiatonic cluster chords are clear examples of melodic minor formations and consist of encompassments of ascending D, F#, and A melodic minor scales. However, these opening harmonies and their structures are not fixated to the recurring three chord motive. Roosenschoon also employs other non-related harmonies to form part of the motive depending on the required underlying harmonies. For example, in measures 41 - 56¹ (Figure 60) the composer uses only B and D melodic minor cluster chords to form the extended three chord motive. Similarly, in measures 73 - 80 (Figure 76) Roosenschoon employs C# and E melodic minor cluster harmonies for the motive.

As seen in the discussion of the melodic aspects of the second movement (section 3.2), the composer employed a constant perpetual rhythmic ostinato that spreads throughout the composition. This ostinato occasionally appears in only one instrument or is expanded through parallel instrumental doublings to form an entire cluster harmony; it is always present. The fascinating fact about this ostinato is that it never changes key but rather remains in the key of G major for the remainder of the movement. One can therefore deduce that the key centre of the movement is G major as it serves as a constant reference point for all other material employed concurrently and is ultimately a tonal anchor. When the ostinato occurs in numerous instruments, the result is rapid successions of G major pandiatonic cluster harmonies. An example of this is shown in measures 45 - 56 (Figure 83) where there is a build-up of the ostinato. It initiates solely in the flutes, clarinets and organ, but is expanded with the addition of almost the entire woodwind section, percussion section, and first and second pianos:

The image shows a musical score for measures 51-56. The instruments listed on the left are Picc., Fl. 1.2, Oboe 1.2, C.ingl., Cl. picc., Clar. 1.2, Cl. basso, Sas., Fg. 1.2, and C'fg. The score features a rhythmic ostinato that builds up across these instruments. A vertical box highlights the rhythmic ostinato in measures 51-56 across several instruments. The score includes dynamic markings such as *ff* and *place.*, and performance instructions like *(sempre)* and *loco*.

Figure 83: Rhythmic ostinato in measures 51 - 56 (woodwind section only)

Figure 83 illustrates the rhythmic ostinato in multiple instruments and any one quaver beat can be analysed to discover a complete G major pandiatonic cluster as illustrated in the boxed part.

However, this entire section is perceived as a horizontal entity and not necessarily as rapid successions of different spacings of a cluster chord.

In analysing the ostinato, which is an ongoing feature in an unchanging key, one finds a more complex situation. This complex situation is a result of the simultaneous employment of unrelated harmonies over the ostinato. If one considers the directional placement of all cluster chords, it is noted that they are utilised predominantly as vertical entities. The ostinato, however, is presented, or at least is perceived, as a horizontally placed pandiatonic cluster (when employed in numerous instruments). Regardless of the directional employment of the pandiatonic cluster chords, the resulting phenomenon of the simultaneous employment of the cluster harmonies over the ostinato can be classified as polychordal. Polychords, according to Kostka (2011:96) involve the juxtaposition of two or more chordal structures. In this context the composer utilises two cluster chords simultaneously, one of which might be perceived as a horizontal entity. The fundamental principle, however, is how the listener perceives these chords (Kostka 2011:98). If the harmonic structures cannot be discerned as separate structures, it defies the purpose of classifying the chords as polychordal. Roosenschoon utilises the orchestral medium to his advantage to highlight the two separate structures. In measures 51 - 56 (Figure 60) the majority of the ostinato is placed in the woodwind section and consists of articulated quaver passages. The sustained cluster chords are given to the strings to attain an excellent degree of separation. Rhythmic contrasts are used between the two cluster chords to create segregation. Similar instances are seen in measures 61 - 72 (Figure 84) and 104 - 119 that have similar constructions but with fewer participating instruments. In these measures the ostinato is reserved mostly for the percussion section, pianos I and II and strings.

Alternatively, the G major ostinato patterns can be seen as articulated tonic pedal groups, seeing that this movement revolves around the key of G major. Unrelated cluster harmonies are therefore employed over the pedal groups similar to how harmonies were commonly used over tonic pedal notes in the 17th and 18th centuries.

The image displays a page of a musical score, specifically measures 63 through 68. The score is arranged in a standard orchestral format with multiple staves for different instruments. The instruments listed on the left include Flute (Flc.), Flute 1 & 2 (Fl. 1.2), Oboe 1 & 2 (Obel 1.2), Clarinet in G (C.ingl.), Clarinet in Bb (Cl. picc.), Clarinet in Bb (Cl. 1.2), Clarinet in Bb (Cl. basso), Bassoon (Bas.), Flute in G (Fg. 1.2), Flute in G (C'fg.), Trumpet (Trbe. 1, 2, 3), Horn (Corni 1, 2, 3, 4), Trombone (Tbn. 1.2), Trombone (Tbn. 3), Tuba, Timpani (Timp.), Mellophone (Mbf 1), Xylophone (Xyf), Cymbal (Cyl), Piano (Piano 1, 2), Violin (Vin. 1, 2), Viola, Violoncello (V'celli), and Contrabass (C'bassi). The score features various musical notations, including notes, rests, and dynamic markings. A red rectangular box highlights the woodwind section (Flute, Oboe, Clarinet, Bassoon) in measures 63-68, showing complex polychordal textures. A green rectangular box highlights the string section (Mellophone, Xylophone, Cymbal, Piano, Violin, Viola, Violoncello, Contrabass) in the same measures. The score includes performance instructions such as 'simile', 'f', 'dim.', 'aperto', 'ff', 'ad libitum', 'poco a', 'sempre stacc.', and 'unis.'. The page number '107' is visible in the top right corner, and the University of Pretoria logo is in the top center.

Figure 84: Polychordal writing in measures 63 - 68

In Figure 84 the composer employs the rhythmic ostinato in the percussion section, pianos I and II, and violins (marked in green). Again, through parallel doublings of the rhythmic ostinato, the resulting G major cluster chord is presented together with the sustained underlying cluster chord (marked in red) aM - M3 [3 4 1 2 5 6 7]. The black bordered parts illustrate the melodic extraction from the opera (scene 5, measures 3 - 7¹). One can again see how the instrumentation and rhythmic disposition aid in the differentiation between the rhythmic ostinato, forming a G major cluster, and the additional A minor cluster.

Other effective instances of polychordal writing occur in measures 194 - 201³ and 221 - 228³. Both these excerpts contain the same melodic extraction from the instrumental interlude in scene 5. This interlude occurs just before the three ladies address Papageno and Tamino concerning three boys that will be their guide. Roosenschoon decided to retain the original harmonies of this melodic extract together with the employment of additional cluster chords.

In Figure 85 one sees the extract from the opera, boxed in black, as well as the cluster harmonies in the organ. All these chords occur over the rhythmic ostinato in the strings:

The musical score for measures 221-228 is a complex orchestral arrangement. It features a variety of instruments including woodwinds (Piccolo, Flutes, Oboes, Cor Anglais, Clarinets, Bassoon), brass (Trumpets, Trombones, Tuba), percussion (Snare Drum, Muffled Drums, Tom-toms, Cymbals), and strings (Violins, Viola, Violoncello, Double Bass). The score is characterized by polychordal writing, where multiple chords are played simultaneously, creating a rich, layered harmonic texture. Key performance instructions include *pp* (pianissimo), *col legno*, *col legno p*, *upl. pizz.*, *p distinto*, *senza sordini*, and *muta in* (change instrument). The score is divided into two systems, with the first system covering measures 221-228 and the second system covering measures 229-236. The bottom of the page shows a sequence of numbers: 1 2 2 1.

Figure 85: Polychordal writing in measures 221 - 228¹

The harmonic layout of this passage seen in Figure 85 is presented in Table 6:

Measure	Cluster harmonies	Harmonies from extract
221	bM - M7 [7 4 5 2 3 6 1]	B min.
222	c#M - M6 [6 4 5 7 3 1 2]	D min. ⁶ ₄
223	aM - M7 [7 4 5 2 3 6 1]	E min.
224	eM - M3 [3 5 7 4 6 1 2]	B min. ⁶
225	dM - M6 [6 4 5 7 3 1 2]	C maj.
226	gM - M2 [2 4 6 3 5 7 1]	G maj. ⁶
227-228	eM - M1 [1 4 7 2 3 5 6]	F# min. ⁶ - G maj. ⁶ - D maj.

Table 6: Harmonic layout of measures 221 - 228

The polychordal writing is clear from the layout in Table 6 and the fact that there is a significant timbre difference between the opera extract and the cluster chords makes it easy for the listener to discern these structures. These harmonies then also occur over the horizontally spread G major rhythmic ostinato in the string section. Ultimately, we see three harmonic aspects participating in the polychordal writing.

Apart from the simultaneous employment of cluster chords, there are also instances where the composer chose to utilise two clusters in rapid alternating relationships. This occurs in measures 84 - 94 (Figure 86):

34

The musical score is arranged in two systems. The first system includes the following parts: Flute 1 & 2 (Fl. 1.2), Oboe 1 & 2 (Ob. 1.2), Clarinet in G (C.ingl.), Clarinet in B-flat (Cl. picc.), Clarinet in B-flat 1 & 2 (Clar. 1.2), Bassoon (Cl. basso), Bassoon 1 & 2 (Bas.), Bassoon 1 & 2 (Fg. 1.2), and Contrabassoon (C'fg.). The second system includes: Trumpet 1, 2, and 3 (Trbe.), Horn 1, 2, 3, and 4 (Corn), Trombone 1, 2, and 3 (Tbn.), Timpani (Timp.), Cymbal (Crt), Xylophone (Xif), Mellophone 2 (Mbf 2), and Cymbal (Cpn). The third system includes Piano 1 (Piano) and Violin 1 and 2 (Vin.), Viola, Violoncello (V'celli), and Contrabass (C'bassi). The score features alternating cluster chords in measures 87-92, highlighted with yellow and red boxes. Performance markings include *arco*, *unls. nat.*, and *nat.* with a forte (*f*) dynamic.

Figure 86: Illustration of alternating cluster chords in measures 87 – 92

m. 92-93

m. 94

gM-M4 [4 6 1 3 7 2 5] +
f#M-M5 [5 6 2 7 3 4 1]

(enharmonic
spelling)

gM-M4 [4 6 1 3 7 2 5] +
dM-M7 [7 2 3 1 5 6 4]

Figure 87: Harmonic layout of measures 84 - 94

In this harmonic layout (Figure 87), the first measure illustrates the harmonies as utilised in the indicated measures while the second measure illustrates their basis chords. Because the rhythmic ostinato in these measures has been reduced to only one or two instruments, the G minor cluster chord is utilised as the harmonic backdrop and occurs in the strings.

Another harmonic employment strategy of the composer is essentially to utilise the harmonic structures as underpinning supplements to the melodic elements. An example can be seen in measures 236⁴ - 253 (Figure 88) where the ostinato pattern is employed as a complete rendition of *Der Vogelfänger bin ich ja* (black boxed part) along with the accompaniment figure from scene 21 (string section). Added to these features are underpinning cluster chords (red boxed part).

The image displays a page of a musical score, specifically measures 236 through 239. The score is arranged in a standard orchestral format with multiple staves. The instruments listed on the left include Piccolo (Picc.), Flutes (Fl. 1, 2), Oboes (Ob. 1, 2), Clarinet in G (C. ingl.), Clarinet in Bb (Cl. plcc.), Clarinets (Clar. 1, 2), Bassoon (Cl. basso), Basses (Bas.), Fagot (Fg. 1, 2), Contrabass (C'fg.), Trumpets (Trbe. 1, 2, 3), Horns (Corni 1, 2, 3, 4), Trombones (Tbnl. 1, 2), Tuba (Tuba 3), Timpani (Timp.), Mtrons (Mrf 1, 2), Xylophone (Xif), Cymbals (Cp1), Piano (Piano 1, 2), Violins (Vln. 1, 2), Viola (Viola), Violoncello (V'celli), and Double Bass (C'bassi). The score shows various musical notations, including rests, notes, and dynamic markings such as *mf* and *stacc.*. A red rectangular box highlights a specific section of the score, primarily in the lower woodwind and brass sections, from measure 236 to 239. This section shows a consistent harmonic pattern across several instruments, including Clarinet in Bb, Bassoon, Fagot, Trombones, and Tuba. The piano part also features a *stacc.* marking and a *Bva. batza* instruction. The bottom left corner of the page contains the number '234' in a small box.

Figure 88: Harmonic underpinning in measures 236⁴ - 239

Although most of the cluster chords are employed vertically there are a few isolated instances where the composer uses clusters horizontally. One can conclude that, similar to the first movement, the cluster chords form part of two landscapes in the music – vertical and horizontal.

Similar to the first movement, we find different degrees of the vertical utilisation of the cluster chords, ranging from static chords to rapid repetitions. In Figures 86 and 88 one finds two different employment strategies of cluster chords. In Figure 86 there are rapid and articulated repetitions of cluster chords whereas in Figure 88 the composer employs the cluster chords as punctuated units recurring not as frequently as in Figure 86.

An example of where the composer employs a cluster chord horizontally can be seen in measures 95 - 98 and 120 - 125 (Figure 89):

The image displays two systems of a musical score for a string ensemble. The first system, labeled with measure numbers 117, 118, 119, and 120, shows five staves: Violin 1, Violin 2, Viola, Violoncello, and Contrabasso. The strings play rapid, articulated repetitions of cluster chords. Dynamic markings include *f*, *mp*, and *mf*. The second system, labeled with measure numbers 121, 122, 123, 124, 125, and 126, shows the same five staves. The cluster chords are now punctuated units. Dynamic markings include *p*, *mp*, and *mf*. The notation includes various articulation marks and slurs.

Figure 89: Horizontal employment of cluster chords in measures 120 - 126¹

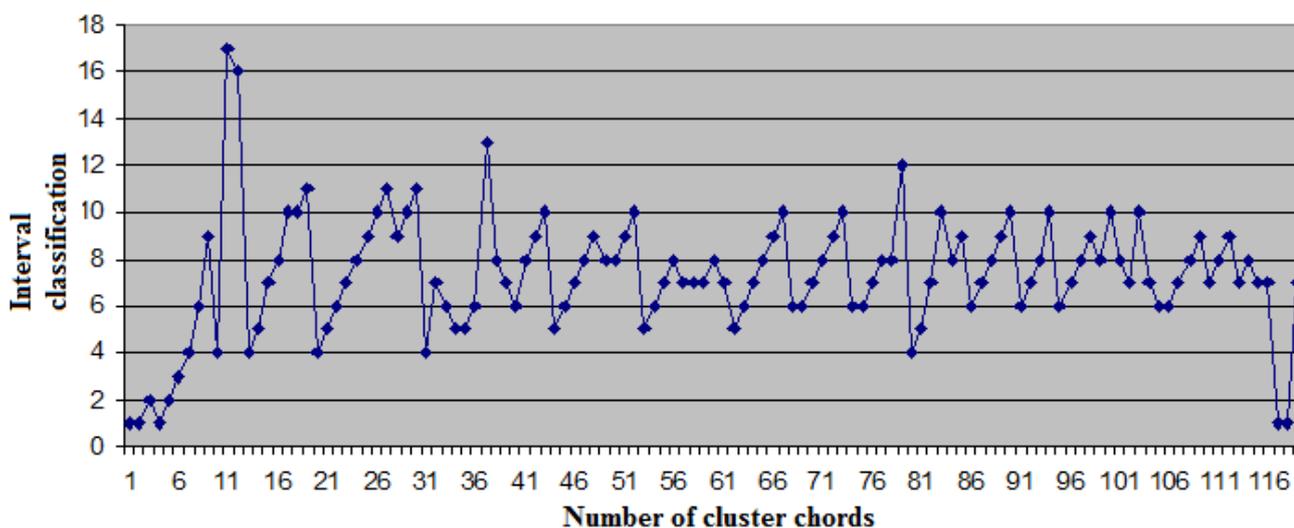
In Figure 89 the composer chose to employ the harmonies $d\flat M - M1 [1\ 3\ 7\ 4\ 5\ 6\ 2]$, $dM - M7 [7\ 3\ 1\ 4\ 5\ 6\ 2]$, and $eM - M2 [2\ 3\ 1\ 4\ 6\ 7\ 5]$ horizontally. The horizontal placement of cluster chords is not frequently employed by the composer.

When comparing the harmonic practices of the second movement to those of the first movement it is clear that there are numerous differences and similarities in the way the composer uses cluster chords. One of the important differences is the scale formations used to construct clusters from. It has been established that with the exception of the ostinato only ascending melodic minor scales are employed. But it is also important to note that the composer exploited only a select number of scale encompassments in this movement, as opposed to the first movement where the composer utilised cluster chords with root notes on almost every degree of the chromatic scale. In the second movement Roosenschoon uses only seven scales: D, E, F#, G, A, B and C# minor (all of which are ascending melodic minor scales). Interestingly, these chord roots in succession form a D major scale that is also the dominant of the overall key of the movement – G major. Furthermore, all these cluster chords appear in succession very early on in the movement and for the remainder of the movement the composer exploits their rotational possibilities. These chords, in a rearranged sequence, can be seen in measures 28⁴ - 42. It is concluded that the second movement is tonally much more anchored than the first movement. This is the result of the limited scale encompassments as well as the lingering G major ostinato employed in the second movement.

The cluster chords' role in textural density construction is different to that of the first movement. This is attributed to the fact that very few instances of chordal member doublings are utilised in this movement. Only the seven degrees of the encompassed scales are used except in measures 1-8, 90-94, 104-119, 147-154, 191-192 and 253-255. In these measures we do find chordal member doublings. The reason for the limited use of member doublings is the fact that the texture of the movement is formulated through three aspects: the ostinato, melodic extractions and harmonic structures. In the first movement the composer only used harmonic structures and melodic extractions to constitute texture. As a result of the added ostinato in this movement more material is available to expand the texture. The role of increasing/decreasing textural densities is assigned to the ostinato which, as discussed, is presented in either one instrument or in multiple

instruments. In the first movement this role was mainly assigned to the cluster chords which was achieved through chordal member doublings.

Because of the ostinato's function in density contribution, as opposed to the cluster chords, a cluster density graph will be ineffective. The method employed by the composer to expand and contract these limited harmonic structures here is identical to the method used in the first movement. Therefore, the author has included a similar graph (Graph 5) to the one in section 2.3. It illustrates how Roosenschoon employs the technique of member rotation to expand basis chords:



Graph 5: Cluster chord expansions and contractions throughout Movement II

All cluster chords have been classified according to their intervallic distances from the bass/root notes. This procedure is seen in Figure 37 in the section on harmonic practices in the first movement (section 2.2). From Graph 5 one clearly sees, as a result of the constant upward trends, that the composer has achieved constant systematic expansions of clusters as opposed to the first movement where constant contractions take place. Graph 5 also shows the number of harmonic changes that occur in this movement. Although this movement contains only seven cluster harmonies the frequent and rapid changes of cluster chords are almost twice the number of harmonic changes in the first movement. This is partly because of the faster tempo of the second

movement. It may also be attributed to the fact that the entire movement utilises cluster chords whereas the first movement employs these cluster harmonies only in the middle section and coda. The fact that there are no sound blocks present is also a factor since harmonic changes can occur in almost every measure as opposed to every other sound block.

Apart from the fact that this movement has a key-specific ostinato that anchors it tonally, the composer also employs other techniques to aid in the process of tonal centricity. Roosenschoon utilises pitches that are repeated between adjacent cluster chords and assigns them to the same instrument. This creates a smoother transition between clusters, even if they are not closely related, and provides stability. These repeated pitches often occur in the bass to ensure minimal movement between fundamentals of harmonic structures. The composer, therefore, engineers the scale collectives so that whichever mode is used, they all start on the same pitch. A substantial example can be seen in measures 236 - 252 (Figure 90):

The musical score consists of two systems of piano and bass staves. The first system covers measures 236-237, 239-240, and 241-242. The second system covers measures 242-243, 244-245, 245-246, and 247-248. Each measure contains a cluster chord in the piano part and a scale collective in the bass part. The scale collectives are labeled with mode names and fingerings.

Measure(s)	Scale Collective	Fingering	Notes
m. 236-237	dM-M4	[4 1 3 5 6 7 2]	D, E, F, G, A, B, C
m. 236-237	f#M-M2 (enharmonic spelling)	[2 4 7 3 5 6 1]	F#, G, A, B, C, D, E
m. 239-240	aM-M7	[7 5 6 3 4 6 2]	A, B, C, D, E, F, G
m. 241-242	c#M-M5 (enharmonic spelling)	[5 3 4 1 2 6 7]	C#, D, E, F, G, A, B
m. 242-243	eM-M3	[3 6 7 1 4 5 2]	E, F, G, A, B, C, D
m. 244-245	gM-M1	[1 6 7 3 4 5 2]	G, A, B, C, D, E, F
m. 245-246	bM-M6	[6 4 7 2 3 5 1]	B, C, D, E, F, G, A
m. 247-248	dM-M4	[4 7 1 5 6 2 3]	D, E, F, G, A, B, C

m. 248-249 m. 250-251 m. 251-252

#M-M2 [2 7 4 5 6 1 3] aM-M7 [7 3 5 1 2 4 6] c#M-M5 [5 1 6 7 2 3 4]

Figure 90: Harmonic layout of measures 236 - 252

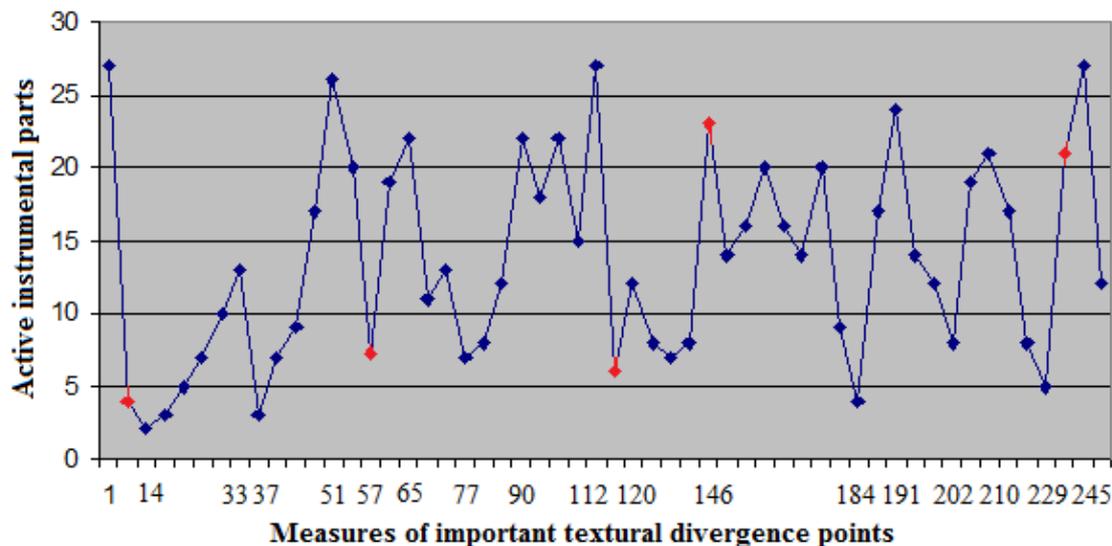
From this harmonic layout (Figure 90) it is clear that the composer intentionally arranged the cluster chords for the bass to remain on either G or G#. This creates minimal movement between the basses of the clusters and it forms short durations of quasi pedal points.

When comparing the result of non-harmonic pitches in the first movement to the second movement, it is clear that a greater number of instances occur in this movement. This is attributed to the G major ostinato, the additional cluster harmonies and the melodic extractions, all being utilised concurrently or in combination. As a result there are constantly pitches that appear foreign in relation to one another.

Lastly, although the intension of this movement is to evoke a constant perpetual drive from start to finish, the composer has still achieved areas of higher and lower tension. However, it is not as drastic and highlighted as in the first movement because of the absence of sound blocks. In this movement there are constant additions and omissions of instruments throughout the movement, causing areas to flatten out in terms of the density levels. This aspect is discussed in more depth in Section 3.4 to incorporate all elements in the examination of tension levels.

3.4. Texture

Textural principles in the second movement are similar to those in the first movement. These principles still involve the number of instruments active in any number of measures together with their accompanying timbres, dynamics and articulations. The fundamental difference between the two movements, which influences the use of texture accordingly, is the employment of sound blocks in the first movement and the absence thereof in the second movement. Sound block constructions in the first movement allow for the division of textural units. However, since there are no sound block structures present in the second movement, the textures can freely move through various levels of density without disruptions. This makes it difficult to determine the density levels of the movement as there are constant shifts in the textural plane through the inclusion and exclusion of instruments. A graph of textural densities, similar to the one of the first movement, can be drawn up based on the active instruments in a certain number of measures (Graph 6):



Graph 6: Textural densities of the second movement

It is important to take note that the densities of textures of this movement predominantly transition smoothly between areas. It is, therefore, difficult to establish the exact density of any area because

of the constant additions/removals of instruments throughout an ongoing gesture. Graph 6 illustrates only the key moments of density divergences. Even though the transitions between these key moments might seem erratic the transitioning process occurs through a gradual build-up or diminishment of instruments. For this reason a line graph is used. It is only the red marks in the graph that illustrate sudden shifts in densities. Regardless of how the densities transition from one area to another, it is still apparent that the composer engineered the movement in order for the music to move through various textural densities. In Graph 6 it is clear how densities vary from only three or four instruments to a staggering 27 instruments.

The smooth transitioning of textural densities can be attributed to the brief entries of melodic extractions from the opera. It is only after climatic peaks that a sudden reduction in the density level occur. This can clearly be seen in measures 119 - 120 (Figure 91):

The musical aspects that constitute the texture of this movement can be categorised into four groups:

- Material extracted from the opera
- Employment of cluster chords
- The rhythmic ostinato
- Prominent motives occurring throughout the movement

These four categories are utilised concurrently or in any combination to form the textural layers of the movement. Within these four categories the textural principles – timbres, dynamics and articulations – are exerted in order to create the deepening aspect in the dimensional layout of the movement.

If one considers the textural principles as employed in this movement, it can be seen that their application is similar to that in the first movement. The musical aspects that establish the texture are usually orchestrated so that each element is played by a different orchestral family. There are also numerous instances where an incomplete orchestral family or more than one instrumental group is exerted for a musical aspect. This is different from the first movement where the orchestra is more definitively employed in accordance with the orchestral families in an alternating fashion. These aspects are constantly reorganised between instruments in order to create contrasting and innovative colours for each element. The dynamics and articulations are exploited in the same way as in the first movement. Accordingly, these principles are the direct influence of the dimensional landscape of the movement.

Consider the following excerpt of measures 72⁴ - 80 (Figure 92):

The image displays a musical score for measures 76 to 80. The instruments listed on the left are: Flc., Fl. 1.2, Obo1. 1.2, C. Ingl., Cl. picc., Clar. 1.2, Cl. basso, Bas., Fg. 1.2, C'fg., Trbe. (1, 2, 3), Corn1 (1, 2, 3, 4), Tbn1. 1.2, Tbn2. 3, Toba, Timp., Mbf 1, Xif, Cpl, Cpn, Organo, Vla. (1, 2), Violo, V'celli, and C'bassi. The score includes various musical notations such as dynamics (mp, p), articulation (delicato, simile), and performance instructions (con sord. (cup) 2., muta in Crt, muta in Pto). Several sections of the score are highlighted with green and red boxes, indicating specific areas of interest or analysis.

Figure 92: Dimensional layout of measures 76⁴ - 80

In this section we observe the employment of the three chord motive (bordered in red) that forms part of the background material. This is because of the sustained nature of the cluster harmonies. The middle-ground material consists of the rhythmic ostinato (bordered in black) which, as a result of active rhythms and staccato articulation, is more prominent than the sustained cluster chords. Constituting the foreground material is the melodic extraction played by the horns, bassoon, and cowbells. This is a consequence of the timbres of the material.

After studying the textural layout of the movement, it can be concluded that generally the melodic material formulates the foreground material while the rhythmic ostinato and cluster chord employments shift between middle-ground and background material. This, however, is not without exception.

A fine example where the dimensional roles of the material are reversed can be seen in measures 229 - 256 (Figure 93). Here the composer introduces the dimensional layering independently. In measures 229 - 236 the accompaniment extracted from scene 21 from the opera is introduced after which Papageno's aria *Der Vogelfänger bin ich ja* is utilised together with further underlying cluster chords.

Note that in these measures the string section (bordered in red) plays the accompaniment material extracted from the opera. As a result of the early entry of the material, which allows for familiarisation of the extract and because of the staccato articulation, this material is quite prominent. However, since the accented chords in the brass section (bordered in black) have a stronger timbre, they are more prominent than the string accompaniment. Due to the piercing timbres of the percussion instruments (bordered in green), their melodic material is perceived as protruding from the rest of the material to form the foreground. In summary, the extracted accompaniment material forms the background material while the cluster chords and ostinato pattern formulate the middle-ground and foreground material respectively (Figure 93):

The image displays a musical score for measures 240 to 245. The score is organized into several systems, each containing multiple staves for different instruments. The instruments listed include Flute (Fl.), Oboe (Ob.), Clarinet in G (C. In G.), Clarinet in Bb (Cl. Bb.), Clarinet in C (Cl. C.), Bassoon (Bass.), Trumpet (Trbe.), Trombone (Tbn.), Tuba (Tuba), Timpani (Timp.), Horn 1 (Hr 1), Horn 2 (Hr 2), Cymbal (Cpl.), Piano (Piano), Violin 1 (Vln. 1), Violin 2 (Vln. 2), Viola (Viola), Violoncello (V'celli), and Double Bass (C'bassi). The score includes various musical notations such as notes, rests, and dynamic markings like *poco a poco crescendo*, *sempre stacc.*, *col 1?*, and *arco*. A red box highlights the bottom system (Violin 1, Viola, Violoncello, and Double Bass), and a green box highlights the middle system (Horn 1, Horn 2, Cymbal, and Piano). The measure number 240 is indicated at the bottom left of the score.

Figure 93: Dimensional layout in measures 240 - 245

Another example can be observed in measure 105 - 111 (Figure 94):

37

The image displays a musical score for measures 105 to 111. The score is organized into several systems of staves. The instruments included are Flute (Flc.), Flute 1 & 2 (Fl. 1.2), Oboe 1 & 2 (Obol. 1.2), Cor Anglais (C.ingl.), Clarinet in B-flat (Cl. p. bcc.), Clarinet in E-flat (Clar. 1.2), Bassoon (Cl. basso), Bassoon (Bas.), Flute 1 & 2 (Flg. 1.2), Contrabassoon (C'fg.), Trumpet 1, 2, & 3 (Trbc.), Horn 1, 2, 3, & 4 (Corn), Trombone 1, 2, & 3 (Tbnl.), Timpani (Timp.), Cymbal (Cyt), Xylophone (Xif), Maracas (Mar.), Piano (Piano), Organ, Violin 1 & 2 (Vln.), Viola (Viole), Violoncello (V'cellll), and Double Bass (C'bassl). The score features various musical notations, including dynamics such as *sim.* (sforzando), *ff* (fortissimo), and *col pp* (coll'arco piano-piano). Red and green rectangular boxes highlight specific sections of the score, likely indicating areas of interest for the study.

Figure 94: Dimensional layout in measures 105 - 110

In Figure 94 one finds that the overpowering orchestration of the cluster chords (bordered in green) in the woodwind, brass, and percussion section overshadows all other material. As a result this is perceived as the foreground material. The ostinato in the string section (bordered in black) is less evident due to the weaker timbre while the melodic material extracted from scene 5, measures 3 - 7¹, recedes into the background.

This classification of dimensional layering can be interpreted as ineffective since every illustrated example can be played differently through orchestral balancing and the interpretation of the conductor. This theoretical examination illustrates the overall image of selected passages based on the aspects listed at the beginning of the chapter and serves as a guide to what the intention of the composer might have been.

Chapter 4

4. Movement III

4.1. Structure

This movement of only 41 measures is the shortest of the three movements and the clearest in musical content. The entire movement is an instrumental adaptation of the duet *Bei Männern, welche Liebe fühlen* between Pamina and Papageno.

The structure, therefore, is similar to that of the duet with the exception of measures 36⁴ - 49 that have been omitted in this movement and replaced by material from measures 294⁴ - 302³, scene 8. This material is employed in the opera in the portrayal of Papageno's magic bells.

The structure of the third movement is simple binary form and can be fully explained by means of the following table (Table 7):

Measure	Content	Key
0 - 2 ²	Introduction	B \flat major
2 ³ - 16 ³	A (phrase structures: 4 + 4 + 6)	B \flat - F - B \flat major
18 ³ - 32 ³	A ₂ (phrase structures: 4 + 4 + 6)	B \flat - F - B \flat major
32 ⁴ - 41	B (phrase structures: 2 + 2 + 5)	B \flat major/minor

Table 7: Structural analysis of the third movement

The only difference in structure between the duet and the third movement is the B section that is slightly shorter in this movement as a result of the exclusion of material from the duet. The phrase structures have also been altered. The phrase structures from the duet are 2 + 2 + 4 + 4 + 4, which in comparison to the phrase structures of this movement reveal slight modifications. When the last phrase is observed, it shows that it is asymmetrical and contains five measures. The key implication is discussed in the section on harmony (section 4.3).

4.2. Melodic content

Since this movement is an instrumental rendition of the duet, all the vocal parts are simply restated as instrumental renderings. The researcher included Table 8 as a summary of instrumental substitutions:

Measures	Vocal part in the duet	Substitute instruments as used in Movement III
2 ³ - 6 ¹	Pamina	Cor anglais
6 ³ 10 ¹	Papageno	Marimba I
10 ³ - 16 ²	Pamina and Papageno	Oboe and Marimba I
18 ³ - 22 ²	Pamina	Saxophone
22 ³ - 26 ¹	Papageno	Saxophone
26 ³ - 32 ²	Pamina (Papageno's part omitted)	Piccolo
33 ⁴ - 36 ¹	Pamina and Papageno	Humming by selected instrumentalists

Table 8: Vocal/instrumental comparison between the duet *Bei Männern, welche Liebe fühlen* and the third movement

The instruments chosen by the composer to play these vocal parts are refreshingly new in this context. The marimba, saxophone, piccolo and humming by the instrumentalists provide a modernised rendition of the material without drastically altering the pitches.

Added to these almost unchanged vocal renditions by the composer is the melodic fragment resembling Papageno's magic bells (Scene 8: 294⁴ - 302³). It is employed twice in the movement and is rhythmically altered on both occasions. The first occurrence is in measures 22³ - 26¹ and is played by the crotales along with Papageno's vocal part, played by the saxophone (Figure 95):

The image displays a musical score for Figure 95. At the top, two staves in G major and 4/4 time show melodic material from scene 8, measures 294-298. Below this, a larger score for a saxophone quartet and cymbal is shown. The instruments are labeled: Sax., Mbr 1, 2 Bng, Mbr 2, and Cpl. The saxophone part (Sax.) features a melodic line in G major. The brass parts (Mbr 1, 2 Bng, Mbr 2) play a rhythmic accompaniment of eighth notes. The cymbal part (Cpl) plays a rhythmic pattern of eighth notes, with a dynamic marking of *p* (piano) at the beginning of the section. The score is arranged in a standard orchestral format with five staves.

Figure 95: Melodic material from scene 8: 294⁴ - 302³ played in counterpoint to the material in the saxophone

This material is also stated in the marimba to form the last phrase of the B section in measures 36⁶ - 41 (Figure 96):

The musical score for Figure 96 consists of the following parts and markings:

- Horn 1**: Melodic line with eighth-note patterns.
- 2 Bng**: Empty staff.
- Horn 2**: Empty staff.
- Cyl**: Empty staff.
- Piano**: Empty staff.
- Organo**: Empty staff.
- Vln. 1**: Violin I part with sustained notes and a fermata.
- Vln. 2**: Violin II part with sustained notes and a fermata.
- Viola**: Viola part with sustained notes and a fermata.
- V'celli C'bassi**: Cello and Double Bass part with sustained notes and a fermata.

Tempo markings are placed below the Piano and Cello/Double Bass staves: *poco rit.*, *a tempo*, and *rit.* with a dashed line extending to the right.

Figure 96: Material from scene 8: 294⁴ - 302³ employed as the last phrase of the movement

Other than this addition very few alterations have been made to the melodic part of which the most significant occurs in measures 26³ - 32² (Figure 97). Here the composer made small changes through the addition of ornamentation:



Figure 97: Melodic comparison between *Bei Männern, welche Liebe fühlen* and movement III (m. 26³ - 32²)

4.3. Harmony

The harmonies employed in this movement are identical to those of the duet except for the last phrase of the B section that is based on other material. Included here is the harmonic layout representing this movement as well as the duet (Table 9). Note that all the keys written first (before the forward slash) are applicable to the duet whereas the keys written second (after the forward slash) are relevant to this movement.

Harmonies	E \flat /B \flat : I	V	I	I - V ⁷ - V	I - I ⁶
Measures	0	1	2	3	4

IV - I ⁶ - V $\frac{6}{5}$ - I	V - I	I - V ⁷ - V	I - V $\frac{4}{3}$ / - V ⁶ B \flat /F: I ⁶	ii ⁶ - IV ⁶ - I $\frac{6}{4}$ - V ⁷	I - V $\frac{4}{2}$ /IV
5	6	7	8	9	10

E \flat /B \flat : I 6 - V 4_2 (B \flat /F:) IV 6	I 6 - vi	ii 6 - V 7	Vi - I 6	ii 6 - I 6_4 - V 7	I - V
11	12	13	14	15	16

I - V 7	I	Repeat of m. 2 3 - 16 2	I	V - I
17	18 1	18 3 - 32 2	32 4	33

V - I	V - I	V
34	35	36 1

Table 9: Harmonic layout of the first 36 measures of the duet and the third movement

The harmony chosen by the composer for the last five measures of the movement is again a pandiatonic cluster chord. Interestingly, the composer chose a B \flat melodic minor cluster as the last harmony of the composition, bearing in mind that the movement is in B \flat major. Roosenschoon employs a minor tonic instead of a major tonic harmonic structure. Together with this melodic minor cluster a melodic extract continuing in B \flat major is used. This is the only cluster in the movement and can be interpreted as a last proverbial ‘tip of the hat’ to the stylistic writing that precedes the movement. The last phrase of the movement consists of the following single sustained cluster chord (Figure 98):

m. 37-41

$\flat\flat M-M1 [1\ 2\ 5\ 7\ 3\ 6\ 4]$

Figure 98: Cluster chord from the coda of the third movement

4.4. Texture

When considering the accompaniment of this movement, it is initially perceived that the instrumentation and texture are very similar to those of the duet. Later in the movement the orchestration and instrumentation are altered to provide the listener with a modernised rendition of the duet. On a small scale, this movement represents the retrograde of the stylistic progression of the entire composition. It starts with similar conventional orchestration and then veers from the original instrumentation to complete this retrograded stylistic process. A hint of this process is provided in the opening three harmonies where the composer included crotales as part of the instrumentation. Apart from the opening, the accompaniment remains identical to the duet up to measure 17. From measure 18 onwards the two marimbas become part of the accompaniment with the introduction of an expanded derivative of the accompaniment figures. Added to the marimbas are bongo drums that further augment the shift towards modernisation (Figure 99):

The musical score for measures 18-20 shows the following details:

- Oboe 1:** Starts with a whole note chord, then rests.
- Clarinet 1 & 2:** Play a half note chord, then a quarter note melody.
- Saxophone:** Enters in measure 18 with a quarter note melody.
- Cor Anglais 1 & 2:** Play a half note chord, then a quarter note melody.
- Marimba 1:** Starts with a half note chord, then a quarter note melody. Includes instructions: "(soft sticks)", "p", and "ritard".
- 2 Bongo:** Enters in measure 18 with a quarter note melody.
- Marimba 2:** Starts with a half note chord, then a quarter note melody. Includes instructions: "soft sticks", "p", and "ritard".
- Violin 1 & 2:** Play a half note chord, then a quarter note melody. Includes instructions: "pizz.", "p", and "pizz.". A bracket labeled "1 6" spans measures 18-20.
- Viola:** Play a half note chord, then a quarter note melody. Includes instructions: "p", "pizz.", and "pizz.". A bracket labeled "1 6" spans measures 18-20.
- Cello/Double Bass:** Play a half note chord, then a quarter note melody. Includes instructions: "p", "pizz.", and "pizz.". A bracket labeled "1 6" spans measures 18-20.

Figure 99: Expanded accompaniment figures in measures 18⁴ - 20

It can be seen in the excerpt above (Figure 99) that the string section continues with the conventional accompaniment, now in pizzicato fashion, while the marimbas and bongo drums add a new dimension.

Continuing this strategy, the composer introduces, for the first time, a vocal aspect to the composition in measures 33 - 36. Accompanying the chorus of instrumentalists are tubular bells that create a surprising element as a final gesture before the unconventional final cluster chord.

The instrumentation of the vocal parts, as discussed in the section on melodic practices (section 4.2) also contributes to the modernisation of this rendition.

Chapter 5

5. Summary and discussion

Through studying the musical elements that constitute each movement, it has been found that the composer united the three movements through the application of stylistic features that recur throughout the composition. However, vast differences occur from one movement to the next, especially when transitioning to the final movement. The stylistic changes from one movement to the next can be described as a distilling process in which stylistic features become clearer, almost at an exponential rate as the composition progresses. A comparative summary of stylistic elements among movements is provided in the following paragraphs.

This composition illustrates the application of structural principles that had their origin in the mid-1900s. The composer employed the majority of the intricate structural devices in the first movement of the composition. These include sound block structures as well as time structuring through calculated metre changes. As part of the structural layout of the movement, the composer alternated large sections of either firmly rooted 20th century techniques or sections of 18th century reminiscence. The second movement breaks away from the complex mathematically derived structures and applies a freer form that resembles a fantasia. Recurrences of motives and melodic extractions function as the main structural devices. The third movement in which the composer renders the aria *Bei Männern, welche Liebe fühlen* as an instrumental adaptation has the clearest structure. Furthermore, if the provided time estimates of the three movements are considered, it is noticed that each movement is exponentially shorter than the preceding one. These time estimates are: 10'30 – 11'00 (Movement I), 6'30 – 7'00 (Movement II), and 2'30 (Movement III).

Melodically, the first movement is based solely on one aria from *Die Zauberflöte – Ach, ich fühl's, es ist verschwunden*. However, all the melodic extractions from this aria are obscured through a series of manipulation techniques. It is only much later on in the movement that melodic extractions become recognisable. Apart from the introduction, one also finds the section between measures 154 - 208 to be of a Mozartian syntax. The second movement incorporates melodic extractions of material throughout the opera as opposed to the first movement that has been constructed from only one aria. These fragments are presented as unaltered restatements. Apart from these extractions the composer employs a continuing ostinato perpetuating throughout

the movement. This rhythmic ostinato is based on a singular aria – *Der Vogelfänger bin ich ja*, and is manipulated by various means, initially to obscure its relation to the aria. In the third movement the composer reiterates the original vocal parts as instrumental versions. When one considers the melodic treatment of all three movements in retrospect, it can be seen that the composer successfully crafted a melodic filtering process. The intention is for the material to dissolve and become progressively lucid as the composition progresses.

The composer's decision to construct this composition on the basis of *Die Zauberflöte* brings to light an important and controversial concept. Numerous scholars have debated the relevance of a literary-based concept in music (Beard & Gloag 2005:96). Nevertheless, the process of reimagining an existing artwork, which has been previously done by the composer, still persists in this composition. The concept that describes this process in its entirety is intertextuality. This concept is defined by Beard and Gloag in *Musicology: The key concepts* (2005:95) as “[...] a concept that has developed through post-structuralism to signify the sense in which any text is defined through its relation to other texts”. The significance of intertextuality in this composition lies in the reframing of a well-known Western work in the context of the composer's own stylistic writing. This has a destabilising effect since *Die Zauberflöte* is a distinguished work that the listener might not necessarily expect to hear in the context of 20th century syntax. This invites comparative reasoning between the understanding of the opera, in all its facets, outside of the context of *The Magic Marimba* and also its use in this composition. One important argumentative question that might arise from this comparison is, what function does this opera have in the context of the cultural climate in which it is placed by *The Magic Marimba*? Roosenschoon's choice of subject material is the result of two aspects: 1) it was commissioned for the bicentennial anniversary of Mozart's death, and 2) it was utilised to make a political statement. This political statement is discussed in the section on background of this document (section 1.1). The opera, therefore, has to be viewed as a representation of Western identity that the composer infused with his own style in combination with hints of Africanism (as discussed in section 1.6). This has been employed by the composer to demonstrate that art is not confined by any limits, cultural or otherwise, but should rather be viewed as a global phenomenon.

Another concept through which this process can be viewed is appropriation. According to *The concise Oxford dictionary of art terms*, appropriation can be described as the deliberate reworking of an image or style from a previous well-known work of art (Clarke & Clarke 2013). As seen in the literature review (section 1.6), this has been successfully applied in various compositions by the composer. The reason for this is to evoke emotions from the listener, whatever emotions that might be. These emotions depend on the subjective emotional attachment to the works quoted in Roosenschoon's compositions.

The harmonic employment strategy for this composition involves pandiatonic cluster formations that have been constructed from three types of scale: Major, harmonic minor and ascending melodic minor scales. Through the rotation of chordal members, the composer successfully implemented numerous expansion possibilities. The first movement illustrates a greater variety of cluster formations constructed on almost every degree of the chromatic scale. Constant contractions of chord formations are also evident in this movement. In the second movement the composer utilises only seven pandiatonic cluster chords, all of which are encompassments of ascending melodic minor scales. The composer also favoured constant expansions of cluster chords as opposed to the contractions of chordal formations in the first movement. The third movement contains all the original harmonies from the duet except for the last harmony that extends through the last phrase of the movement. This harmony is a B \flat minor pandiatonic cluster in the overall key of B \flat major, illustrating a minor tonic construction. If the keys of all three movements are considered, it can be seen that they form an E \flat major triad: E \flat major - G major - B \flat major. These triads correspond to the pitches of the top notes of the opening triads in the overture to *Die Zauberflöte*.

The textural landscape of the first movement comprises the ordering of musical layers to create a series of dimensional spectrums. As a result one finds background, middle-ground and foreground material in selected sound blocks. The second movement is texturally based on the same principles with the melodic material, rhythmic ostinato, and cluster chords each being assigned a specific dimensional role. In the third movement one finds a similar textural layout of material as

in the original duet with the exception of selected instrumental adaptations to conform to a more modernised rendition of the duet.

Through the investigation of all these elements, it has become apparent that all elements contribute to the constant quest for clarity through a filtering process that reaches its clearest form in the third movement. Through the use of a well-known opera, for melodic purposes, the composer created an artwork that is accessible to audience members, yet relevant in the time and space in which it was written through the application of the composer's style of writing.

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Appendix A: Harmonic analysis of measures 8-153 from movement I

Note:

The harmonic analysis is presented as follows:

The first measure of each analysed cluster chord is a representation of the cluster chord as used by the composer (including chordal member doublings). The second measure is an illustration of the cluster chord without the chordal member doublings (if member doublings were used). If no member doublings were used by the composer, the second measure is excluded. The last measure illustrates the basis cluster chord.

The musical score is divided into three systems, each with a treble and bass clef staff. Above the first staff of each system are brackets indicating measure ranges: measures 8-13, measures 14-16, and measures 17-18 for the first system; measure 19, measures 20-22, and measures 23-25 for the second system; and measures 26-28, measures 29-31, and measures 32-34 for the third system. The notes are represented as clusters of circles on the staff lines. Below each system, specific chord labels and fingering patterns are provided.

System 1:

- measures 8-13: $\flat H-M7$ [7 5 1 2 3 4 6]
- measures 14-16: $fH-M5$ [5 2 6 7 1 3 4]
- measures 17-18: $dH-M7$ [7 5 2 3 4 6 1]

System 2:

- measure 19: $cH-M5$ [5 1 6 7 2 3 4]
- measures 20-22: $\flat H-M1$ [1 4 6 2 3 5 7]
- measures 23-25: $dH-M1$ [1 6 7 2 3 4 5]

System 3:

- measures 26-28: $fH-M2$ [2 4 5 3 4 7 1]
- measures 29-31: $\flat H-M5$ [5 3 6 1 2 4 7]
- measures 32-34: $\flat H-M7$ [7 5 1 2 3 4 6]

2

measures 35-36 measure 37 measures 38-40

23

aH-M7 [7 3 4 5 1 2 6] aH-M1 [1 5 6 7 4 2 3] Ab-M1 [1 5 7 2 3 4 6]

measures 41-42 measure 43 measures 44-45

30

diatonic plaining

C-M1 [1 3 6 2 4 5 7] aH-M6 [6 2 3 5 7 1 4] Ab-M5 [5 3 4 6 2 7 1]

measure 46 measures 47-49 measures 50-52

36

OR

Ab-M7 [7 4 5 2 3 6 1] Ab-M6 [6 1 3 7 2 4 5] fH-M5 [5 1 4 6 7 2 3] OR
fH-M5 [5 4 6 7 1 2 3]

6

measures 112-115 measures 116-121 measures 122-124

106

presented melodically

fH-M6 [6 7 4 1 2 3 5] Ab-M2 [2 4 5 6 1 3 7] Ab-M4 [4 2 3 5 6 7 1]

measures 125-127 measures 128-132

113

Gb-M4 [4 6 1 2 3 5 7] fH-M5 [5 2 3 4 1 6 7]

measure 133 measures 134-136

119

presented melodically

Gb-M2 [2 1 4 5 6 7 3] Ab-M2 [2 3 4 5 6 7 1]

measures 137-139 measures 140-142 measures 143-145 7

gH-M7 [7 1 6 2 3 4 5] Ab-M1 [1 2 4 5 6 7 3] gH-M6 [6 7 5 1 3 4 2] enharmonic spelling

measures 146-148 measures 149-150

fH-M3 [3 6 4 7 1 2 5] cH-M3 [3 5 2 6 7 1 4]

measure 151 measures 152-153

Gb-M2 [2 3 5 6 4 7 1] cH-M7 [7 1 4 6 2 3 5]

Appendix B: Complete harmonic analysis of movement II

Note:

The harmonic analysis is presented as follows:

The first measure of each analysed cluster chord is a representation of the cluster chord as used by the composer (including chordal member doublings). The second measure is an illustration of the cluster chord without the chordal member doublings (if member doublings were used). If no member doublings were used by the composer, the second measure is excluded. The last measure illustrates the basis cluster chord.

The musical score is divided into three systems, each showing a sequence of measures with cluster chords. The first system covers measures 1-3, 3-5, 5-8, and 25-29. The second system covers measures 29-32, 33-36, and 37. The third system covers measures 38, 39, 40, and 41-42. Each measure is annotated with a chord symbol and a sequence of numbers representing the chord's structure.

System 1:

- m. 1-3: $dM-M7$ [7 1 2 3 4 5 6]
- m. 3-5: $f\sharp M-M5$ [5 6 7 1 2 3 4]
- m. 5-8: $aM-M3$ [3 5 6 7 1 2 4]
- m. 25-29: $dM-M4$ [4 5 6 7 1 2 3]

System 2:

- m. 29-32: $f\sharp M-M4$ [4 6 7 1 2 3 5] (enharmonic spelling)
- m. 33-36: $aM-M4$ [4 5 7 1 2 3 6]
- m. 37: $c\sharp M-M4$ [4 5 6 1 2 3 7]

System 3:

- m. 38: $eM-M4$ [4 5 6 7 1 3 2]
- m. 39: $gM-M4$ [4 5 1 3 7 2 6]
- m. 40: $c\sharp M-M4$ [4 5 6 1 2 3 7]
- m. 41-42: $bM-M4$ [4 5 6 3 7 2 1]

47 m. 81-83 m. 84-85 m. 86-87 3

gM-M4 [4 6 1 3 7 2 5] gM-M4 [4 6 1 3 7 2 5] +
eM-M6 [6 7 5 2 3 4 1] gM-M4 [4 6 1 3 7 2 5] +
#M-M5 [5 6 2 7 3 4 1] (enharmonic
spelling)

53 m. 88-89 m. 90-91

gM-M4 [4 6 1 3 7 2 5] +
dM-M7 [7 2 3 1 5 6 4] gM-M4 [4 6 1 3 7 2 5] +
eM-M6 [6 7 5 2 3 4 1]

58 m. 92-93 m. 94

gM-M4 [4 6 1 3 7 2 5] +
#M-M5 [5 6 2 7 3 4 1] (enharmonic
spelling) gM-M4 [4 6 1 3 7 2 5] +
dM-M7 [7 2 3 1 5 6 4]

83 5

m. 116-117 m. 118-119 m. 120-121

gM-M5 [5 1 3 6 7 2 4] eM-M1 [1 3 4 7 2 5 6] d \flat M-M1 [1 3 7 4 5 6 2] (enharmonic spelling)

91

m. 122-123 m. 124-125 m. 126-128 m. 129-130

dM-M7 [7 3 1 4 5 6 2] (enharmonic spelling) eM-M2 [2 3 1 4 6 7 5] f \sharp M-M5 [5 1 3 4 6 7 2] (enharmonic spelling) gM-M2 [2 3 1 4 5 6 7]

98

m. 131-132 m. 133-134 m. 135-137

aM-M2 [2 3 6 4 5 7 1] bM-M5 [5 1 2 3 4 7 6] d \flat M-M5 [5 2 3 4 1 6 7] (enharmonic spelling)

6

105

m. 138 m. 139 m. 140 m. 141

dM-M7 [7 2 6 3 4 5 1] c#M-M1 [1 3 7 4 5 6 2] (enharmonic spelling) dM-M7 [7 3 1 4 5 6 2] eM-M2 [2 3 1 4 6 7 5]

113

m. 142 m. 143 m. 144

f#M-M5 [5 1 3 4 6 7 2] gM-M2 [2 3 1 4 5 6 7] aM-M2 [2 3 6 4 5 7 1] bM-M5 [5 1 2 3 4 7 6] (enharmonic spelling)

121

m. 147-150 m. 151-154 m. 157

gM-M7 [7 2 1 3 4 5 6] c#M-M4 [4 5 7 1 2 6 3] f#M-M1 [1 2 6 3 4 5 7] (enharmonic spelling)

129 m. 158-159 m. 160-161 m. 163 7

bM-M2 [2 5 6 7 4 1 3] eM-M5 [5 2 3 6 7 1 4] gM-M2 [2 7 1 3 4 5 6]

136 m. 164 m. 165 m. 166

c#M-M5 [5 7 1 2 4 6 3] #M-M1 [1 2 6 3 4 5 7] (enharmonic spelling) bM-M2 [2 5 6 7 4 1 3] eM-M5 [5 2 3 1 4 6 7]

142 m. 167-168 m. 170-172 m. 173-176 m. 179-180

aM-M6 [6 3 7 1 4 5 2] dM-M2 [2 7 1 3 4 5 6] aM-M3 [3 5 6 2 4 7 1] aM-M3 [3 1 2 7 4 5 6]

8

m. 181-183 m. 188 m. 189 m. 190

eM-M1 [1 3 5 7 2 4 6] eM-M1 [1 3 5 7 2 4 6] bM-M7 [7 2 3 5 1 4 6] #M-M5 [5 1 3 7 2 4 6] (enharmonic spelling)

m. 191 m. 192 m. 194-195

#6...] c#M-M4 [4 3 6 7 1 2 5] (enharmonic spelling) #6...] gM-M7 [7 2 3 1 6 4 5] (enharmonic spelling) eM-M1 [1 3 5 6 7 2 4]

m. 196-197 m. 198-199 m. 200

bM-M7 [7 2 3 5 6 1 4] #M-M5 [5 1 3 6 7 2 4] (enharmonic spelling) gM-M2 [2 7 3 6 1 4 5] (enharmonic spelling) #M-M5 [5 1 3 7 2 4 6]

173 m. 201 m. 201-202 m. 202-203 m. 203-205 9

c#M-M3 [3 7 2 6 1 4 5] (enharmonic spelling) dM-M6 [6 1 5 7 2 3 4] dM-M5 [5 7 1 6 2 3 4] dM-M3 [3 6 2 5 7 1 4]

181 m. 206-207 m. 208-209 m. 210-211 m. 212-213

dM-M4 [4 7 1 3 5 6 2] f#M-M4 [4 6 1 2 5 7 3] (enharmonic spelling) aM-M4 [4 1 2 3 6 7 5] c#M-M2 [2 3 5 7 1 6]

189 m. 214-215 m. 216-217 m. 217-218

eM-M4 [4 7 1 3 5 6 2] (enharmonic spelling) gM-M4 [4 6 1 2 5 7 3] (enharmonic spelling) bM-M4 [4 1 2 3 6 7 5] (enharmonic spelling)

10

195

m. 219-220 m. 221 m. 222 m. 223

$\delta^{eb} \dots$
dM-M4 [4 2 3 5 7 1 6] bM-M7 [7 4 5 2 3 6 1] c#M-M6 [6 4 5 7 3 1 2] aM-M7 [7 4 5 2 3 6 1]

203

m. 224 m. 225 m. 226 m. 227

eM-M3 [3 5 7 4 6 1 2] dM-M6 [6 4 5 7 3 1 2] gM-M2 [2 4 6 3 5 7 1] eM-M1 [1 4 7 2 3 5 6]

211

m. 236-237 m. 236-237 m. 239-240 m. 241-242

$\delta^{eb} \dots$
dM-M4 [4 1 3 5 6 7 2] $\sharp M$ -M2 [2 4 7 3 5 6 1]
(enharmonic spelling) aM-M7 [7 5 6 3 4 6 2] $c\sharp M$ -M5 [5 3 4 1 2 6 7]
(enharmonic spelling)

219 m. 242-243 m. 244-245 m. 245-246 m. 247-248 11

eM-M3 [3 6 7 1 4 5 2] gM-M1 [1 6 7 3 4 5 2] bM-M6 [6 4 7 2 3 5 1] dM-M4 [4 7 1 5 6 2 3]

227 m. 248-249 m. 250-251 m. 251-252

f#M-M2 [2 7 4 5 6 1 3] aM-M7 [7 3 5 1 2 4 6] c#M-M5 [5 1 6 7 2 3 4]

233 m. 253 m. 254 m. 255

eM-M7 [7 1 2 3 4 5 6] gM-M5 [5 6 7 1 2 3 4] bM-M3 [3 1 4 5 6 7 2]

Appendix C: Complete score of *The Magic Marimba* by Hans Roosenschoon



Hans Roosenschoon

The Magic Marimba

for orchestra
1991

*Commissioned by the
Foundation for the Creative Arts*

 HaRP

Hans Roosenschoon Publishing

HANS ROOSENSCHOON

THE MAGIC MARIMBA (1991)

For my sons, Hans and Emile

APPROXIMATE DURATION – 20'00

INSTRUMENTARIUM

Flauto piccolo (picc.)
2 Flutes (Fl.)
2 Oboes (Ob.)
Cor anglais (C.ingl.)
E \flat Clarinet (Cl.picc.)
2 Clarinets (Clar.)
Bass Clarinet (Cl.basso)
Alto Saxophone (Sas.)
2 Bassoons (Fg.)
Contrabassoon (C'fg.)

3 Trumpets (Trbe.)
4 Horns (Corni)
2 Tenor + 1 Bass Trombone (Tbni.)
Tuba

Percussion

Player 1 → marimba (Mbf 1), set of chromatic crotali (Crt), gong (Gng),
maracas (Mar)
Player 2 → xylophone (Xlf), 2 suspended cymbals (2 Pti), claves (Clv),
2 bongos (Bng), 4 tomtoms (Tomt)
Player 3 → marimba (Mbf 2), 3 cowbells (Cpi), 5 chinese temple blocks (Bl.ch),
tambourine (Tamb), rasp (Guirro)
Player 4 → glockenspiel (Cpl), tubular bells (Cpn), triangle (Tng),
bell-tree (Sistro), tamtam (Tmt), bass drum (Gr.c)

Timpani

Piano (4 hands)
Pipe organ (organo)
Strings (16.14.12.10.8)

The score is notated in C, except for those instruments making the customary octave transposition.

Note: The four percussion groups should, by preference, be separated, 1 & 2 on the left side and 3 & 4 on the right side of the stage. Thus is suggested in order to enhance the stereophonic effect in the scoring of the percussion section. Should this not be practical, then at least the two Marimbas should be separated.

Editor's note: In the first movement, time relationships between the bars in 3/4, 5/8, 6/8 and 7/8 have been indicated in crotchet/dotted crotchet units, as well as in quavers, to stress the fact that this notation has been created in order to avoid the use of quintuplets/sextuplets/septuplets etc. The total bar's duration has in fact the same spatial length whether it be in 5, 6 or 7 quavers.

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8 Oevertuyn, Noorwal West
7600 STELLENBOSCH
South Africa

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diminuendo

Picc. *ff*

Fl. 1.2

Obol 1

Obol 2

C.ingl.

Cl.picc.

Clar. 1

Clar. 2

Cl.basso

Sas.

Fag. 1.2

C'fag.

diminuendo

Trbe.1-3 *ff*

Corni 1

Corni 2

Corni 3

Corni 4

Tbni. 1

Tbni. 2

Tbnc. 3

Tuba

diminuendo

Gng *ff* *l.v.*

2 Pti *hard stick l.v.* *soft sticks*

Gr.c *f* *f* *f* *ff*

Organo *f* *organo pleno*

Organo *f* *organo pleno*

diminuendo

Vin. I *N.B.!* *ff* *div.*

Vin. II *div.*

Viola *div.*

V'celli *div.*

C'bassi *div.*

8 *ff*

diminuendo

(dim.)

Picc.
Fl. 1.2
1
Obel
2
C. ingl.
Cl. pic.
1
Clar.
2
Cl. basso
Sax.
Fag. 1.2
C'fag.

(dim.)

1
3
Corni
2
4

(dim.)

Cng
2 Pti
3 Cyl
gr. c

l.v. muta in 2 Bng & 4 Tomt
muta in Sistro
muta in Crt
2 Bng
muta in Cpn

Piano I

Organo

*) Hold down all notes within brackets

Organo

(dim.)

1
Vln.
2
Viola
V'celli
C'bassi

loco
loco

diminuere  *mf*

J-88

1 *fp* *f* *mf*

Trbe. 2 *fp* *f* *mf*

3 *fp* *f* *mf*

1 *fp* *f* *mf*

Corn 3 *fp* *f* *mf*

2.4 *fp* *f* *mf*

Piano 1 *ff* *diminuendo* *sim.* *mf*

2 3 *sim.*

J-112

Picc. *f* *mf* *mf*

1 *f* *mf* *mf*

2 *f* *mf* *mf*

Obol. 1.2 *mf* *mf* *mf*

C. ingl. *mf* *f* *sim.*

Cl. picc. *f* *mf* *mf*

1 *f* *mf* *mf*

2 *f* *mf* *mf*

Cl. basso *mf* *f* *sim.*

Sax. *mf* *f* *sim.*

Fag. 1.2 *mf* *f* *sim.*

Mar. *f* *mf* *mf* *muta in Gng*

2 Pti *mf* *f* *mf*

Bl. ch. *f* *mf* *mf*

J-112

Organo *f* *mf* *mf*

76

*)suoni reali

82

91

Temp. *espressivo*

Mbf 1

4 Tpt

Mbf 2

Vln. 1

Vln. 2

Viola (div.)

V'celli

C'bassi (div.)

p *f* *mp*

♩=152 *molto* *mp*

mf *cruc.* *f*

molto dim. *pizz.* *sempre f*

92

mf poco a poco diminuendo

Picc.

Fl. 1.2

Oboi 1.2

Cl. picc.

Clar. 1.2

Fag. 1.2

C'fg.

Corni 1, 2, 4

Trbn. 3

Tuba

Timp.

Organo

Temp. *f*

Mbf 1

Mbf 2

Tpt

Vln. 1 *unis.*

Vln. 2 *unis.*

Viola *unis.*

V'celli

C'bassi *alivo*

mf poco a poco diminuendo

mf dim. *mf dim.* *mf dim.*

poco a poco diminuendo

f

Picc. *p*
 Fl. 1,2
 Obol. 1,2
 Cl. picc.
 Cl. 1,2
 Cl. basso *p*
 Fag. 1,2 *p*
 C'fig. *p*
 Corni 1, 2, 4
 Trbn. 3
 Tuba
 Timp. *p* *mf* *p* *fp* *fp* *p*
 Vln. 1 *p* *fp* *fp*
 Vln. 2 *p* *fp* *fp*
 Viola *p* *fp* *fp*
 V'celli *p* *fp* *fp* *fp* *fp*
 C'bassi *p* *fp* *fp* *fp* *fp*

102

Picc. *p*
 Fl. 1,2 *mp*
 Ob. 1 *p*
 Cl. 1 *fp*
 Fag. 1 *p* *sim.*
 Crt. *p* *muta in Ong* *p* *muta in Mbf*
 2 Pti
 Mbf 2 *p*
 Cpn
 Piano 1 *p*
 Viole *pp* *senza sord. arco portamento* *sim.*
 V'celli *pp* *senza sord.* *unif. arco* *pp*

110

$\text{♩} = 44$ ($\text{♩} = 132$)



$\text{♩} = 44$ ($\text{♩} = 132$)

Obel. 1.2
C. ingl.
Cl. picc.
Clar. 1.2
Cl. basso
Bar.
Fag. 1.2
C'fg.
Trp. 1.2
3
1
3
Corni
2
4
Tbnl. 1
2
Tbnc. 3

$\text{♩} = 44$ ($\text{♩} = 132$)

$\text{♩} = 44$ ($\text{♩} = 132$)

Timp.
Mbf 1
Xif
Mbf 2
Cpn

Piano 2
Organo

$\text{♩} = 44$ ($\text{♩} = 132$)

$\text{♩} = 112$

$\text{♩} = 44$ ($\text{♩} = 132$)

1
2
Vln.
Viola
V'celli
C'bassi



♩=112

♩=66

Obel 1.2
C.ingl.
Cl.picc.
Clar. 1.2
Cl.basso
Sar.
Fag. 1.2
C'fg.

Trp. 1, 2, 3
Corni 1, 2, 3, 4
Tbnl. 1, 2
Tbn. 3
Tuba

Timp.
Crt
Xlf
Mbf 2
Cpn

Piano
Organo

Vin. 1, 2
Viola
V'celli
C'bassi

♩=152 cresc.

♩=66 ff



Flcc. *f cresc.*

Fl. 1.2 *f cresc.*

Oboi 1.2 *ff* *p*

C. Ingl. *ff* *p*

Cl. p. lcc. *f cresc.*

Clar. 1.2 *ff* *p*

Cl. basso *ff* *p*

Sas. *mp* *solo espressivo*

Fag. 1.2 *ff* *p*

C'fg. *f cresc.*

Trb. $\frac{1}{3}$ *f* *p*

Corni 1 2 3 4 *f cresc.* *ff* *p*

Tbn. 1 2 *f* *p*

Tbn. 3 *f* *p*

Tuba *f* *p*

Timp. *sempre cresc.* *ff* *fp*

Crt. *f* *muta in Mbf* *p sempre*

Xif. *f* *muta in 2 Pti* *bbdo:*

Mbf 2 *f* *muta in Sistro (Mbf 2)* *p sempre*

Cpn. *f*

Piano 1.2 *ff* *l.v.*

Organo *f* *organo pieno*

Vin. 1 2 *div₃* *ff* *dim.* *p*

Viole *div₃* *ff* *p*

V'celli *div.* *p unis.* *tr*

C'bassi *arco* *div₃* *ff* *p*

Sax.
Timp.
1 Mbf
2 Mbf
V'celli
165

Sax. Timp.
1 Mbf
2 Mbf
Sistro
1 Vla.
2 Vla.
Viola
V'celli
C'bassi
178
p poco crescendo
simile
div. unis.
p

lunga niente
Timp.
CABENZA I
Mbf 1 (a) p poco accelerando a tempo fp accel.
p
(b) fp più mosso (secco) meno mosso poco a poco diminuendo attacca
lunga
2 Pto
lunga niente
Mbf 2 p (colla parte)
Sistro
lunga niente
1 Vla.
niente
2 Vla.
niente
Viola
niente
V'celli
niente
C'bassi
niente
191

Oboe 1, 2 *p cresc.* *dim.*

Timp. *p*

Mbf 1 *p* hard sticks *p cresc.* *dim.* soft stick

2 Pti *p cresc.* *dim.*

Mbf 2

Sistro *mp* (longer strokes)

Vln. 1 *p crescendo* *simile* *mf diminuendo*

Vln. 2 *p crescendo* *simile* *mf diminuendo*

Viola *p crescendo* *simile* *mf diminuendo*

V'celli *p crescendo* *simile* *mf diminuendo*

C'bassi *pizz.*

192

Corno 1 *solo* *p* *mf* *niente*

Timp. *lunga* (niente)

CADENZA II

Mbf 1 (a) *espressivo* *mp* *f*

2. muta in Clv
4. muta in Tag

Mbf 2 (b) *lunga* *fp* *p* *mf* *f*

Vln. 1 *lunga* niente

Vln. 2 niente

Viola niente

V'celli niente

C'bassi *lunga*

199

Corn 1.3 *poco a poco crescendo*

Mbf 1

Clv *f*

Mbf 2 *mp*

Tng *f*

Vln. 1 *f simile*

Vln. 2 *f simile*

Viola *f simile*

V'celli *f simile*

C'bassi *f simile*

200

CADENZA III

Mbf 1 *lunga* *sempre f* *attacca!*

2

2. muta in Pto
4. muta in Gr.c

Vln. 1 *niente*

Vln. 2 *niente*

Viola *niente*

V'celli *niente*

C'bassi *niente*

208 *attacca!*

213

Picc. *p poco*

Crt

Pto *muta in Xlf*

Mbf 2 *p*

Cpl

Vln. 1 *pp* *pizz.* *p poco* *pp* *p*

Vln. 2

Viola *pizz.* *p*

V'celli *pizz.* *p*

10

Picc. *p* *mp*

C.ingl.

Cl. 1.2 *a 3* *mp* *simile*

Trba.1 *sord. (straight)* *mp*

Corni 1.3 *chiuso* *pp*

Crt

Xlf

Mbf 2

Cpl

Vln. 1 *mp* *mp* *simile* *p cresc. poco a poco*

Vln. 2 *p cresc. p. a p.*

Viola *p cresc. poco a poco*

V'celli *mp*

19

Musical score for page 25, featuring various instruments including Piccolo, Flutes, Oboes, Clarinets, Bassoon, Trumpets, Trombones, Percussion, and Strings. The score includes dynamic markings such as *p*, *poco cresc.*, *mf*, *dim.*, *chiuso*, *aperto*, and *con sord.*. Performance instructions include *(sempre con sord.)*, *arco div.*, and *Y* (likely indicating a specific technique or bowing style). The score is divided into systems, with the first system ending at measure 25 and the second system starting at measure 26.

Fl. 1.2

C. Ing.

Cl. 1.2

Sax. *solo*

Trba. 1 *senza sord.*

Trbn. 1 *p*

Crt *muta in Mbf*

Xlf *muta in Bng*

Mbf 2

Cpl *muta in Cpn*

Piano 1

Vln. 1

Vln. 2

Viola

V'celli *pizz.*

C'bassi *pizz.*

33

1 solo *mf* (jazzy)

Fl. 1.2

Sax. *p*

Clar. 1.2 *1.*

Mbf 1 *mp*

2 Bng *p*

Cpn *p*

Piano 1 *mp*

Organo *mp*

Vln. 1.2 *arco div.*

Viola *div.*

V'celli *arco*

C'bassi *tutti arco*

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Picc.

Fl. 1.2
cresc. poco a poco *sempre stacc.*

Oboi 1.2
stacc. sempre cresc. *mp*

C.ingl.

Cl. picc.

Cl. 1.2
cresc. poco a poco *sempre stacc.*

Cl. basso

Sas.

Fg. 1.2
mp *mf* *stacc. e cresc.*

C'fg.

Trbe. 1 2 3
mp *subito sordini mf* *senza sordini f*

Corni 1 2 3 4
cuivré ff *(aperto) f*

Tbni. 1.2
mp

Timp. *f fp*

Mbf 1
cresc. poco a poco *f sempre*

Xif *f sempre*

Mbf 2

Cpn *f* *muta in Cpl*

Piano 1 2

Organo
sempre stacc. *cresc. poco a poco*

Vln. 1 2 *f*

Viola *unis. f*

V'celli *div. f*

C'bassi *f*



Picc. *sempre*
 Fl. 1.2 *loco*
 Obol 1.2
 C. Ingl.
 Cl. picc.
 Clar. 1.2
 Cl. basso *ff*
 Sas.
 Fg. 1.2 *f stacc.*
 C'fg. *ff*
 Trbe. 1, 2, 3 *drum.*
 Corni 1, 2, 3, 4 *drum.*
 Tbnl. 1.2 *f*
 Tbn. 3
 Tuba *f*
 Timp. *f*
 Mbf 1
 Xlf
 Mbf 2
 Cpl
 Piano 1 *stacc.*
 Piano 2
 Vln. 1, 2 *ff*
 Viole *ff*
 V'celli *ff*
 C'bassi *ff*

uniso. f cresc.
uniso. cresc.
uniso.
sub. mf
uniso.
sub. mf
uniso.
sub. mf

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Flcc. *simile*

Fl. 1.2

Oboi 1.2

C.ingl.

Cl. picc. *simile*

Cl. 1.2

Cl. basso

Sax.

Fg. 1.2

C'fg.

Trbc. 1, 2, 3

Corni 1, 2, 3, 4

Tbni. 1.2

Tbnc. 3

Tuba

Timp. *ad libitum*

Mbf 1

Xif

Mbf 2

Cpl

Piano 1, 2

Vin. 1, 2

Viole

V'celli

C'bassi

f, *ff*, *aperto f*, *sempre stacc.*, *unif.*, *pizz.*, *f*, *ad libitum*, *poco a*

Picc.

Fl. 1.2

Oboe 1.2
mp *p* *delicato* *simile*

C.ingl.

Cl.picc.

Clar. 1.2

Cl.basso

Sax.

Fg. 1.2

C'fg.

Trbe. 1 2 3

Corni 1 2 3 4

Tbni. 1.2

Tbnc. 3
Tuba
p

Timp.

Mbf 1

Xlf

Op1

Opn

Organo

Vln. 1 2

Viola

V'celli

C'bassi

con sord. (cup) 2.

muta in Crt

muta in Pto

mp

75

Flc.

Fl. 1.2

Oboe 1.2

C.ingl.

Cl.picc.

Clar. 1.2

Cl.basso

Sax.

Fg. 1.2

C'fg.

Trbe. 1, 2, 3

Cornl. 1, 2, 3, 4

Tbnl. 1, 2, 3

Timp.

Crt

Xif

Mbf 2

Cpn

Piano 1

Vin. 1, 2

Viola

V'celli

C'bassl

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Picc. *rim.*
 Fl. 1.2 *rim.*
 Obol. 1.2 *rim.*
 C.ingl. *ff*
 Cl. picc. *ff*
 Clar. 1.2 *ff*
 Cl. basso *ff*
 Sas. *ff*
 Fg. 1.2 *ff*
 C'fg. *ff*
 Trbe. 1, 2, 3 *rim.*
 Corni 1, 2, 3, 4 *ff*
 Tbnl. 1, 2, 3 *rim.*
 Tuba *rim.*
 Timp.
 Crt.
 Xif.
 Mbr. 2
 Piano 1, 2 *rim.*
 Organo *ff*
 Vln. 1, 2 *col 19*
 Viole
 V'celli
 C'bassi

Flcc. *solo* *p*

Bar. *p* *lontano*

Corno 1 *solo* *p* *lontano*

Ong. *mp* *mp* *muta in Mbf*

Tamb. *p*

1 *sotto voce* *poco cresc.* *V* *p*

Vla. *div.* *mp* *V* *p*

2 *poco cresc.* *V* *p*

Viole *mp* *V* *p*

V'celli *poco cresc.* *V* *p*

C'bassi *poco cresc.* *arco* *p*

1 3 5 *sotto voce* *p*

Flcc.

Corno 1

Timp.

Mbf

Xif

Tamb. *muta in Mbf*

Cpl

1 *V* *poco cresc.*

Vla. *V* *poco cresc.*

2 *V* *poco cresc.*

Viole *V* *poco cresc.*

V'celli *V* *poco cresc.*

C'bassi *V* *poco cresc.*

1 4 1 *V* *poco cresc.*

Picc. *pp poco sotto voce simile*

Fl. 1.2

Ob. 1.2 *p* *p sempre*

C.ingl.

Cl. picc.

Clar. 1.2 *pp poco sotto voce simile*

Cl. basso

Sax. *p*

Fg. 1.2

C'fg.

Trbe. 1 2 3 *con sord. (cup) sola p* *senza sord.*

Corn. 1 3 4 *1. (chiuso) pp poco sotto voce simile*

Tbn. 1 2

Tbn. 3

Tuba

Timp.

Mbf 1 *mp*

2 Ptl *(soft stick) p*

Guirro *p*

Cya *p*

Piano 1 2

Vln. 1 2 *dim. fp*

Viola *fp dim.* *plazz. mp*

V'celli

C'bassi

pp p

Picc.

Fl. 1.2

Ob. 1.2

C.ingl.

Cl.picc.

Clar. 1.2

Cl.basso

Bas.

Fg. 1.2

C'fg.

1

Trbe.

2

3

1

Corn

3

2

4

(aperto) a 2 p sim.

1

Tbnl.

2

1

Tbne.

3

Tuba

Timp.

Mbf 1

2 Pti

Guirre

Cpn

muta subito in Cpl

muta in 4 Tomt

muta in 3 Cpi

muta in Cps

p simile

Piano 1

Organo

(senza ped.)

[depress silently]

1

Vln.

2

div. in 3

mp p sim.

Viole

espressivo

plizz.

mp *

V'celli

div.

mp *

C'bassi

div.

mp *

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Flcc.
 Fl. 1.2
 Ob. 1.2
 C.ingl. *solo stacc.*
p delicato
 Cl.picc.
 Clar. 1.2
 Cl.basso
 Sas.
 Fg. 1.2
 C'fg.
 Trbe. 1, 2, 3
 Corni 1, 2, 3, 4
 Tbn. 1, 2
 Tbn. 3
 Tuba
 Timp. *muta in bacchette pp*
 Mbf 1
 Xlf
 Mbf 2
 Cpl
 Piano 1 *solo*
p leggiero
 Organo
 Vln. 1 *nat. arco*
 Vln. 2 *nat. arco*
 Viola
 V'celli *pizz.*
 C'bassi

Picc.

Fl. 1.2

Ob. 1.2

C.ingl.

Cl.picc.

Clar. 1.2

Cl.basso

Sax.

Fg. 1.2

C'fg.

Trbe. 1, 2, 3

Cornl. 1, 2, 3, 4

Tbnl. 1, 2

Tbnc. 3

Tuba

Timp.

Mbf 1

Xif

Mbf 2

Cpl

Piano 1, 2

Vin. 1, 2

Viole

V'celli

C'bassi

a 3 sempre stacc.

a 2

mf

stacc.

arco

ava. barra

poco a poco crescendo



Picc.
 Fl. 1.2
 Ob. 1.2
 C.ingl.
 Cl.picc.
 Clar. 1.2
 Cl.basso
 Bar.
 Fg. 1.2
 C'fg.

1
2
3
 Trbe.
 1
2
3
 Corni
 1
2
 Tbn.
 3
 Tbn.
 Tuba

Timp.
 Mf 1
 Xif
 Mf 2
 Cpl

1
2
 Piano

1
2
 Vln.
 stacc.
 Viole
 V'celli
 C'bassi

poco a poco crescendo

Picc.

Fl. 1.2

Ob. 1.2

C.ingl.

Cl.picc.

Clar. 1.2

Cl.basso

Bas.

Fg. 1.2

C'fg.

Trbe. 1.3

Corn 1 3 2 4

Tbnl. 1 2

Tbne. 3

Tuba

Timp.

Mbf 1

Xlf

Mbf 2

Piano 1 2

Organo

Vin. 1 2

Viole

V'celli

C'bassi

crescendo

sempre stacc.

crescendo

f organo pieno
(Ped.)

col 1^o

div.

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Picc. *fff* *ff* *f*
 Fl. 1.2 *fff*
 Ob. 1.2 *fff* *f*
 C.ingl. *fff*
 Cl.picc. *fff*
 Clar. 1.2 *fff*
 Cl.basso *fff*
 Sas. *fff*
 Fg. 1.2 *fff* *f*
 C'fg. *fff*
 Trbe. 1 2 3 *fff*
 Corni 1 2 3 4 *fff*
 Tbnl. 1 2 *fff*
 Tbn. 3 *fff*
 Timp. *fff* *ff* *f*
 Mbf 1 *f*
 Xif *f*
 Mbf 2 *f*
 Tat *f cresc.* *ff*
 Piano 1 2 *f*
 Organo *fff*
 Vln. 1 2 *f*
 Viole *f*
 V'celli *f*
 C'bassi *plzz.* *f*

affacca

affacca

affacca

♩=100



Picc.

Fl. 1.2

Oboe 1.2

C. Ingl.

Cl. picc.

Clar. 1.2

Cl. basso

Sax.

Fg. 1.2

C'fg.

solo
p

p

Trbe. 1-3

1

2

3

4

Corral

Tbnl. 1

2

Tbnc. 3

Tuba

p

Timpani

Mbr 1

2

Mbr 2

Cp1

solo
p

p

Piano

Organo

♩=100

1

2

Vln.

p

simile

p

simile

Viole

p

simile

V'celli

C'bassi

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Oboe 1 *solo* *p* *mf*

Mbf 1

Vln. 1 *fp* *mf*

Vln. 2 *fp* *mf*

Viola *fp* *mf*

V'celli
C'bassi *fp* *mf*

8

Oboe 1

Clar. 1.2 *p*

Sax.

Corn 1.2 *p*

Mbf 1 (soft sticks) *p* *simile*

2 Bg *p*

Mbf 2 soft sticks *p* *simile*

Vln. 1 *p* *pizz.*

Vln. 2 *p* *pizz.*

Viola *p* *pizz.*

V'celli
C'bassi *p* *pizz.*

16

Sax.

Mbf 1

2 Bg

Mbf 2

Cpl *p*

Vln. 1

Vln. 2

Viola

V'celli
C'bassi

21

poco ritenuto - - - - *a tempo*

Picc. *Voce (bocca chiusa)* *pp* (Voce)

Fl. 1.2 *col Picc. & Fl.*

Ob. 1.2 *col Picc. & Fl.*

C. ingl. *col Picc. & Fl.*

Cl. picc. *col Picc. & Fl.*

Clar. 1.2 *p* *col Picc. & Fl.*

Cl. basso *col Picc. & Fl.*

Sax. *col Picc. & Fl.*

Fg. 1.2 *p* *col Picc. & Fl.*

C'fg. *col Picc. & Fl.*

poco ritenuto - - - - *a tempo*

Trbe. 1-3 *colli Tbn.*

Corn 1 *1* *p* *colli Tbn.*

Corn 2 *colli Tbn.*

Tbn. 1 *Voce (bocca chiusa)* *pp* (Voce)

Tbn. 2 *col Bng & Mbf*

Tbn. 3 *col Bng & Mbf*

Toba *col Bng & Mbf*

Timp. *col Bng & Mbf*

Mbf 1 *col Bng & Mbf* *sola* *mp*

2 Bng *Voce (bocca chiusa)* *pp* (Voce)

Mbf 2 *col Bng & Mbf*

Cpl *p*

poco ritenuto - - - - *a tempo*

Piano *Voce (bocca chiusa)* *pp* (Voce)

Organo *col Piano*

poco ritenuto - - - - *a tempo*

Vln. 1 *con sordina* *Voce (bocca chiusa)* *pp* (Voce) *div in 3* *(trem)* *ppp*

Vln. 2 *con sordina* *colle Vln 1 & 2* *div in 3* *(trem)* *ppp*

Viole *con sordina* *colle Vln 1 & 2* *div in 3* *(trem)* *ppp*

V'celli C'bassi *colle Vln 1 & 2* *pizz.* *ppp*

poco ritenuto - *p* - - - - *a tempo*

poco rit. a tempo

rit.

Picc.
Fl. 1.2
Ob. 1.2
C. ingl.
Cl. picc.
Clar. 1.2
Cl. basso
Sax.
Fg. 1.2
C'fg.

poco rit. a tempo

rit.

Trbe. 1-3
1
3
Corna
2
4
Tbai. 1
2
Tbac. 3
Tuba

poco rit. a tempo

rit.

Timp.
Mrf 1
2 Bug
Mrf 2
Cpl

poco rit. a tempo

rit.

Piano
Organo

poco rit. a tempo

rit.

1
Vln.
2
Viola
V'celli
C'bassi

poco rit. a tempo