Reinterpreting the Concerto

Three Finnish clarinet concertos

written for Kari Kriikku

Sapphire Clare Littler

MA by Research
University of York
Music
December 2018

Abstract

The origins of the word *concerto* can be traced to two different sources: the first is the Italian translation, to mean 'agreement', and the other stems from the Latin *concertare,* which means 'to compete'. Ironically, the duality presented by these two translations encapsulates the true meaning of the concerto: opposition and resolution.

This thesis focuses on Finnish works for clarinet and orchestra composed for Kari Kriikku in the last forty years, and seeks to analyse three in depth: Jukka Tiensuu's *Puro* (1989); Magnus Lindberg's Clarinet Concerto (2002); and Kaija Saariaho's *D'OM LE VRAI SENS* (2010). The works have been chosen as these composers were all born around a similar time in Finland, and all worked with the same clarinettist, whom they all know personally. Through analysis, *Reinterpreting the Concerto* seeks to discover how each of these composers tackled the pre-existing model of the concerto, and suggest reasons for compositional decisions. The thesis will end with a discussion of clarinet technique, and how much writing for Kriikku in particular may have influenced the works.

This essay will be formed of several sections, with the first examining the traits which could be considered important to each of the pieces: form, and how this results in the linear progression of the work; continuity and discontinuity created through melodic treatment, and how the soloist interacts with the ensemble. The next will analyse the repercussions of tonality and pitch centres. The final portion of the thesis will discuss the use of the clarinet, from the player's perspective, and how extended techniques are used within each work. This will then be developed to discuss how much Kriikku may have contributed to each of the concertos.

Contents

List of Tables

List of Figures

List of Excerpts

Preface

It is worth discussing the history of the concerto, and specifically outlining information which is relevant to both the clarinet, and to Finland. The modern clarinet is a relatively new instrument, with early models invented in the 17th century, and not becoming a permanent member within orchestras until the early 18th century. The first clarinet concerto was written by Johann Stamitz in 1757. The first *Finnish* clarinet concerto was written by Bernhard Crusell (1775 – 1838),[1] which is not officially dated, but believed to have been composed in 1807.[2] He wrote a further two, which were succeeded by a 155-year absence, before Pehr Henrik Nordgren (1944 – 2008) composed a concerto for clarinet and folk instruments in 1970. Another silence of almost two decades followed, before Jukka Tiensuu's *Puro* was premiered by Kari Kriikku in 1989. What followed in the next 40 years was a huge response from composers, with 18 clarinet concertos being composed after this (accounting for 82% of Finnish clarinet concertos). Five of these were written specifically for Kriikku.

[1] Crusell was a clarinettist and composer born into a Swedish family living in Finland. Although not a Finn by blood, he grew up in the country, although he left in the 1890s to spend a majority of his life in Sweden. Despite this, Crusell considered himself Finnish, rather than Swedish, and referred to himself as a 'Finn Landsman' and kept his diaries in Finnish.
Ruth-Esther Hillila, and Barbara Blanchard Hong, *Historical Dictionary of the Music and Musicians of Finland* (Connecticut: Greenwood Publishing Group, 1997), 48-50.
[2] Kimmo Korhonen, *Finnish Concertos* (Helsinki: Finnish Music Information Centre, 1995), 10.

Acknowledgements

I'd like to begin by thanking my supervisor, Professor Tim Howell, who has not only supported my musical endeavours since 2015, but has also guided me through *Reinterpreting the Concerto*, with his endless wealth of knowledge on all things Finnish. Thanks also go out to Doctor Mark Hutchinson, for his invaluable and relevant comments on my work, as well as to many other academic staff in the Department of Music at the University of York who have been wonderful in answering any questions I had and guiding me since the admission for my undergraduate degree in 2014. I'm also grateful to Lauri Sallinen and Heather Roche, whose experience of both musical analysis and contemporary clarinet performance has been vital in helping to create the bridge between the two in this thesis. Lastly, I'd like to thank my family, friends, and partner, Luke, for always being encouraging and taking an interest in my work, despite having no understanding of what that is.

This thesis is dedicated to my Grandpa, Michael Hobbs, who is no longer with us, but inspired me to achieve all I could in my musical education, and always strived to support me in whatever way possible.

Author's Declaration

I declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for an award at this, or any other, University. All sources are acknowledged as References.

I: A Pure Beginning

Three Composers, Three Identities

The work of three composers will be looked at in depth during this thesis: Jukka Tiensuu (b. 1948), Kaija Saariaho (b. 1952), and Magnus Lindberg (b. 1958). Each has their own personal style and approach to both their career and their compositional technique, which may be due to their differing backgrounds. However, they share common ground as their clarinet concertos were all written with, and for, the same performer – Kari Kriikku (b. 1960).

Several academics have written about the specific qualities found in Finnish music, and the role of which the isolated (both linguistically and geographically) country plays in this.[3] As well as this possible isolationism which may be experienced by these composers, they are often compared and related to Jean Sibelius – arguably the most recognised composer Finland has produced. Tim Howell wrote that because this generation of composers was born around the time of Sibelius' death, they seem to be 'more distanced from the Sibelian legacy' than might be expected.[4]

The other, rather literal, common ground shared by these composers is their early academic pursuits at The Sibelius Academy in Helsinki. They were all taught by Paavo Heininen (b. 1938) who passed on his compositional style and ideas, and acted as a bridge between the previous generation of Finnish composers – such as Aare Merikanto and Einojuhani Rautavaara – to this new, younger generation. Jarkko Hartikainen wrote that Heininen is 'the most significant living Finnish composer'[5] and his biography on Music Finland begins with the fact

[3] Tim Howell, *After Sibelius* (Farnham: Ashgate Publishing, 2006), 263-64.
[4] Ibid, 7.
5 Jarkko Hartikainen, trans. Jaakko Mäntyjärvi, "The Constant Variation of Creation," *Finnish Music Quarterly*, April 2, 2013, accessed June 5, 2019, https://fmq.fi/articles/the-constant-variation-of-creation-on-paavo-heininen.

that he is often referred to as 'the grand old man of Finnish Modernism.'[6] It goes on to clarify this - 'While many other composers have migrated from Modernism to other musical landscapes, Heininen has remained true to the ideals of Modernism'.[7] He characterises his compositional style in the following way:

> 'My musical thinking is based on the idea of constellations, configurations of musical time, each one precisely characterized in terms of rhythm, dynamic, melody, harmony, timbre and spatial location. These characteristics and their weight vary from unit to unit. The problem of cohesion, of combining units into configurations and linking one configuration to another, thus requires a new expressive solution every time… In essence, this is an extended conception of the interval – the relation between one multi-dimensional moment and another. If cohesion is not achieved, the individual points of musical time will not receive their full richness of connotation, significance and intelligibility.'[8]

This, rather ethereal, description of his process can be applied to ways in which Saariaho, Lindberg, and Tiensuu compose. Although a slightly ambiguous description, what seems to remain is the idea that separate ideas in a work need to remain, to an extent, continuous and for the transitions between them to be organic. The process of composition based on variation, which remains continuous through careful transition, is a technique which is uniform across all three works studied in *Reimagining the Concerto*, and can be suggested to stem from ideas each composer learned from Heininen.

---

[6] "Paavo Heininen," *Music Finland,* accessed 05/06/18, https://core.musicfinland.fi/composers/paavo-heininen.

[7] This name was also given to Erik Bergman, who developed Schoenberg's technique of 12-tone serialism, and used total serialism in some of his works, albeit in his later years (his early works were often concerned more with Romanticism). However, there were a handful of Finnish composers who were pioneers in the Finnish modernist movement, also including Usko Merilainen, who each brought their own use of new techniques into the public eye (or ear). It seems fair to attribute this term to both Bergman and Heininen.
Ibid.

[8] Jeremy Parsons, "Paavo Heininen." *The Musical Times* 119, no. 1628 (1978): 853.

Jukka Tiensuu

'Jukka Tiensuu is a universal musician. He embraces the concept of the timelessness of art and of music as an essential component of a universal cosmology; on the other hand, he shows a consciousness of the means and channels through which the innermost depths of music can be probed.'[9]

Jukka Tiensuu was born in Helsinki in 1948, and studied at the Sibelius Academy, the Juilliard School, the Freiburg Hochschule für Musik, and IRCAM in Paris, as a composer, conductor and as an accomplished harpsichordist and pianist. During this time, he studied with Heininen and Brian Ferneyhough (who taught all three composers discussed in this thesis) as well as Klaus Huber, who also taught Saariaho. Tiensuu performs music which has been composed across a range of eras, from the late Renaissance, up until the modern day, having taught classes globally on Baroque music, despite being a composer of new music.

He is very much a man of mystery, and since the 1980s, he has refused to speak about his compositions, or provide any programme or liner notes for these, preferring to let the music speak for itself, and leave 'the joy of discovery to the listener'.[10] He rarely agrees to be interviewed, with his most recent being a brief discussion with Risto Nieminen in 2007, regarding the Finnish avant-garde movement.[11] He has also written and published two articles, which are available on his website. These are titled 'The Future of Music'; and 'Harpsichord - A Mother of Necessity?'.[12] Unfortunately, this choice has resulted in the amount of scholarly literature on Tiensuu being rather limited – *Puro* has been written about in detail by only three

[9] Harri Suilamo, "Jukka Tiensuu," *Music Finland,* accessed Feb 12, 2018, https://core.musicfinland.fi/composers/jukka-tiensuu.
[10] Ibid.
[11] Risto Nieminen, "Notes From the Borderland – An Interview with Jukka Tiensuu," *Finnish Music Quarterly,* Sep 1, 2007, accessed June 10, 2018, https://fmq.fi/articles/notes-from-the-borderland-an-interview-with-jukka-tiensuu.
[12] Jukka Tiensuu, 'The Future of Music," (lecture, *SEARCH EVENT I*, The University of California, San Diego, April 16, 2000). Transcript available at https://tiensuu.fi/FutureOfMusic.pdf.
Jukka Tiensuu, "Harpsichord — A mother of Necessity?", *Contemporary Music Review* 20, no. 1 (2001): 3-15, https://tiensuu.fi/Harpsichord_MotherOfNecessity.pdf.

people: two of these are performance guides for the clarinettist, and the third is in Finnish.[13] Despite this apparent lack of self-promotion, it has been written that his 'influence on the contemporary Finnish music scene is virtually beyond compare.'[14] This in itself is almost paradoxical. On the one hand, a very small amount of academic writing has been published on his plethora of compositions, but as a composer, there is a large amount of public mystery, and hence, interest, surrounding him. Nieminen described Tiensuu as the following:

> 'Jukka Tiensuu has, like the music he composes, always defied classification in a single category. The most fitting words to describe him might be… "the best-kept secret in Finnish music". Hence Tiensuu, if anyone, is the person par excellence to open the discussion about Finnish avant-garde today.'[15]

Tiensuu's first published work was in 1971 - *Largo* for string orchestra - and in the near half a century since, he seems to have explored many different styles: aleatoricism; strict serialism; electronics; Baroque influence; free improvisation; and spectralism. The branding of a 'universal musician'[16] perhaps suggests how well he is able to evolve with changing trends and ideas within music. The idea of evolving with fashions was discussed in a lecture about general trends in music given by Tiensuu at the University of California, titled 'The Future of Music'.[17] A transcript stated:

---

[13] Katie Morell wrote about *Puro* in her thesis: Katie Morell, "Contemporary Clarinet Music in Finland: Three Concertos by Finnish composers commissioned for Kari Kriikku," (2014). Mikko Raasakka discussed it in *Exploring the Clarinet.*
Lauri Sallinen discussed this in an essay to support his MA recital and The Sibelius Academy in 2009.
Lauri Sallinen, translated by the author, *Puro klarinetille ja orkestrerille. Muodon ja harmonian analyysi,* (Sibelius Academy, 2009).
Mikko Raasakka, *Exploring the Clarinet: A Guide to Clarinet Technique and Finnish Clarinet Music* (Helsinki: Fennica Gehrman, 2010).
[14] Nieminen, "Notes from the Borderland."
[15] Ibid.
[16] Suilamo, "Jukka Tiensuu."
[17] Jukka Tiensuu, 'The Future of Music."

> 'To understand the future, you have to take a look at the past. Many people claim there cannot be any kind of evolution in the arts. "History develops, art stands still" (E.M. Forster). How can they possibly know that the music of our ancestors, thousands, even millions of years back – some Australopithecine, fish, even amoebae – was of equal quality to that of Bach and Mozart?'[18]

Puro (1989) translates as 'brook' in Finnish and 'pure' in Italian – with Mikko Raasakka writing that 'Both are easy to associate with the limpid, flowing texture of the work.'[19] The concerto was written for the young Kari Kriikku, and he has performed it over 50 times.[20] *Puro* was also his solo debut, with Kriikku a founding member and performer with the *Avanti!* Chamber Orchestra since 1983, when he graduated from the Sibelius Academy. The score does not explicitly use the word 'concerto', instead using the subtitle 'For Clarinet and Orchestra'. This raises a rather interesting question – *why* is *Puro* not described as this? It may be fair to assume that an audience will see it as such, due to the aural and aesthetic prominence of a soloist with an orchestra. It can be suggested that although the piece is for clarinet and orchestra, the 'concerto' is perhaps suggested through the dialogue created between the two. Solos which are initially heard from the clarinettist are shared and imitated by individual soloists within the orchestra. *Puro* was the second work for soloist and orchestra he composed, with the first being a Harpsichord concerto in 1980, titled *M* – unsurprising considering he is primarily a harpsichordist. After these, Tiensuu did not return to the concerto until 2000, when *Mind,* for piano, and *Luo* for MIDI wind-controller were written. These were succeeded by eleven further concerti (all referred to as for the solo instrument and orchestra), of which a second work for clarinet and orchestra *Missa* (2007) was composed for Kriikku, making the clarinet the only instrument for which Tiensuu has created more than one concerto. As

[18] Jukka Tiensuu, 'The Future of Music," 2.
[19] Raasakka, *Exploring the Clarinet,* 31.
[20] Kari Kriikku, interviewed by Clarissa Dunn, "Upbeat," *Radio New Zealand,* Oct 27, 2015.

Raasakka stated; 'Jukka Tiensuu knows the clarinet. He makes full use of its expressive potential without ever writing anything that is impossibly difficult or uncomfortable to play.' [21]

The use of microtones within *Puro,* and in fact, within a large amount of Tiensuu's catalogue of works, has become a defining feature. Kriikku referred to the composer having created a 'world of microtonality' within *Puro.*[22] Tiensuu wrote in 2001:

> 'There is nothing artificial in micro-intervals. On the contrary, they can be regarded as a real benefit of nature: if an instrument is tuned in perfect intervals, micro-intervals of different sizes automatically emerge. 'Different size' is the magic word. It is naturally possible to divide an octave in as many equal parts as you like - the parts are still equal, all intervals are tempered, none is perfect.'[23]

Within his six-sentence biography on Music Finland, microtones seem to be important enough to warrant a full sentence.[24] The only specific microtones he used in *Puro* are either quarter or sixth, expanding the 12-tone scale into 48 notes – and utilising what Tiensuu refers to as the 'fascinating universe hidden inside a semitone'.[25] The resulting effect creates something which enriches both the melody and the harmony, as well as unifying the work. The harmonic implications of this are due to spectral techniques, which are used during *Puro,* where Tiensuu extracted overtones from the lowest note on the clarinet to shape the harmony and orchestration through orchestral synthesis.[26]

---

[21] Raasakka, *Exploring the Clarinet,* 31.
[22] "Jukka Tiensuu: Puro," *Kari Kriikku,* 2015, accessed Jan 18, 2018, http://www.karikriikku.com/projects/jukka-tiensuu-puro/
[23] Jukka Tiensuu, "Harpsichord — A mother of Necessity?," 8.
[24] Harri Suilamo, "Jukka Tiensuu," *Music Finland,* accessed Feb 12, 2018, https://core.musicfinland.fi/composers/jukka-tiensuu.
[25] Jukka Tiensuu, *Harpsichord — A Mother of Necessity?,* 8.
[26] The technique of orchestral and instrumental synthesis is discussed on pages 84-88, and Tiensuu's use of this from page 89.

Kaija Saariaho

Kaija Saariaho is a prominent and celebrated Finnish composer, with an eclectic style which stems from a range of sources. Born in Finland in 1952, she studied visual arts, which focused on graphics, at the University of Art and Design (previously known as the University of Industrial Art) in Helsinki from 1972-76. Her culturally rich background in this is an invaluable insight into her unique compositional idiom, with a welcome spread of artists and renowned composers inspiring her to create music which utilises sources which are multi-disciplinary to create a unified work.

> '... the visual and the musical world are one to me ... Different senses, shades of colour, or textures and tones of light, even fragrances and sounds blend in my mind. They form a complete world in itself.'[27]

In the late 1970s, she persuaded Heininen to accept her onto a composition course at the Sibelius Academy.[28] After this, she studied with Ferneyhough and Huber in Berlin, before she moved to Paris in the 1980s, where she still resides. Despite this, Howell notes that her 'Finnishness' is still 'deeply embedded in her compositional psyche', and that she acknowledges the significance of her national identity.[29] Initially, her time in Paris was spent at IRCAM, where she learned spectralist techniques with instigators of the method – Gérard Grisey and Tristan Murail. As Anthony Burton wrote: 'This analytical approach inspired her to develop her own method for creating harmonic structures, as well as the detailed notation using harmonics, microtonality and a detailed continuum of sound extending from pure tone to unpitched

[27] Pirkko Moisala, *Kaija Saariaho* (Illinois: University of Illinois Press, 2009), 55.
This quote illustrates how much Saariaho relies heavily on all her senses when composing, as well as the blurred lines between them – the importance of this will be revealed in due course.
[28] Tom Service, "Meet the Composer," in *Kaija Saariaho: Visions, Narratives, Dialogues,* ed. Tim Howell, Jon Hargreaves and Michael Rofe (Farnham: Ashgate Publishing, 2011), 6.
[29] Howell, *Kaija Saariaho: Visions, Narratives, Dialogues,* xvi.

noise…' [30] This background of learning across three rather different schools of composition have resulted in a multidisciplinary technique.

Much of Saariaho's work has been inspired by art, poetry, and other readings, and this is discussed in depth in Howell's book, *Kaija Saariaho: Visions, Narratives, Dialogues.*[31] This association with other artistic sources was not a sudden development in Saariaho's mind-set, with the composer taking piano and organ lessons in the early 1970s at the Helsinki Conservatory alongside her visual arts degree.[32] After her admission to the Sibelius Academy in 1976, her earliest works were songs and vocal music inspired by literature and poems, before moving onto strings and flute, at Heininen's suggestion.[33] The writing of works inspired by dual sources are a feature of Saariaho's music which has been prominent throughout her career.

A defining feature of Saariaho's music is the link between voice and composition, with her work for soprano and electronics, *Lonh,* winning the Nordic Council Music Prize in the year 2000. Her first opera, *L'amour de Loin* (2000) was 'directly connected' to her compositional output from 1983 onwards.[34] In conversation with Tom Service, she said:

> 'I felt that when I wrote [*L'amour de Loin*], that everything I had written up to that moment was somehow in that piece. All the material, my approach to harmony, to texture – all of it was there.'[35]

After this, she went on to write a further three operas: *Adriana Mater* (2005), *Emile* (2008), and *Only the Sound Remains* (2015). Burton wrote in Saariaho's official biography that 'The experience of writing for voices has led to some clarification of [her] language, with a new vein

[30] Anthony Burton, *Kaija Saariaho: Biography,* 2006, updated by Chester Music in 2017. Available at http://saariaho.org/wp-content/uploads/2017/08/170118-Bio-ENG-KS.pdf.
[31] Howell, *Kaija Saariaho.*
[32] Ibid, 4.
[33] Ibid, 5.
[34] Howell, *Kaija Saariaho,* xvii.
[35] Kaija Saariaho, Interviewed by Tom Service, "Kaija Saariaho in Conversation with Tom Service," ed. Tim Howell, Jon Hargreaves and Michael Rofe, *Kaija Saariaho: Visions, Narratives, Dialogues,* 13.

of modally oriented melody accompanied by more regular repeating patterns.'[36] Several works are listed as products of this change of direction which was 'carried over', and this includes *D'OM LE VRAI SENS,* along with other concerti, most notably – *L'Aile du songe* (2001), her concerto for flute. Saariaho's concerto writing is varied, and she has written for flute, cello, violin, organ, voice, clarinet and harp, yet the Finnish musicologist Pirkko Moisala noted that although these are based upon an existing convention in Western music, they do not conform to, or oppose, the tradition.[37] Moisala's statement suggests some amount of duality regarding the use of Western musical techniques. For example, Saariaho uses aspects of traditional ideas, such as references to tripartite form in *D'OM LE VRAI SENS,* but she also incorporates more contemporary techniques, such as the hiding of this suggested form within the six-movement structure. These two techniques work together constructively, and hence, do not strictly conform to, or oppose, the concerto tradition.

D'OM LE VRAI SENS is formally and musically based on a collection of six medieval tapestries recently named *La Dame à la licorne* (The Lady and The Unicorn).[38] These tapestries depict the five senses, and are titled accordingly, with the movements of the concerto following the same outline: I: '*L'Ouïe'* (Hearing), II: '*La Vue'* (Sight), III: *'L'Odorat'* (Smell), IV: '*Le Toucher*' (Touch), and V: '*Le Goût*' (Taste). The sixth tapestry is something of a mystery, and has been titled '*A mon seul Désir'* (To My Only Desire). Saariaho wrote:

> 'The name and subject matter of the sixth tapestry have been widely interpreted and examined. What interested me in particular was an article about the meanings hidden in the letters of the name of the sixth tapestry. One of these is D'OM LE VRAI SENS. This is

[36] Burton, *Kaija Saariaho.*
[37] Moisala, *Kaija Saariaho,* 107.
[38] These have been given a modern title, as they were rediscovered in 1841 in Boussac Castle, suffering from damp and mould. They were not brought to the Thermes de Cluny in Paris until 1863, and have since been restored.

> medieval French and alludes both to the senses and to the true meaning of humankind.'[39]

Of course, it was from this article that the title of her concerto was taken, resulting in a work inspired by dual sources: literary and visual. The article in question was written by Jean-Patrice Boudet in 1999, and titled in English: *The Lady and the Unicorn and its Medieval Sources of Inspiration.*[40] In this, the writer goes on to discuss various dualities behind the meanings of the tapestries, and of the conflict of the representation of the unicorn as an 'ambiguous erotic allegory, but at the same time, a symbol of chastity, which can only be tamed by a virgin'.[41] Perhaps Saariaho was inspired to use duality as a key technique for this concerto through the writings of Boudet, as well as through her understanding of the traditional concerto tradition.

Several other dualities exist within *D'OM LE VRAI SENS*; of course, the contrast between soloist and orchestra, as observed within many concerto-like pieces, but also the use of theatre and staging. The clarinettist is to act as the unicorn depicted in the tapestries, with the instrument itself representing the animal's horn, and required to move around the hall and stage, with specific requirements for each movement, as detailed in the score.[42] This staging was designed with Peter Sellars, an American theatre director, who had previously worked with Saariaho on *L'amour de Loin, Adriana Mater* and *Only the Sound Remains.* This particular involvement with *D'OM LE VRAI SENS* led to a work which was both visual and musical, transforming a multi-part, soloistic work into something with one continuous narrative, provided through aesthetic means.

---

[39] Kaija Saariaho, *D'OM LE VRAI SENS,* Programme note.
[40] Jean-Patrice Boudet, "*La Dame à la licorne* et ses sources médiévales d'inspiration," translated by the author, *Bulletin de la Société Nationale des Antiquaires de France*, (1999): 61-78.
[41] Ibid, 75.
[42] Ibid.

Magnus Lindberg

Magnus Lindberg has consistently stated that 'only the extremes are interesting.'[43] He is known to create musical works which thrive under the stresses caused by hugely opposing features: tonality and atonality; lyricism and technical virtuosity; contrasting orchestral timbres; register; dynamic; tempi - the list continues. Much like any composer, he has gone through several different stylistic periods, although he does not see these as abrupt changes - rather as organic developments in a continuing process.[44] Between 1983-85, *Kraft* (Power) was written – a 25-minute piece for soloists, orchestra, and tape.[45] Much of the score was derived from computer programming, and the music itself was driven through self-sustaining chords, as well as complex rhythmic ideas.

> 'All the musical material of the piece has been prepared with a micro-computer, with programmes written in FORTH allowing a very flexible control of rhythm and chord processes. The programme is based on a formalization of rules for creation of rhythmic events, gestures and temporal processes, and an environment allowing a graphical output for metric notation. Similar rule-based programmes control the creation of harmonic material by a comparison to previously defined and accepted chordal successions given by the composer.'[46]

This work won the prestigious Nordic Council Music Prize in 1998. After *Kraft,* Lindberg continued his interest in harmony through the use of pitch-class set theory, and in works such

[43] "Magnus Lindberg: Accused," *News,* London Philharmonic Orchestra, January 15th, 2015, accessed 18 October 2017, http://www.lpo.org.uk/news/magnus-lindberg-accused.html.
[44] Magnus Lindberg, interviewed by Joshua Cody, "Magnus Lindberg in Conversation. Moving between Extremes." *The Musical Times* 141, no. 1872 (2000): 33.
[45] Lindberg often premieres his own piano works, and *Kraft* was no exception: he has even performed this with the Berlin Philharmonic (in February 2014).
[46] Magnus Lindberg, *Kraft* (Helsinki: Wilhelm Hansen, 1985).

as *Ur* (1986), which he referred to as '*Kraft* in chamber form' he created 12-note symmetrical chords made from a hexachord and its transposed inversion.[47] These works used computer software such as *LeLisp* to generate electronic, predefined chains of chord sequences, which are triggered in real-time through the use of the pianist's MIDI keyboard.[48] He continued to develop the harmonic technique, and eventually came up with his self-defined 'chaconne principle', whereby chains of chords are reused and recycled, and undergo constant transformation.[49] This compositional technique was used in a set of three works for orchestra – *Kinetics* (1988), *Marea* (1989-90), and *Joy* (1990). However, few works which succeeded these used the chaconne principle, and although Lindberg had continued interest in harmony, he moved away from electronics and chain chord cycles.

Lindberg has written seven concertos: two for piano; two for cello; one violin concerto; the Clarinet Concerto; and a concerto for orchestra. There are elements of compositional technique which create an underlying similarity between all of his works - the fact that several compositional elements are often opposing, with Lindberg taking the meaning of 'extreme' to mean opposition before synthesis. His Concerto for Piano and Orchestra (1991-94) has also been labelled a concerto of 'opposites'.[50] His Clarinet Concerto is a prime example of this compositional technique, with conflicts evident on almost every level – Lindberg took the literal meaning of concerto, and applied it to every element of the work.

Despite this framework suggesting the work is a twenty-five-minute battle, of sorts, it is perhaps the most definitively lyrical piece of music he has written. The soaring lines of the clarinet are never dwarfed by the orchestra, and the soloist and orchestra work in 'complementary opposition', with these ideas coming together to form a synthesis, of sorts. Lindberg has done something surprising for a contemporary composer, especially one with a

---

[47] Ilkka Oramo, "'Chaconne Principle' And Form in the Music of Magnus Lindberg," *Studies in Music and Other Writings*, Dec 12, 2004, accessed Oct 5, 2017, https://relatedrocks.wordpress.com/2004/08/12/chaconne.
[48] Ibid.
[49] Magnus Lindberg, *Corrente* (London: Chester Music, 1992).
[50] "Magnus Lindberg: Programme note for Concerto for Piano and Orchestra," *Music Sales Classical,* accessed September 9, 2017, http://www.musicsalesclassical.com/composer/work/5837.

work such as *Kraft* under his belt, and taken a rather traditional approach to the pre-existing idea of the concerto. In an interview with Joshua Cody for *The Musical Times,* he had this to say:

> 'I guess I'm a bit classical, in the sense that I have faith in equilibrium as a goal; we have seen so much art pushed to the extremes, neglecting totally the idea of balance. In trying to write music I've felt a very strong impulse to the notion of equilibrium, and when I push an element to an extreme I feel an urge to withdraw somewhere else.'[51]

The element which is the most extreme in the concerto is the melody - and it was the first piece in which Lindberg wrote melody so blatantly, especially one on which the entire work hinges. He had previously spoken of his fear to write in this way, and this was the composition in which he decided to tackle this.[52]

Lindberg's Clarinet Concerto makes for a worthwhile study: critics have consistently referred to his more recent music as 'classical',[53] but is the music perhaps less traditional in its composition than one may perceive? Through exploration of form, with specific interest paid to the interplay between variation and block-like structures, a particularly contemporary approach to writing may be revealed. The melody follows a more linear, continuous structure, which unifies the piece, but the orchestral accompaniment conforms more rigidly to discontinuous blocks. Harmonically, too, the main motifs played by the soloist are largely tonal, with much of the chromaticism emerging within the more virtuosic passages, or from deep within the orchestra. Lindberg has said that his favourite instrument is the orchestra,[54] so perhaps the comments which state this concerto is 'classical' all focus too heavily on the clarinet

[51] Lindberg and Cody, "Magnus Lindberg in Conversation," 34.
[52] Ibid.
[53] "Magnus Lindberg's Clarinet Concerto," editorial, *Hufvudstadsbladet (Helsinki),* September 2002, in Howell, *After Sibelius,* 253.
[54] Tom Service, "A guide to Magnus Lindberg's Music," *The Guardian*, April 16, 2013, accessed Oct 5, 2017, https://www.theguardian.com/music/musicblog/2013/apr/16/contemporary-music-guide-magnus-lindberg.

– having a central protagonist to follow does help to keep the listener focused, and the soloist's role is not contested in the way that it can be in some 20th and 21st-century concerti. There is something oddly calming, yet turbulent, about Lindberg's Clarinet Concerto: similar to the way a river appears to be smooth, and continually flowing, yet, below the surface, there is threat.

Kari Kriikku

The one factor which undeniably links all three pieces is Kari Kriikku, with all three works written for and dedicated to him. He was born in April 1960, and graduated from the Sibelius Academy in 1983, before acting as one of the founding members of the *Avanti!* Chamber Orchestra, where he met several of the composers with whom he would later collaborate. He is now the Artistic Director – a post he has served since 1998 – making him the longest acting director of the ensemble. He plays in both the recordings of Lindberg's *Kraft,* but the first concerto he premiered was Tiensuu's *Puro* – and the response to him, as a musician, was extraordinary. John Button wrote of the interpretation:

> 'But Kriikku was the magician. He produces sounds one would not have thought possible from the clarinet… His playing, and the works he has played, showed just how modern music can be both of the highest quality and engage audiences at the same time'[55]

As a highly regarded player in Finland, Kriikku has been in great demand – but often seeming to work with the same group of high-profile composers and conductors: Lindberg, Saariaho, Tiensuu, Kimmo Hakola, Esa-Pekka Salonen, and Osmo Vänskä. As Alex Ross wrote in 2009, 'Kari Kriikku, a clarinettist of explosive agility and melting lyricism, is not a household name, but he should be.'[56] The same year, Kriikku was awarded the highly prestigious Nordic Council Music Prize – a prize for which he had been previously nominated, in 2001. He is one of 12 performers to win this sought-after accolade since its foundation in 1965, and the only orchestral woodwind player to do so. After raising his profile in America, through support from

[55] The Dominion Post, John Button, 22nd June 2009 quoted in "Jukka Tiensuu: Puro," (see footnote 21).
[56] Alex Ross, "Kriikku's Kraft," *Alex Ross: The Rest is Noise, Books, Articles, and a Blog, by the critic of the New Yorker,* September 25th, 2009, accessed 19/19/18, http://www.therestisnoise.com/2009/09/kriikkus-kraft.html.

Salonen and Vänskä,[57] composers from further afield have begun to write for him, including Unsuk Chin, with her Clarinet Concerto, which he premiered in 2015.

Kriikku's role within each of the works to be discussed in *Reinterpreting the Concerto* is of significance, with a certain amount of collaboration to be expected between a composer and the soloist, and hence, the possibility of the three pieces being united with their use of his technique and style. There are several extended techniques which appear in all three works, and some which were developed by Kriikku, and are therefore undeniably a result of his influence. This will be discussed in the final chapter.

It can be argued that Kriikku himself helped to spark the sudden eruption of clarinet music in Finland post-*Puro.* His talent, combined with the mastery of *Puro,* showcased the clarinet as an impressive solo instrument. The common denominator in each of the works studied in this thesis is that each composer set out to write a clarinet concerto *for* Kriikku – and this began a national rebirth (or birth?)[58] of the clarinet in Finland. He has also had concerti written for him by Kimmo Hakola – his Clarinet Concerto (2001), as well as Tiensuu's second clarinet concerto, *Missa* (2006).

[57] Ross, "Kriikku's Kraft."
[58] With such a lack of clarinet music in Finland preceding this, and Sibelius never writing a clarinet concerto, it could be considered that *Puro* actually started the trend of Finnish clarinet music.

Ia: Scholarly Readings

Despite the compositional differences between Tiensuu's *Puro,* Lindberg's Clarinet Concerto, and Saariaho's *D'OM LE VRAI SENS,* they are all unified by their relationship with the existing model of the concerto. Saariaho and Lindberg were part of the founding members of a group – *Korvat auki!* (*Ears Open!* in English) – which was formed during their student years in Finland, and aimed to 'promote and propagate contemporary music'.[59] They organised concerts, seminars, and workshops to help their cause, as they did not plan to form a composer's collective, but rather something more widely accessible to the general public and musicians alike. The group is still up and running today, yet it is now run by the younger generation of Finnish composers. Kimmo Korhonen wrote that they were not only united through Heininen, but also through 'genuine friendship'.[60] This bond led several of them to establish agreements amongst themselves related to their own compositional output – including one between Saariaho and Lindberg to never write a work titled 'symphony'.[61] This was due to a rebellion, of sorts, against norms imposed in Finland. To join the *Society of Finnish Composers,* one had to write a symphony – however Saariaho and Lindberg refused, and as leading composers of their generation, they were still accepted, and helped to change the admission requirements.[62]

Of the clarinet works under discussion, only Tiensuu's is not explicitly called a 'concerto', instead subtitled 'for clarinet and orchestra'. *D'OM LE VRAI SENS* is subtitled as a concerto for clarinet, as Saariaho has subtitled all of her concerti, including her flute concerto *L'aile du Songe* (2002). None of the three composers discussed here seems to have an issue with describing their work as a 'concerto', such as in interview, for instance. Saariaho begins the programme note to *D'OM LE VRAI SENS* with 'The idea of a clarinet concerto for Kari Kriikku

[59] Kimmo Korhonen, *New Music of the Nordic Countries* (Pendaragon Press, 2002), 227.
[60] Ibid.
[61] Howell, *After Sibelius,* 243.
Other founding members of the group, such as Jouni Kaipainen, however, still wrote symphonies, with Kaipainen having written four.
[62] Howell, *After Sibelius,* 243.

had been going round in my mind for some years.'[63] This distinction between the symphony and the concerto is of importance – both are existing historical models, yet there seem to be more connotations with the word 'symphony' than 'concerto'. The musicologist can only begin to wonder why this would be – with views possibly varying between composers and musicians alike. It could be suggested that there is somewhat more of a stigma writing a symphony – for a long period of time, composition of a symphony was what made a composer 'great'. Over the three hundred years that the symphony has existed, the word brings with it a certain air of superiority which may cause some anxiety to modern day composers.

The New Grove Dictionary of Music and Musicians defines the word 'concerto' as the following:

> 'An instrumental work that maintains contrast between an orchestral ensemble and a smaller group or a solo instrument, or among various groups of an undivided orchestra. Before 1700 the term was applied to pieces in a variety of forms for an even greater variety of performing media, voices as well as instruments; it was also used in the sense of 'ensemble' or 'orchestra'. Not until the beginning of the 18th century was it applied consistently (though not exclusively) to works in three movements (fast–slow–fast) for soloist and orchestra, two or more soloists and orchestra (concerto grosso) or undivided orchestra.'[64]

This leaves us to consider how vague the word 'concerto' truly is – if no formal structure is necessary, then all we are left with is the 'contrast between an orchestral ensemble' and the soloist. This may have some amount of positive impact for the composer – this apparent lack of strict format leaves him or her to structure and explore their concerto in any way they desire. Hutching's article goes on to state that today, the word has 'lost any residual formal meaning'

[63] Kaija Saariaho, *D'OM LE VRAI SENS,* Programme note.
[64] Arthur Hutchings, *The New Grove Dictionary of Music and Musicians Volume 6* (Oxford: Oxford University Press, 2001), s.v. "Concerto", 240.

and can simply be used to indicate a work which utilises soloist(s).[65] As a result of this, many composers have 'simply dropped the work 'concerto' and found other names for concertante works that have little in common with the concertos of earlier periods.'

Despite the lack of the word 'concerto' in *Puro*, there is no doubt as to what it is. What is of significance are the parallels these three works share with each other, and the relationship between clarinet and orchestra. The compositional devices used can be examined to answer questions related to the composer's connection to the concerto model, Finnish heritage, musical background, and involvement with Kriikku.

There are numerous sources that have been invaluable to *Reinterpreting the Concerto*, and the research surrounding it. Tim Howell, who is a Professor at the University of York, has written two books which were of use to this thesis. *After Sibelius* and *Kaija Saariaho: Visions Narratives, Dialogues,* of which he was the main editor, make frequent appearances, as well as several journal articles he has written about Lindberg, Saariaho, and the music of Finland, as a whole.[66] The amount of scholarly reading that exists the music of Finland is small, and Howell was the first to write on Finnish modernism and contemporary music in this language.

After Sibelius takes the reader through a journey exploring Finnish music from Sibelius, through to the younger generation of Finnish composers, or those whom Howell defines as being born around the time of Sibelius' death (1957).[67] The looming presence of Sibelius – who left a lasting legacy in Finland – left a certain aura which surrounded the younger generation of composers, and this is referred to as the 'shadow of Sibelius'. [68] The book was certainly of significance to *Reinterpreting the Concerto*, as it would be to any person wishing to understand the history and compositional traits of Finnish music. However, chapters which were invaluable were the final two, written on the youngest composers with a full chapter to their name. 'Kaija

[65] Arthur Hutchings, *The New Grove Dictionary of Music and Musicians,* "Concerto", 257.
[66] Tim Howell, "Magnus Lindberg: Narratives of Time and Space," *Contemporary Music Review* 33, no. 4 (2014), 355-372.
Tim Howell "Musical Narratives: Studies in Time and Motion," *Contemporary Music Review* 33, no. 4 (2014), 339-340.
[67] Howell, *After Sibelius,* 7.
[68] Ibid, Chapter 1 *The Shadow of Sibelius,* 1-27.

Saariaho – The French Connection' and 'Magnus Lindberg – Rediscovering Balance'. Several key-traits of each's compositional style were defined, as well as specific analysis on a concerto for each – Saariaho's *Aile du songe* (2001), a concerto for flute and orchestra, and Lindberg's Clarinet Concerto. Each analysis worked through issues surrounding formal architecture, context, continuity, and structural consequences of the concerto. These writings were vital to creating and exploring a basis for the grounds of the work in this thesis.

Kaija Saariaho: Visions, Narratives, Dialogues, is a diverse collection of essays, created with eight authors, and edited by Tim Howell with Jon Hargreaves, and Michael Rofe, which explored Saariaho's approach to her music. The first chapter, which consists of an interview of Saariaho with Tom Service, was instrumental to understanding her personal reasons for some of her compositional and aesthetic traits. Two further chapters were of significance to *Reinterpreting the Concerto*: Howell's "Dualities and Dialogues: Saariaho's Concerto's", which was useful in understanding the dual sources behind many of Saariaho's concerto's, and Vesa Kankaanppä's "Dichotomies, Relationships: Timbre and Harmony in Revolution", which discussed Saariaho's personal technique whereby the timbre and spectral harmonies are symbiotic.

Other sources have proven valuable to this thesis, and this includes the Finnish Music Information Centre, which was founded in 1963, as well as Music Finland and The Society of Finnish Composers. With such a strong musical history, the country takes pride in documenting and promoting composers and their works. With information on 278 living composers, and access to 40,000 pieces of music, there is no digital archive with as much information on Finnish contemporary art-music to rival this.[69] As well as these, articles and books have been written in association with the group, which include *Finnish Concertos,* a book by Kimmo Korhonen, which

[69] This phrase is used in Howell's *After Sibelius,* but it was coined much earlier, and used frequently in writings on Finnish Music. In 1945, Sibelius said to Erik Bergman: "I am often told that Finnish composers work in the shadow of Sibelius. Now I notice you are someone who doesn't want or need to be in my shadow." As well as this, Einar Englund titled his 1999 autobiography *In the Shadow of Sibelius.* Howell, *After Sibelius*; Tom Service, *The Silence of Sibelius,* The Guardian, Sep 20, 2007, accessed Nov 20, 2018, https://www.theguardian.com/music/2007/sep/20/classicalmusicandopera1; Einar Englund, *I skuggan av Sibelius* (Helsinki: Söderström & Co., 1996) quoted in Howell, *After Sibelius,*

documents concertos in Finland from the Classical era, right through to 1995, at the time of the book's publication. These sources act as one of the first steps to investigating a particular composer, with one likely to easily access the defining characteristics and works of whomever is in question.

One of the writings most similar to *Reinterpreting the Concerto* is a thesis by Katie Morell, undertaken at Ohio State University in the USA in 2014. *Contemporary Clarinet Music in Finland: Three Concertos by Finnish composers commissioned for Kari Kriikku*, explores Tiensuu's *Puro,* as well as Kimmo Hakola and Lindberg's Clarinet Concertos.[70] However, it is more of a performance guide than an analytical discussion, with Morell aiming to provide 'the clarinettist with a practical approach to each piece'.[71] The thesis was helpful to help identify examples of specific clarinet technique, as well as some straightforward examples of form, yet lacked the analytical approach that *Reinterpreting the Concerto* will take. Finnish clarinettist Mikko Raasakka's *Exploring the Clarinet: A guide to clarinet technique and Finnish clarinet music,* is also a performance guide, but Raasakka's was more detailed than Morell's, and it explored techniques in relation to their greater use – for example, it discussed the importance of the overtone series and its technical repercussions in Tiensuu's *Puro.*[72]

With such a small amount of literature written in English to consult, the same authors appear frequently in this thesis. Other than the aforementioned, these include writings by the composers themselves; Tom Service; Jonathan D. Kramer; Schoenberg; and Lauri Sallinen, who created the only analytical writing on *Puro* (in Finnish). This comprised an essay undertaken during a performance MA in 2009 at the Sibelius Academy titled *Jukka Tiensuu: Puro for Clarinet and Orchestra: An analysis of Harmony and Form*.[73] This thesis will be the most in-depth analytical discussion of *Puro* to date. Sallinen himself has also been accommodating, having been happy to respond to questions via email, with topics surrounding *Puro* and Finnish clarinet music

[70] Morell, *Contemporary Clarinet Music in Finland.*
[71] Ibid, iii.
[72] Raasakka, *Exploring the Clarinet,* 143-5.
[73] Lauri Sallinen, *Puro klarinetille ja orkestrerille.*

II: Forming Melodies

The Relationship Between Melody, Continuity, and Form

Before exploring the concept of melodic continuity in these three clarinet concerti, it first makes sense to define what is meant by some of the terms which are consistently used in *Reinterpreting the Concerto* in regard to melody.

Cell/motif: The smallest fragment of musical material.

Theme: A short and recognisable fragment of musical material, which can be comprised of several 'cells'.

Melody: In this instance, a melody can be formed through the addition of several themes. The Concise Oxford Dictionary of Music defines this as 'a succession of notes, varying in pitch, which have an organized and recognisable shape.'[74] Due to the use of atonality within the works discussed, the concept of labelling 'melody' is a tricky one – it is feasible that listeners will disagree on what they will distinguish as 'melodies'. However, it seems reasonable to suggest that phrases played by soloists in many of these concerti will fit the defined criteria, and therefore, can be labelled as such.

With the consideration of the above definitions, the following idea can be suggested as a way in which the three terms are related.

Cell →theme → melody

[74] "melody." The Concise Oxford Dictionary of Music. *Encyclopedia.com.* (April 1, 2019). https://www.encyclopedia.com/arts/dictionaries-thesauruses-pictures-and-press-releases/melody.

The Relationship Between Time and Melody

Nonlinearity: principle of composition and of listening in which events are understood as outgrowths of general principles that govern entire pieces.[75]

Nondirected linear time: temporal continuum determined by progression toward unpredictable goals.[76]

In *The Time of Music* by Jonathan D. Kramer, he writes about the differences between reaching a 'goal' in tonal and post-tonal music.

> 'The temporal form of a tonal piece typically consists of a move towards a point of great tension that is usually remote from the tonic, followed by a drive back towards the tonic. The return of the tonic is an event of rhythmic importance, a structural downbeat, a point of resolution, the goal.'[77]

He states that the larger forms in tonal music are defined through their use of tonality – which he writes is 'comprised of a set of complex hierarchic relationships between tones, supported by durations, dynamics, timbres, etc.'[78] This explanation implies that tonality is the most important factor to create movement and form in this music, and other compositional devices act to assist the structures it creates. This leaves post-tonal works in a different situation: with the absence of tonality, the composer is forced to find new ways to define formal structures within their music. Kramer discussed the ways in which this is approached:

[75] Jonathan D. Kramer, *The Time of Music* (New York: Schirmer Books, 1988), 453.
[76] Ibid.
[77] Ibid.
[78] Ibid, 25.

> 'For a posttonal [sic] composition to be temporally linear *with goals,* there must be a clear sense of continuity, provided by voice leading or perhaps by other directional processes in some parameters. Furthermore, goals must either be defined contextually (by reiteration or emphasis, as in the Western cantata) or established *a priori* (by reference to (neo)tonal procedures…). In either case, the arrival of goals is usually supported by rhythmic and textural means.'[79]

In other words, continuity is needed in post-tonal compositions to define the 'goals' in the music – which cannot be to the tonic here, but an important or climactic moment. Although contemporary music seems to use continuity frequently, it is not always goal directed – and Kramer refers to this as 'nondirected linearity', where the music 'carries us along its continuum, but we do not really know where we are going in each phrase or section until we get there.'[80] Thus, two types of continuity in post-tonal music, or linearity exist: goal directed, and nondirected.

A striking similarity between Tiensuu and Lindberg's clarinet concertos is their use of continuity and discontinuity, which is often closely intertwined with formal structures. With both works made up of a single movement, this must be used to help define the formal structures, and to guide the listener. These are primarily created through the solo clarinet phrases, which are produced through some kind of an additive process, as melodies are developed through variation. The works are not strictly goal-directed: they have a certain amount of drive, created through several means, but the listener cannot be absolutely sure where and when a 'goal' will be reached. Because of this, it is wise to think of these works as using nondirected linearity.

The technique of 'developing variation' is one defined by Arnold Schoenberg as 'Brahms's technique',[81] although the process can be retrospectively applied to many composers'

[79] Kramer, *The Time of Music*, 39.
[80] Ibid, 40.
[81] Schoenberg, *Style and Idea,* 129.

outputs, as early as Bach. Walter Frisch wrote that Schoenberg 'clearly considered it one of the most important structural principles of Western art music since about 1750'.[82] Developing variation involves 'repeated phrases, motives, and other structural ingredients of themes only in varied forms', which requires a 'new and special effort'.[83] Developmental features can include rhythms, metre, and note groupings, although other compositional techniques can be used to assist developing variation.[84]

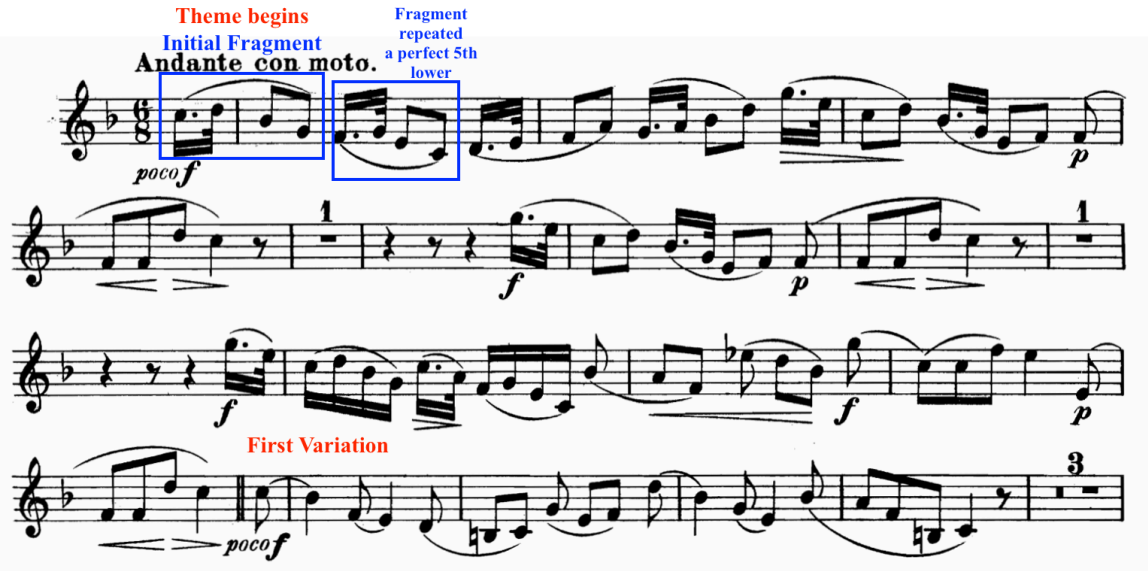
This technique can be observed in Brahms's Clarinet Sonata no. 2 in E flat, for clarinet and piano – the last chamber work Brahms wrote before his death in 1897. Although developing variation is prevalent in the melodic phrases throughout, the clearest examples in the work are in the third and final movement, *Andante con moto,* where the formal structure is a theme and variations.

Table 3: Brahms's Clarinet Sonata, Andante con moto, variation structure

Theme	Variation 1	Variation 2	Variation 3	Variation 4	Variation 5	Coda
1 – 14	15 – 28	29 – 42	43 – 56	57 – 70	71 – 97	98 – 153

As can be seen from the opening 14 bars, as shown below, the clarinet's theme is derived from the cell played during its first three beats, as it is extended and transposed.

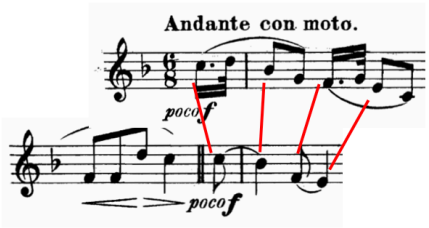
[82] Walter Frisch, *Brahms and the Principle of Developing Variation,* Berkeley (University of California Press, 1984), 1.
[83] Schoenberg, *Style and Idea,* 129.
[84] Frisch, *Brahms and the Principle of Developing Variation*, 5.



Excerpt 20

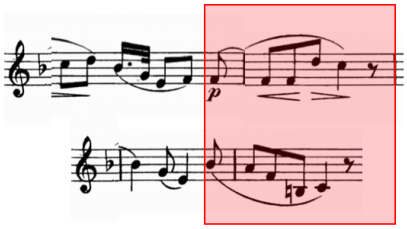
Clarinet in B flat, Brahms Clarinet Sonata in E flat, Movement III, bars 1-21

With the rest of the movement based on this cell, it can be understood that the full movement stems from the developing variation of this. The first variation, for example, uses the same rhythms, as well as pitches, related to the full original theme, as can be seen below. The ending cell, as well, closes the variation with a similar rhythm, and there is some amount of mirroring, with the disjunct leap downwards rather than upwards.



Excerpt 21

Clarinet in B flat, Brahms Clarinet Sonata in E flat, Movement III, bars 1 & bars 14-15

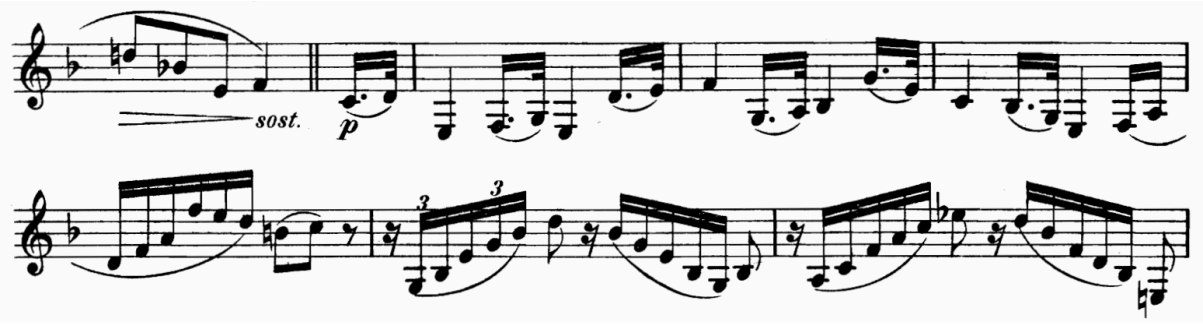


Excerpt 22

Clarinet in B flat, Brahms Clarinet Sonata in E flat, Movement III, bars 4-5 & bars 17-18

Each is more complex than the previous, up until variation 4, and comprises phrases which employ a faster speed of material, with the melodies embellished each time they return. For

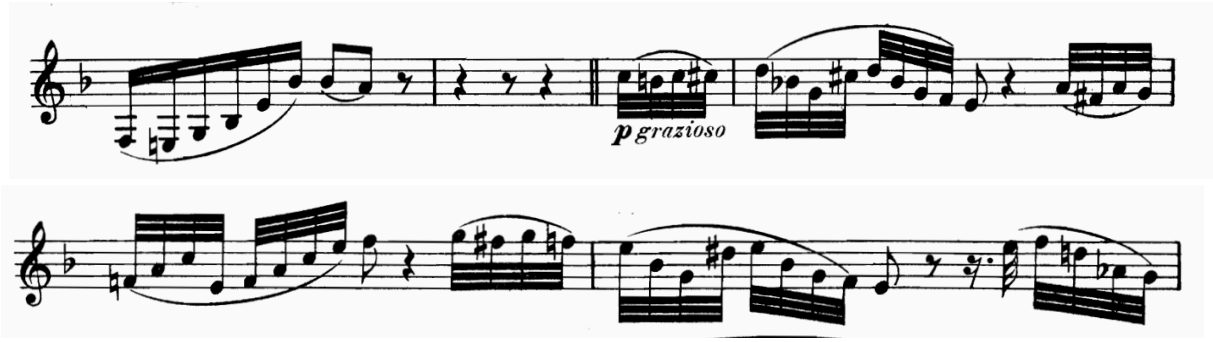
example, the second variation at bar 29 begins with the original cell, an octave lower, but is developed through a triplet idea which works upwards and downwards in an arpeggiated manner.



Excerpt 23

Clarinet in B flat, Brahms Clarinet Sonata in E flat, Movement III, bars 29 – 34[85]

This triplet idea undergoes more developing variation during bars 43 – 56, which is arguably the most intense variation of the movement, where demisemiquavers explore increasingly chromatic phrases.



Excerpt 24

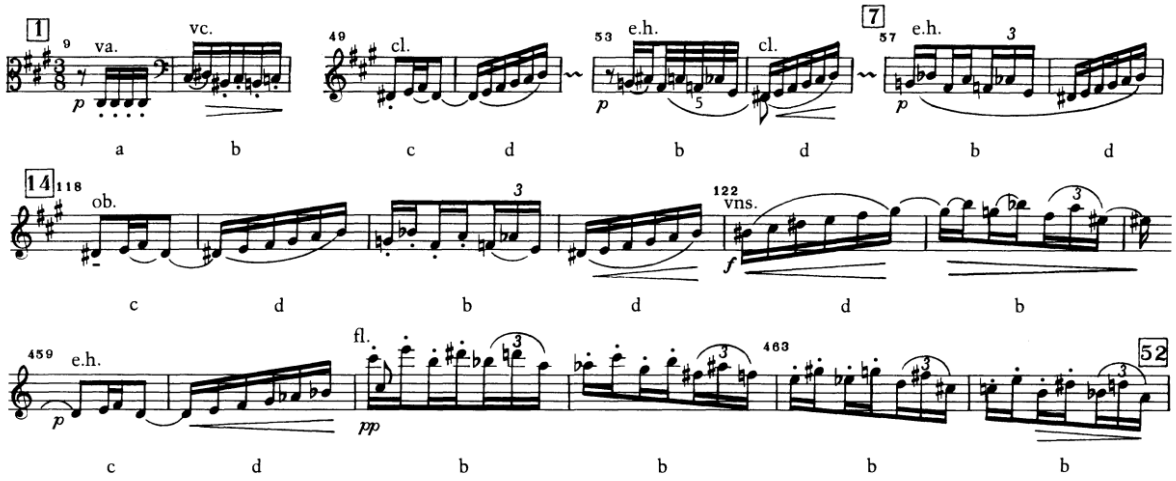
Clarinet in B flat, Brahms Clarinet Sonata in E flat, Movement III, bars 41-45 (variation 3 at bar 43)

similarities, such as the shaping and the prominence of a C moving to a D, but not a wealth, of melodic resemblance. However, following the progression of the clarinet's phrases throughout the movement reveals how each has been developed from the previous, through extension and

[85] N.B. All clarinet excerpts in this thesis will be in B flat, unless otherwise specified. This is for the ease of the clarinettist – the final chapter discusses technique in detail, and is done so in a way which is relevant to the performer. As well as this, Mikko Raasakka and Katie Morell's writing also refers to the clarinet in B flat, so continuing in this way will add clarity to their quotations.

elaboration, both in pitch and rhythm. This technique was continued through the Romantic era, particularly in the music of Wagner,[86] and continued to be used in the twentieth century.

Debussy's *Jeux* (1912), was the subject of great debate by musicologists between the 1950s and 1980s, who all attempted to define its form through differing means. The process of fragmentation and emergence of melodies was well received, with Kramer writing that these characteristics made the work 'appealing'.[87] Jean Barraqué showed these in more detail, and used the phrase 'mutation poétique' to describe this type of transformation of the 'thèmes-objets' as they change.[88] Jann Pasler writes of the four fragments of *Jeux,* a, b, c, and d, which are used to create larger melodies, as shown below.[89]



Excerpt 25: Fragmentation in Jeux

At figure 14 (bar 118), these fragments are manipulated, often through elongation, and then go on to form a full phrase through a process similar to the idea of developing variation. Pasler wrote that:

[86] Arnold Schoenberg, *Style and Idea,* (New York: 1975), 129-30.
[87] Jonathan D. Kramer, "Moment Form in Twentieth Century Music," *The Musical Quarterly* 64, no. 2 (1978): 177-94.
[88] Jean Barraqué, *Debussy,* Paris: Éditions du Seuil, 1994, quoted in Jann Pasler, "Debussy's, "Jeux": Playing with Time and Form," *19th-Century Music* 6, no. 1 (1982): 69-70.
[89] Jann Pasler, "Debussy's, "Jeux": Playing with Time and Form," *19th-Century Music* 6, no. 1 (1982): 70.

> 'Although they [other musicologists] have succeeded in demonstrating a certain unity based on motives (Eimert), instrumentation (Zenck), intervals (Spies), and pitch sets (Jakobik), they have failed to find the key to its form. Their analyses have skirted half of the central problem: *Jeux* concerns not just sound but also time.'[90]

The concept of time and music occurs repeatedly throughout the academic readings studied in advance of *Reinterpreting the Concerto* – especially when considering continuity. As Kramer wrote:

> 'Does music exist in time or does time exist in music? This question is not simply a semantic game. If we believe primarily that music exists in time, then we take time as an absolute, as an external reality, as somehow apart from the experiences it contains. I do not wish to deny time totally but rather to posit a substantially different musical time. If we believe in time that exists uniquely in music, then we begin to glimpse the power of music to create, alter, distort, or even destroy time itself, not simply our experience of it.'[91]

This viewpoint provokes many thoughts for the reader, but a striking question is: if time exists in music, then *how* is it manipulated?'

It can be suggested that interactions between continuity and discontinuity are what create listeners' idea of perceived time. In one sense, the works are almost akin to a journey, which takes one path (it is linear), but this can be disrupted by obstacles (otherwise known as isolated episodes of discontinuity). The way in which continuity is achieved in these concerti is primarily through the use of a technique similar to Schoenberg's idea of 'developing variation', whereby the melody shapes listeners' perception of formal structure.

[90] Ibid, 70.
[91] Kramer, *Time in Music,* 5.

This process may have been learned by the composers studied in *Reimagining the Concerto* from Heininen, rather than direct exposure to Schoenberg's writings. His style and use of variation was described by Ilkka Oramo for the Finnish Music Information Centre as the following:

> 'Heininen's early works bear the stamp of neo-classicism, but this soon gave way to a phase of dodecaphony (Symphony No. 1), followed by one of serialism (*Adagio*, Piano Concerto No. 1), proceeding ultimately towards the adoption of a 'stream of consciousness' in which, to quote the composer's own words on his work *Dia*, 'all parameters are of equal value as directions of musical argument, and all their combinations are equally probable'. Described in general terms, his compositional technique is somewhat reminiscent of Schoenberg's principle of '[developing] variation'.[92] He has clearly abandoned the use of repetition of musical ideas in the form in which they first appear. Everything is in a state of constant flux. Elements of recapitulation have still not entirely lost their significance, however, since a syntax based on the simultaneous developing variation of all musical parameters also implies the retention of a certain degree of similarity between the various appearances of the musical ideas. The mutation of musical figures is the single most important determining trait in Heininen's music, and this being so, one may best describe it from the structural standpoint as being 'bound by logic' rather than 'bound by pattern'.'[93]

As such, the way in which melodies are manipulated throughout a piece to form the overall formal shape, as well as unity, seems to have stemmed from each of the composer's teachings from Heininen. As will be shown, Tiensuu and Lindberg use a technique of forming larger

[92] In this article, published in English, the process of 'developing variation' is named 'evolving variation'. It can be assumed that this is purely a mistranslation, so the quote has been altered to use the more common term.
[93] "Paavo Heininen," *Studies in Music and Other Writings,* Jan 7, 1980, accessed Feb 1, 2018, https://relatedrocks.com/1980/07/01/paavo-heininen/

melodies through the additive process of smaller cells, which is closely linked to Schoenberg's idea of developing variation, due to the themes gradually emerging and transforming slowly with each use.

IIa: Two Dimensions

Dialogue and Competition in Lindberg's Clarinet Concerto

Lindberg's Clarinet Concerto uses continuity as a basis for contrast with more discontinuous features. This is created through his use of form derived through melody. The work consists of five parts, or blocks, which can be further subdivided into smaller subsections.[94] Issues of continuity and discontinuity are relevant, as the music *sounds* continuous, but the formal orchestral arrangement of blocks suggests otherwise. There is reference to developing variation, through treatment of melodic material, which was perhaps inspired by his teacher, Heininen, who Howell said had a 'typically idiosyncratic teaching of variation form.'[95] This is likely the case – with Lindberg talking of Heininen's 'fantastic understanding of variation form: the idea of doing very different things in the same way.'[96] Lindberg's Cello Concerto no. 1 (1997-99) also takes place across five sections, played without a break, and formally uses the technique of continual variations. The sections of the Clarinet Concerto can be seen below, to scale.

Table 4: Sections in Lindberg's Clarinet Concerto

Section 1	Section 2	Section 3	Section 4	Section 5
1-171	172-375	376-423	424-557	558-665

These five sections are not to be defined as 'movements', as the use of a variation process tie all these together within one, unified, work. This continuity seeks to create an overall architectural shape of rising intensity, achieved through increasing range, dynamic, and virtuosity, as well as density of orchestration. There are underlying references to traditional Western concerto form, but Lindberg has once again taken these to the 'extreme': rather than the typical, three part

[94] Howell, Tim. *After Sibelius* (Aldershot: Ashgate Publishing, 2006), 256-7.
[95] Ibid.
[96] Lindberg and Cody "Magnus Lindberg in Conversation," 33.

fast/slow/fast structure, he has exploited 19 different tempi, and 18 different metres, across the five-part concerto. Synthesis is, once again, created through opposing features - here between traditional and more contemporary forms. Formally, there is a contrast between the block-like arrangement of the work, which is not dissimilar to techniques employed by Stravinsky, and something akin to Schoenberg's idea of developing variation.

In conversation with Joshua Cody in 2000, shortly before the premiere of the Clarinet Concerto, Lindberg said this:

> 'Of course, we refer to Stravinsky as the composer who constantly changed himself, but I would say he never changed: he was Stravinsky from the very first piece up to the very end. It comes down to the consistency of method, and Stravinsky happened to have a fantastic one, which enabled him to feed his creativity with the material at hand, without losing his own creative personality.' [97]

Stravinsky seems to have been a particular influence for much of Lindberg's work: he has made reference to him on multiple occasions, both during interviews, and within his music. This fondness is not only apparent in Lindberg's praise, but also in his earlier compositional career, with the composer admitting in 1993 'I have always had the score of *The Rite of Spring* near my work table'.[98] Following on from this, he went on to praise both Stravinsky's technique, and 'sensation of movement'.[99]

> 'Les *Noces* is a very special work, by the way of using wild material within a refined technique. What interested me was the clear thematic design that emerges: the themes or motives of Les *Noces* are worked not in a linear sense, but in order to create a kind of *gravitation*. From a certain point of view, one could almost say that I am, in my own

[97] Lindberg and Cody "Magnus Lindberg in Conversation," 33.
[98] Ibid, 48.
[99] Ibid.

> way, a development of Stravinsky's work. I was initially very attracted by this wild style. But I now have equal admiration for the so-called neoclassical plays, which are often misunderstood. Their lightness, their *pace,* are very stimulating: Stravinsky has really created a sensation of movement that contrasts with the frozen harmonies of many contemporary works.'[100]

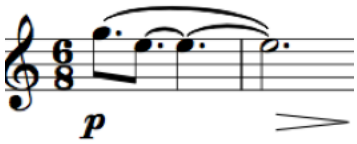
Of course, Stravinsky's consistent and unique use of continuity through discontinuity created much of the movement within his works, and it may be this technique to which Lindberg is referring, and therefore relying on some form of cellular, or block like, formal arrangement within the orchestral blocks in the Clarinet Concerto.

Tom Service also stated that 'The concerto sounds more like what happens when Gershwin meets Sibelius and Stravinsky…'[101] The Gershwin reference is linked to melody, but Sibelius and Stravinsky seem to have influenced Lindberg's formal procedures. There is an apparent opposition between continuity and discontinuity in Lindberg's Clarinet Concerto: the music *sounds* incredibly continuous throughout, although, if one is to examine the underlying orchestral accompaniment, the composition appears more discontinuous. The music incorporates two forms, with the soloist's line often using developing variation, with an economy and continuity of material akin to Sibelius, whereas the orchestra follows a more Stravinskian method of cellular construction to create calculated discontinuity. This results in continuous discontinuity, which, within this concerto, can be described as an amalgamation of several ideas:

[100] Lindberg and Cody "Magnus Lindberg in Conversation," 33.
[101] Tom Service, "A Guide to the Music of Magnus Lindberg," *The Guardian,* April 16, 2013, accessed Oct 5 2017, https://www.theguardian.com/music/musicblog/2013/apr/16/contemporary-music-guide-magnus-lindberg.

a. There is some element of a continuous stream of material, which is linear and makes use of smooth transitions – often in the foreground (i.e. the clarinet line)
b. There is another, more background, element which uses block-like discontinuous material, which are unrelated, and lack any type of transition between them (i.e. within the orchestra)
c. The use of these two elements simultaneously results in an effect whereby the music is continuous and discontinuous on two layers – switching between foreground and background use. This creates two dimensions of the aural experience which coexist in dialogue and competition – much like that soloist and orchestra themselves.[102]

Before examining the dialogue between continuity and discontinuity, it is worth defining the overall structure of the work, as suggested through changes in tempi, metre, and orchestration, as well as the melodic material played by the clarinet. The opening section sets up the themes explored during the rest of the work. The soloist plays almost continuously through this, presenting the initial set of variations, and to reaffirm the importance of the opening pentatonic cell, which highlights the interval of the minor third.



Excerpt 26

Bars 1 and 2, solo clarinet, Lindberg's Clarinet Concerto

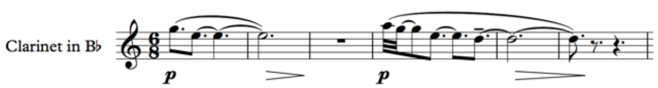
The recurrence of this is almost comical, yet its repetition ensures the listener is able to recognise the theme in many different settings. Figure 1, as seen below, shows the full structure of the work in the five main sections and their subsections, as defined through the materials of the concerto.

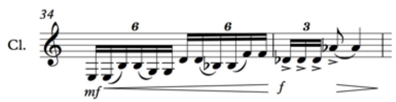
[102] I am grateful to Mark Hutchinson, who suggested this feature within his feedback on my work.

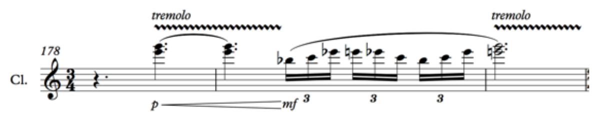
1	2	3	4	5
This sets up the initial conflicts, which are to be exploited later, as well as the idea of soloist against orchestra: formally as well as dramatically.[102]	There is more dialogue between the soloist and the orchestra than previously, and it ends with an orchestral interlude which is based around the accompaniment for the 'A' material.	A self-enclosed ternary form,[103] the two variations on the initial theme are separated by a 15-bar interlude, of sorts, in which the clarinet plays delicate *mp* lines, against sustained, rich orchestral chords, with minimal imitation from other instruments.	Sets up musical motifs which are yet to be exploited in the cadenza.[104] There is a large amount of material which recurs that alludes to previous important motifs, seemingly to remind the listener of the elements which are to be developed imminently during the cadenza.	The final section begins with a return of the material pre-cadenza, to act, again, as a transition, and as to not disrupt the continuity of the clarinettist.

1								2								3			4						5		
A	B	A'	B'	C (A/B)	D	A''	E	F	G	A''	F'	C' (B''/A''')	A'''	H	A''''	A	I	A	B'''	F''	C (A/B)	A	F	G	G	C (A/B)	A
1-31	32-45	46-62	63-81	82-104	105-127	126-135	136-171	172-183	184-214	215-230	231-268	269-312	313-329	330-344	345-375	376-394	395-410	411-423	424-434	435-471	471-487	488-499	500-525	526-557	558-593	594-647	648-665

A	One of the most prominent melodies in the concerto – the pentatonic, minor third motif which opens the piece.
B	Disjunct motif with each note played twice.
C	Melodies created which use elements of both the A and B ideas
F	Tremolo motif
G	Rapid demisemiquaver idea, which moves quickly through differing tonalities, dynamics, and ranges.







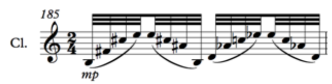


Figure 4: Lindberg's Clarinet Concerto, structural overview

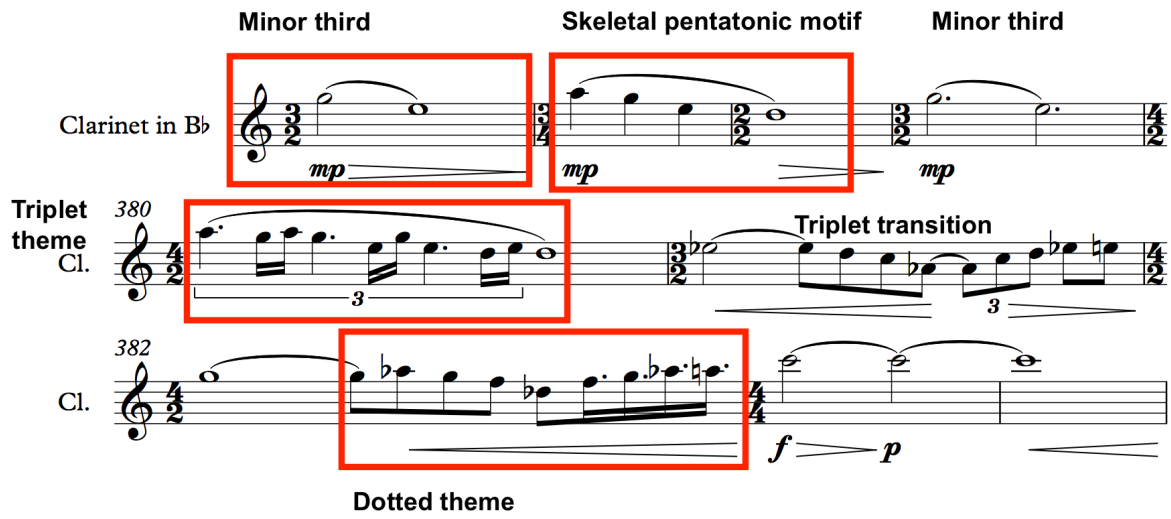
103 Howell, *After Sibelius*, 257.
104 Ibid.
105 Ibid.

The continual nature of the solo line, pitted against a more block-like approach to the orchestral writing parallels that of the concerto as a whole.[106]

The second section sounds somewhat more discontinuous than the first, due to the more apparent opposition between clarinet and orchestra. This segment is the longest, both in terms of the number of bars and the time taken - much like the development of the first movement of a classical concerto, as Howell shows through his analysis in *After Sibelius*.[107] Throughout this, there is rising intensity, which forms through the addition of instruments to the orchestral texture – the music begins with the soloist and brass, yet closes with a full orchestra, at the dynamic ***fff*** at bar 370 (although there is a rapid diminuendo, which acts as a transition into the third part).

The third section resembles the second, or slower, middle movement of a concerto.[108] Here, the melodies are either direct quotations from the initial statement, or blatantly derived from these – which is the clearest use of Brahms's developing variation. These can be seen as the following:[109]

[106] This block-like construction is discussed further in the chapter 'The Second Dimension: Cellular Construction'.
[107] Howell, *After Sibelius,* 257.
[108] Ibid.
[109] The use of these in the opening 20 bars is shown in a score excerpt on page 19.



Excerpt 27: Third section of Lindberg's Clarinet Concerto

Gone is the rapidly building orchestral texture, with Lindberg seemingly favouring 'functional harmony… within an atonal world' as the focus,[110] which will be discussed later. To use this typical second movement structure, within the concerto, is cunning: Lindberg was able to create opposition between classical and modern formal ideas, whilst masking these to the listener – an idea Martin Suckling is familiar with, suggesting that the 'tried and tested' method of traditional structure is often hidden within newer works.[111]

The fourth section mediates between the third and the final sections, and we can presume this is done, to contrast with the extreme lyricism and beauty of the third;[112] after all, Lindberg did state that 'equilibrium' should always be strived for.[113] After such an outpouring of emotion, it seems relatively safe to assume that some form of opposition is needed to keep structural integrity in the music, and the composer achieves this by changing the orchestration (to something reminiscent of Stravinsky's *Symphonies of Wind Instruments)*[114] and soloist material, to 'an expansive lyricism [which] becomes 'more dynamic and edgy'.[115] As the

[110] Lindberg and Cody "Magnus Lindberg in Conversation," 38.
[111] Martin Suckling, email correspondence with the author, November 14th, 2018.
[112] In *After Sibelius,* Howell aptly describes this as a 'counterbalance'. Howell, *After Sibelius,* 257.
[113] Lindberg and Cody "Magnus Lindberg in Conversation," 34.
[114] This is particularly prevalent between bar 516 and 526: there is something about the interaction between oboe, two clarinets, and the soloist, encapsulated in a block-like setting, with a rhythmic drive, that is endemically 'Stravinskian'.
[115] Howell, *After Sibelius,* 256.

(unwritten, and improvised) cadenza follows, it also seems logical that this virtuosic passage is needed to keep the continuous flow of the soloist: to succeed section 3 with a cadenza would create an abrupt change - which Lindberg has worked so hard to avoid in the previous twenty minutes of music. Instead, through careful use of transitionary and continuous material, a linear solo line prevails to smoothly take the listener into the highly virtuosic cadenza. Although this is improvised, with the work written for, and with, Kriikku, one would expect that he and Lindberg would have had many a conversation on the direction the cadenza should take. Therefore, it is likely that the material used in section 4 was deliberately linked to the techniques and phrases to be used, such as glissandi (overtone, fingered, and teeth on the reed), contrasting ranges, virtuosic and chromatic phrases, trills, and of course - the minor third!

However, after this, there is a recapitulation, where the initial opening material is repeated, albeit as a grander statement. The clarinet is an octave higher, and plays *fortissimo* lines over the full orchestra. This repeated material feels as if it reaches its climax during this closing statement, due, in part, to the rich orchestration, as well as the dynamic and range of the soloist. As well as this, there are times where the speed of melodic material is very fast, and allows the clarinettist to act as a true soloist one last time. There is harmonic as well as melodic resolution, with the work ending with the orchestra playing a confident C major chord – a key which has been alluded to (but never functionally used) during the work. Section five mainly exists to provide some sense of return, as well as a worthwhile ending, as it revisits and resolves previous ideas. This, in itself, may also be taken as a comment on classical concerto finales, with the material clearly acting as a recapitulation to any listener, due to the importance of the recurrent pentatonic theme.

The First Dimension: Continuity Through Dialogue

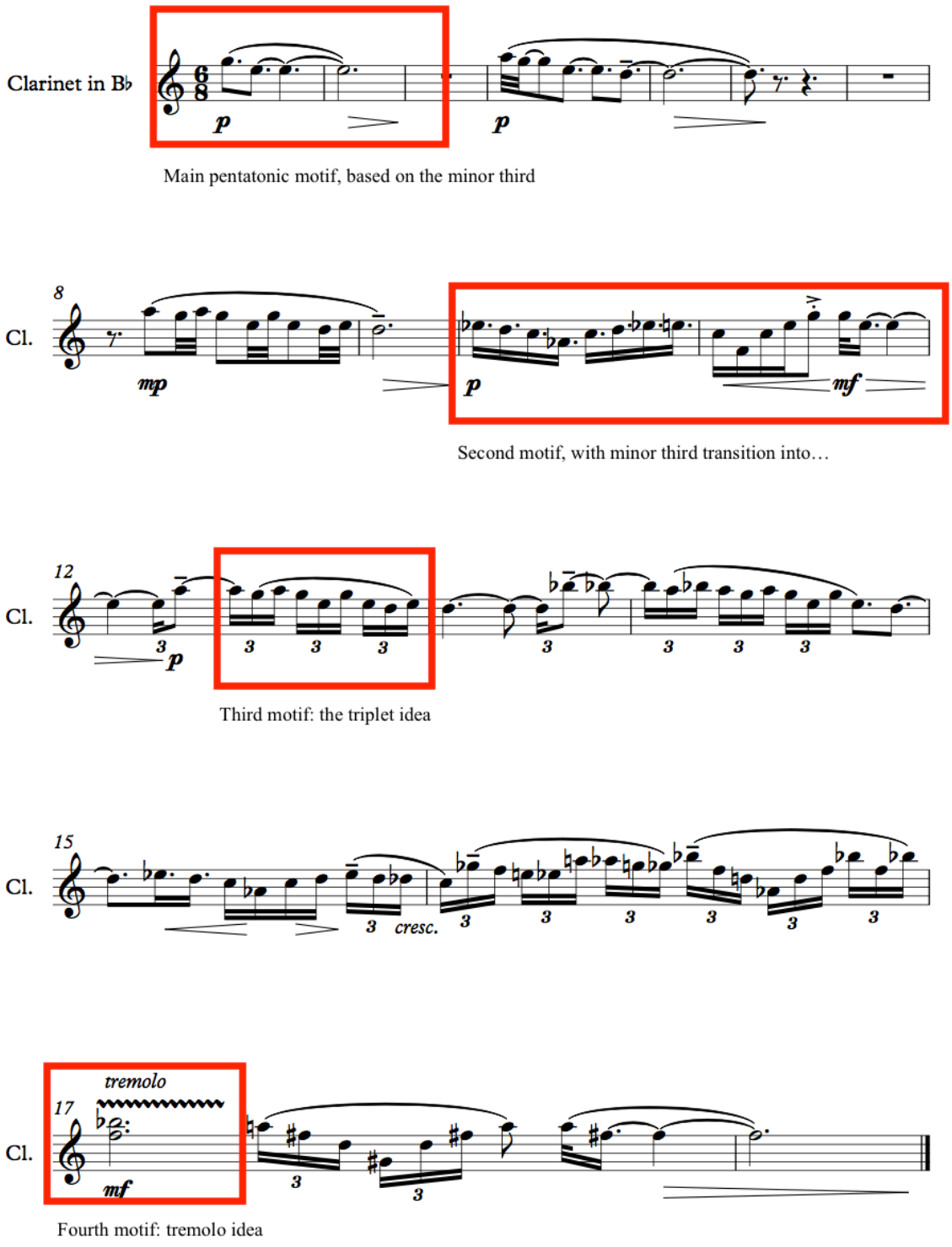
During Lindberg's Clarinet Concerto, it can be suggested that there are two dimensions to the music, with each contributing to listener's perceptions of form and structure. The first dimension, as it were, is the use of a continuous clarinet line, which blurs formal subdivisions through the almost constant stream of material. The orchestral writing is more block-like, and the use of the solo line in the foreground helps to mask this.

The music progresses through repetition and variation, similar to Schoenberg's idea of developing variation, as discussed earlier, which can take place in the solo clarinet line due to a faster, or greater, speed of melodic material, elongation of phrases, and change in range. Orchestrally, pitch, harmony (whether this would be through difference, resolution, or speed of harmonic change), orchestration, and imitation, vary to suggest progress. There must be some discussion of this use of variation within the clarinet line, to ascertain how continuous the music is, in relation to the orchestral 'blocks', and how this contributes to form. The soloist presents themes, often in an incomplete state, with a basic rendition of the material, which is not fully realised until an exploration through variation has taken place. This is achieved in a way which is similar to the four fragments in *Jeux,* as earlier considered by Pasler. This appears on both a macroscopic and microscopic scale in Lindberg's concerto – for example, the opening theme, from bars 1- 20, sets up the variations which take place throughout the whole work, with the use of four separate ideas, which all reoccur throughout the piece. The main opening pentatonic theme, which emphasises the minor third, as seen in bars 1-6, is not heard in its final state until bar 648. The other three ideas are each repeated throughout the work, with development taking place, showing some element of Sibelius's economy of material – whereby much of the musical material can be derived from the opening gestures, but more prominently, the process of

developing variation. Kriikku himself noted that 'there are some similarities to Sibelius. Operating with small motifs which organically grow into bigger things.'[116]

[116] Dunn and Kriikku, *Upbeat,* 27th October 2015.

Opening 20 bars of Magnus Lindberg's Clarinet Concerto



Excerpt 28: Motifs in Lindberg's Clarinet Concerto opening

The reflections between microscopic and macroscopic levels in the concerto are noteworthy: there is often some form of mimicry within smaller subsections which is reflected in the work as a whole. To take this opening section, for example – there are four 'motifs', yet the line is presented in a continuous manner, with transitional ideas preceding, or succeeding, each cell, which lead us through a 'gradual mutation' of the original – to create themes and longer melodies.[117] For example, the 'triplet motif', seen in bar 12, is based on the pitches from bars 8 to 9, which itself is an extension of the cell presented in the opening bar. Each of these ideas are later extended, at some point or another in the work, and each reaches a final 'realisation', after several themes are explored – often interspersed with transitional melodic material. This final realisation will not necessarily be the last use of this melodic idea, but rather, the moment at which the developmental variation has been building towards, where the theme is in its most complete state. The table below shows the whereabouts of the main developing variation and final realisation of the themes initially presented in the first 20 bars.

Table 5: Use of themes in Lindberg's Clarinet Concerto

Motif	Main Development	Final Realisation
1 (pentatonic motif)	411-423 (although this theme is continuously developed throughout the concerto)	648-656
2 (dotted motif)	Used as an orchestral cell, which frequents the work. Notice it at bars 407-410.	657-658
3 (triplet motif)	208-215	269-312
4 (tremolo motif)	250-266	447-467

[117] I am grateful to Mark Hutchinson for suggesting this during feedback on my work.

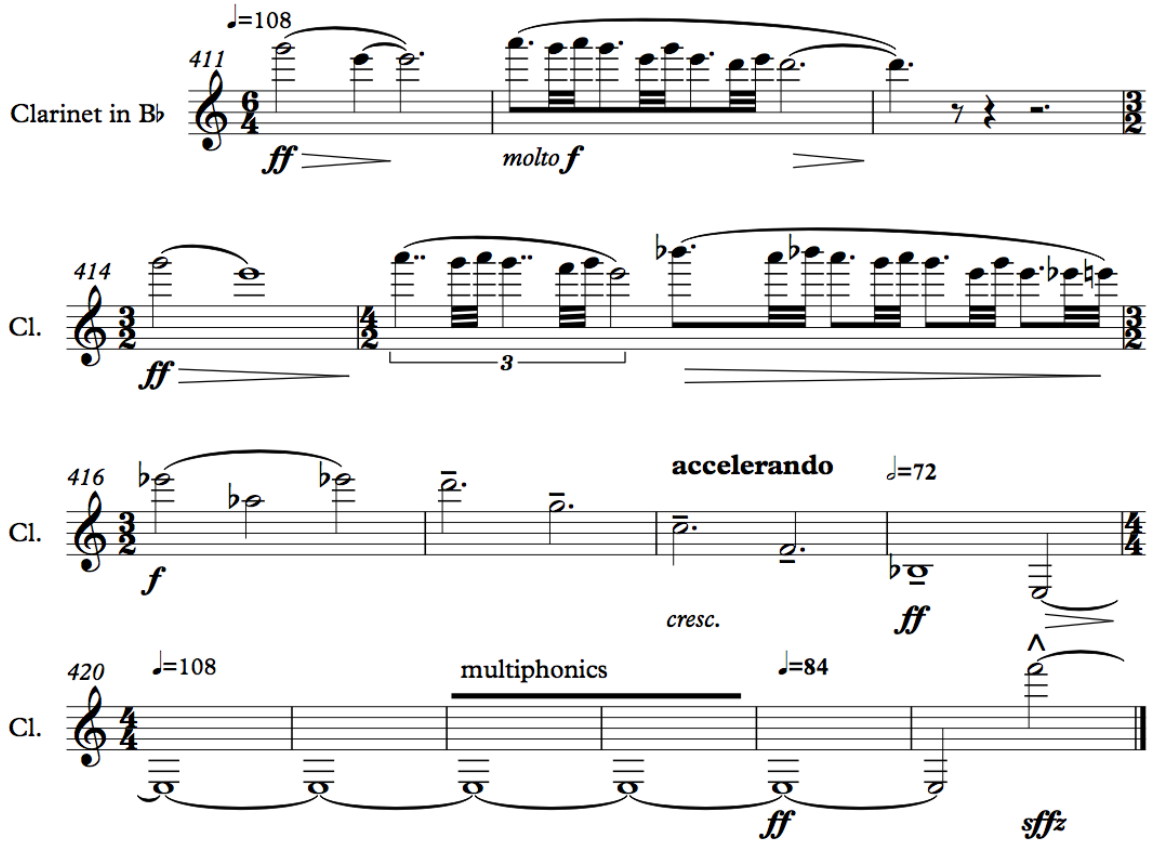
The motif which is the most useful to analyse the developing variation is the opening pentatonic idea, which places emphasis on the interval of a minor third, and opens the work. This is as a large amount of the melodic material through the concerto is derived from, or quotes, this cell. As can be noted, this undergoes variation almost immediately after it is first heard – it is developed through this, both in terms of its length, number of notes, and pitch centre. However, throughout the rest of the concerto, this integral, and for Lindberg, extreme melody, undergoes a large amount of manipulation. It is fragmented, and the minor third interval is showcased as a stand-alone cell – it is often isolated and left as between two differing melodies or themes, to serve as a constant reminder of the opening. However, there is a full exploration of the full melody four times in the concerto: once to open (mm. 1-19), two within the concerto (mm. 411- 424 and 488 and 499), and one to close the work (mm. 648-656), which will all be discussed.

It is wise at this point to return to Lindberg's interpretation of variation he learned from Heininen:

'the idea of doing very different things in the same way.'[118]

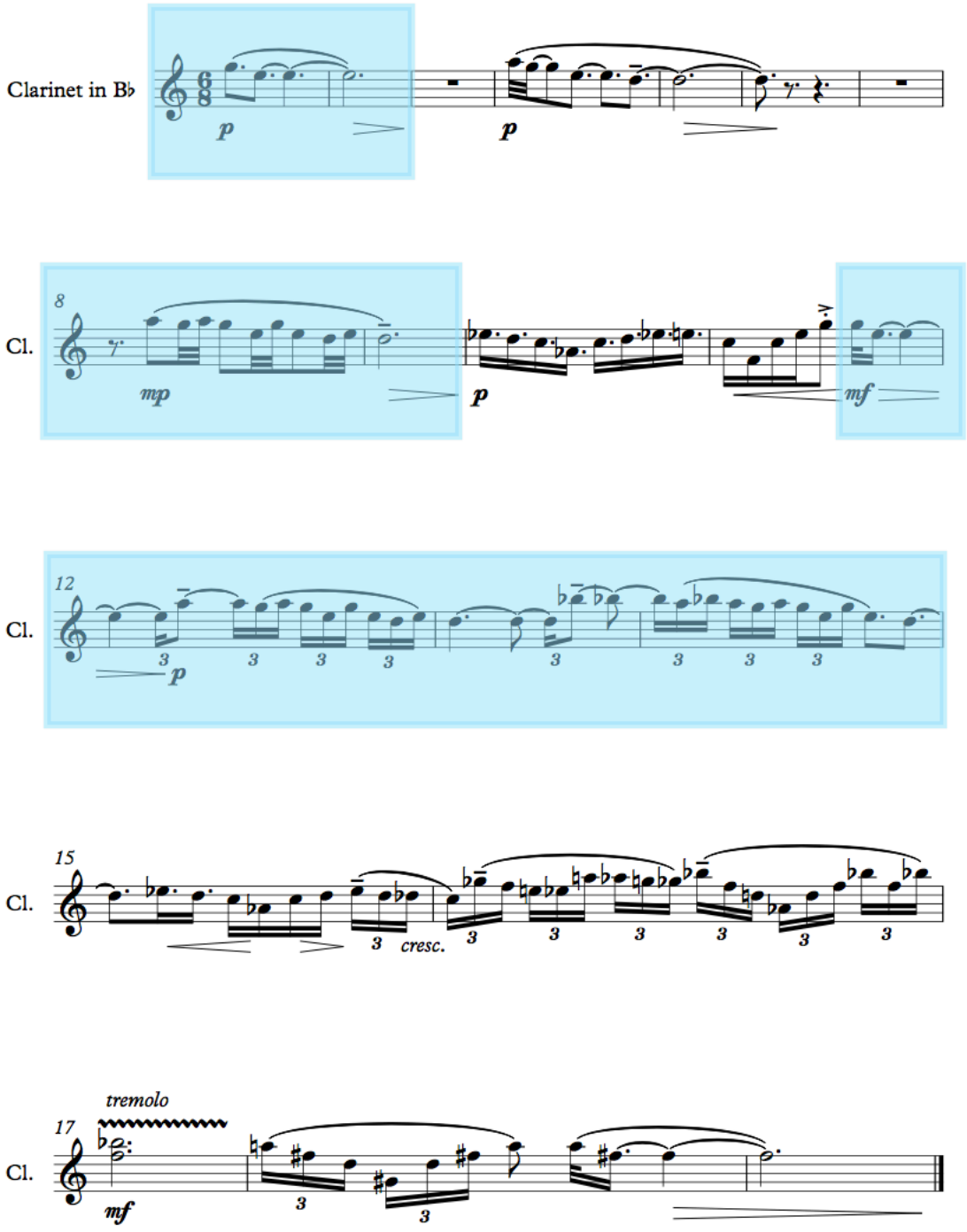
There is variation between these four uses of the melody, and it seems appropriate to look at the 'different things' Lindberg may have been trying to achieve during these explorations. We have already ascertained that the importance of the opening is the introduction to the main motives, as well as some suggestion of the use of continuous discontinuity. The second full variation on the main theme occurs between bars 411 and 424, to close the end of the third main section and create a transition into the fourth. The clarinet melody during this is shown below.

[118] Lindberg and Cody "Magnus Lindberg in Conversation," 33.



Excerpt 29: Melody from bar 411 of Lindberg's Clarinet Concerto

As can be seen, this exploration is made up of parts of the main melody, as well as transitionary material, to, in this case, move into a new centre and range. The melody begins on an F, similar to the opening of the work, yet this time it is an octave higher. The music is somewhat condensed, too, with only nine bars of melody, followed by transitionary material, and with the melody now presented in a shorter, fragmented version of its original exploration in bars 1-20.



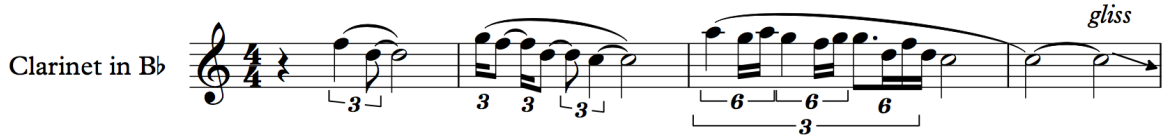
Excerpt 30

Opening of Lindberg's Clarinet Concerto, solo clarinet

One difference between the two excerpts shown in these examples that there is a pitch centre discrepancy by the end of each of the phrases: despite both beginning on F, the opening phrase eventually moves to E, with the line which closes section 3 resounding confidently on a D. Both

variations also incorporate the use of D flat within them, and akin to Sibelius's economic use of melodic material, this pitch centre change is derived from the opening melody: the dotted theme in bar 10 uses the same pitches as the descending minim phrase from bars 416-419 (with the exception of an A flat not being used in the former). Despite this not sounding *strictly* melodic, it can be suggested that it is a variation on the dotted theme, and does therefore not only serve the purpose of a pitch centre change, but also as melodic variation. This leaves us with our original question: what is *different* during this variation? The latter acts as both a closing statement to its section, as well as a transition into the next. The listener is reminded of the initial theme, almost again to signpost something formal, and command full attention before section four – the fact that the melody is an octave higher reinforces its climactic importance. As the melody begins, one expects to reach some type of resolution, but before too long, there is a rapid timbral change, with the clarinet's held D no longer accompanied by the brass and percussion, but by the full orchestra, and the soloist jumps just under three octaves to a ***sffz***, marcato E flat. Perhaps this shows the *context* of the variation is the main difference – not the *content*.

The third time this theme is explored is between bars 488 and 499, with the clarinet playing the exact same pitches as the opening melody, but this time having undergone some rhythmic and metric modulation.



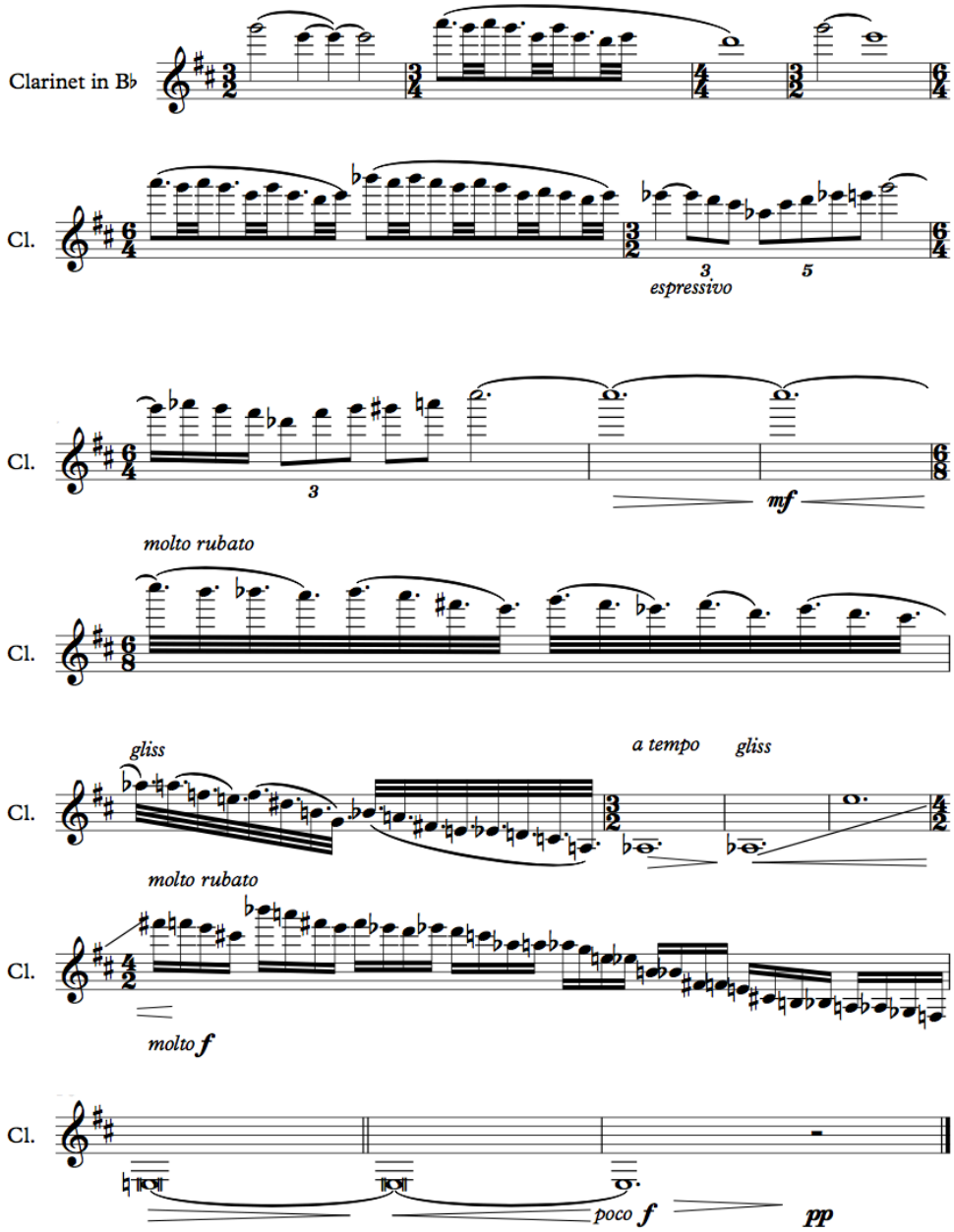
Excerpt 31

Bars 488 – 491of Lindberg's Clarinet Concerto

After the clarinet plays the first phrase, the orchestra takes over, with solo lines from the oboe and flute continuing the variation. In this instance, the clarinet begins the melody to begin a new formal section, and the orchestra continues the variation as a transition in itself, before the

clarinet begins a fragmented version of the tremolo motif. The placement of this in the structure of the concerto is an important one: the musical material presented from this section onwards is all alluded to or referenced in the cadenza. Therefore, this use of the pentatonic theme here begins as a formal one, but also serves as a foundation for the cadenza itself.

The last variation to discuss is the final use of the opening gesture, which also closes the concerto. This takes places from bars 648- 656, as shown below.



Excerpt 32

Bars 648 – 656 of Lindberg's Clarinet Concerto

This is the longest exploration of this theme during the whole work, and it acts as a recapitulation, of sorts. This somewhat grandiose statement has been called 'comical', and taken 'almost to the point of parody'[119]. Jay Nordlinger of *The New Criterion* wrote of the Clarinet Concerto: 'It's hard to tell whether the composer is mocking or in earnest',[120] and this recapitulation seems to be a prime example of that. Nevertheless, it serves a purpose: to close the concerto in a rather heroic way, and *finally* reach some form of resolution. There is also a harmonic point to this recapitulation, with the clarinet's held D against the bright C major chord to remind us that the clarinet and orchestra are still separate entities.

It can be seen that compositional features within the initial opening 20 bars set up several themes for the rest of the concerto:

1. Melody – all the cells which make up the opening are repeated, elongated, manipulated, and reach some form of 'final state'
2. Formally – the clarinet plays through several different themes and ideas, yet the music remains continuous through the use of transitionary material and exploration of melodic ideas.

However, yet to discuss is how fragmentation of themes, as seen in the opening, becomes an important formal technique for Lindberg's orchestral writing.

[119] Howell, *After Sibelius,* 257.
[120] Nordlinger, "New York chronicle".

The Second Dimension: Cellular Construction

The contrast between soloist and orchestra is something one would ordinarily expect during a concerto. However, Lindberg's Clarinet Concerto creates opposition between the soloist and orchestra through the use of block-like orchestral writing, rather than focusing on variation, like the clarinet does. If we use the fourth section as an example, the two formal procedures Lindberg has used can be demonstrated, and it can be suggested how both variation and block-like forms can be used simultaneously to create continuous discontinuity.

Table 6: Section 4 of Lindberg's Clarinet Concerto, formal overview

Section 4					
B"'	F"	C (B/A)	A	F	G'
424- 434	435- 471	472- 487	488- 499	500- 525	526- 557
Fortissimo transitionary ideas, based on the disjunct motif, are played by the solo clarinet to begin working towards the cadenza.	The clarinet plays phrases which are developed from the tremolo motif, with sparse orchestral accompaniment.	Solo line plays through disjunct phrases, which are closely imitated bt members of the string section.	A transposition of the opening theme is played, first by the solo clarinet, and then by the oboe and flute.	Another clarinet idea based on the tremolo motif, with sparse orchestral accompaniment.	A rapid speed of material transports the listener into the racing, fortissimo, cadenza.

The diagram above shows the overall form of this section – that being the arrangement that may be suggested to the listener through pitch, harmonic, tempi, or melodic change. However, if we are to break down the orchestral accompaniment into its blocks, and the solo line into variations and transitional material, the following diagram can be created.

Solo and Orchestral Formal Structure in Section 4 (424 – 557) of Magnus Lindberg's Clarinet Concerto

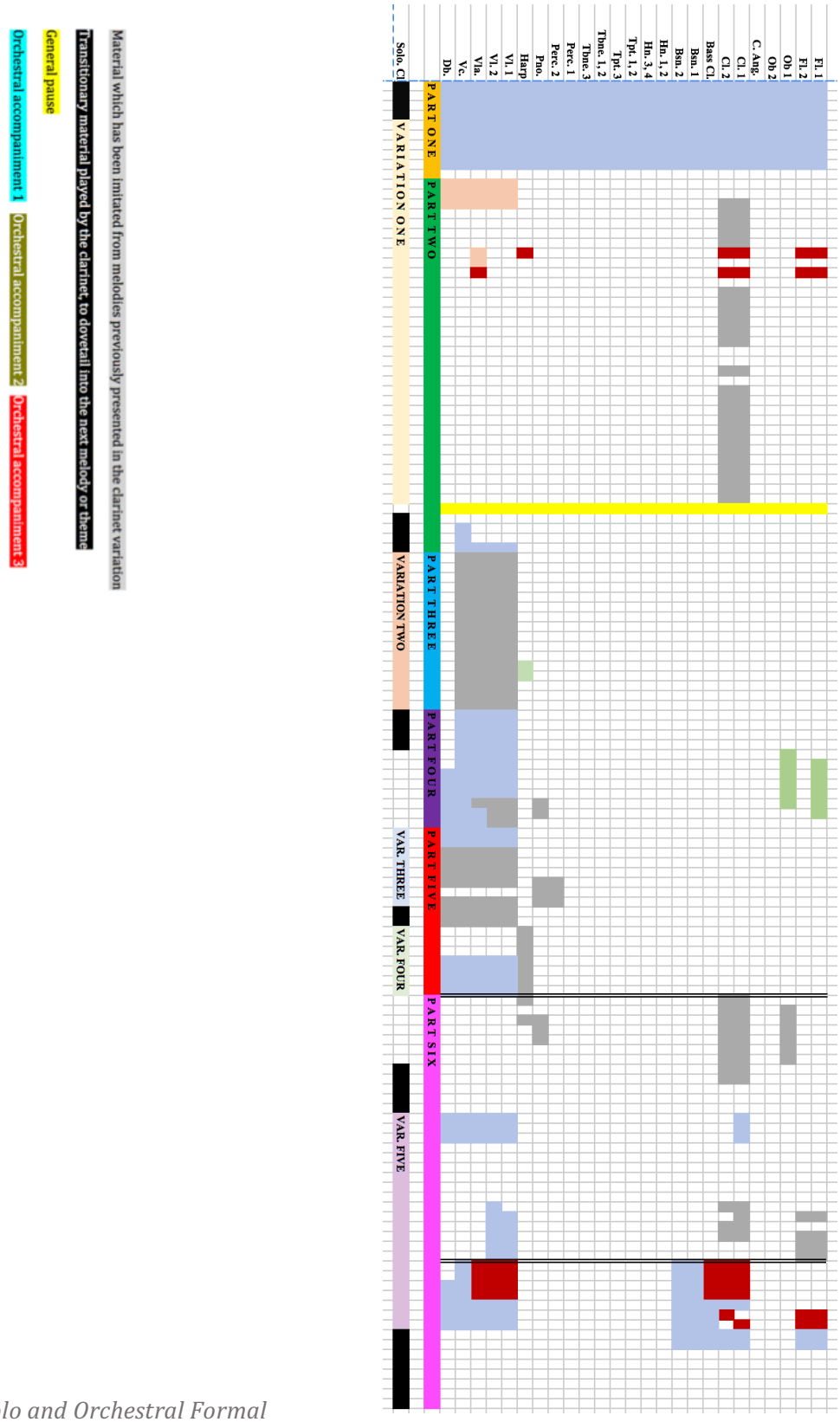


Figure 5: Solo and Orchestral Formal Structure in Section 4 (424 – 557) of Magnus Lindberg's Clarinet Concerto

This diagram indicates that five different 'variations' in the solo line are explored during this section, with each preceded and succeeded by some amount of transitional material, to ensure the music continuously and seamlessly blends one variation into the next, and a certain amount of dovetailing occurs. For example: part two begins at bar 435, but the solo clarinet actually begins the variation which is explored seven bars earlier, from bar 428. The orchestral writing, however, often comprises recurrent material, which may indicate the use of cellular composition.

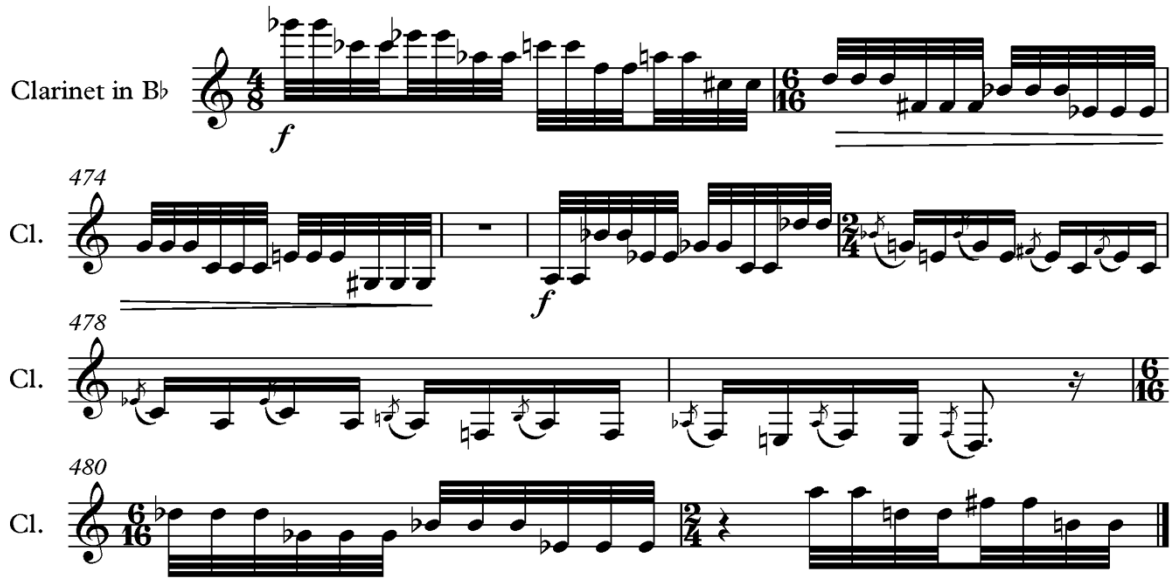
This technique was favoured by composers such as Stravinsky and Boulez, who crafted entire works purely out of particular cells. When Stravinsky began his 'Russian' period in 1907, he adopted a trait which would frequently appear in his compositions for the rest of his life; discontinuity. This constituted of a recurring theme, with a specific rhythm, harmony, or melody, which was often related to a particular tempo or time signature, which often underwent almost no development, in the classical sense, other than modulation. Stravinsky used orchestral blocks throughout his compositional career, but the importance of these varied throughout his various stylistic periods. Created initially through harmonic stasis, this quirk became a fundamental feature of his works. Long passages of music which contain only one or two chords do not allow for any sense of traditional harmonic development, with any kind of move away from the prolonged harmony sounding abrupt, creating 'blocks'. *Agon* (1953) was composed a year before his final period – the serial period – and in this, he utilised complex and convincing development of motifs, which took emphasis away from the use of blocks, forcing the listener to focus on more melodic material. In Lindberg's concerto, too, the clarinet phrases do somewhat distract the listener from the underlying block-like treatment of the orchestra.[121]

During this section of Lindberg's concerto, the first orchestral accompaniment consists purely of held chords, of which often have little melodic or rhythmic interest.[122] However, the

[121] Sapphire Littler, "Stravinsky in Transition: Listening to the Discontinuous," University of York, 2015-16.
[122] However, the harmonies are certainly of interest – more on that later.

most useful way to discuss the use of cells in the orchestral writing is to examine how themes from the clarinet line are imitated in the orchestra – shown as the grey blocks on the diagram. The difference between the solo and orchestral writing is simple – where the clarinet is allowed to explore and use variation with its phrases, the orchestral music will only play melodic fragments, which are repeated with little or no development. For example, the music from bars 472-499 is highly imitative, and this uses mainly material which has been derived from the 'A' material in the concerto. Where the clarinet line uses processes which involve developing variation, the orchestra writing could be considered to be more imitative. The clarinet is able to introduce new themes, as well as present them in their 'final realisation', whereas the orchestra relies on mimicking small melodic fragments which were originally played by the clarinet. Members of the orchestra play little part in developing the themes – and although they are occasionally varied, there is no progressive and gradual mutation towards a newly developed melody.

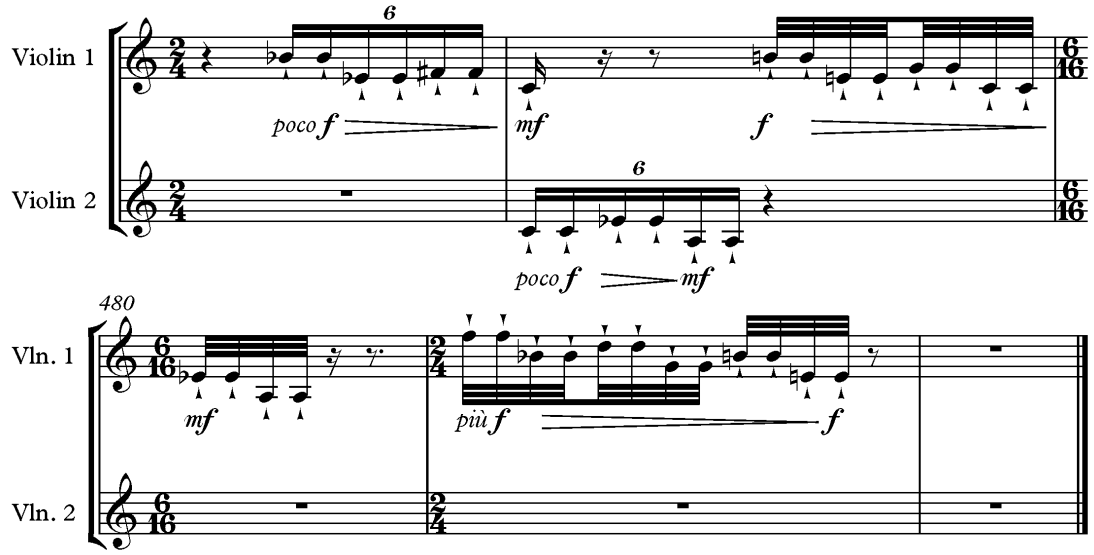
The first theme which is subject to fragmentation during this section is the one which the clarinet opens with, seen between bars 472-74, which is repeated by a solo violinist. This theme was initially presented by the soloist between bars 34 and 45. This melody is based on the diminished seventh, with the upper notes of the bar outlining this chord – for example seen in bar 472 as G flat, E flat, C, A.



Excerpt 33

Bars 472 – 481of Lindberg's Clarinet Concerto

Between bars 472 and 479, there is developing variation in the solo line, with the initial three bar phrase not only repeated and extended, but elaborated on with the use of acciaccaturas. The orchestral use of this melody, however, only uses short fragments of the initial theme, with each repetition always less than two crotchet beats long. The final two bars of the clarinet segment are fragments, designed to intertwine with the violin repetitions.



Excerpt 34

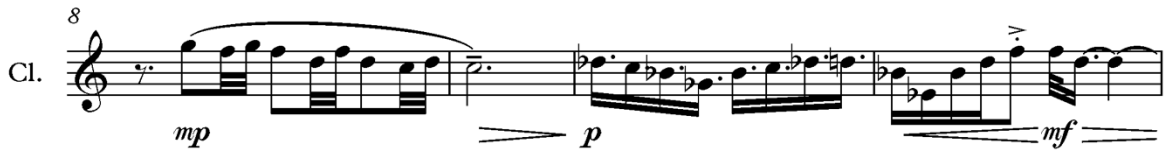
Bars 478 - 481of Lindberg's Clarinet Concerto

As can be seen, the fragmented version uses the same intervals, although the notes themselves are transposed to fit each harmony, and the rhythms altered to align with each time signature. Despite this, the implications of the diminished theme are not lost. The use of this compressed motif within the orchestral lines is not limited to the fourth section of the concerto, but it is used throughout. In fact, this cell is used on 32 occasions during the concerto, across 36 instruments, with it being used at least once in each of the main sections (however, the most prevalent use of this theme is in section one). The clarinet and orchestra, although competing for melodic material, are largely complementary in their opposing structures. And hence, the idea of the traditional concerto using both opposition and resolution simultaneously, is used in a structural way in Lindberg's Clarinet Concerto.

As the music goes on, there are further instances where the orchestra uses short excerpts of the clarinet variations within its accompaniment, reinforcing the idea of cellular construction. For example, the recurrence of the main pentatonic theme between bars 487 and 499. Once again, the clarinet presents the initial statement, although this time it is only four bars

long.[123] Immediately after this, the first oboe and flute, interchangeably play through short excerpts of this phrase for the following eight bars.

The dotted theme which is initially presented in the clarinet's opening twenty bars is also used as an orchestral cell throughout the work – the soloist rarely uses this melody, and when it does, it exists as transitionary material, to take the listener from one theme to another.



Excerpt 35

Bars 8 - 11 of solo clarinet line in Lindberg's Clarinet Concerto

There is not a point during this concerto that this theme is developed through a variation played by the clarinet – instead, the descending segment [0,1,3,7] is exploited as a transitionary interlude, in both the clarinet and orchestra.[124] The most prevalent use of this is during bars 407-410, where transpositions of the cell are repeated by the first violins, before the violas, second violins, and finally the winds, also begin this repetition to create a rich transition into the development of the main pentatonic motif at bar 411.

Through this analysis, it can be seen that the orchestra and solo clarinet use the same melodic material, but in different ways. Both explore extremes, but the clarinet makes use of extreme melody, and therefore creates development through thematic ideas using elongation and variation of phrases, or developing variation whereas the orchestra uses extremes of repetition, through cellular construction and fragmentation of important melodic ideas which were previously presented in the solo line.

[123] As discussed on pages 16-20, the main variations for this theme take place at bars 411-423, 488-499 and finally from 648-656.
[124] This is also used harmonically, with both the opening and closing chord using this set, as discussed on page 27.

IIb: Pure Fragments

Melodic Fragmentation in *Puro*

Formally, *Puro* takes place over one extended movement. It is extremely continuous after the initial introduction, with the music being more of an evolution, of sorts, due to the organically developing themes within larger melodies. Unity is also achieved through the clarinet's E (concert D) which is used as a pitch centre, with much of the harmonic planning derived from this. The work can be split into three main sections – the introduction; one large, main section; and the closing statements, seen in the following table. The splitting of the work into this is, without a doubt, a reference to traditional concerto form. The fact that these subdivisions are not reaffirmed as distinct movements shows us Tiensuu's desire to showcase the concerto in a more contemporary way. The sections are supported through the tempo markings, of which a graph is shown below. The middle section, at a tempo of crotchet = 132, is where most of the explorations on melody take place, and can be further subdivided into five parts.

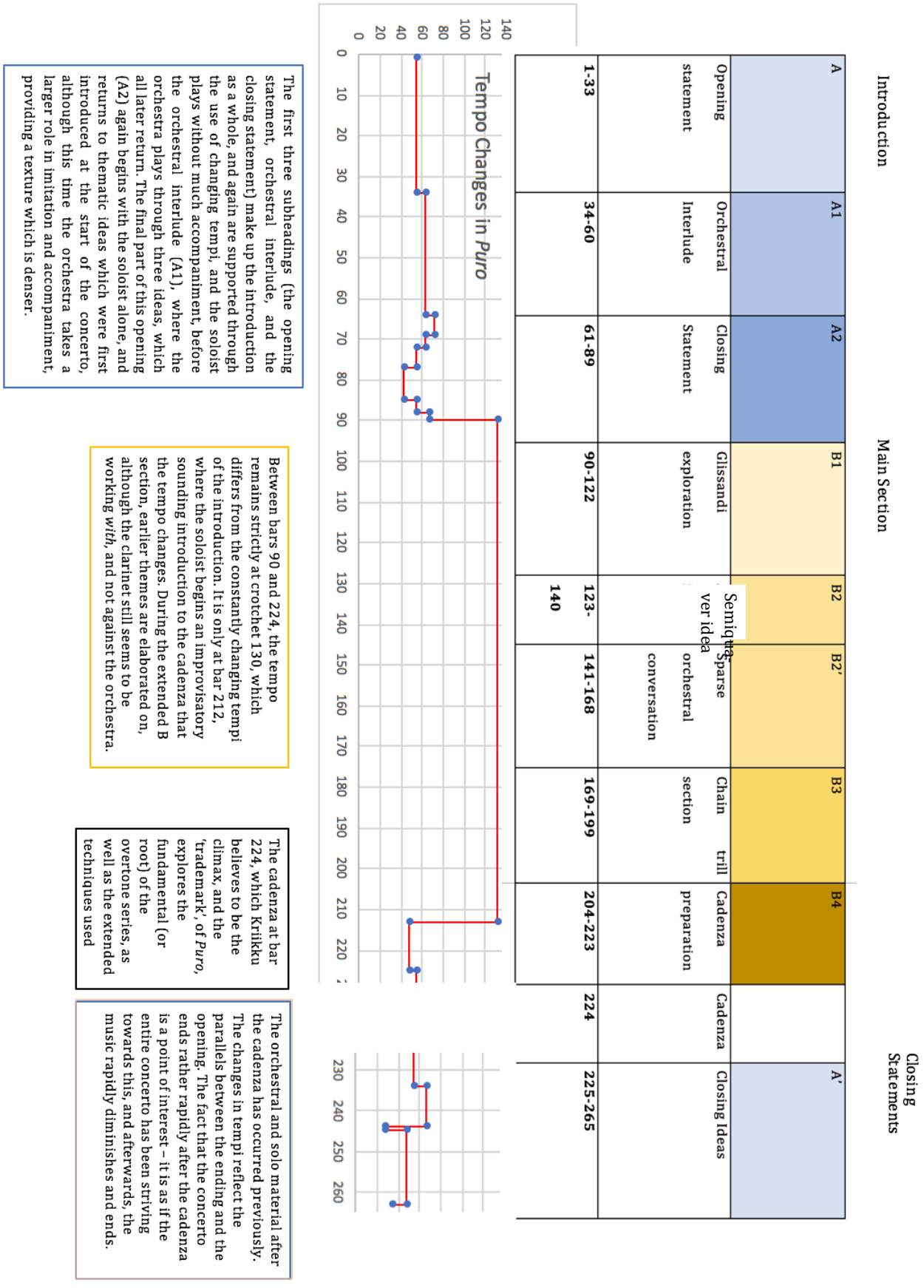


Figure 6: Puro Structural Overview

The B section is divided into subsections, and these can be described as the following:

Table 7: Puro Subsections

Bars	Section	Notes
90-122	B1	An exploration of the clarinet's higher register, with both the soloists and the orchestral music predominantly focusing on use of the glissando.
123-140	B2	A section where the clarinet gradually moves to the lower registers of the instrument, through semiquaver ideas.
141-168	B2'	Based on the material in B1, but this time without much accompaniment from the orchestra: the supporting instruments play short and simple (both technically and rhythmically) ideas in *tutti* which seem to 'answer' the clarinets phrases. The semiquaver lines in the solo part are interspersed with material upon which section B3 makes use of, ensuring the two differing ideas are seamlessly and continuously blended together.
169-199	B3	This part of the concerto is known as the 'chain trill'[125] section: the soloist plays un unbroken trill using the side keys on the clarinet – often only achievable by removing the right hand from the thumb rest and instrument completely – making this section difficult in a way one would not often expect. The orchestral role in this section is sparse, which leaves the clarinettist exposed.
204-223	B4	These final 20 bars are in preparation for the cadenza, with the solo clarinet only playing low concert D's, for the first time since the opening. This section was briefly discussed on page 6.

The timbral effects through this middle section, as a whole, are unexpected: at the beginning of this, the orchestral accompaniment is rich, but as we get ever closer to the cadenza, the number of instruments playing with the soloist dramatically reduce.

[125] The term 'chain trill' was used by Mikko Raasakka in his book *Exploring the Clarinet,* between pages 178 and 180.

The orchestration for the first subsection between 90 and 122 makes use of the winds, first violin, and lower strings – after this point, as shown by the red break, the second subsection begins. What can be immediately noticed using the below diagram is the alternation between different instruments: the lower strings alternate with the violin, and the clarinets often stop playing when the violin is. This is for a very specific reason: the clarinet is playing an extended melody during these bars based around the glissando, and a solo violin often imitates these phrases, or even plays with the soloist.

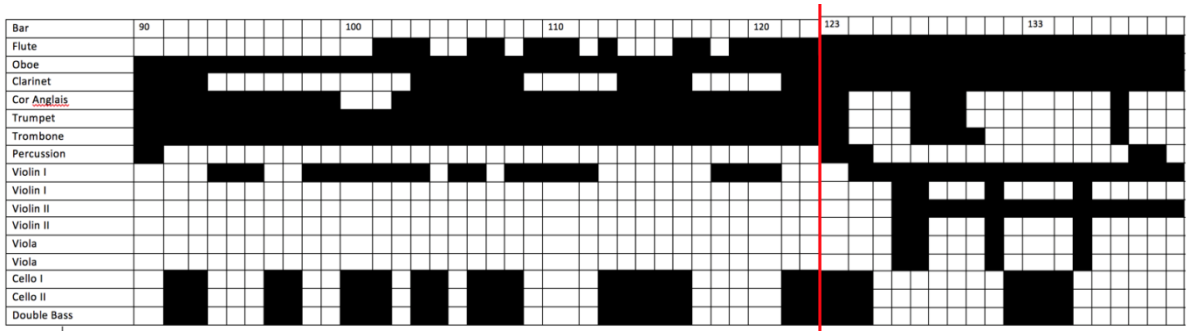
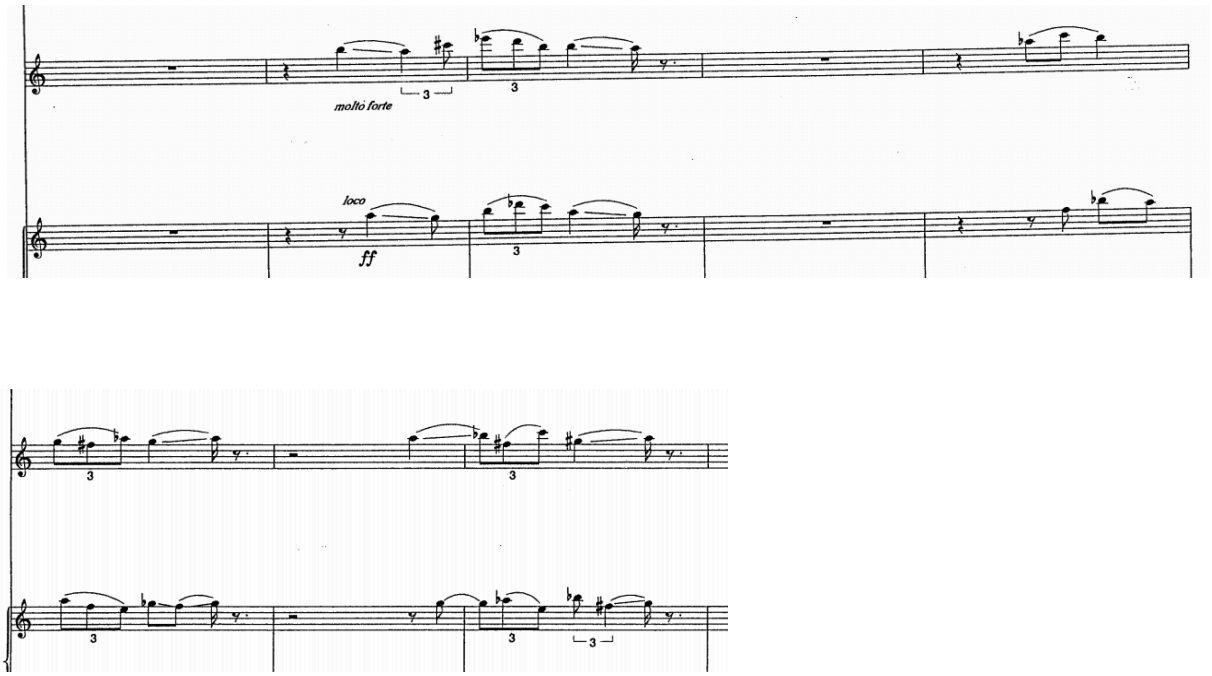


Figure 7: Orchestral Blocks in Puro, bars 90-140

In order for the themes to be heard clearly, the clarinets within the orchestra have stopped playing. At other times, the lower strings fill the gaps between the clarinet and violin phrases, using harmonics to create chords which encompass rather alienating harmonic sonorities.[126]

[126] These are discussed further on pages 120-123.



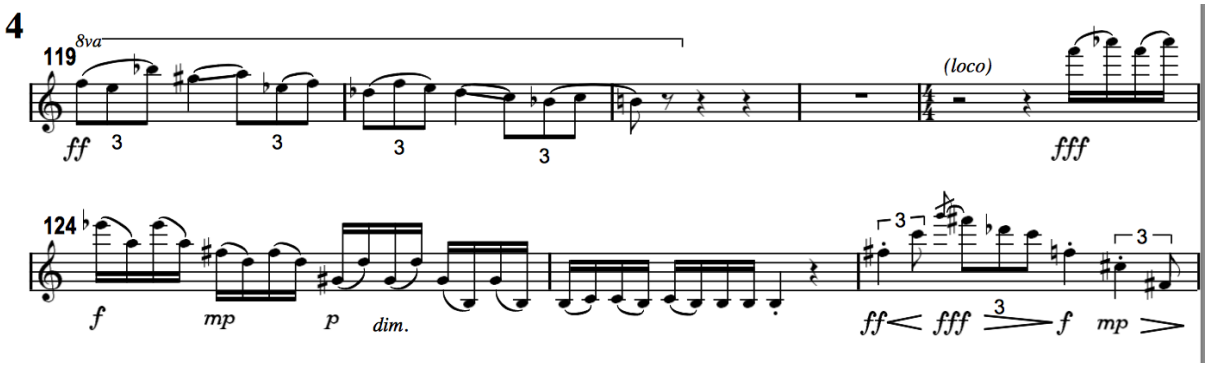
Excerpt 36: Bars 105 - 112, Solo Clarinet and Solo Violin

This example from bars 105-112 shows how closely the solo violin is imitating the clarinet phrases: here just a quaver out of time. This creates an interesting timbral and harmonic effect. As this melody uses the glissando as its identifying feature, the boundaries between semitones are already blurred. To add in a further instrument which closely copies these fragments enhances the effect further. This section still is based around the original overtone series, yet here the notes have been 'rounded' to their closest semitones.[127]

In section B2, between bars 141 and 168, the orchestra fills out more, and this is the timbrally most dense music within the entire piece. The upper strings join in, and there is a slight switch of roles within the wind section: the winds are constantly playing, whilst the lower begins to alternate with the strings. The subsection opens with the solo clarinet playing through themes which are mimicked by several other members of the orchestra.

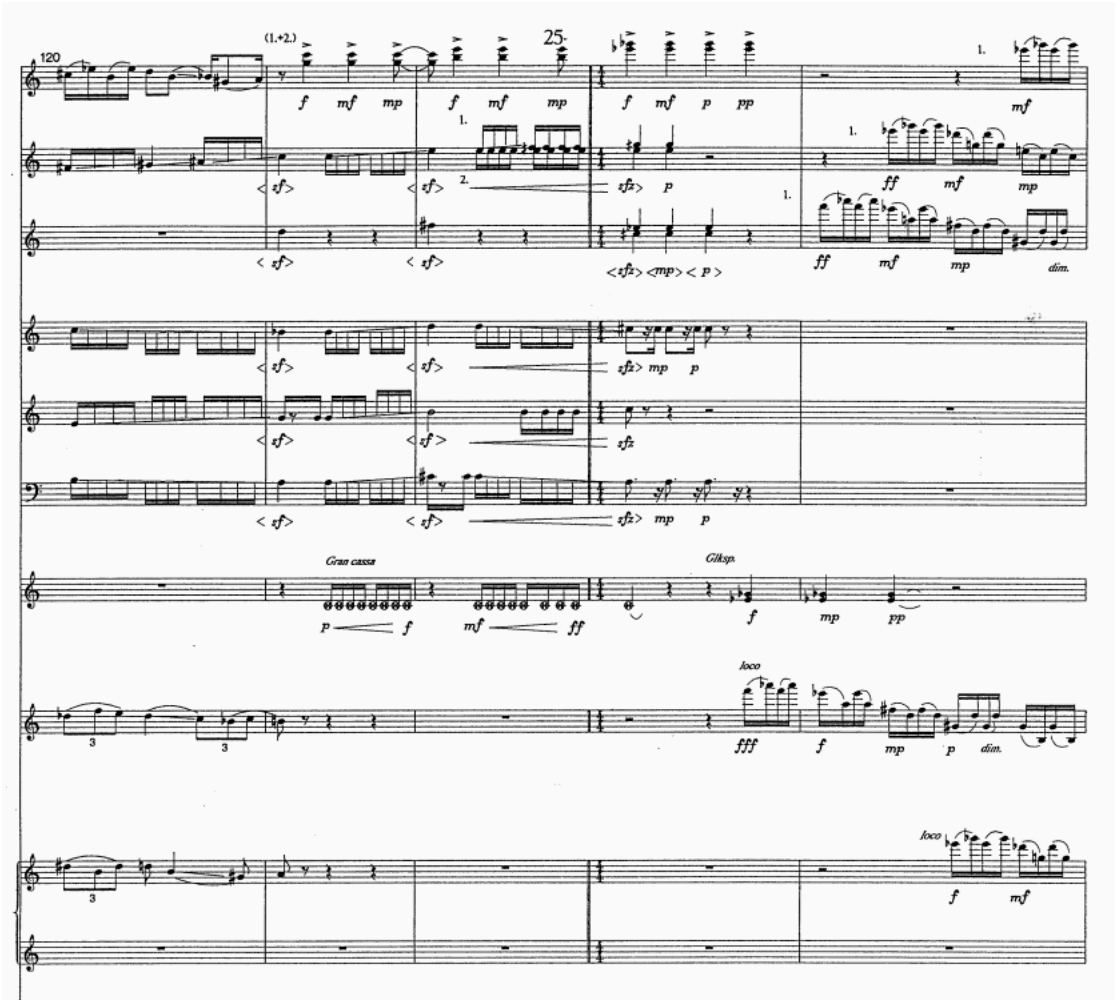
[127] Sallinen, Email correspondence with the author.
This was written about by Lauri Sallinen, a professional Finnish clarinettist, who was taught by Kari Kriikku at The Sibelius Academy, who wrote a paper on *Puro* during his Masters degree.
Sallinen, *Puro.*

Bars 119 - 126, Solo Clarinet



Excerpt 37: Solo Clarinet in Puro, bars 119-126

The phrase between bar 123 and 125 is imitated by soloists on the clarinet, oboe, first violin, flute, and second violin, in that order, with each starting one crotchet beat after one another. All but the flute and oboe complete their phrases, with these two instruments ending their imitation after beat six, assumedly to allow for the clarinet's subsequent phrase to be heard clearly – the timbral difference between the strings and solo clarinet may be the reason their phrases are completed.



Excerpt 38

Bars 120 – 124, showing the start of the imitative passage at 123. Flute, Oboe, Clarinet, Cor Angalis, Trumpet, Trombone, Percussion, Solo Clarinet, First Violins.

This imitation of the soloist continues until bar 140, where the process using a specific set of instruments make the texture dense and the harmony ambiguous. The orchestration in itself acts as a formal impulse, and heightens the oppositional qualities of the soloist and orchestra during this part of the piece, with each soloist seeming to compete for the melody. The lower wind and strings alternate with crotchet accompaniment, which creates non-functional chords – major thirds in the winds, and major sixths in the strings, which are dissonant against the unpitched glissandi played by the lower winds.

The cadenza at bar 224, utilises extended techniques used within the concerto – with Tiensuu perhaps using these techniques in the place of characteristically fast and difficult

phrases to suggest these are similar in complexity, as far as the performer is concerned. The importance of the cadenza is reaffirmed through the use of the clarinet's E, which has not been heard since the introduction, as well as having the densest use of extended techniques and exploring a large amount of melodic material.

The main section between 64 and 225 is almost bookended, with the orchestral and solo material after the cadenza having occurred previously. The orchestral repetition is strict, having undergone no change, however the clarinet phrases have been elaborated on. The changes in tempi, too, reflect the parallels between the ending and the opening. The fact that the concerto ends rather rapidly after the cadenza is a point of interest – it is as if the entire concerto has been striving towards this, and afterwards, the music rapidly diminishes and ends.

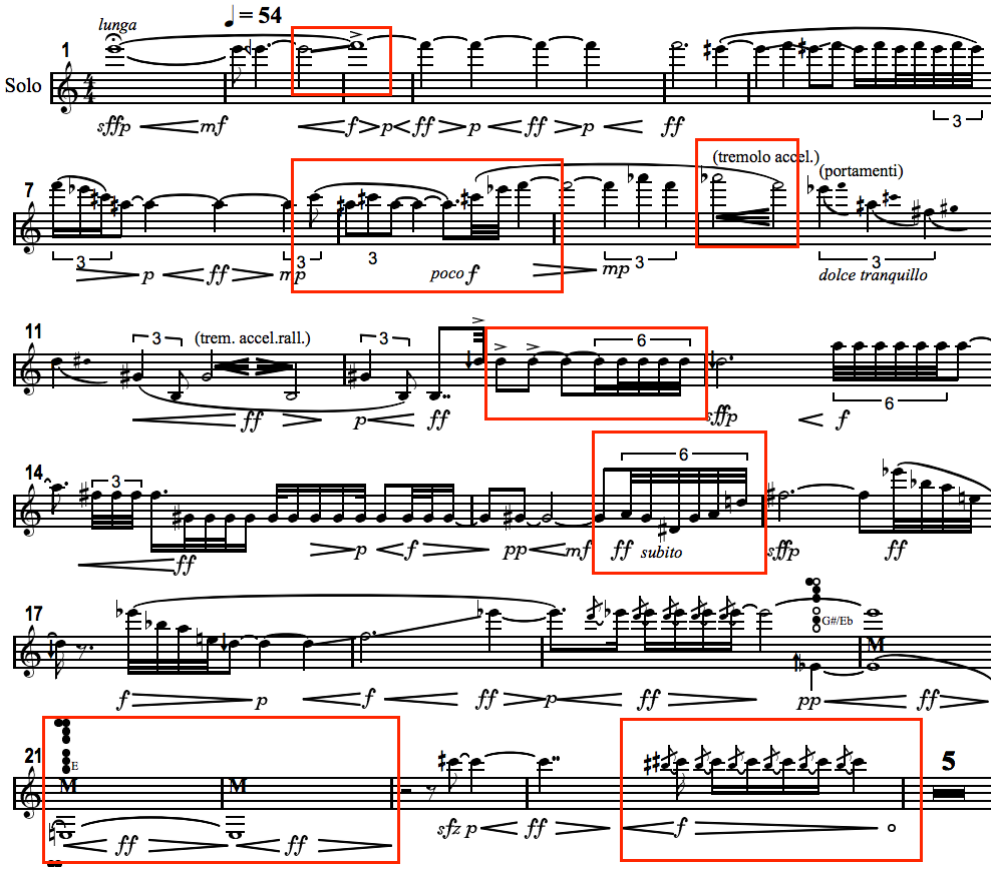
Much like Lindberg's concerto, *Puro* uses techniques involving melodic treatment to create a large amount of continuity, as melodies are developed through variation. The one-movement structure creates something which evolves gradually throughout, but, there is less focus on the oppositions created through continuity and discontinuity, than there is in the Lindberg. Tiensuu achieves this gradual development through several means:

1. The use of cells and themes within melodies, which can reoccur within both the clarinet and orchestra.
2. Gradual shifts into new melodies using a process of fragmentation *before* the full melody is played as one phrase.
3. Repetition through:
    a. Imitation and fragmentation of themes
    b. Ostinati-like patterns in the orchestral accompaniment
4. Predominately using notes from the overtone series, along with a constant pitch centre.

Within this chapter, Tiensuu's use of melodic developing variation will be discussed, which covers points one, two, and three. The fourth principle is examined in chapter III, *A New Pitch,* part b, *Puro.*

Thematic Cells Within Melodies

Many of the cells presented in the introduction are repeated multiple times throughout *Puro*, and these form a majority of the melodies in the piece. However, during the first hearing of the work, it can be difficult to differentiate between the separate cells, and gauge their significance from this. Interestingly, many of these earlier motifs are not centred around melody, as such, but around the extended technique they use. There are seven main ideas presented during the opening 24 bars. These are detailed below.



Excerpt 39, Solo clarinet in Puro, bars 1-29

A large amount of melodic material within *Puro* can be derived from these opening cells. Rather than being strictly 'developed' they are combined with each other to create longer themes, which in turn form melodies. Because of this, the changes that occur between repetitions are often small, with Tiensuu perhaps only altering them to ensure they organically create the larger melodic structures, without too much immediate contrast. To look at these opening examples in slightly more depth helps us to understand the evolutions these cells go through.

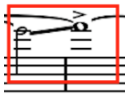
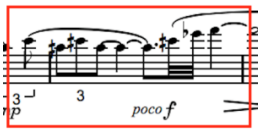
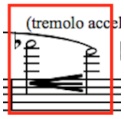
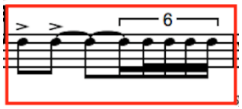
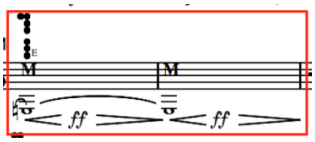
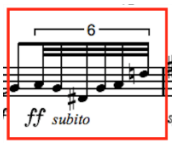
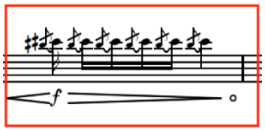
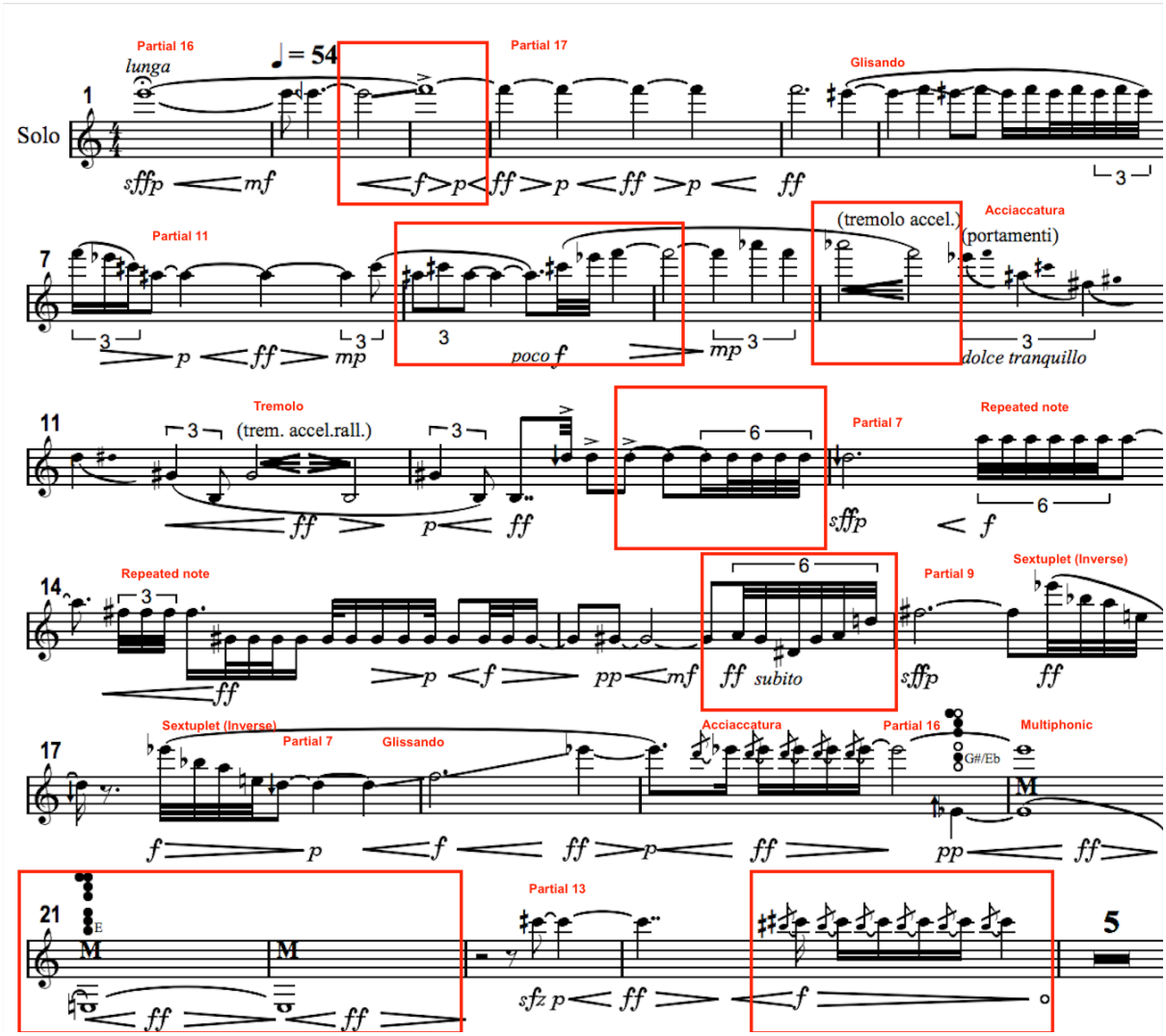
Cells derived from extended techniques	Cells which rely on a melodic or rhythmic idea
Glissandi: 	Triplet: 
Tremolo: 	Repeated note: 
Multiphonic: 	Sextuplet: 
	Acciaccatura: 

Figure 8: Melodic cells in Puro

Of course, these seven motifs are relatively short, in comparison to the twenty-four-bar opening. The transitionary material between these is worth examining, due to its ability to seamlessly

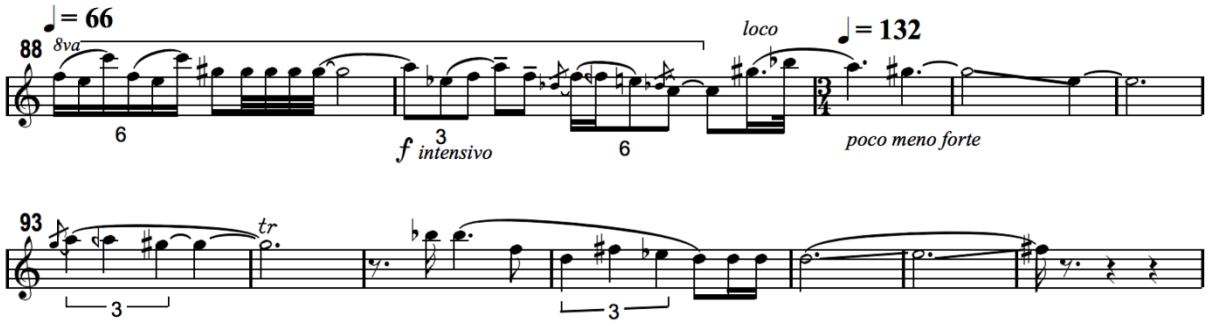
and continuously move between ideas. These interlude-type melodies can be described as 'themes', as they often are derived from the cell, or cells, which precede it.



Excerpt 40, Solo clarinet in Puro, bars 1-29

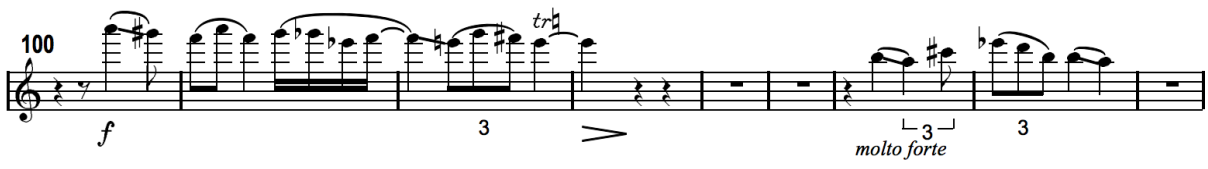
As this excerpt outlines, much of the melody is created from these seven cells. Where there are held notes, these are partials of the overtones on E – which will be discussed later. However, the phrasing is reminiscent of how cells are treated in Brahms's Clarinet Sonata in E flat, as shown earlier, where these are introduced and then repeated within a theme, with some development, before they undergone more developing variation. This is seen particularly well with the repeated note idea in bar 12, which continues through to bar 15. The excerpt also shows some amount of a 'pre-echo', seen for example in the use of the multiphonic in bar 20, which blends into the E multiphonic at bar 21, on which the concerto is based.

This process involving transitionary material derived from small cells continues throughout the work, and can also be observed in section B1 (mm. 90-122) which explores the use of the glissandi, and opens with this idea.



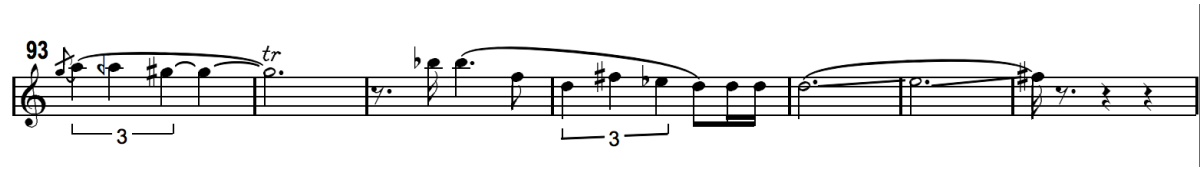
Excerpt 41: Puro, Solo clarinet, bars 88-99

The use of this technique is the most important motif during this section due to the number of times it is played (11), and also due to the placement of them, and their length. It is often used at the beginning or ending of phrases, as seen below.



Excerpt 42: Puro, Solo clarinet, bars 100-108

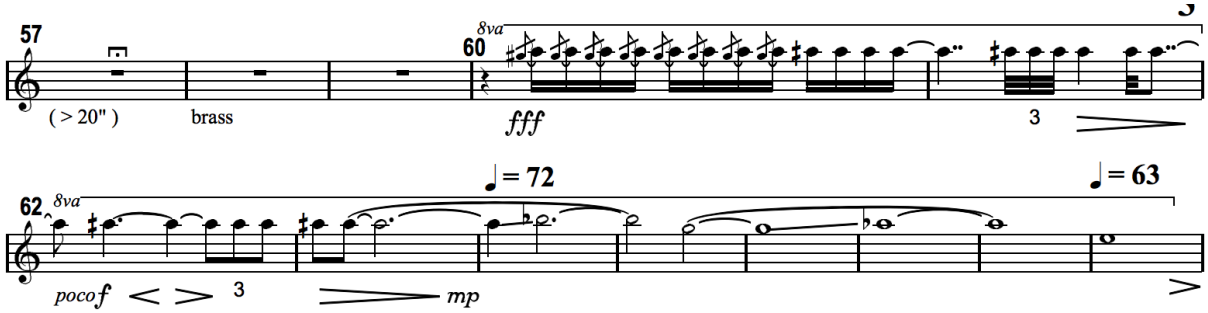
The longest glissandi of the section lasts for two full bars, and ends a short phrase.



Excerpt 43: Solo clarinet glissandi in Puro

It may be noticed that within each of these excerpts, other fragmented themes occur – noticeably the trill/tremolo idea, as well as the use of the acciaccatura. It can be presumed that these are here to serve a purpose similar to that of the opening, where transitionary thematic material is derived from the main seven cells. Despite this, the placement and emphasis of the glissando makes this section from 90-122 focused on this extended technique.

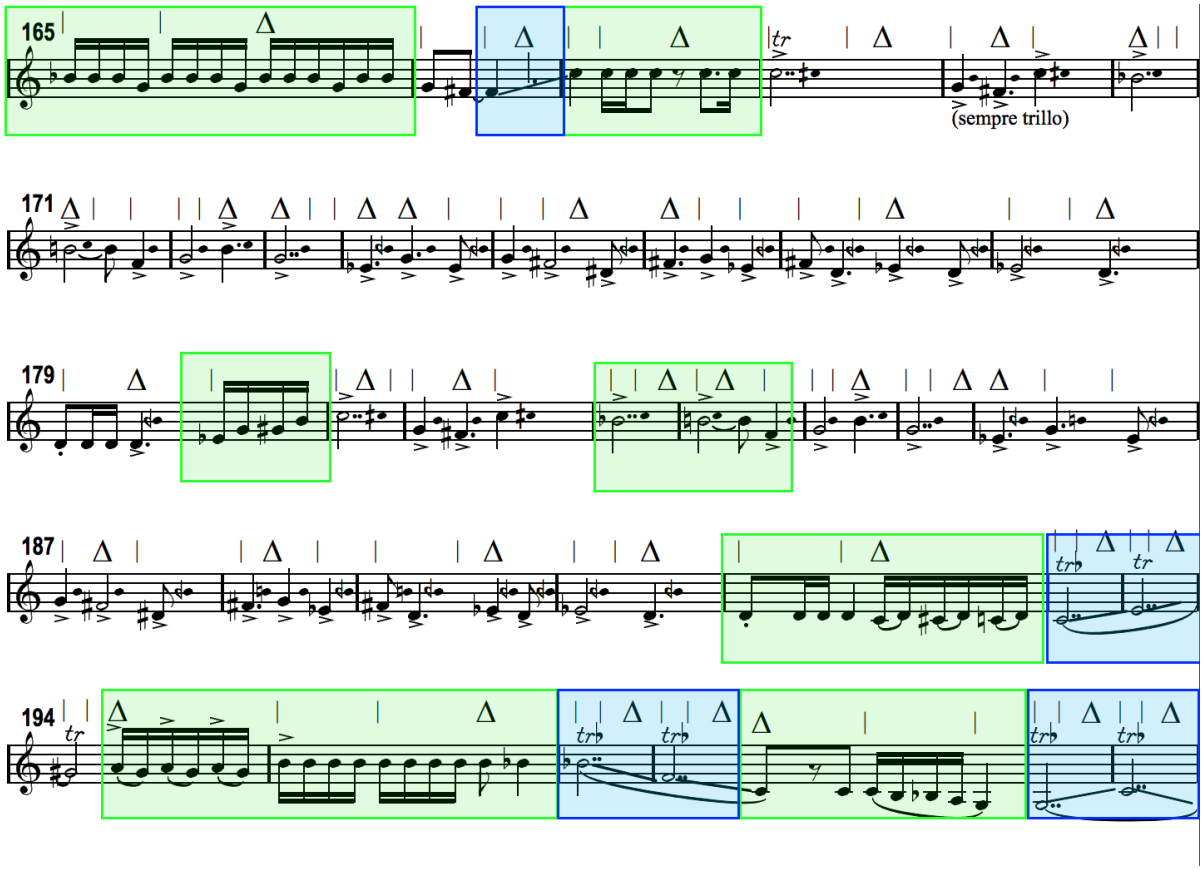
As it is the specific technique of a glissando which creates the significance of this motif, Tiensuu is able to use it almost wherever he desires. In theory, this could have been used between any two (or more) notes, but in practice, the composer has used these rather idiomatically, between notes where the glissando itself can be smooth. Many other cells are also repeated in this way – short and without much change. The acciaccatura cell occurs several times throughout *Puro,* although this time an octave higher, which creates a rather different aural effect.



Excerpt 44: Acciacatura in Puro, solo clarinet

It could also be suggested that here, as well as during the opening, this idea has been somewhat combined with the repeated note theme, as well as glissandi, which again ensures continuity is achieved through complementary ideas to form themes and melodies.

The tremolos in the introduction evoke suggestions of later trills and tremolos, and a specific section, B3 (mm. 169-199), explores this one cellular idea, and it is this which has been referred to as the 'chain trill' or 'chain tremolo' section.[128] In this section, glissandi and the repeated note idea also make an appearance, showing that by using a combination of melodic and technical cells, they can easily and recognisably be combined to create a larger, continuous, melody.

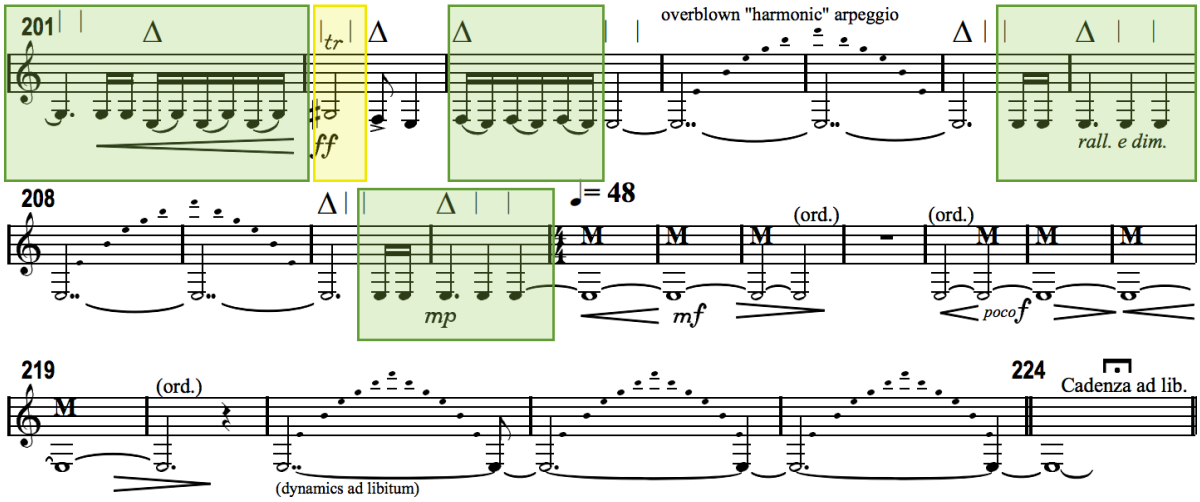


Excerpt 45: Combination of solo clarinet cells in bars 165-199 of Puro

Repeated Note idea Glissando idea

[128] Mikko Raasakka, *Exploring the Clarinet,* 178-180.

The multiphonic cell doesn't just have a melodic effect, but a tonal one, too. This cell is exploited for the pitch centre the E creates, despite not being heard again until the preparation for the cadenza begins. During this, we can see how these smaller cells are used to create a larger melody. We have a combination of the E multiphonic, the repeated note idea, and the trill or tremolo cell, which are all used to create a melody which focuses on technique, thematic material, and the tonal importance of the E.



Excerpt 46: Cadenza preparation for solo clarinet in Puro

Trill idea

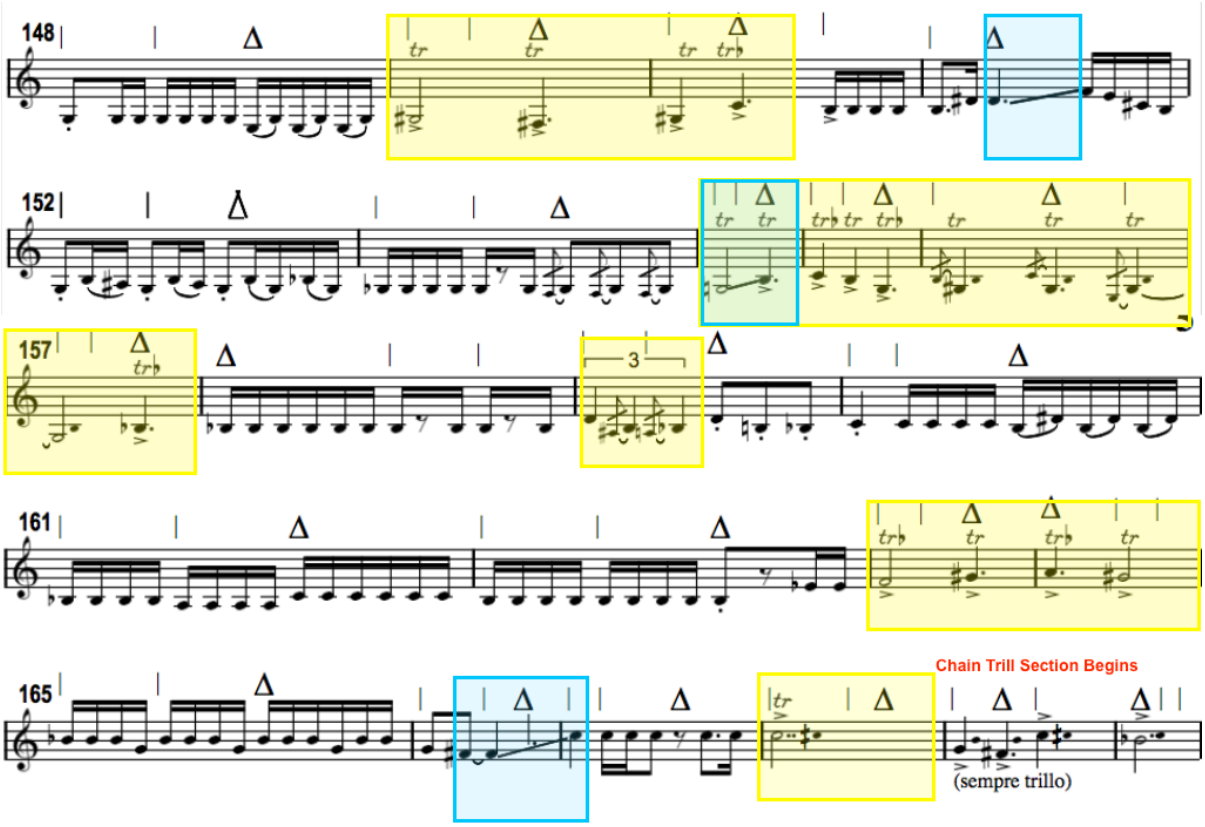
Continuity is achieved through melodies formed from smaller cells, which can be used as thematic ideas within their own right. Using a combination of cells which are both technical and motivic allows Tiensuu to combine these, so that if both are used at once, the listener is more likely to recognise at least one of these as known material.

There is often a gradual transition into new melodies through a process of fragmentation *before* the new melody takes place. This is a type of 'pre-echo', whereby a continuous melody is interrupted by disruptive elements which eventually go on to form a continuous chain of events, rather reminiscent of Schoenberg's idea of developing variation used in Brahms, as discussed earlier. Although it is somewhat of a contrast to introduce a new theme within others, it is less so than ending one idea and abruptly beginning another. This

takes place often throughout *Puro,* but there are times in which this technique is noticeably clear: both to the listener and to the analyst. Transition can be defined as 'any passage in a piece or movement which, rather than having a particular thematic identity of its own, seems to lead from one well-defined section to another, for instance the 'bridge passage' between the first and second subjects of a movement in Sonata form. It is usually applied to passages in which a modulation from one key to another is systematically worked out, though it is also used for sudden changes of tonality, as well as for passages in which there is a 'modulatory digression' but no actual key change.'[129]

The chain trill section at bars 169-199 is preceded by a transitionary passage in which the clarinet is rather exposed, with just a few members of the orchestra accompanying the soloist through quiet, rhythmically orientated, ideas (mm. 141-168).

[129] "Transition (i)," *Grove Music Online.* 15 Feb. 2018, https://doi.org/10.1093/gmo/9781561592630.article.28271.

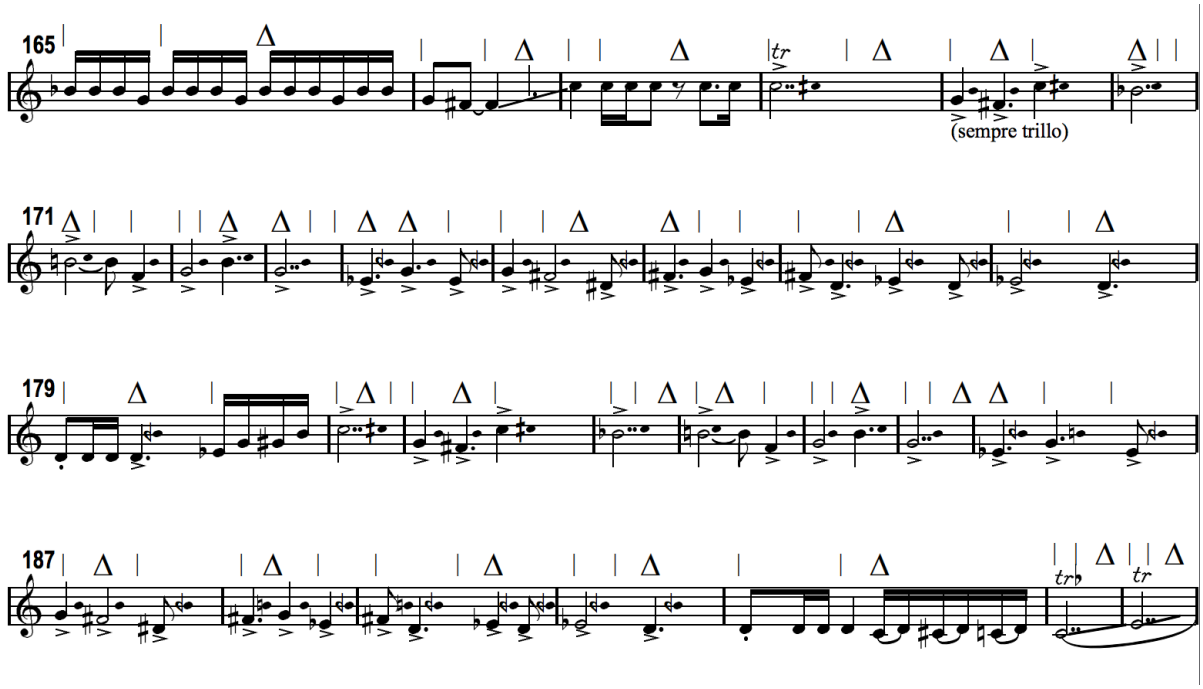


Excerpt 47: Precursor to 'chain trill' section of Puro

The soloist plays through fast semiquaver phrases, which are based upon the repeated note idea from the introduction. This brief except works well as an example, as all three ideas explored can be derived from the opening 24 bars: the glissando, the trill, and the repeated note idea, as well as showcasing how opposing themes are combined to create a larger melody (which begins at bar 169). Additional elements that permeate the melody, create an additive process where fragments are consistently used which will eventually form a new melody in a continuous manner. This technique is widely used throughout *Puro,* and these instances are found relatively easily. Analytically, one can, in retrospect, identify disruptive new cells interspersed within a melody, as the formation of these into a new melody will not become apparent until the new theme begins. However, the technique does become more obvious as the work progresses, so when disruptive themes are used within a melody, the identification of this pre-echo may suggest the predominant melody is going to shift. The transitionary episodes, as shown between bars 148 and 168, utilise fragmented themes, which are combined to create a 'constant flux

between different elements',[130] which creates tension, due to the unresolved nature of the phrases. When the full melody does take place, there is some sense of resolution.

The melody in its entirety takes place at bar 169. The 'chain trill' section, as named by Raasakka,[131] takes the fragmented ideas from the transitionary material, and works them into a larger, complete, melody.



Excerpt 48: 'Chain trill' section of Puro

What began as a singular fragment – the use of a tremolo in bar 9 – has gradually evolved into a full melody, as the idea is elongated and played within an accented and stark phrase. The fragments in the opening gradually morph into the interruptions added into bars 148-168, where the originally technical idea incorporates new aspects of rhythm and drive, before arriving at their largest use, where the original two-beat idea is extended into a full section, through elongation, pitch manipulation, rhythm, and articulation.

Unlike Lindberg's Clarinet Concerto, the orchestra in *Puro* is rather complementary to the clarinet line, and the two operate on the same level, as they follow the same formal

[130] I am grateful to Mark Hutchinson for aptly describing this technique in this way during feedback on my work.
[131] Raasakka, *Exploring the Clarinet,* 180.

subdivisions. The orchestra mainly seems to use ideas focusing around repetition and imitation, and specific fragments are repeated by individual members of the orchestra to ensure the continuity is constant. It is possible to examine the use of repetition within *Puro,* and evaluate how this impacts upon the continuity of the work, as a whole. As mentioned earlier, Tiensuu seems to use three types of repetition: imitation; fragmentation; and ostinati.

Repetition, as a technique, underpins much of music that has been written, with Adam Ockleford alluding that it is a 'universal attribute' in his book *Repetition in Music.*[132] Ockleford goes on to discuss the importance and effects of repetition to the listener, in a theoretical and metatheoretical light, using his 'zygonic' theory, which 'hypothesizes the creation and cognition of musical structure [is derived] from imitation (and therefore repetition).', [133] and it is this which creates a listener's 'aesthetic response', as well as altering their perception of time.[134] This is a rather grandiose statement, however the importance of it rings true: much of a listeners perception of the structure piece of music is based upon the recurring ideas of the work, and are necessary to consider elements of formal arrangement. The combination of the perception of structure and time within music due to repetition affects a listener's sense of continuity, with Richard Powell writing that 'Repetition or consistency of even the vaguest kind has a bearing on perceived continuity, forming a central component of musical syntax. Even discontinuous elements, when implemented in an extreme or extended manner, are tantamount to continuities of their own.'[135]

In *Puro,* imitation is often used between the clarinet and the orchestra, where one cell is repeated by a soloist within the orchestra, whilst the clarinet moves onto a new phrase. This ensures that movement away from the original theme does not come across as abrupt, but rather as a gradual transition. Transitions created through repetition of an older idea are something which seem to be used frequently in the period connecting the late Renaissance and

[132] Adam Ockleford, *Repetition in Music: Theoretical and Metaphysical Perspectives* (Aldershot: Ashgate Publishing, 2005).
[133] Ockleford, *Repetition in Music,* 37-38
[134] Ibid.
[135] Richard Powell, "Articulating Time: Listening to Musical Forms in the Twenty-First Century," PhD Thesis, University of York, 2016, 36.

early Baroque, which was ironically a transitional period in itself. Kriikku did state in interview that Baroque music was Tiensuu's 'love'.[136] Tim Carter and Geoffrey Chew wrote with eloquence on Monteverdi's use of transition in several works in The New Grove Dictionary of Music and Musicians, and refer to the transitional repetition section of *Zefiro torna e di soavi accenti* as the 'greater part' of the piece.[137] Considering Tiensuu's fondness of this period of early music, it is not unsurprising to note he is using compositional techniques regularly employed by composers such as Monteverdi.[138] Beethoven, too, made use of transition through repetition of phrases, and this can be observed in the first movement of his Piano Sonata op. 110, as detailed by David Beach in "Motivic Repetition in Beethoven's Piano Sonata Op. 110 Part I: The First Movement".[139] In this, he describes how motifs are used as transitional passages through their repetition and modulation to related keys.

This type of imitation in *Puro* results in both melodic and formal effects: the clarinet melody evolves gradually, whilst the orchestra ensures the formal subdivisions remain blurred. This idea is set up right from the opening of *Puro,* with imitation taking place between the clarinet and string soloists, before wind soloists join. In fact, by bar 17, there is a soloist beginning the repetition of a cell on every beat of the bar. After this, the orchestra moves back to rhythmic unison for the rest of the introduction. However, the precedent has already been set and this technique already solidified as an important idea for the rest of the work.

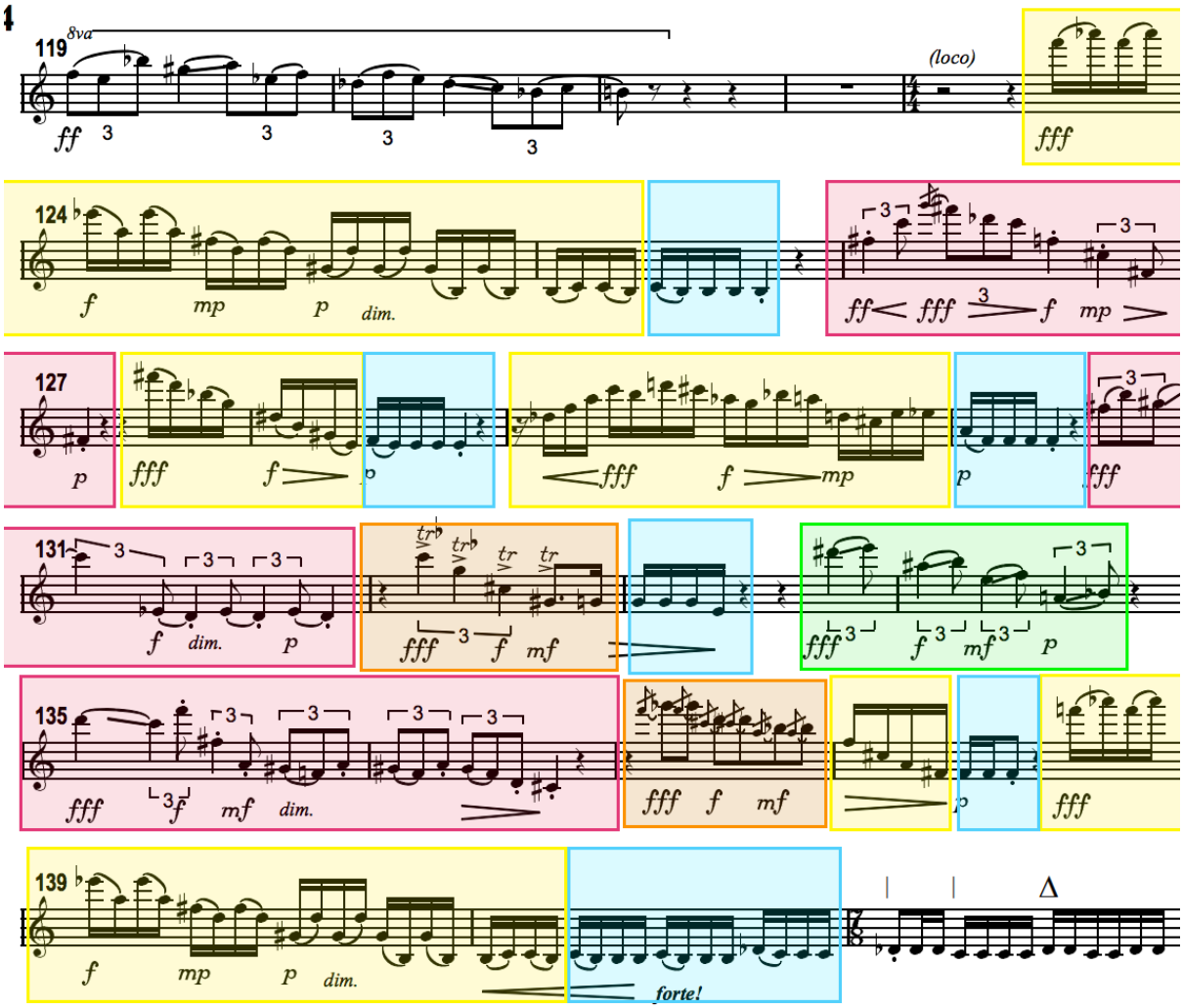
The sections in which this idea of imitation is particularly prevalent are B1 (mm.90-123) and B2 (mm. 123-140). However, they differ in their approach. The melody in B1 is stark, with the clarinet and violin and flute soloists playing through the themes, with the rest of the orchestra playing rather ostinati-like accompanying patterns. The violin is often only a quaver

---

[136] Dunn and Kriikku, *Upbeat,* 27th October 2015.
[137] Tim Carter, and Geoffrey Chew, 2001 "Monteverdi [Monteverde], Claudio," *Grove Music Online.* 15 Mar. 2018, http://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000044352.
[138] His fondness for early music has been demonstrated through his prominence as a harpsichordist, as well as his compositions for baroque orchestra, his teaching of baroque repertoire, and his speaking of the importance of early music – seen in '*The Future of Music',* lecture at *Search Event* in 2001.
[139] David Beach, "Motivic Repetition in Beethoven's Piano Sonata Op. 110 Part I: The First Movement," *Intégral* 1 (1987): 1-29.

beat out of time with the clarinettist, followed then by the flautist, making this method of imitation a rhythmic and metric effect. This continues through the section, not working as a device that influences continuity so much as it does rhythm. However, the process of setting this idea up in preparation for the following section, and using cells which are about to reoccur, is a device that impacts on the continuity of the work, with Tiensuu slowly working into the segment, rather than having the music abruptly shift in its mood.

During this section, the music moves quickly through melodic cells, with a dense orchestral texture and technically difficult melodies. To be able to move through these differing ideas, but maintain an on-going continuity, is a rather difficult compositional process. However, through repetition, Tiensuu is able to alter the listener's perception of this. Five distinctive fragmented thematic cells are explored here, and the clarinettist plays constantly through these, never resting for more than two beats. This technique, as previously discussed, is used throughout *Puro.* However, what is of importance to discuss here, is how Tiensuu is able to alter the listener's sense of continuity during a section where a wider range of contrasting fragments take place.

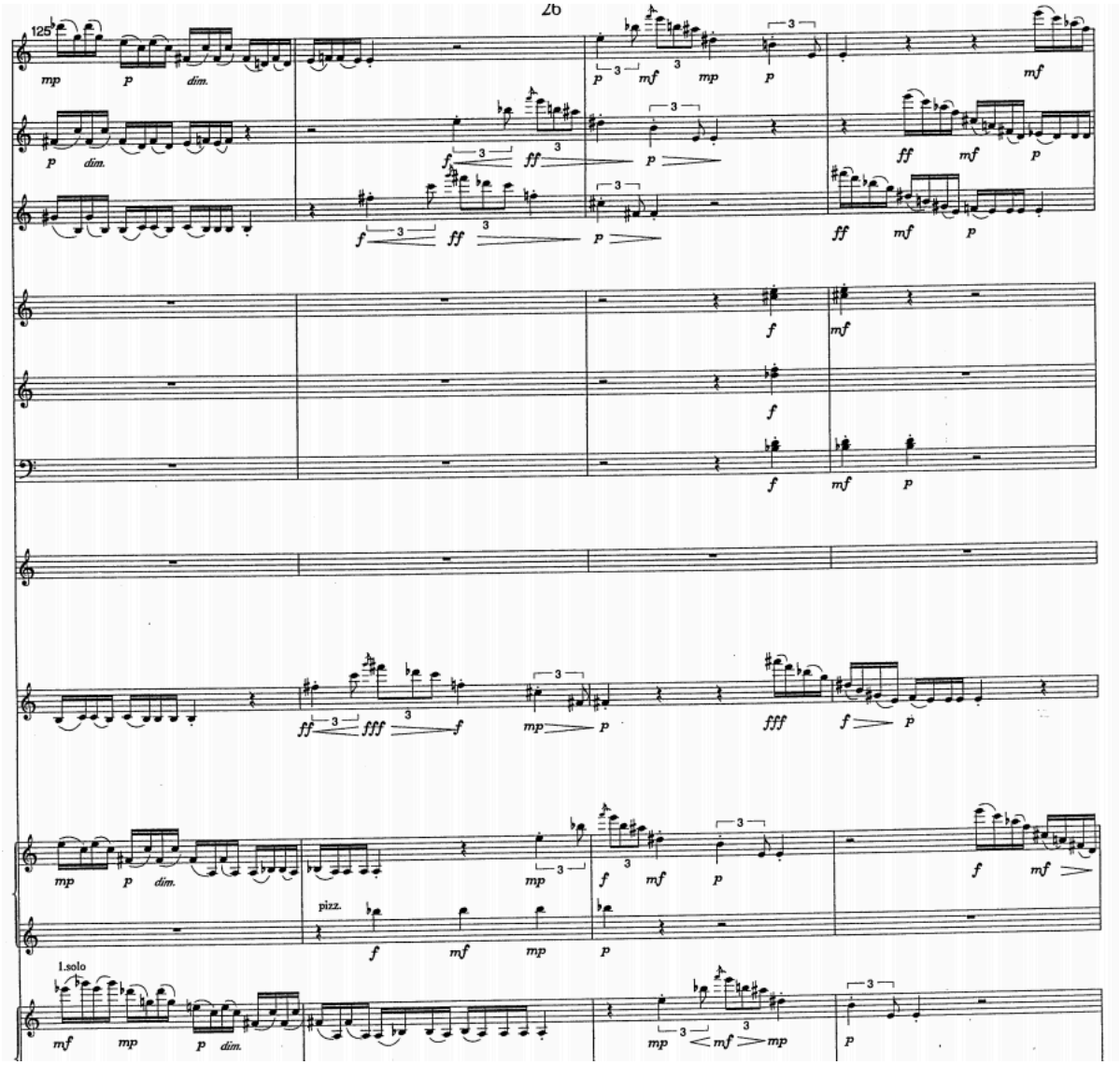


semiquaver idea **triplet idea** **repeated note idea** **trill idea** **glissando**

Excerpt 49: Melodic fragmentation in Puro

As can be seen above, the solo clarinet plays through explorations of five of the opening fragments. The contrasts between these ideas, too, are not showcased to a large extent, as Tiensuu has crafted them together through pitch and rhythmic manipulation. However, due to constant imitation by several soloists in the orchestra, a dense texture is created which allows for deviation by the clarinettist, as the music, as a whole, seems move gradually from theme to theme, rather than abruptly change, as the clarinet phrase, when seen alone, may suggest. This creates an overall sense of continuity.

The soloists within the orchestra imitate these cells, and this is predominately done by one clarinet, flute, oboe, and violin one and two – essentially the upper woodwind and upper strings. This specific use of repetition is used in a way which is largely the same as the opening, that is, for each member to begin one beat after the other, and ensuring that every beat in the bar is covered by the repeated theme. Interestingly, all these instrumentalists play an *exact repetition* of the clarinet line, with the last (violin two) beginning five beats after the soloist initially started – with exception of the differing notes in the final bar of this section, 140. This technique is used throughout the entire B2 section, with the longest theme being seven beats long (the triplet idea in the solo line from 135-36, where all five imitating instruments are playing through this theme at the same time, albeit at different points). The shortest fragments (the repeated note ideas) are often only one beat long. This means that the repetition of these are more like echoes, with each player beginning when the previous has ended.



Excerpt 50: Repetition in Puro

Fl, Ob, Cl, Cor, Tr, Tni, Perc, Solo Cl, Vl. I, Vl. II.

Seen here from bar 125, we can see the upper woodwinds and strings repeating phrases played by the clarinet, sharing the soloistic lines and creating a rich orchestral texture. This use of opposing themes within a continuous manner, using a combination of speed and repetition to ensure continuity seems to align neatly to Powell's earlier statement, that 'Even discontinuous elements, when implemented in an extreme or extended manner, are tantamount to continuities of their own.'[140]

[140] Powell, "Articulating Time: Listening to Musical Forms in the Twenty-First Century," 36.

When the orchestra in *Puro* are not directly imitating the soloist, there are often sets of instruments which employ the use of ostinati-like repeated figures, which take place on one note, to ensure a melodic drive towards something can take place, as well as the possibly to alter a listener's sense of time and metre.[141] The use of ostinati which are comprised of minimal numbers of pitches was something Monteverdi began to use in his bass lines in the early 17th century, with Silke Leopold writing that he was 'ahead of his contemporaries'.[142] The use of this technique was described in the work *Zefiro torna e di soavi accenti* as the following:

> 'Monteverdi flamboyantly presents a succession of continually new musical ideas over the fifty-six repetitions of [a] two bar ostinato pattern; the text is split into short fragments, whose musical motifs are either presented in imitation by the voices or tossed back and forth like balls… The basic principle behind this composition is not the union of an ostinato melody with a vocal part which simply executes a series of variations above it, but the coordination of two opposing attitudes.'[143]

This allowed the composer the 'greatest possible freedom, not only in the shaping of the melody but also in the regularity of the phrasing, which was no longer tied to the bass progression.'[144] This process is tied to *Puro* in a way which concerns opposition and resolution – the use of seemingly contrasting, melodic ostinati, support other melodies and allow these to undergo variations.

The ostinati in *Puro* are used either when the clarinet is not playing, or when the clarinet is playing through melodies which lack much rhythmic effect, with the composer perhaps using

---

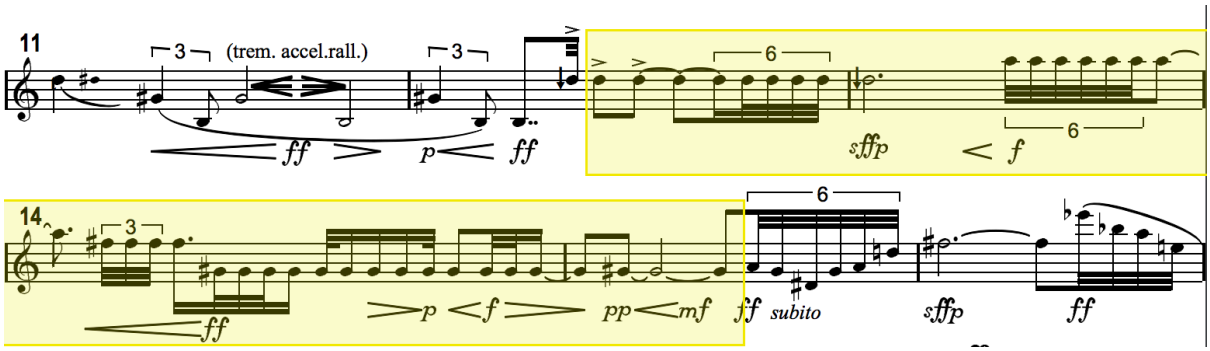
[141] Ockleford discusses the importance of 'background' organisation in his book *Repetition in Music,* and states how it is an underlying beat and metre which is the most musically significant feature to a listeners zygonic interpretation of continuity within music. He does not explicitly use the term 'ostinato' to describe this, however ostinati can create an underlying beat, and therefore it is assumed that this technique can be applied to Ockleford's theory. Whether or not this background organisation is the most musically significant feature, it still stands that it does heavily influence the listeners perception of continuity.
Ockleford, *Repetition in Music,* 38.

[142] Silke Leopold, *Monteverdi: Music in Transition* (Oxford: Clarendon Press, 1991), 116.

[143] Leopold, *Monteverdi,* 114.

[144] Ibid, 117.

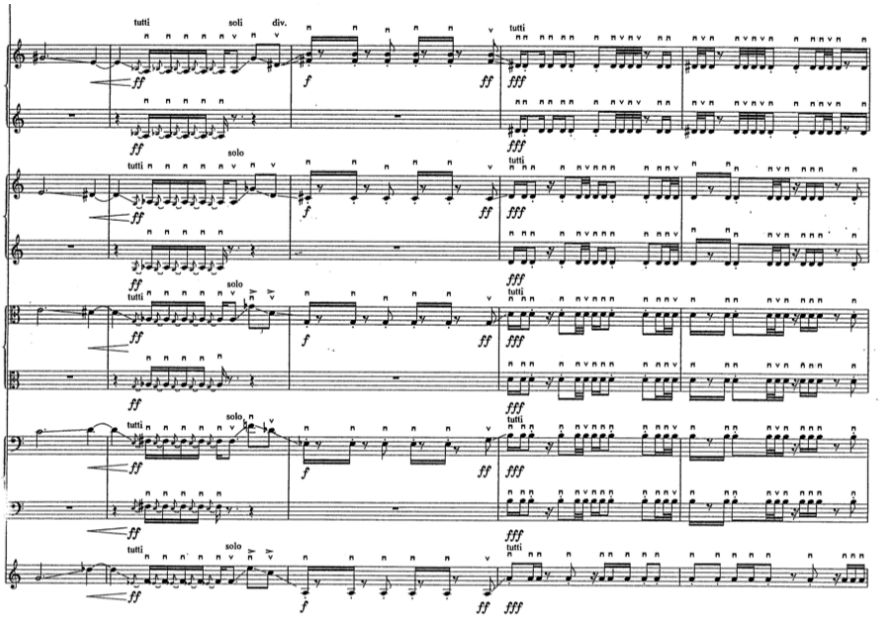
these to keep a sense of pulse. Interestingly, the most widely used ostinato within the work is derived from a clarinet cell in the opening 24 bars: the repeated note idea, perhaps to ensure that the focus is solely on the rhythm employed, rather than the notes. There are further instances where the glissando and trill motifs are also turned into ostinati.



Excerpt 51

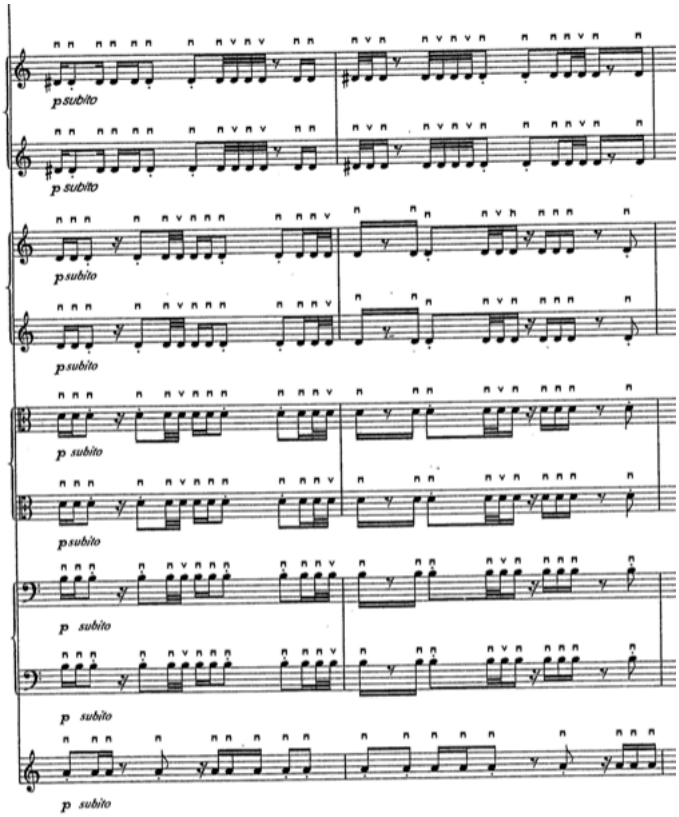
Repeated note idea played by the solo clarinet during bars 12-15, from which the discussed ostinato is derived

The first instance of the main ostinato is introduced by the strings during bars 41-44, a pattern consisting of specified up and down bows, focusing on the quaver, semiquaver, and demisemiquaver. It is only ever played by the strings – the wind and percussion sections do not participate.



Excerpt 52

Bars 38-42. Vl I, Vl II, Vla, Vc, Cb



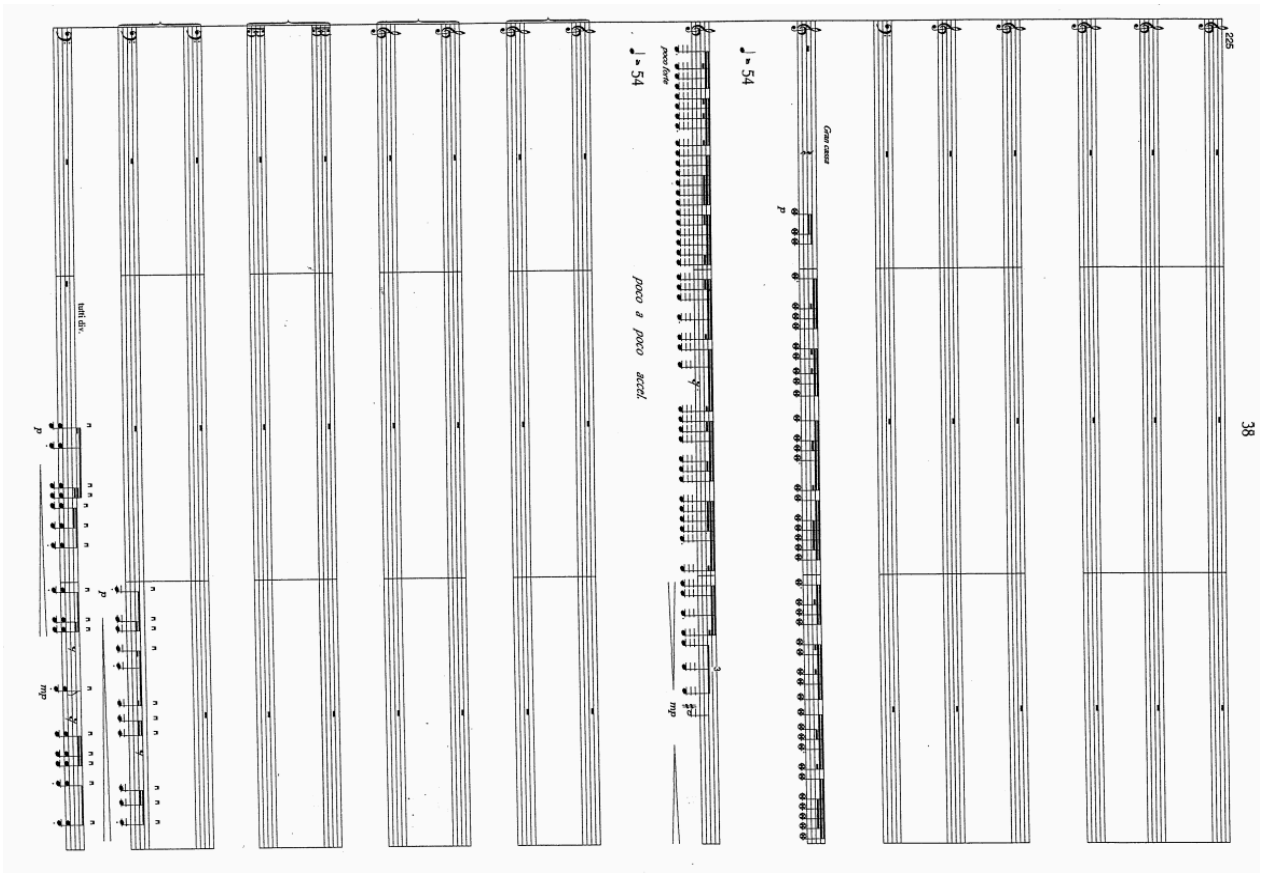
Excerpt 53

Bars 42- 44 Vl I, Vl II, Vla, Vc, Cb

During this excerpt, no other instruments are playing – it can be suggested that this ostinato is first played in isolation to ensure that it is heard, and therefore will be more quickly recognised when it is repeated later on during *Puro.* During the first A section, this ostinato is only ever played alone, further reaffirming its importance. Interestingly, this string figure only occurs during the A sections (mm. 1-89 and 225-265). These seem to rely more on repetition through ostinato, with the middle B section focusing on repetition through melodic imitation.

The next time this ostinato takes place is bar 225 – the opening bar of the final A section, but this time, the clarinet begins the rhythm. It can be proposed that this happens to ensure the orchestra can blend into playing again after the clarinet's cadenza, with the orchestral material being introduced slowly, so as to not disrupt the continuity of the previous chain of events. The easiest and most continuous way to do this is for the clarinet to begin by playing the E (which

forms the basis of the piece, and the cadenza) in a rhythm which can easily be taken over by the orchestra, using the repeated note theme which alludes to earlier material.



Excerpt 54

Bars 225 – 230. Fl, Ob, Cl, Cor, Tr, Tni, Perc, Solo Cl, Vl I, Vl II, Vla, Vc, Db.

This use of the ostinato is the last time it occurs in *Puro,* with the whole orchestra playing it, and this is the only occurrence of it being used alongside the solo clarinet. It is also the longest use of it, at 17 bars. The purpose of this is to keep the beat whilst a long melody, focused on the glissando, is played by the soloist. The aural sense of metre alters the listener's perception of not only continuity, but also time. A melody that would have perhaps had the sense of a rather long phrase is now driven through the ostinato, which seems to speed up the amount of perceived time the section takes.

Tiensuu's *Puro* is eighteen minutes of continuity – the entire work drives towards the cadenza – perhaps something which can be considered the 'goal' of the work. The fact that the music rapidly draws to a close so soon afterwards is testimony to this. Kramer defines goal-directed time as 'a temporal continuum in which events progress toward predictable goals'.[145] The predictability of the cadenza in *Puro* can be debated: on the one hand, a cadenza is expected in a concerto, and the importance of the clarinet's E is continuous throughout. As well as this, the preparatory material before the cadenza guides the listener into the cadenza smoothly. However, as the work exists as a non-tonal piece of music, Tiensuu is not able to lead the listener through functionally tonal means, which perhaps is the most recognisable way to drive towards something which becomes expected. Despite this, the continuity he achieves through developing variation and orchestral imitation and ostinati is unquestionable.

[145] Kramer, *The Time of Music,* 452.

IIc: How Six Become Three

Formal and Aesthetic Settings in *D'OM LE VRAI SENS*

Unlike Tiensuu and Lindberg's concertos, Saariaho's *D'OM LE VRAI SENS* is split across six movements, each based upon one of the tapestries. The idea of multi-movement layout is not uncommon in Saariaho's music, with the cello concerto *Notes on Light* (2006-7) taking place across five movements, although Howell concludes that the work actually makes some use of tripartite structure.[146] In the first movement of *D'OM LE VRAI SENS*, '*L'Ouïe'* (Hearing), the 'calmly breathing' orchestra,[147] represented by alternating held wind and string harmonies, is interrupted by a call from the clarinet – an intense, stable multiphonic, which is deliberately split to produce a harmonic to match the upper note played by the violins. This cycle of interruptions by the soloist to the gentle, alternating, orchestral harmonic idea continues, although the timbral density often changes, and melodies begin to form, typically played by horns, celesta, and the solo clarinet. '*La Vue'* (Sight), differs from the previous movement, taking place at a faster tempo (crotchet=104 compared to crotchet=54), with the orchestra here providing more of an accompanimental role, to allow the soloist to play through longer, melodic phrases, and 'develop the musical motifs this supplies'.[148]

Saariaho provides a lengthy description in the programme note to accompany '*L'Odorat*' (Smell), which seems to use spectralist ideas. She writes:

[146] Howell, *Kaija Saariaho,* 144-149.
[147] Kaija Saariaho, *D'OM LE VRAI SENS,* Programme note.
[148] Ibid.

> 'Smell is colour music. I associate the harmony with scent; it is immediately recognisable intuitively and the impression is too quick for thought. The clarinet languidly spreads its colour over the orchestra, where it hovers, transforming as it passes from one instrument to another.' [149]

Although any definitive proof that the harmony is evocative of scent is near impossible, the significance of this cannot be overlooked: the harmony provides a rich backdrop for the fleeting melodies passed between the soloist and the orchestra, and its specific use is a fundamental technique in this movement. '*L'Odorat*' is also one of the longest, in performance time, and at just over seven minutes it is of a similar length to '*L'Ouïe'*, and around double that of the second, fourth, and fifth movements. The harmony, melodic treatment, and orchestration are of significant interest.

'*Le Toucher*' (Touch) is the fastest movement, with a tempo of crotchet=120, as well as being the most traditionally 'virtuosic' for the clarinettist through the soloist's and orchestra's 'dialogical' approach, as well as complex phrases which employ both a quick tempo and speed of material. The music ends abruptly, mid-ostinato, and leads swiftly onto the fifth movement, '*Le Goût*' (Taste). The overarching subject matter of the concerto seems to be the huge musical difference between each movement, with '*Le Goût*' following this pattern, focussing on acoustic explorations of the clarinet – demonstrated through trills, tremolos, and extended technique. The music acts more as a soundscape than a linear, melodic process.

The final movement, '*A mon seul Désir'* (To My Only Desire), perhaps symbolic of love, is the only movement which lacks an explicit description of the influences and imagery which inspired it. Saariaho wrote:

[149] Kaija Saariaho, *D'OM LE VRAI SENS,* Programme note.

> 'While composing the last movement I experienced a sense of entering a new, intimate and timeless dimensionality. The end of a work is always the last chance to discover its quintessence. I often approach it by stripping the music down to its most ascetic elements. Here, too.'[150]

This mystery surrounding the closing movement is, in itself, evocative of the cryptic nature of the final tapestry in *La Dame à la licorne* series. Perhaps, with careful analysis of this final movement, the most significant features of the concerto will be revealed. She writes of 'stripping the music down to its most ascetic elements' – and her use of the word 'ascetic' can be interpreted to mean different things. However, in this instance, it can be inferred as suggesting something which is simplistic, spiritual and possibly isolated.

It may be possible that each movement, with the exception of '*A mon seul Désir',* has one specific technique which acts a focal point.

Table 8: Focal points of D'OM LE VRAI SENS movements

Movement	Focal Point
'L'Ouïe'	Repetition and stasis
'La Vue'	Melody
'L'Odorat'	Harmony
'Le Toucher'	Timbre
'Le Goût'	Extended Clarinet Technique
'A mon seul Désir'	All of the above

These pairings are detailed – either explicitly, or implied – within the programme note, but are also discovered through analysis.[151] A question which is important to consider is *why* Saariaho would have considered isolating individual techniques within each movement. Ultimately, it can be proposed that this is due to the subject matter of these – a sense is *one* thing, which contributes to a larger whole. When defining these, musically, Saariaho needed to create some

[150] Kaija Saariaho, *D'OM LE VRAI SENS,* Programme note.
[151] Ibid.

kind of musical representation, and that would mean honing in on one compositional technique. Of course, all the movements use a huge variety of techniques within them, but the suggestions are of the most aurally apparent to the listener. It is in the final movement that these are most blatantly combined to create something which cannot be easily defined – as also implied in Saariaho's views on the '*A mon seul Désir*' tapestry, when she refers to the 'sixth sense' and wrote 'whatever that is (emotion? love?)'. If Saariaho were to decide to fixate on either love or emotion for the final movement, one would consider the complexity this would require, as to be able to dictate what either of these, verbally, consisted of would be a challenge in itself, before contemplating the idea of using notation.

Dualities exist on several levels within Saariaho's *D'OM LE VRAI SENS.* The use of this technique within a concerto is not something Saariaho is unfamiliar with – Howell wrote:

> 'From its extra-musical inspiration, through the concerto genre itself, *Aile du songe* may be viewed as a work that explores issues of duality – the pairing of opposites – operating on a range of levels.'[152]

He goes on to write '… the concept of binary opposition lends itself not only to conflict, but also to complementation: dialogue that may eventually lead to resolution.' *Aile du songe* makes full use of oppositions, and some of these are summarized by Howell as such: flute and orchestra; variation and repetition; dynamic and static; improvised and controlled; as well as including some extra-musical dualities.[153]

On the surface, it appears that *Aile du songe* and *D'OM LE VRAI SENS* are not too dissimilar in their conception: both use literary and extra-musical influences, as well as utilising opposition to create the driving forces behind the music. In fact, Saariaho herself wrote of issues concerning duality and formal structure.

---

[152] Howell, *After Sibelius,* 217.
[153] Ibid.

> 'Of course, the construction of musical form has always used this principle of oppositions. In a composition, it can be found on a small scale and in the larger structure of the piece (slow section/fast section); and not only in music but in all the arts. In his work *Point, Line, Plane* (1970), Kandinsky talks of fundamental oppositions in the plastic arts: the point (stasis) and the line (tension created by movement); the warmth and coolness of a colour; the vertical and the horizontal. Every form of artistic creation is based on these same notions, only the terminologies differ. Ultimately, it is a question of how we perceive the world, how we distinguish one thing from another as a result of differences and oppositions.'[154]

By examining the way in which Saariaho creates these dualities in *D'OM LE VRAI SENS*, one is able to discuss the way in which she has approached the pre-existing notion of 'the concerto'. The composer goes about setting up these juxtapositions by creating oppositions between the following things:

Table 9: Dualities in D'OM LE VRAI SENS

Clarinet	Timelessness	Standard Instrumental Technique	Melody	Virtuosity	Aesthetic Information	Strings	Fast Tempo	Tonality
Orchestra	Pulse	Extended Technique	Accompaniment	Simplicity	Aural Information	Woodwind	Slow Tempo	Atonality

Of course, the contrasts listed here are not the only dualities present within the work, but they are techniques which are frequently used. Discussion of each of these is needed in order to ascertain how Saariaho is using certain techniques to create an overarching effect. One feature not listed here is the possible pairing of movements – the work takes place across six defined

[154] Kaija Saariaho, "Timbre and harmony: Interpolations of timbral structures," *Contemporary Music Review* 2, no. 1, (1987): 97.

movements, of which each can be suggested to have a pair. In fact, the larger structure does split up evenly into three parts, as follows:

Table 10: Triparte suggestions in D'OM LE VRAI SENS

I: '*L'Ouïe*' 7'	**II: '*La Vue*' 3'30"**	**Total duration of the pair:**	**10'30"**
Long, slow ♩=54	Short, fast ♩=104		
III: '*L'Odorat*' 7'	**IV: '*Le Toucher*' 3'30"**	**Total duration of the pair:**	**10'30"**
Long, slow ♩=48	Short, fast ♩=120		
V: '*Le Goût*' 4'	**VII: '*A mon seul Désir*' 6'11"**	**Total duration of the pair:**	**10'10"**
Short, slow ♩=60-72	Long, slow ♩=48		

It can be said that despite the six-movement layout, there is some suggestion of a three-part form, as would be expected in more traditional concerti, and also takes place in *Notes on Light* with groupings of contrasting pairs of movements.[155] These three sections in *D'OM LE VRAI SENS*: movements I and II; III and IV; V and VI; all divide to last a similar amount of clock time. There are also large contrasts between these pairings, not only as suggested by the use of a shorter and longer movement, but also through other compositional dualities. These traits in turn, create the larger formal structure, and it is through analysis of these smaller devices that the larger scheme of the work can be revealed. It will be suggested that the complementary pairing of movements is as follows:

[155] Howell, *Kaija Saariaho,* 144.

Table 11: Pairings in D'OM LE VRAI SENS

'L'Ouïe' (Hear) ➢ Repetition	***'L'Odorat'*** (Smell) ➢ Harmony
'La Vue' (See) ➢ Melody	***'Le Toucher'*** (Touch) ➢ Timbre
'Le Goût' (Taste) ➢ Extended Clarinet Technique	***'A mon seul Désir'*** (To my only Desire) ➢ A culmination of processes used throughout

These complementary pairings exist due to similarities in melodic material and instrumentation between the movements, as well as the tempo and clock-time durations of the movements. It seems likely that the tempi are related as a consequence of the melodic similarities. The pairings, as well as the presentation of the actual pieces of artwork, are purely suggestions: the intended order of the tapestries is unknown, and these are displayed in the way in which the curator decides is most appropriate.[156] Therefore, to switch the order does not seem to be anything hugely controversial. In fact, the Museé de Cluny has shown them in at least two different arrangements - neither of which correspond to Saariaho's arrangement.

The formal arrangement on a large scale has been discussed, but each movement utilises smaller, existing, forms, many of which are rather simpler. These are as follows:

[156] Helmut Nickel, "About the Sequence of the Tapestries in 'The Hunt of the Unicorn' and The Lady with the Unicorn,'" *Metropolitan Museum Journal* 17, (1982), pp. 9-14.

Table 12: Forms in D'OM LE VRAI SENS

'L'Ouïe'	Ternary
'La Vue'	Variation form
'L'Odorat'	Ternary
'Le Toucher'	Binary
'Le Goût'	Variation Form
'A mon seul Désir'	Binary

As can be seen, there are three forms utilised: binary, ternary and variation forms, again, used in pairs. The use of these in an alternating fashion ensures that each movement contrasts directly with the previous.

It has been shown that Saariaho creates large-scale opposition through the setting of *D'OM LE VRAI SENS*: that being tempi; duration; and large and small-scale forms contrasting between consecutive movements. However, to analyse the smaller features within each movement, leading up to '*A mon seul Désir',* will reveal compositional traits which affect the complementary pairings, as well as the relationship between the tapestries in *La dame á la Licorn* and the concerto.

'L'Ouïe' and 'L'Odorat'

The first movement, '*L'Ouïe',* relies heavily on the use of repetition and stasis: held orchestral chords are interspersed between interjections from the solo clarinet. The clarinet doesn't play through full phrases – the moments instead are more like short outbursts which utilise extended techniques which reaffirm the pitch centres, with each interruption seemingly longer and more complete than the last. This fragmentary approach begins after the orchestral introduction from bars 1-10, and lasts until bar 34. At bar 35, the longest clarinet phrase takes

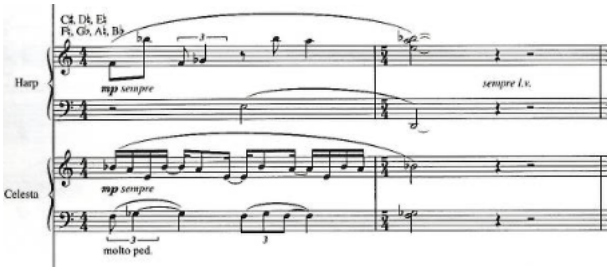
place – a notated cadenza – before the orchestral closing between 44 and 62, which mirrors the opening, to complete the ternary form.

Table 13: 'L'Ouïe' form

Bars	Section	
1-12	A	Opening – introduces the listener to the theme of the static orchestra against the interrupting clarinet.
13-43	B	The soloist plays fragments of melodies, which lead to an extended, cadenza-like solo.
44-62	A	Static orchestral chords mirror the opening and end the movement.

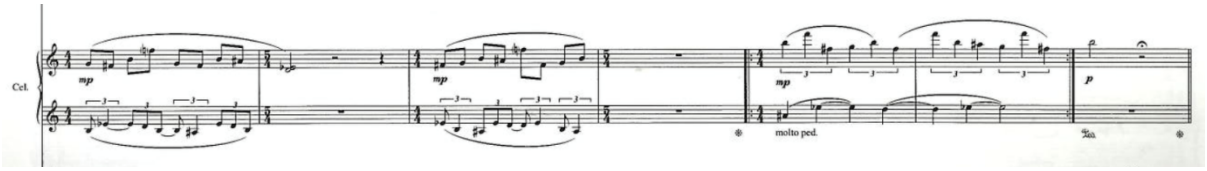
There is a sense of resolution created through the finally complete clarinet phrase in the middle section, as well as through the, rather circular, return to the introductory ideas by the orchestra in the final A section. This compositional approach creates contrasts through the differing timbres and roles of the clarinet and the orchestra, as well as the contradictory nature of movement through elongated phrases, and the static nature of the repetitive orchestral chords.

Melodies which are repeated and extended are not limited to the clarinet, but also played by the celesta and horn. The opening bars, which create the breath of the orchestra, consist of alternating string and woodwind held notes – the percussion continues through both, but the celesta and harp join the strings. However, these two instruments are the only to have any sense of movement during these fragments, as can be observed in the first two bars, as seen below.



Excerpt 55 Bars 1 and 2 of La Ouïe

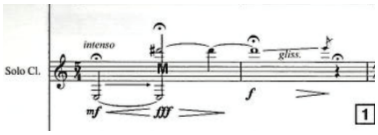
With every orchestral chord, the celesta and harp continue to provide movement, albeit quietly, so as not to distract the listener from the overall effect of stillness that is created. It is not until the penultimate two bars that the celesta finally turns this soloistic episode into a full phrase, which is heard clearly, with accompanying held notes from only the percussion, harp, first violin, and double basses.



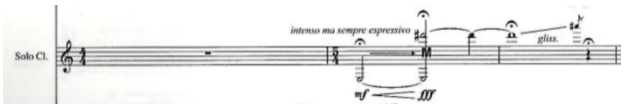
Excerpt 56: Celesta, Bars 56 – 62 'L'Ouïe'.

These bars are to be repeated *ad libitum,* at the conductor's discretion, with strings holding their notes, rather than repeating them. The melodic treatment in the clarinet, celesta and harp lines is very similar – however the clarinet does remain in the foreground throughout, and the fragmented celesta and harp lines are more of a background idea, until they are fully showcased towards the end of the movement. The use of triple against duple time adds to the sense of timelessness in the music – there is a lack of strong pulse – and the accompaniment remains static, with some soloistic movement, as the ending of '*L'Ouïe'* almost remains stranded in time.

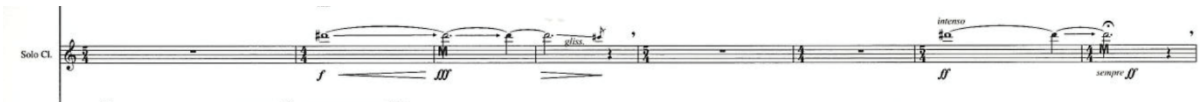
The solo clarinet is treated in a similar way to the celesta, with two multiphonic, and two glissando interruptions between bars 11 and 34, which can be seen below.



Excerpt 57: Bar 11



Bars 18-19



Excerpt 58
Bars 23-30

These are the only times in which the soloist interjects between the held orchestral chords, creating some amount of timbral, dynamic, and metric opposition. It is not until bar 35 that the clarinet plays through phrases which are more like a notated cadenza, which seems a nod to a traditional concerto form, taking place towards the end of the first movement. This nine-bar exploitation of the clarinet is rhythmically complex, with an aural lack of metre or tonality, and makes full use of a large range and plethora of extended techniques, all whilst being accompanied by a held chord of E, E quarter flat, and D by the lower strings.

This first movement was perhaps one of the easier movements to evoke extra-musical inspirations, as hearing is the primary sense used by an audience member during a concert. Saariaho's translation of this into '*L'Ouïe'* is created through the opposition of several things:

Table 14: Opposition in 'L'Ouïe'

Movement	Interjections	Pulse	Orchestra	Extended techniques
Stasis	Phrases	Lack of pulse	Soloist	'Normal' notes

As well as this, the clarinettist is hidden during this movement, which forces the audience members to focus more on the sounds of the clarinet, than the aesthetic impact they would provide. After the still and dream-like ending of '*L'Ouïe',* the listener is quickly transported to the 'mobile landscape' of '*La Vue'.*[157] However, in the third movement, evocations of '*L'Ouïe*' begin.

'*L'Odorat',* like '*L'Ouïe',* is in ternary form, with a similar tempo and clock-time duration, at seven minutes. The phrases and motifs are reminiscent of those in the cadenza-type phrases in the first movement, and imitation plays a role in repeating these notable melodies.

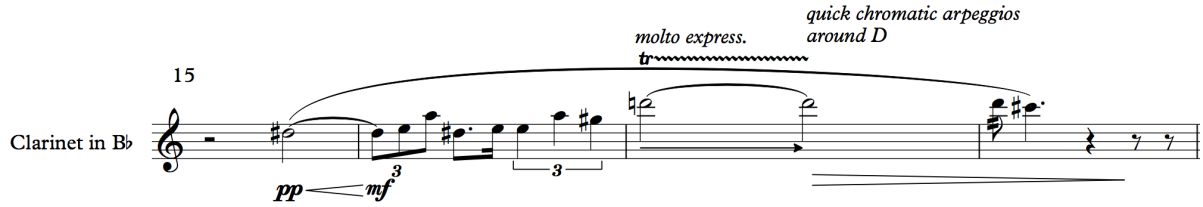
[157] Kaija Saariaho, *D'OM LE VRAI SENS,* Programme note.

Table 15: L'Odorat form

Bars	Section	
1-29	A	Dreamlike, ethereal exploitation of melodies used in movements I and II.
30-65	B	The climax, contrasting section of '*L'Odorat'*, with the range, dynamic, and speed at their greatest in the movement.
66-83	A'	A return to repetition of earlier ideas, with the clarinet taking a more melodic approach, but in a way which is more intense, which offers some sense of resolution through evolution.

The complementary pairing of these two movements is due to their large-scale settings, as well as the melodies used. In a similar way to *Puro* and Lindberg's Clarinet Concerto, melodies are created through development of originally fragmented, incomplete ideas. This does not only take place within specific movements, but across them, too, as is the case in '*L'Odorat*' and '*L'Ouïe'.*

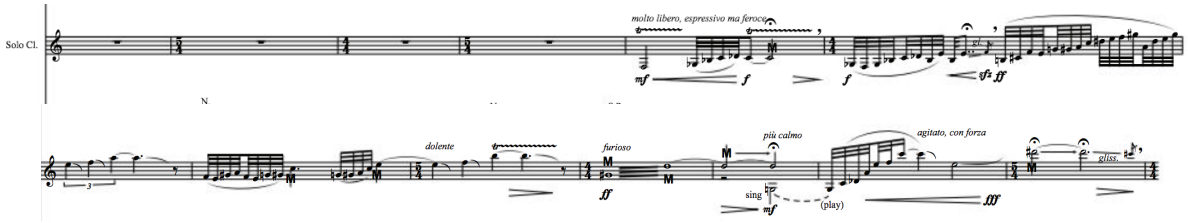
As discussed earlier, the first interjectory phrases played by the solo clarinet in the first movement are based on the glissando and multiphonics, before moving onto the full exploration of these at bar 34. The third movement again uses these extended techniques to form full phrases, with the addition of a technique Saariaho refers to as 'quick chromatic arpeggios' – where the clarinettist improvises fast demisemiquaver harmonics on a given note – which can be argued to stem from the multiphonic cell, due to the upper harmonics being driven to and explored in both uses. As will also be noticed, both movements use pitch centres based upon the clarinet D sharp (or concert C sharp).



Excerpt 59

First Clarinet phrase in 'L'Odorat' at bar 15

This opening phrase in '*L'Odorat*' is manipulated throughout the movement, as it is extended and the technicality increases through faster and more complex ideas, which stem from the 'notated cadenza' in '*L'Ouïe'* (shown below).

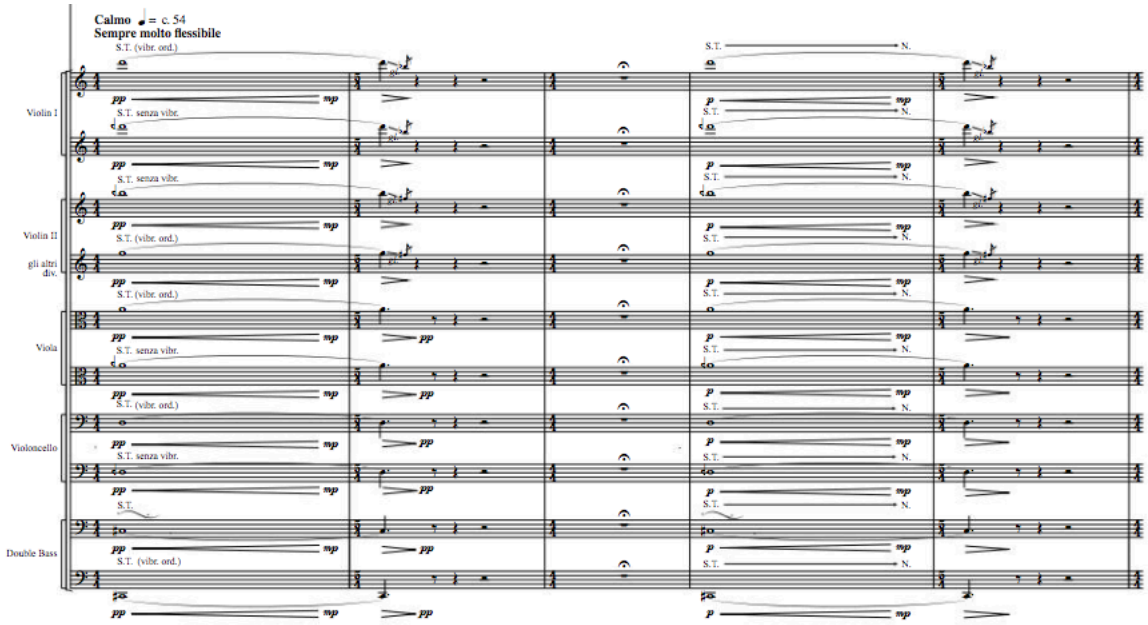


Excerpt 60

Solo Clarinet, Bars 31 – 44

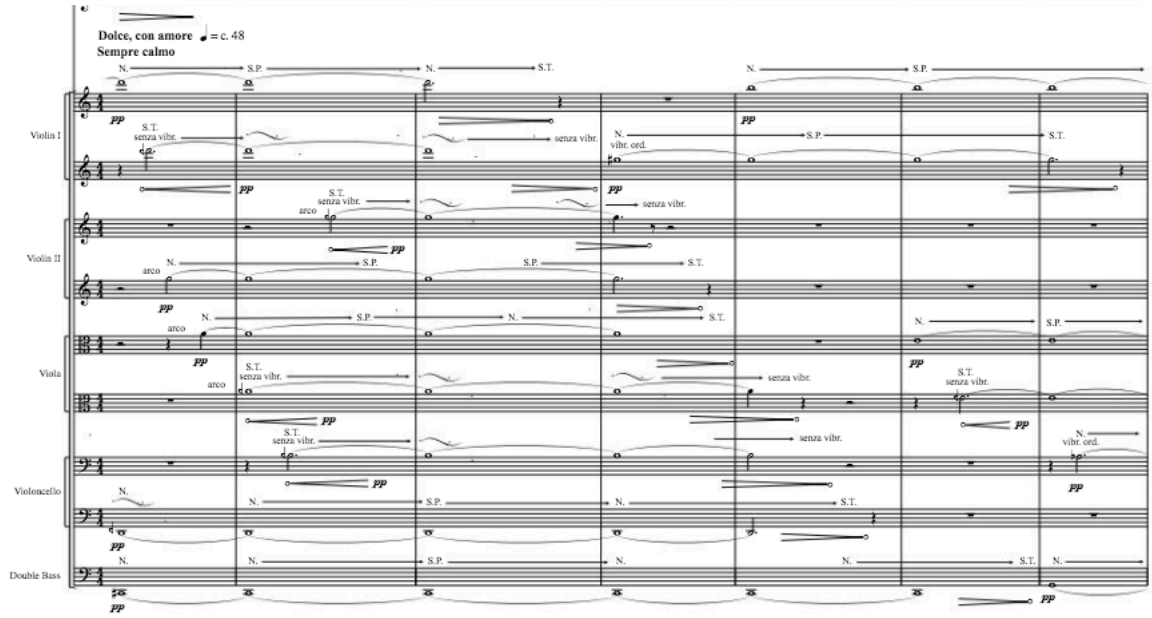
The opening phrase follows a similar shape to bars 35 and 36 of '*L'Ouïe'*, with a trill leading up to a rising figure which leads to a second, longer, trill. As the third movement progresses, the melodies continue to be reminiscent of the opening movement.

However, a majority of the aural similarities between the two movements seem to stem from the writing for orchestra and the background string sonorities, which support the clarinet's foreground melodic material with a mass of sound.



Excerpt 61

Movement I, Bars 1 - 5



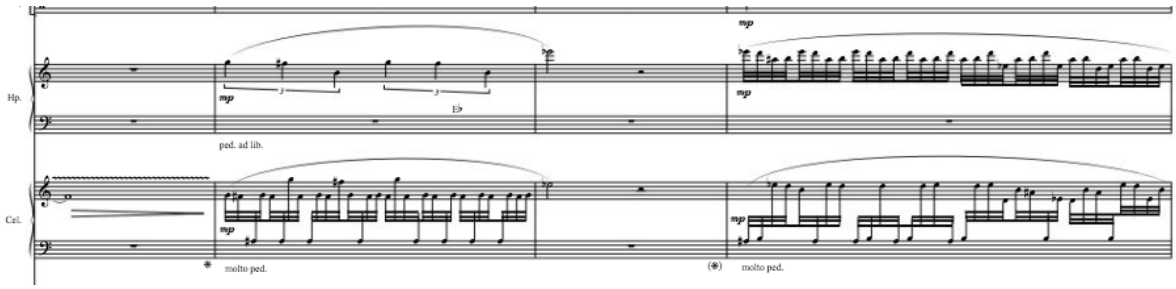
Excerpt 62

Movement 3, Bars 7

In both the movements, the underlying string sonorities are an ongoing feature. However, in the first, they are repeatedly stopped for the clarinet's interjectory phrases (of which the first takes

place at bar 3), and in the third, they are continuous and somewhat blurred through the use of wide vibrato and syncopated entries. Despite this, they are aurally incredibly similar – both for the unifying background function they provide – and as they cover many of the same pitches.

It is not only the writing for strings which is similar, but also the use of harp and celesta – which were the only instruments to provide movement during static string moments in '*L'Ouïe'* – that can be compared.



Excerpt 63

Celesta and Harp, Movement III, from bar 47

Although there isn't much melodic comparison between the two, it is the timbral implications of the combination of these instruments, over static string harmonies, which create similar sound-worlds between '*L'Ouïe'* and '*L'Odorat'.*

'La Vue' and '*Le Toucher'*

This second movement, '*La Vue',* is much shorter than the previous, with performances taking around 3' 30", as well as using a tempo of crotchet=104 – almost double that of '*L'Öuie'.* True to the name of the movement, the audience will also see the soloist for the first time, as the performer slowly moves out from their hiding place onto the stage, followed by a spotlight. With more aesthetic information comes more aural information, in the case of '*La Vue',* and the

clarinettist takes a lead role in performing a true melodic exploration, using a technique based upon variation.[158]

In this movement, it can be suggested that the soloistic nature of the clarinettist is truly revealed, and the fast, technically-challenging, passages combined with the visual setting of '*La Vue',* create an aesthetic representation of the tapestry.

Figure 9: La Vue tapestry

'La Vue', as seen above, shows the unicorn resting its front legs on the lady's lap, as they make eye contact. It is the only tapestry in the series in which the lady and the unicorn are both in the

[158] More information on this, as well as its relation to Heininen, can be found on pages 2 and 6.

foreground, as well as interacting to this extent. Saariaho wrote that 'the clarinet – itself a unicorn – plays only some of its music in the soloist's position. This appropriation of space became an inherent element of the work at the composition stage.'[159] It may be possible that the flamboyant and melodic treatment of material by the solo clarinet in Saariaho's '*La Vue',* whilst the orchestra provides a strong and complimentary accompaniment, is a direct representation of how the lady and the unicorn are represented and visually interact during the corresponding tapestry, as the virgin 'tames' the wild unicorn.

'Le Toucher' is the fourth movement, and contrasts with the previous in its setting with a fast tempo and short duration. It is in binary form, with two clear and distinct sections, which create some amount of opposition through pulse, clarinet range, melody, and orchestration.

Table 16: Le Toucher structure

Section	Bars	
A	1- 97	High pitched clarinet, with a strong sense of beat provided by ostinati in the percussion.
B	98- 178	Less of a clear pulse, with sporadic percussion accompaniment, with a more virtuosic line from the clarinet which is imitated by other instruments.

Saariaho's programme note includes a description for '*Le Toucher*' which is comparatively longer than the others, despite it being somewhat shorter than a majority of the movements. She wrote:

> 'In *Touch,* the soloist arouses each instrumental section in turn from the pulseless, slightly dreamy state of the previous movement. This is the concerto's liveliest movement, and the most virtuosic in the traditional sense, and the clarinet and orchestra engage in a dialogical relationship.' [160]

[159] Kaija Saariaho, *D'OM LE VRAI SENS,* Programme note.
[160] Saariaho, *D'OM LE VRAI SENS,* programme note.

With this description, as well as an aural understanding of the piece, it can be suggested that in '*Le Toucher',* Saariaho uses timbre as her way of defining the sense, as well as creating duality.[161] The use of differing instrumental groupings creates opposition through changes in the sound world, as the orchestra responds to the clarinet's solo line. Each group is brought in in turn, with the sections slowly building as the movement goes on, to create what is almost a layering effect – with each new group, it becomes easier to hear the underlying phrases, due to them being introduced previously and acting as known material.

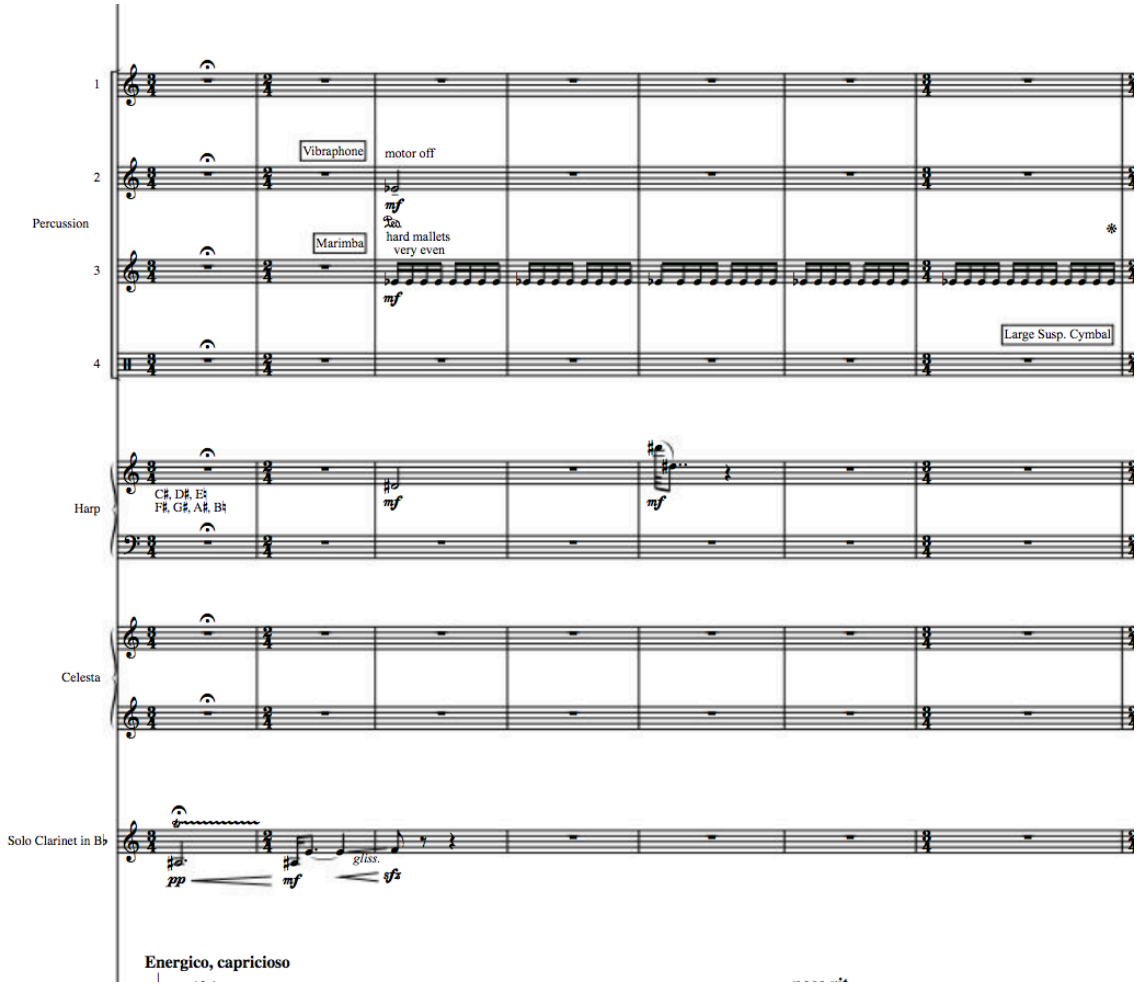
Table 17: Le Toucher instrumental structure

Clarinet and percussion	Clarinet, percussion, and woodwind	Clarinet, percussion, woodwind, and brass	Clarinet, percussion, woodwind, brass, and strings
1 – 31	32 – 46	47 – 118	119 - 178

To begin the movement, the soloist plays a fast, tongued melody, based around semiquavers. The percussion joins, with a marimba providing some imitation and continuation of the clarinet's phrases, with the two working together in a melodically complementary fashion, with the changes in timbre prevalent, as the rest of the orchestra is *tacet*. A quaver pulse is clear and well-defined, due to the repeated semiquaver notes.

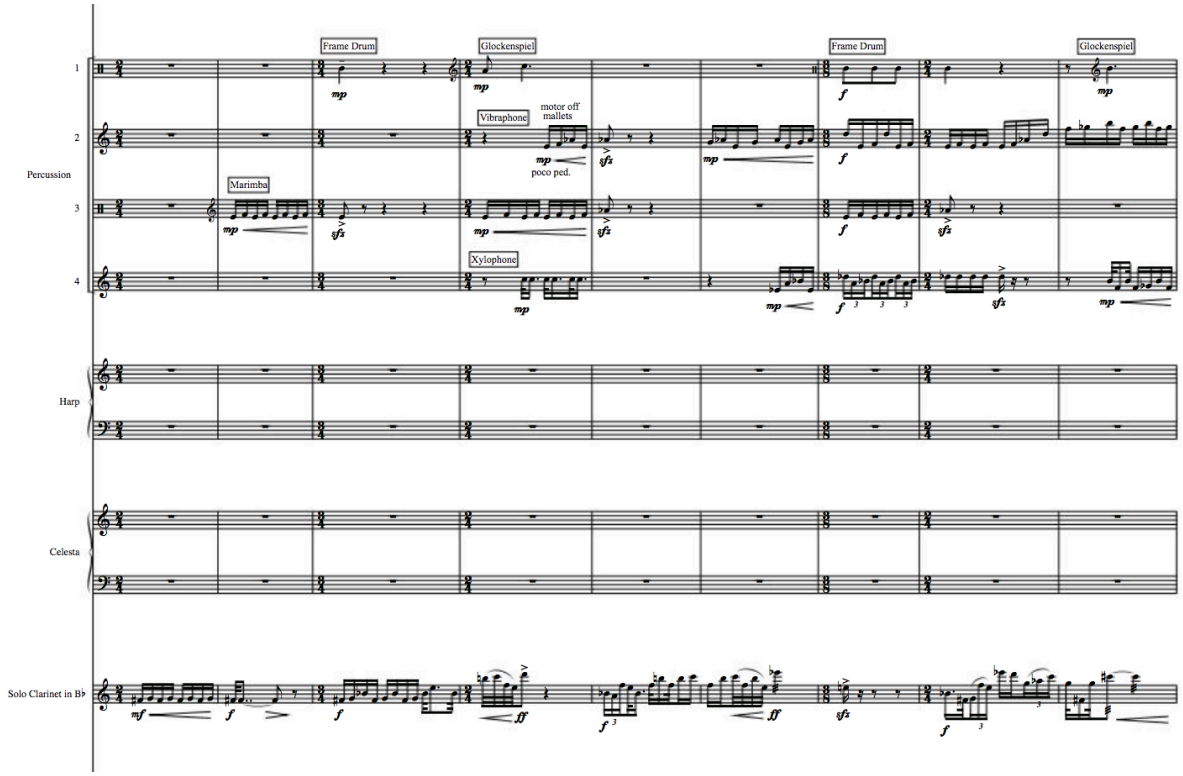
The similarities between '*La Vue'* and '*Le Toucher*' exist due to techniques surrounding: melody; timbre; instrumentation; and complementary writing between the soloist and the orchestra. One of the most aurally striking relationships between the two movements is the prominence of percussion instruments, which complement fast and technically-challenging clarinet phrases.

[161] Saariaho's treatment of timbre is rather specific and unique to her, and this is discussed in more depth on pages 91-94.



Excerpt 64

'La Vue', bars 1 - 7



Excerpt 65

'Le Toucher', Bars 1 - 7

As can be seen from the two excerpts, the quick tempi (crotchet = 104 and 120, respectively) are clearly shown through the use of foreground percussion, with particular aural prominence from semiquaver marimba fragments. These serve the purpose of metric drive – with each interjection from the marimba, the listener's attention is focused on the timbrally sharp repeated notes (reinforced by the use of hard mallets) which carry the work forwards to each new clarinet entry. The percussion instruments seek to work in a complementary fashion with the short clarinet phrases, which also creates an amount of timbral opposition. This particular foreground use of these instruments with the solo clarinet continues in this way throughout both movements.

The next technique to discuss is the use of known melodic materials played by the solo clarinet, and how that affects the listener's understanding of the formal structures, as well as the relationship between the two movements.

As Saariaho wrote: '*Sight* opens up a more mobile landscape in which the orchestra gets into position behind the solo instrument to develop the musical motifs this supplies.'[162] It is of importance to note that Saariaho refers to the solo instrument lines as 'develop[ing]', rather than using a word such as varying, which suggests that the melodic lines undergo some amount of transformation, rather than being a succinct collection of variations. Because of this, it cannot be said that '*La Vue*' is a specific type of variation form, but rather, it is based upon it, again returning to ideas surrounding developing variation. Various cells are developed during the movement, through the process of elongation, pitch, and rhythmic alterations. As a result, it may be more fitting to refer to each occurrence of these changing phrases as 'explorations'.

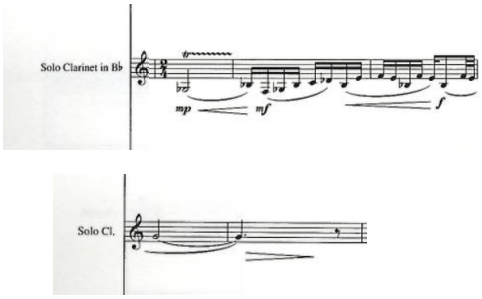
There are seven explorations which occur before closing statements begin at bar 129, into the third movement, '*L'Odorat*', which is played attacca. The first clarinet idea played during the opening three bars, reproduced below, goes on to form a part of each of these explorations, in some way.

Excerpt 66

Bar 1 of 'La Vue'

Rather than rhythmic or strict pitch use of this, it is the extended techniques used: trills and glissandi, as well as the general shape of an ascending (in range and dynamic), which are conveyed in the future explorations. The following phrase, seen here at bars 8-12, is also used in the explorations, particularly in its use of virtuosic ascending semiquaver and triplet ideas.

[162] Saariaho, *D'OM LE VRAI SENS,* Programme note.



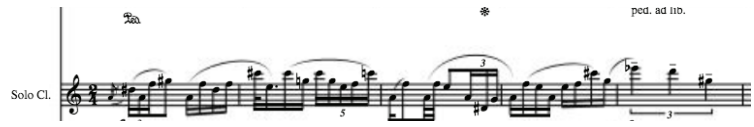
Excerpt 67

Bars 8-12 of 'La Vue', solo clarinet

This phrase, just like the opening idea, begins on a trill, before the line ascends in both pitch and dynamic, as well as the same opening note. This process of development continues in much the same way throughout the movement, with explorations happening at the following times:

Exploration	Opening Ideas	1	2	3	4	5	6	7	Transitionary
Bar	1-17	18	30	44	58	75	92	104	118 - 152

Although the soloist and orchestra work together in a complementary fashion, there is very much a sense of melody and accompaniment, with the two forces taking turns in their responses to one another, and resulting in complementary opposition – a theme also prevalent in Lindberg's Clarinet Concerto.

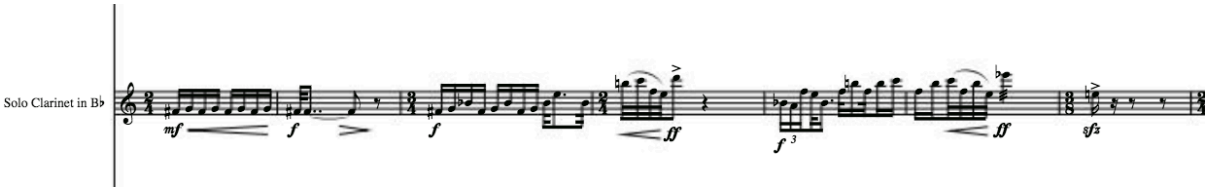


Excerpt 68

Bar 71, 'La Vue'

Comparing the melodies which begin at bar 71 in '*La Vue*' and bar 3 in '*Le Toucher*' unveils several similarities. Both ultimately work upwards in pitch to lead to a climax when the high E

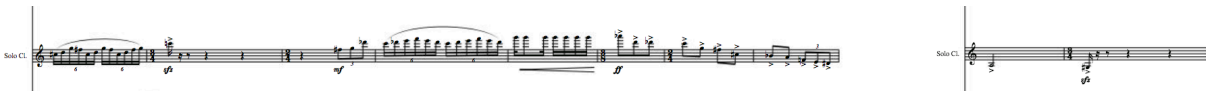
flat is reached (showing some amount of similarity in the use of pitch centres), and both use comparable melodic shapes, including the use of semiquaver triadic patterns.



Excerpt 69

Bar 1, 'Le Toucher'

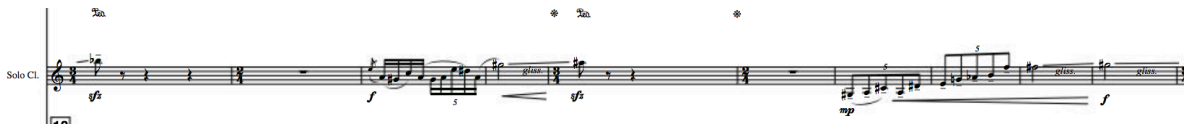
Many of the melodies used also focus on similar rhythmic patterns which begin and end on the same pitches, with this compositional technique being prevalent throughout both the movements. For example, the triplet idea at bar 57 is a climactic moment during '*Le Toucher',* but it can be argued that it is almost an inversion of an idea seen at bar 108 in '*La Vue'.* Both work from a G sharp/A flat towards the same note, separated by one or two octaves, in a rhythmically or metrically complex fashion, and cover the same notes – G sharp, C sharp, G and F. This phrase is also highlighted aurally very well due to the expressions that are placed on the



Excerpt 70

'Le Toucher' from bar 52

notes – accents in '*Le Toucher*' and tenutos in '*La Vue'.*



Excerpt 71

'La Vue' from bar 104

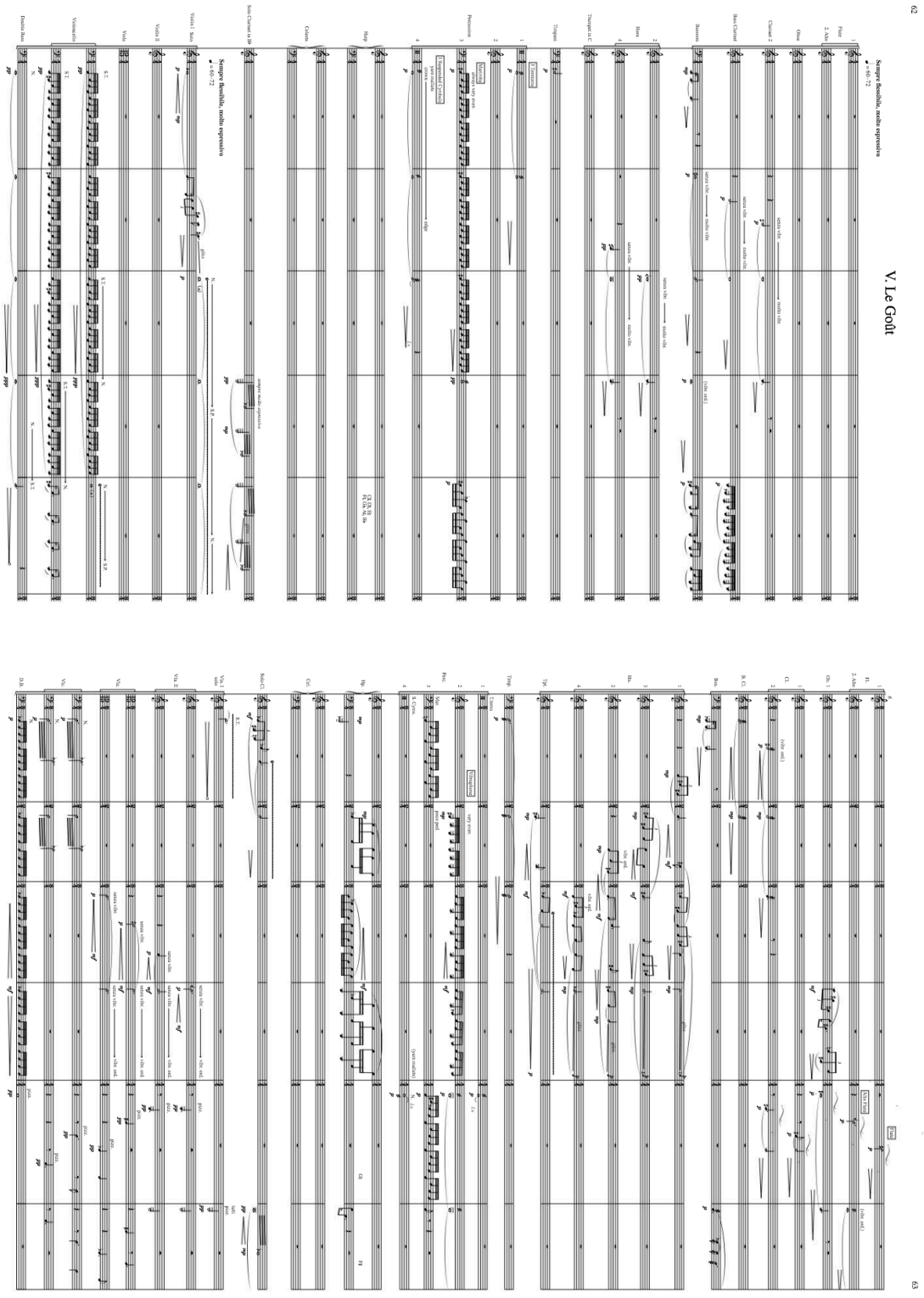
'Le Goût' and '*A mon seul Désir'*

'Le Goût' is the penultimate movement of the work, and acts slightly differently to the previous four, as some amount of preparation has to be done to take the listener into '*A mon seul Désir',* which incorporates compositional traits used throughout. Aesthetically, the clarinet is now in full view, and playing in front of the orchestra, again with a spotlight and on a podium if 'necessary'.[163] This seems to mimic the tapestry, with the unicorn standing in the foreground on its hind legs, with his head facing the viewer, and the other subjects in the tapestry looking straight at him.

Figure 10: A mon seul Désir tapestry

[163] Saariaho, *D'OM LE VRAI SENS,* programme note.

The tapestry suggests that the unicorn is the main focus, with the others taking a reduced role, and creating some amount of duality between the two forces. This idea seems to be conveyed in Saariaho's representation. Saariaho writes that the soloist 'serves' the sound of extended techniques to the orchestra, which suggests that this movement is perhaps more focused and defined through the sounds of the clarinettist, with the orchestra taking more of an accompanimental role. This results in some amount of timbral opposition which ensues between the two. The way in which she has used these clarinet techniques suggests a type of variation form, as also seen in *'La Vue',* with melodies contributing to a sense of complementary opposition – with these phrases ultimately derived from the same source, but used in a way which suggests contrast.

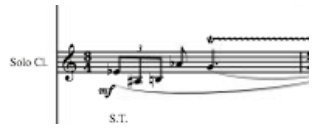


Excerpt 72: 'Le Goût' timbral opposition

As can be seen from this excerpt, the clarinet phrase is imitated and extended by other members of the orchestra – namely the winds and upper strings. The complementary nature of these is created through the use of materials undergoing an amount of developing variation, but

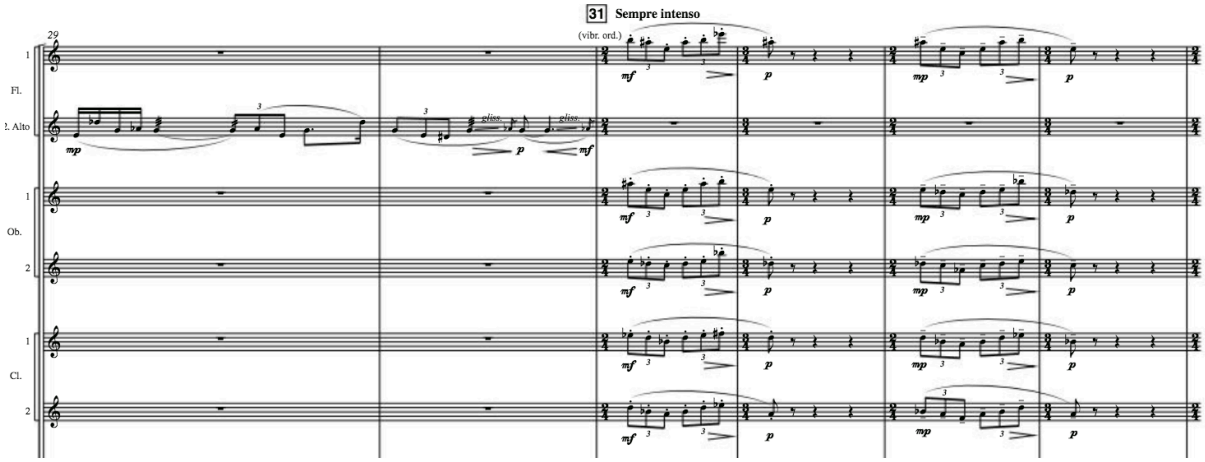
opposition ensues due to the timbral qualities of several layers of phrases, making them harder to aurally discern.

The developing variation in '*Le Goût*' stems from the triplet figure the solo clarinet plays in bar 6.



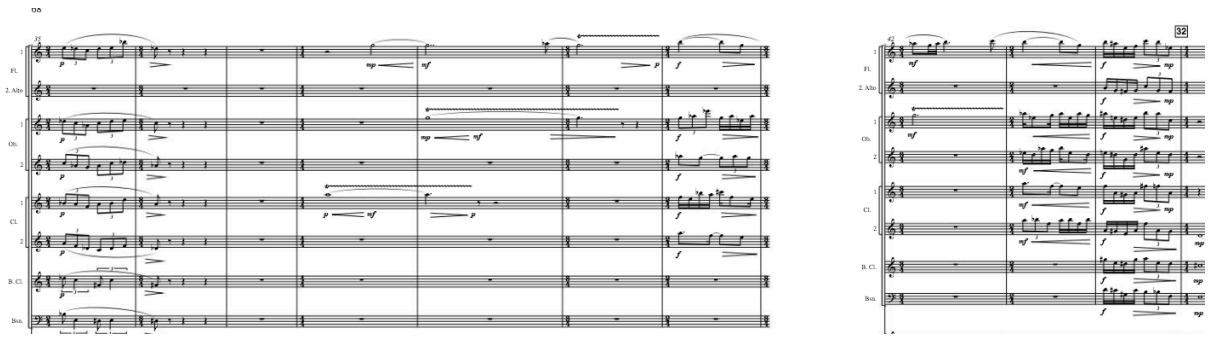
Excerpt 73: triplet figure

This is what is extended in the imitation shown on page 106, and makes up a large amount of the orchestral dialogue. It is used in an opposing manner, with instruments entering at different times, to create timbral opposition, as is seen in bars 6 – 10. However, at bar 31 the wind section suddenly unifies after a variation played by the alto flute between bars 29 and 30.



Excerpt 74: Rhythmic unison in 'Le Goût'

From this moment onwards, there is unity within the orchestral writing, and the triplet fragments continue and mutate between bars 41 and 44, to a phrase which is 10 beats in length – considerably longer than the initial cell it was derived from. This use of dialogue between the clarinet and orchestra, with opposition now turning into resolution, begins to prepare the listener for the final movement.

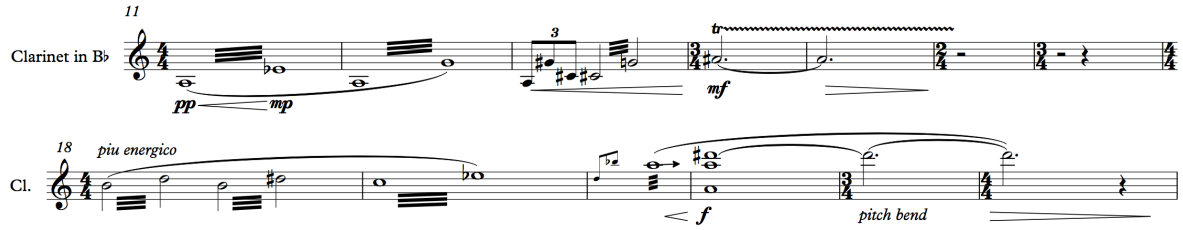


Excerpt 75: Dialogue in 'Le Goût'

As well as this sense of resolution, the listener is also prepared for the final movement through the complementary melodic pairing of the movements. This is created through extended techniques. In '*A mon seul Désir'*, a majority of the phrases played by the soloist are based upon, or solely consist of, these techniques – leading on neatly from Saariaho's statement that the previous movement is based upon the clarinettist 'serving' these to the orchestra.[164]

Extended techniques are used throughout *D'OM LE VRAI SENS,* and these are: glissandi; tremolos; multiphonics; harmonics; vibrato and pitch bending; and fluttertongue. A contemporary clarinet player would be expected to play a majority of these well, and Kari Kriikku is particularly well-known for his excellent execution of these.[165] It is of importance to note that these also appear in *Puro* and Lindberg's Clarinet Concerto. In fact, '*Le Goût*' is reminiscent, at times, of the 'chain trill' section discussed earlier in *Puro.*[166]

[164] Saariaho, *D'OM LE VRAI SENS,* programme note.
[165] Dunn and Kriikku, *Upbeat,* 27th October 2015.
[166] See excerpt 25.



Excerpt 76

Solo Clarinet, 'Le Goût', Bars 11 - 23

As can be seen above, the use of tremolos and trills by the solo clarinet, across whole phrases is something which was exploited in Tiensuu's *Puro.*

The final movement of *D'OM LE VRAI SENS* incorporates compositional techniques used throughout the concerto, one the one hand to create resolution, but on the other, to truly define what the work has revolved around. Saariaho wrote 'The end of a work is always the last change to discover its quintessence. I often approach it by stripping the music down to its most 'ascetic' elements. Here, too.'[167] This nod in the programme note to something which is rather strict, disciplined, and is not indulgent, to create a higher level of spirituality, suggests that the musical ideas the composer used in '*A mon seul Désir'* are in their most basic form

This description begs the question: what *are* the most 'ascetic' elements of *D'OM LE VRAI SENS*? There is a possibility that ideas which have manifested throughout the piece have culminated in this movement, as the listener finally discovers and hears the 'quintessence' of the concerto.

Formally, the movement does use an unassuming structure, taking place in two parts to utilise binary form, with bars 1-34 as part A, and 35-54 as part B. It is a possibility that by using this established form, Saariaho aimed to clearly show she used traditional forms throughout the concerto – with binary perhaps one of the simplest to identify. The first section is rather stark, timbrally, as the clarinet explores slow-paced multiphonic phrases, which use both glissandi,

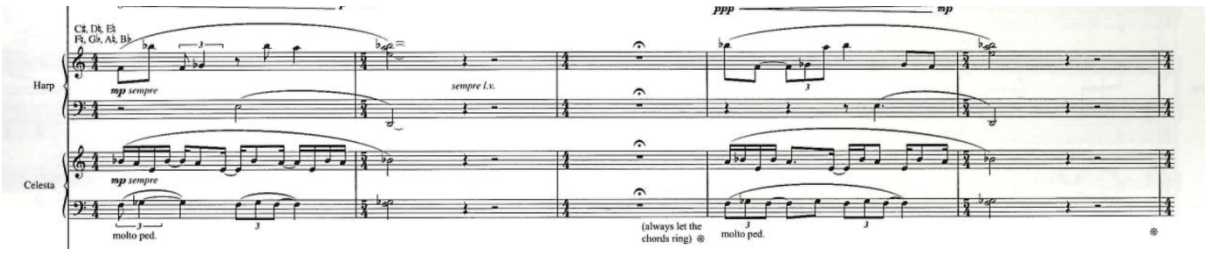
[167] Saariaho, *D'OM LE VRAI SENS,* Programme note.

tremolos, and pitch bending. The soloist is accompanied by groups of instruments in turn: either strings; woodwind; or percussion, with these instruments replicating, in a non-soloistic fashion, phrases which the clarinet has played. Here, all eyes – and ears – are on the clarinettist. The use of the clarinet as the only solo instrument during this movement is true to Saariaho's word, with the one necessity of a concerto being an isolated player. This leaves us with the first 'ascetic' element of *D'OM LE VRAI SENS:* the clarinet.

For the final twelve bars of the work, the soloist is asked to 'improvise with the given elements; enharmonic and normal trills, chromatic arpeggios, different vibratos, very high uncontrolled tremolos, teeth on the reed. End the phrases always with a small moaning glissando.'[168] This suggests the second element which is vital to the concerto: clarinet technicality through use of extended technique, as well as being linked to the duality between 'improvised' and 'controlled' in *Aile du songe* as discussed by Howell.[169]

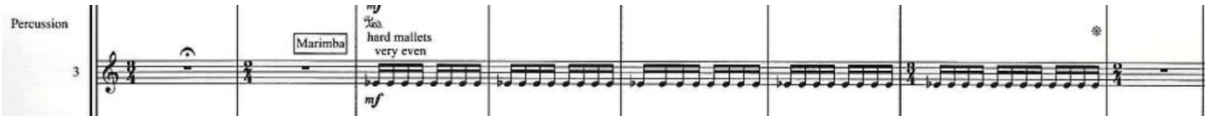
There are two instruments which play continuously throughout the final movement – the celesta and the double bass. The double bass holds a C sharp, to create some opposition against the constant quaver pulse of *piano* D's in the celesta, which keeps a beat through the alternating $\frac{5}{4}$ and $\frac{4}{4}$ metres.[170] The use of a pulse created through a percussive instrument is another factor which should be considered – in each movement, there is at least one point at which at least one percussion instrument accompanies the work with some form of rhythmically-driven ostinato or phrase. In the final movement, the use of a repeated quaver note clearly shows the use of this technique in its simplest form, making continuity created through a sense of percussive beat the third element which is vital to *D'OM LE VRAI SENS.*

[168] Saariaho, *D'OM LE VRAI SENS.* (Score).
[169] Howell, *After Sibelius,* 217.
[170] The harmonic implications of this are discussed on page 128.



Excerpt 77

Bars 1 – 5 of 'L'Ouïe', repeated rhythmic ideas from the celesta and harp.

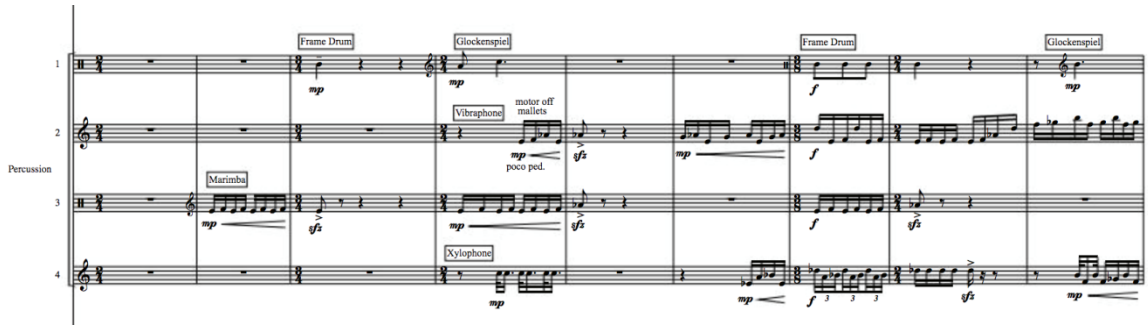


Excerpt 78

Bars 1 - 8 of 'La Vue', with semiquavers played by the marimba

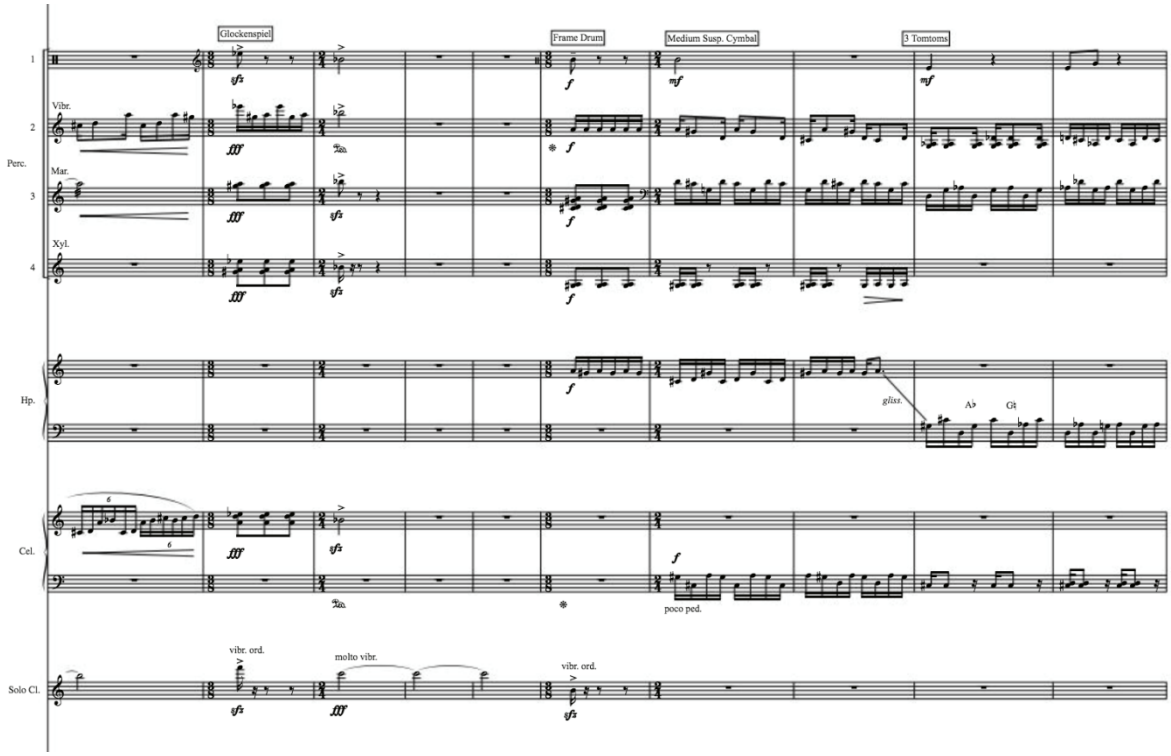
Excerpt 79

Bars 1- 3 of 'L'Odorat' with semiquavers played by the tom-toms



Excerpt 80

Opening of 'Le Toucher', where the full percussion section works constructively to interact with the clarinet, before bar 25, where the section creates a strong and driven beat as the clarinet ends its phrase (below).



Of course, the issue of duality during '*A mon seul Désir*' is ongoing and ever-present, just as it has been throughout the work. Here, oppositions are created on every level, and these can be summarised below.

Table 18: Duality in 'A mon seul Désir'

Clarinet	Timelessness	Standard Instrumental Technique	Melody	Virtuosity	Aesthetic Information	Strings	Pitch Centre
Orchestra	Pulse	Extended Technique	Accompaniment	Simplicity	Aural Information	Woodwind	Atonality

It can be noted that these techniques are the same as the ones listed during the introductory information on *D'OM LE VRAI SENS,* as well as ideas which are discussed in relation to certain movements.[171] Some, however, are constant in their use, such as the contrast between aesthetic

[171] See page 128.

and aural information, standard and extended instrumental technique, and clarinet against orchestra – although this can be in one or many of the following ways: melodic; timbral; aesthetic; and rhythmic.

III: A New Pitch

How Continuity is Achieved Through Pitch Organisation

In Saariaho's article titled *Timbre and Harmony: Interpolations of timbral structures,* she wrote of the importance of tonality in defining forms.

> 'In exploring the development of form I have found my attention naturally drawn to the significance of dynamism and stasis. Amongst familiar organizational models concerning pitch the tonal system is, in my own experience, the most effective means of using harmony to construct and control dynamic musical forms. This is illustrated by numerous large-scale, substantial formal structures which emerged during the age of tonal music. It would be difficult to find as dynamic a conception of form amongst other approaches. I think, however, that using tonal functions in such a way is definitely a thing of the past.'[172]

There is a distinct a lack of functional tonality in all the works discussed during *Reinterpreting the Concerto.* This results in some amount of difficulty for any composer, as tonality is traditionally used to create structure and form in music. Kevin Mooney wrote that:

> '[tonality] gives rise, moreover, to abstract relations that control melodic motion and harmonic succession over long expanses of musical time. In its power to form musical goals and regulate the progress of the music towards these moments of arrival, tonality has become, in Western culture, the principal musical means with which to manage expectation and structural desire. It is thus understood to be essential to modern Western music; it determines the coordination of harmony with melody, metre with

[172] Kaija Saariaho, *Timbre and Harmony,* 94.

> phrasing, and texture with register, thus encompassing – within its historical domain – the whole of music.'[173]

This ability of tonality to control not only musical time, but the structures surrounding this, means that composers who write atonal music need to find other means to create forms: it has been discussed how soloistic continuity and thematic ideas are used in the works discussed, but a closer look at continuity through pitch is also relevant to this study. In Tiensuu's *Puro,* this is achieved through the overtone series, in Lindberg's Clarinet Concerto through pitch centres and the allusion to C, and in Saariaho's *D'OM LE VRAI SENS* through pitch centres, too. All three composers have a diverse approach towards pitch organisation, as well as an astute ability to blend ideas stemming from both tonal and atonal practises.

[173] Kevin Mooney, *The New Grove Dictionary of Music and Musicians, Volume 25* (Oxford: Oxford University Press, 2001), s.v. "Harmony", 584.

IIIa: A Brief Introduction to Spectral Synthesis

Tiensuu's *Puro* uses a collection of notes throughout which are derived from the overtone series on the clarinet's E – the lowest note on the instrument. There are some associations created with this treatment of pitches and spectralism, with *The New Grove Dictionary of Music and Musicians* defining spectralism as 'Music composed… which uses the acoustic properties of sound itself (or sound spectra) as the basis of its compositional material.'[174] It then goes on to describe a specific technique described as one of the 'most influential' – first used in Grisey's *Périodes* (1974) – where the ending chord is derived from a spectrogram analysis of the trombone's low E 'so that the timbre of the trombone is artificially re-synthesized by the rest of the ensemble'.[175] Grisey developed the term 'instrumental synthesis' to describe this.

Robert Hasegawa wrote a journal article titled 'Gérard Grisey and the 'Nature' of Harmony', which attempted to analyse Grisey's 'artificial' spectralist techniques in relation to nature and natural sounds.[176] Within this, he described this method as one which 'mimics the electronic music technique of additive synthesis, but replaces pure sine tones with the complex sounds of real instruments.'[177] He describes how a spectrogram of the trombone E in *Périodes* can identify frequencies within the note which are more prominent, with many of these being the upper tones – and how it is these which Grisey uses. The relation of this to the composition of *Puro* is uncanny – a large proportion of this work is based upon this series, which ensures a continuity through pitch. Tiensuu is cunning in his use of this method, as he is able to both create continuity *and* discontinuity, by using range and timbre as a way of altering the listener's perception of the tones used. This is not unsurprising, as Tiensuu spent time studying and working at IRCAM, where these techniques were developed by his teachers, Grisey and Murail, in the mid-to-late 1970s.

---

[174] Julian Anderson, *The New Grove Dictionary of Music and Musicians, Volume 24* (Oxford: Oxford University Press, 2001), s.v. "Spectral music", 166.
[175] Ibid.
[176] Robert Hasegawa, "Gérard Grisey and the 'Nature' of Harmony," *Music Analysis* 28, no. 2/3(2009): 349-371.
[177] Ibid, 350-51.

Instrumental synthesis is derived from additive synthesis, and Joshua Fineberg describes this additive process in his article, 'Guide to the Basic Concepts and Techniques of Spectral Music' in *Contemporary Music Review*.[178] He wrote:

> 'In this technique, the simplest possible sonic components are used: sine waves… whose spectra contain only the frequencies of their oscillation… This property makes them both an ideal medium into which to decompose sounds and an ideal unit from which to build them. Fourier's Theorem states that any periodic sound can be decomposed into a number of sine waves (in some cases, however, this may not be a finite quantity) and also provides the corollary that the combination of these elementary units can rebuild the original sound.'[179]

Essentially, the original sine wave exists as the *fundamental* – that is, the note from which the spectrum is derived. This can be viewed as the following:[180]

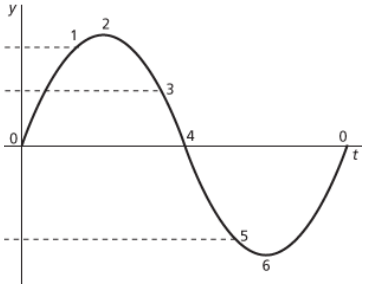


Figure 11: Sine wave

However, a pure sine wave does not exist naturally in nature – these can only be produced by computer technology. Instead, pitches played by instruments naturally have *overtones,* which contribute to tone colour. These overtones are derived from the frequency (measured in Hz) of

[178] Joshua Fineberg, "Guide to the Basic Concepts and Techniques of Spectral Music," Contemporary Music Review 19, no. 2 (2000): 81-113.
[179] Ibid, 84.
[180] Diagram taken from A Dictionary of Physics, "Simple Harmonic Motion," *Oxford Reference,* accessed Mar 22, 2019, http://www.oxfordreference.com/view/10.1093/acref/9780198821472.001.0001/acref-9780198821472-e-2782#.

the original wave, and occur at each whole-number times the original frequency (*f*), so that 1 times *f* is the fundamental, 2 times *f* is the first overtone, 3 times *f* is the second overtone, and so on. As can be seen below, these overtones are each half and one third of the wavelength of the original fundamental.

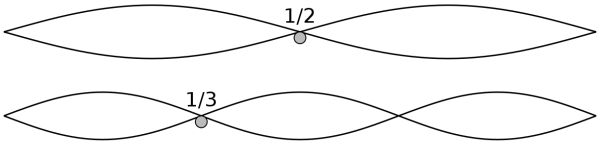


Figure 12: Overtones

This continues, physically indefinitely, but at a certain point, the human ear will no longer hear the upper notes. The diatonic scale is based on the overtone series, with the lower overtones being further apart, and not using microtones.[181] However, further up the overtone series, the pitches become closer together, and microtones are present. The technique employed by spectral composers uses this concept of the overtone series, and readily delves into the upper parts of this, to explore microtonality. Instrumental synthesis takes the concept of additive synthesis and applies it to an instrument, or the orchestra (for orchestral synthesis), where notes are played which aim to recreate the original spectrum of the note.

Saariaho, too, employs certain spectralist techniques in *D'OM LE VRAI SENS,* as well as many of her other works, of which also utilise the overtone series as a ground for pitch and harmonic arrangement. For her, spectral harmony is inexplicably linked with timbre, and led her to publish her 'timbral axis' in 1991, as seen below.[182]

[181] The information relating to overtones and the clarinet, as well as their use within diatonic scales, was presented by the author in a physics presentation. 'Overtones and the Clarinet, An Experiment', 2013.
[182] Jean-Baptiste Barrière ed., *Le timbre: métaphore pour la composition* (Paris: C. Bourgois, 1991), 415, quoted in Damien Pousset, "The Works of Kaija Saariaho, Phillippe Hurel and Marc-André Dalbavie," *Contemporary Music Review* 19, no.3 (2000): 83.

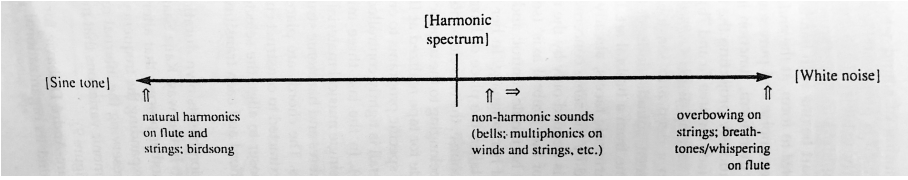


Figure 13: Saariaho's 'timbral axis'

As Damien Pousset wrote: 'this concept allowed the creation of dialectic poles in the very materiality of the sonic phenomenon: between 'sine waves' and 'white noise', between 'clear sounds' and 'noisy' ones. Finally, this concept induces a bipolar conception of timbre.'[183] As well as this, Saariaho has written works based on spectrograms of notes and instrumental synthesis, most notably in *Amers* (1992), a cello concerto produced at IRCAM, where the soloist's E flat becomes a landmark for the work, and reoccurs throughout. Despite this, in more recent times Saariaho seems to have moved away from electronic composition and spectralism, but her grounding in these techniques still exist, as do her associations with timbre.

Puro and *D'OM LE VRAI SENS* do not confine themselves either to a tonal or atonal framework – a typical result of spectralist methods, as described by Hasegawa. 'Instrumental synthesis creates a musical effect which is neither atonal nor tonal in the traditional sense - rather, we can best understand this music as exhibiting an extended tonality based on the upper overtones of the harmonic series.'[184]

[183] Pousset, "The Works of Kaija Saariaho, Phillippe Hurel and Marc-André Dalbavie", 82.
[184] Hasegawa, "Gérard Grisey and the 'Nature' of Harmony," 370.

IIIb: *Puro*

Puro uses a collection of twenty notes derived from the clarinet's low E. With these, all but five of the twelve tones are used– it is only B flat, B, C, G, and G sharp which are omitted. Tiensuu is not strict with his use of the series, too, with these notes occurring throughout the work. The continuity through pitch in *Puro* is mainly underlying, and will only be uncovered using analysis – to be able to hear and identify the series and its relation to the work would be almost unfeasible. The main way in which this is audibly identifiable is through the use of the actual note upon which the series is based – used most prominently in the introduction, with all notes derived from the series in the first 20 bars, as well as before, during, and after the cadenza, by the soloist.

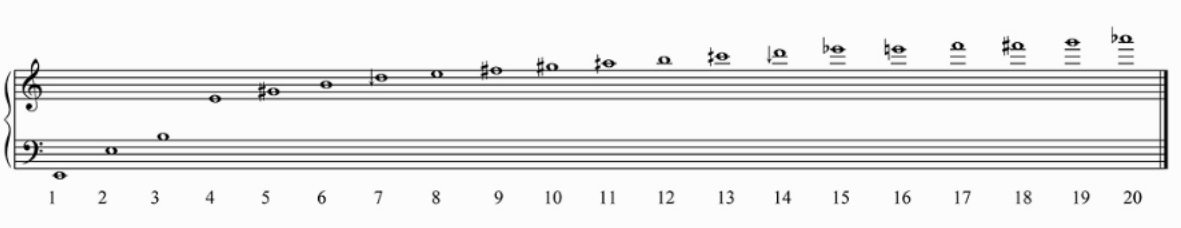
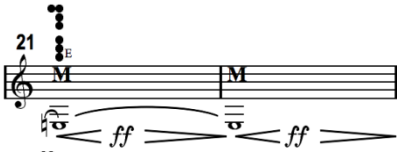


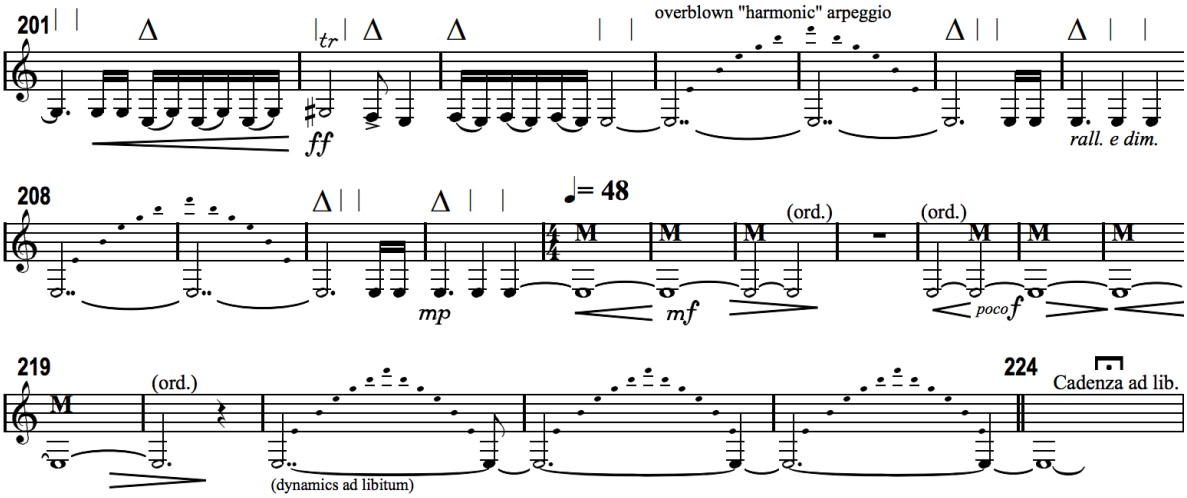
Figure 14, Raasakka's overtone series on concert D[185]



E multiphonic played by the solo clarinet at bar 21

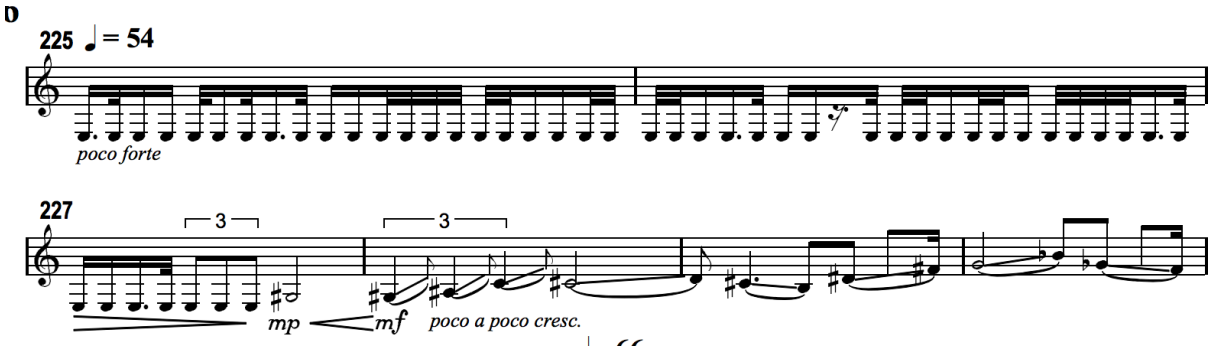
Excerpt 81

[185] Raasakka, *Exploring the Clarinet,* 144.



Transition into the solo clarinet cadenza from bar 201

Excerpt 63



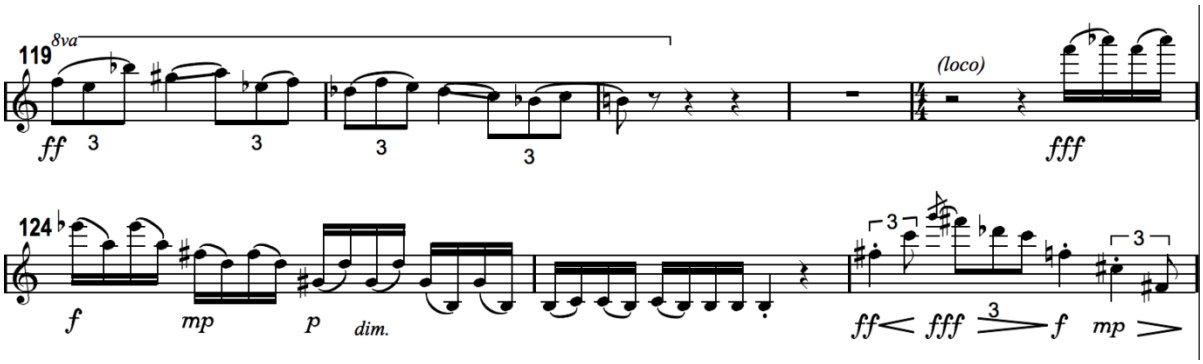
Excerpt 82

The bars immediately following the soloist's cadenza from bar 225

Due to this note only being used at specific points – albeit at important ones – during *Puro,* the audible continuity is limited to those episodes. It is only at these points that the clarinet actually plays the E, with the solo and orchestral lines avoiding the pitch throughout the rest of the work, acting more as an 'assumed' rather than absolute pitch centre. This method does, therefore, actually contribute to a sense of aural discontinuity, due to the constant shifting

to different collections of notes within the series. Perhaps it would be more apt to suggest that the pitch centre contributes to the overall perceived continuity of *Puro,* whereas the series itself is more of an underlying feature. This feature is related to the idea that unity is created through the harmonic spectrum, where any number of notes can be used in any order, but continuity is still created through the overriding harmonic structure of the fundamental. A majority of the harmonies in *Puro* are based purely on the overtone series, to create what Kriikku refers to as a 'giant clarinet',[186] and the tones used do align with the most prominent frequencies on the clarinet's E – which is the spectral idea of orchestral synthesis.

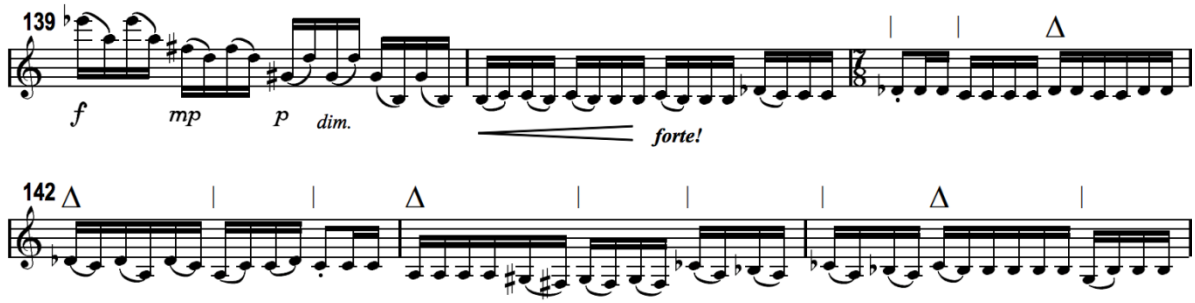
Conceivably then, it is not the series itself which creates the content, but a set of specific pitch classes within this which creates a unified timbre through orchestral synthesis. Within the piece, he is able to construct endless tonal – and atonal – sonorities, although none used are functional. It can be suggested that the parts at which the excluded notes are used are during moments of uncertainty – for example, in the clarinet line during opening phrases of new melodies. In fact, every entry made by the clarinet (with the exception of the introductory section), makes use of these additional notes in a way which seems to draw attention to their use. Here, at bar 60, the soloist repeatedly moves onto an G at their first entry, before reaching some sense of resolution, when they move to G quarter sharp, note number 11 in the series.



Excerpt 83: Puro from bars 119-126

Again, here at bar 119, G sharp, B and A sharp are used, before the B1 section ensues, which ends the semiquaver phrase on a bar which again focuses on A sharp.

[186] Dunn and Kriikku, *Upbeat,* 27th October 2015.



Excerpt 84: Semiquaver phrase in Puro

The opening two bars of the main 7/8 section at bar 141 use notes which do not belong to the series, exclusively, with B, A sharp, and G. However, these bars alone are not what create the discontinuity in pitch, but it is their contrast to changing series of notes in the following bars. The pulse created by these phrases– which use pitches spanning from G to B – is what creates the uniformity, rather than series. These centres can be easily aurally identified by a listener, and with the fundamental of E acting almost as a tonic throughout *Puro,* heavy repetition of other notes acts as a clear way to suggest some movement away from this.

In Lauri Sallinen's analysis of *Puro,* he identifies a chord he named the X chord, which uses pitches which he describes as the prominent frequencies in the clarinet's E.[187] However, there do not seem to be any other recurring chords during the work despite Sallinen's 'X chord' – which is only used three times.

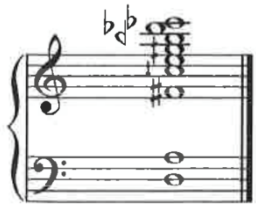
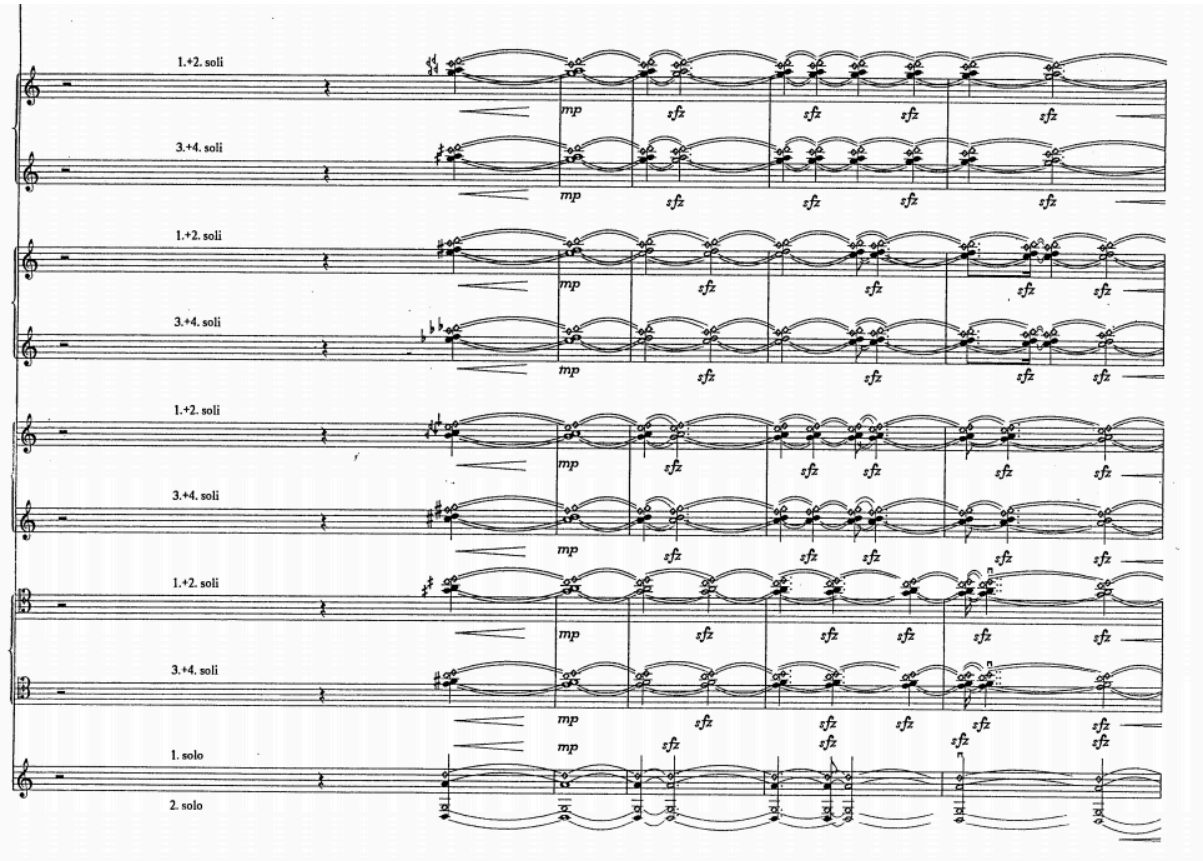


Figure 15: The 'X chord'

This chord is used from bars 27-33, 47-53, and 123. However, at each of these points the chord is in a completely different context, and the relevance of the pitches do not seem overly

[187] Sallinen, *Jukka Tiensuu: Puro for Clarinet and Orchestra, Formal and Harmonic Analysis*, 7-8.

important, with the exception of its use at 47-53, where the string section hold glassy harmonics to create a full chord – with the clarinet and the rest of the orchestra silent during the interlude.



Excerpt 85

Bars 47 - 53, Violins I, Violins II, Violas, Cello, Double Bass.

Both the orchestration and the formal arrangement of this statement add to its importance. Formally, it occurs during the orchestral interlude (mm. 34-60) after the clarinet's introductory phase, and acts as a response to the themes and ideas presented in the previous section, as well as a reaffirming of the significance of the overtone series. As far as orchestration is concerned, the use of the strings – the section that also arguably has the most similar timbre between instruments – allows for a smooth blend of the pitches used to create a complete chord, where uniformity within sound allows for the different tones to blend seamlessly. The use of harmonics, too, creates a softer sound, but also alludes to Hasegawa's idea that the upper pitches are of more importance. In the repetition of bars 47-53 at 245-252, the pitches have

been changed. Despite the changing contexts and arrangements of this chord, it can be seen that orchestral synthesis is used to recreate the clarinet's E on which *Puro* is based, which creates unity through background pitch organisation.

The use of the series is of interest to the analyst, but in actuality is aurally hard to identify. With such a large pool of pitches to choose from, Tiensuu instead has to use centres within the melody as a way to suggest tonal and harmonic change, with the atonal chords underneath acting more as a background idea to ensure a degree of uncertainty with the harmonic and tonal language of the work. There is certainly an element of competition and agreement in the harmonic and tonal aspects *Puro,* primarily between the constant use of the overtone series against prominent additional notes to the series. However, rather importantly, there is a sense of unification between the clarinet and orchestra. The use of the overtone series which the clarinet presents during the opening is reaffirmed and supported through orchestral harmonies throughout *Puro* – one only has to look at the opening 24 bars to see the support the first violin provides through the pedal E flat (partial 15).

IIIc: *D'OM LE VRAI SENS*

Saariaho is constantly tied to French spectralists: her time at IRCAM and her studies with Grisey are something which has undoubtedly been reflected in her compositional idiom. However, her use of spectralist techniques is nowhere near as strict as the French movement, or her contemporaries such as Tiensuu. It seems, rather, that she hopes to separate herself, to an extent, from these comparisons and this school of thinking. Vesa Kankaanpää wrote:

> 'Saariaho has never adopted the approaches of integral serialists and their version of form/content unification: for her, the expansion of serial organization to encompass musical parameters besides pitch leads to a pointless, musically meaningless organization: in her world, timbres have qualities that make them inherently dissonant or consonant. Yet while Saariaho wishes to distance herself from compositional procedures whose results are beyond perception, she regards herself as part of a tradition of parametric thinking: her music contains networks of simultaneous interpolation processes between musical parameters.'[188]

Her use of spectrogram analysis of particular pitches was much more approximate than spectral composers – she modified the results by removing certain intervals, as well as adjusting transcriptions and rounding microtones.[189] As Kankaanpää wrote, 'Her interest was not in the purity of methods or ideologies, but rather in the pursuit of techniques that allowed her to develop her own expressive language.'[190]. However, most spectral composers have been willing to employ similar techniques, concerning the rounding of microtones and removal of intervals. In order to transform a scientific method into something which becomes an art-form, the

[188] Vesa Kankaanpää, "Dichotomies, Relationships: Timbre and Harmony in Revolution," *Kaija Saariaho: Visions, Narratives, Dialogues,* 173-74.
[189] Ibid, 175.
[190] Ibid, 176.

technique becomes more of a compositional tool, which will inevitably be altered.[191] As Grisey said, 'Spectralism is not a system... it's an attitude. We consider sounds, not as dead objects that you can easily and arbitrarily permutate in all directions, but as though they were living objects which are born, live and die.'[192] What this quote suggests is that spectralism isn't necessarily a strict formula which can be followed, but a concept based on the idea that individual sounds are all made up of a collection of events, which undergo some amount of change as they proceed. What remains in Saariaho's music is a unique and personal reflection upon physical properties of sound, coupled with her methods concerning timbral structure. Because of this, to analyse her specific use of timbral harmony would be near impossible – Saariaho's treatment of this is something which is abstract.

As Saariaho has progressed through her compositional career, she seems to have moved further away from strict spectralism derived from electronic techniques. Of course, there is still some amount in her work – but by this point it is possibly forever engraved in her compositional language. However, what she does seem to use, is pitch centres in her work, and these are particularly prevalent in *D'OM LE VRAI SENS.* Below, an overview of the work can be seen, which is a reduction of aurally prominent pitch centres and chords throughout the concerto.

[191] I am grateful to Mark Hutchinson, who explained this technique within his feedback on my work.
[192] Gérard Grisey, *Ecrits ou l'invention de la musique spectrale,* (Paris: MF éditions, 2008): 265-6, quoted in Philip Singleton, "Spectralism Today: A survey of the consequences of the French spectral school of the 1970s and 1980s," (PhD thesis, University of Surrey, 2015), 9.

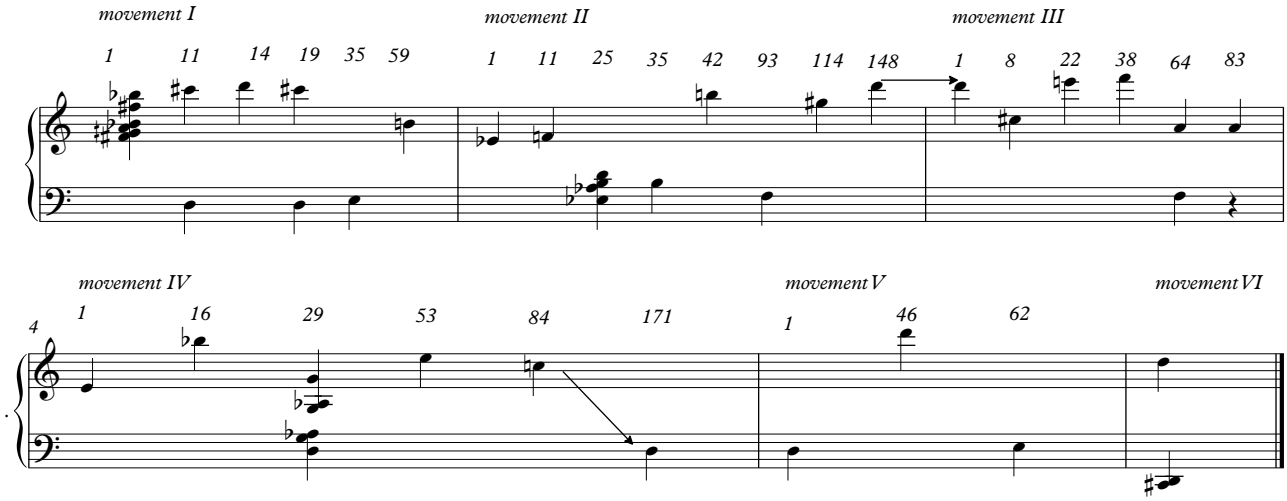
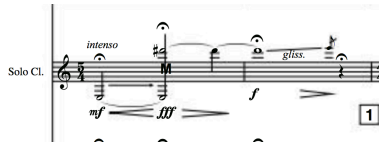


Figure 16: D'OM LE VRAI SENS, pitch reduction

One note which is recurrent throughout the work is the concert D– it is the first note played by the solo clarinet, at bar 11 of the first movement.



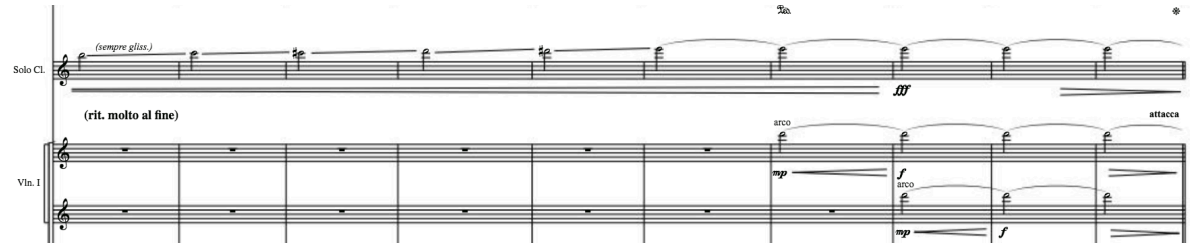
Excerpt 86

Bar 11, Movement I

This is the lowest note on the clarinet, which is well-known to be easily be manipulated by the player to extract the most stable overtones through multiphonics and harmonics.[193] It is also the note on which *Puro* is based. The first time it is used in *'L'Ouïe',* the soloist deliberately splits it into a multiphonic, and then into an upper harmonic – a great allusion to the use of the spectral techniques Saariaho so astutely uses. The highest concert pitch D a clarinet can play (without deliberately playing high harmonics) is used in the transitionary fragment from bar 148 of the

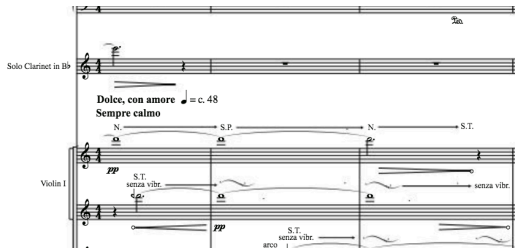
[193] This technique is explained in more detail on pages 152-156.

second movement, which is played, uninterrupted, into the third movement, linking the two over the *attacca*.



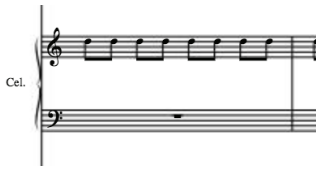
Excerpt 87

Ending of movement II, from bar 148



Excerpt 88, Beginning of movement III

At bar 84 of the fourth movement, a chromatic downwards progression begins in the solo clarinet line, which ultimately leads back down to this low D at bar 171, which becomes the pitch centre until the end of the concerto. In fact, during the sixth movement, the celesta plays quaver D's as a pedal note throughout.



Excerpt 89

The celesta pedal during movement VI

Saariaho's tripartite form in *D'OM LE VRAI SENS* is reaffirmed through the use of this note: the movement around the D is similar to the way in which the tonic is used in tonal music, where large-scale form can be derived from a movement away from, then back to, the tonic.

'L'Odorat'

'L'Odorat', the third movement of *D'OM LE VRAI SENS,* is referred to by Saariaho as 'colour music', with the composer associating the harmony with scent.[194] Saariaho uses several pitch centres, modes, and arrangements, to create the overall effect of a tonally ambiguous movement, but individual modes and pitch centres can be discovered during small fragments. As this is the movement which can be suggested to have harmony as the focal feature, it is of use to the analyst to use this movement as a case study, as such, to understand the composer's approach to harmony, tonality, and pitch. This neatly corresponds with Saariaho's statement that the harmony is 'too quick for thought',[195] as each time the soloist plays something which could be considered tonal, albeit dysfunctional, there is something to counter that brief moment in the orchestral harmonies, and tonal ambiguity is again restored. This use of uncertainty within harmony and pitch arrangement is something which can also be observed during *Puro* and Lindberg's Clarinet Concerto. What is left to deduce, within *'L'Odorat',* is exactly how Saariaho is able to manipulate harmonies and pitch arrangement to create dualities within this movement.

In order to examine the harmony in this movement, Saariaho's use of timbre must first be examined, as the two have long been linked in her work. As Pousset wrote:

> 'Doubtlessly, her desire to merge the timbral and harmonic facets, already present in *Vers le blanc*, could have been motivated by the same concern for a strict control of the elements, a control which is defined only by the rules of their coexistence. Kaija

[194] Saariaho, *D'OM LE VRAI SENS,* programme note.
[195] Ibid.

> Saariaho's creation of the 'timbral axis'[196] allowed this association of timbral and harmonic control: and thus became one of the main cohesive elements of her language. In her music, particularly with *Jardin secret I*, timbre has taken the place of harmony as the progressive element in the musical discourse: the two elements becoming confused one within the other and both belonging to the organic materiality of the sound.'[197]

Due to this, it makes sense to look firstly at the timbres created through orchestration and dynamic in '*L'Odorat',* and this can be done using a block-like system, as shown below.

[196] As shown earlier in figure 27.
[197] Pousset, "The Works of Kaija Saariaho, Phillippe Hurel and Marc-André Dalbavie", 84.

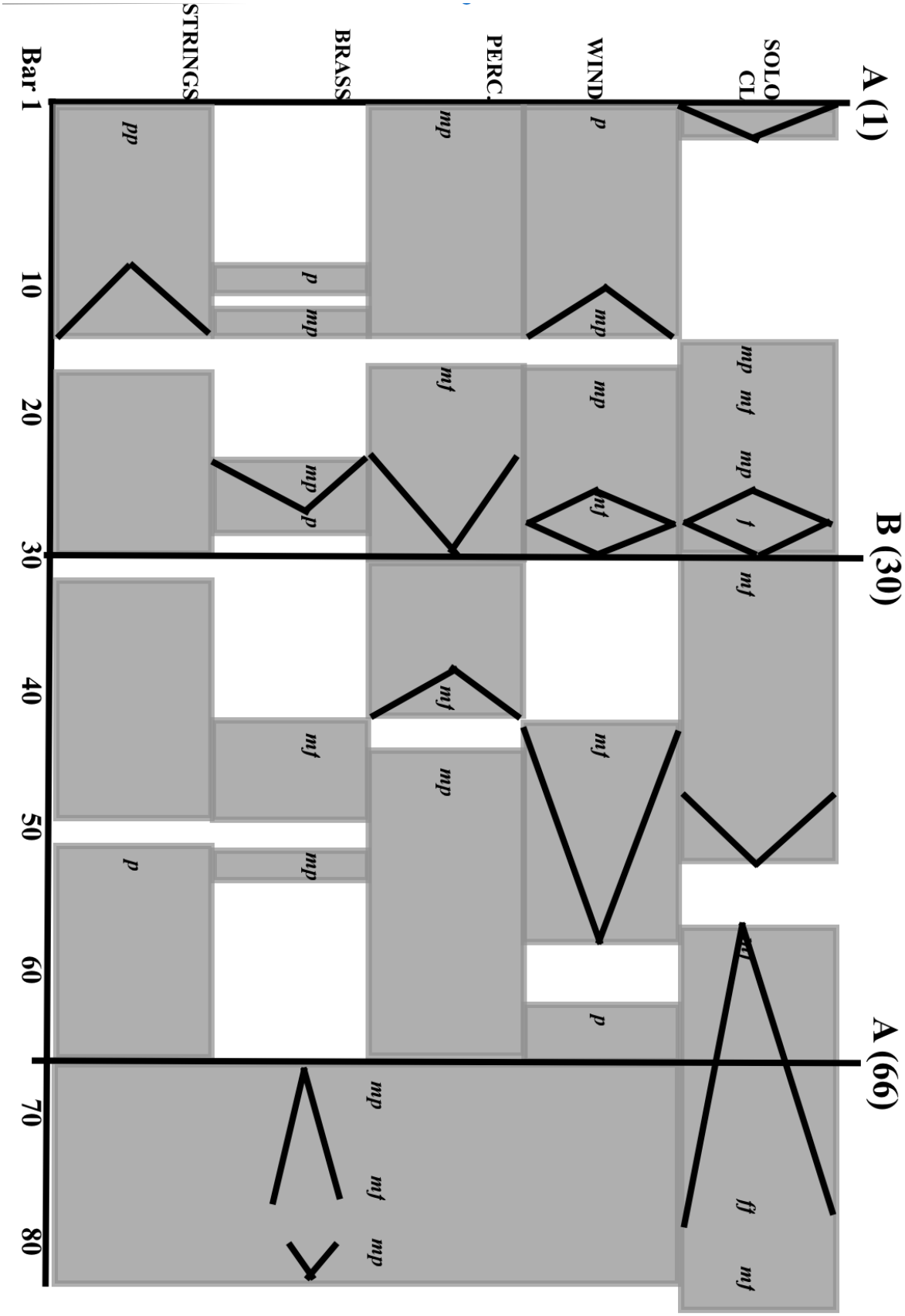


Figure 17

Dynamic and Orchestral Construction, 'L'Odorat'

From this, further reduced diagrams can be produced to show the dynamic shape of the movement in both the orchestral and soloist lines.

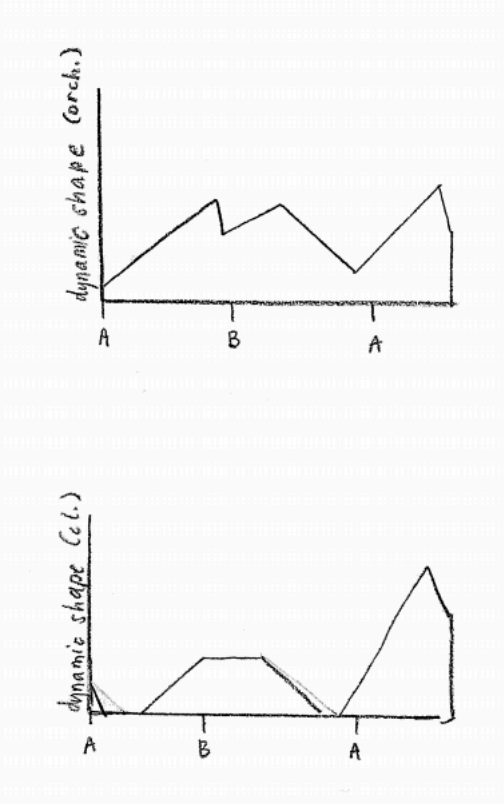


Figure 18: Dynamic shape of 'L'Odorat'

Several things can be deduced from these graphic representations.

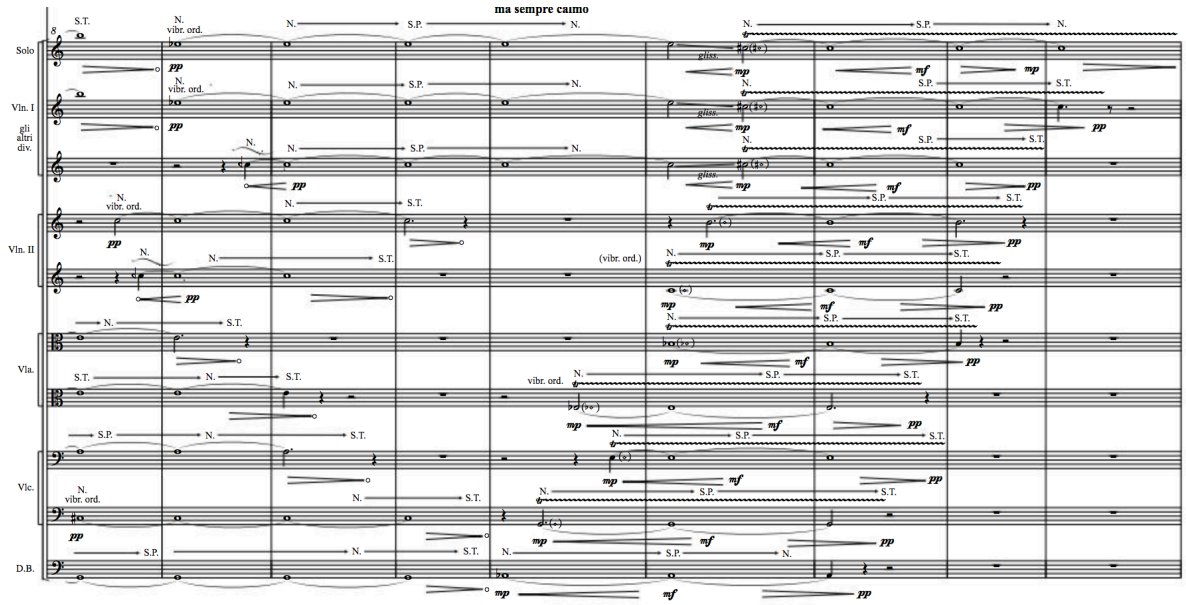
1. The dynamic of the soloist and orchestra seem to, on the whole, work together constructively.

2. The timbre of the strings section seems to be the most timbrally static – that is, it undergoes the least dynamic shaping, and stays the most constant.

3. Whilst the first A section seems to share the general dynamic movement, the instrumentation frequently changes. However, during the second A section, the full orchestra is now playing in the same dynamic shape.

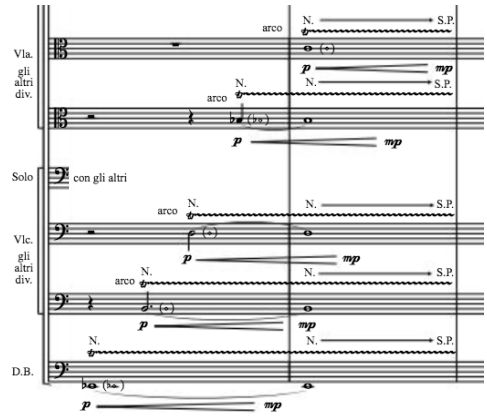
Because of these points, the static string sections should be analysed – they seem to make up almost the core of the movement. Although they are perhaps a more aurally background feature, they provide the foundations for '*L'Odorat'*.

Saariaho's links with spectralism are hard to uncover in '*L'Odorat'*, and it is near impossible to see how instrumental or additive synthesis is used. Extracting the lowest pitches of chords as fundamentals and running these through harmonic series calculators will not uncover any kind of overtone series which can be linked to the harmonies used, as these are often derived from complex timbres or particular instrumental playing extended techniques. However, what is clear is that during a majority of string chords during the movement, the notes are all separated into pairs of semitones spaced between tones – for example, the prime form of the chord at bar 13 is (01345689), and at bar 20 is (01245).



Excerpt 90

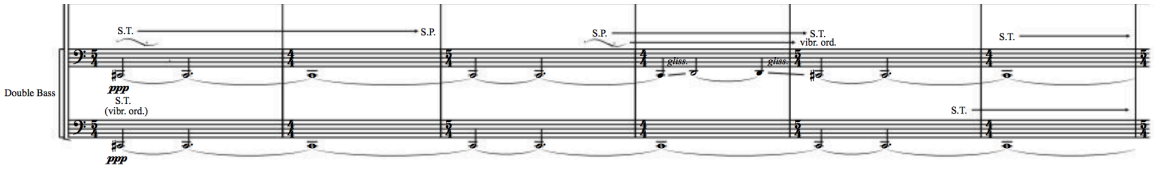
Strings section from bar 8 in 'L'Odorat'



Excerpt 91

Bars 19 and 20, 'L'Odorat'

It does not seem surprising that much of the soloist's line in this movement also uses the interval of a semitone frequently – the use of extended techniques such as trills, pitch bending, and chromatic arpeggios all work around this interval. Saariaho wrote that the ending of a work is often the time to 'discover its quintessence', and in the final movement, '*A mon Seul Desir',* there is an ongoing opposition between the drone C sharp played by two double basses, which is occasionally disrupted as one glissandos to a D and back again, as seen below.

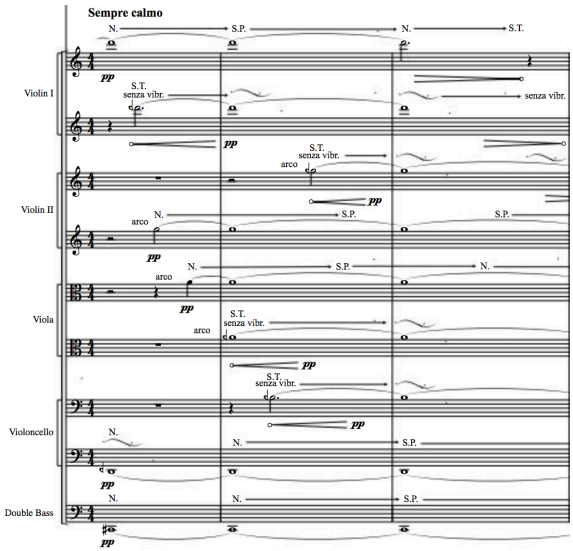


Excerpt 92

Bars 1-6 of Movement VI

The interval of a semitone and the blurred harmony this creates is vital to *D'OM LE VRAI SENS.*

As well as this, the opening two notes of the majority of clarinet phrases are separated by a semitone, too. In the first few bars of '*L'Odorat',* the intervals are even closer than semitones, and use quarter tones instead.

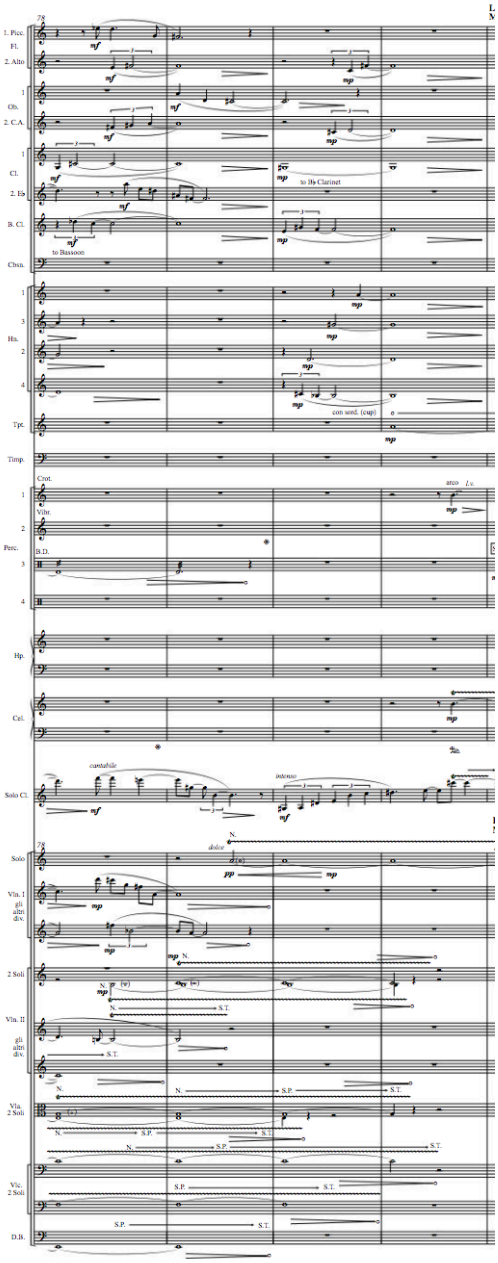


Excerpt 93, 'L'Odorat', bars 1-3

This treatment aligns neatly with Saariaho's 'dialectic poles' as described by Pousset.[198] Her use of timbre seems to have influenced the harmony – it seems as if the static writing for the violins was first inspired by the need for a general background sonority, that wasn't aurally well-defined. By stacking intervals which are incredibly close, intervallically, and parts fading in and out, as well as using pitch bending, glissandi, and wide vibrato, the individual notes become harder to recognise – returning to Saariaho's statement that the harmony is 'too quick for thought'.[199]

[198] Pousset, "The Works of Kaija Saariaho, Phillippe Hurel and Marc-André Dalbavie", 82.
[199] Saariaho, *D'OM LE VRAI SENS,* programme note.

The final A section of '*L'Odorat*' is of interest, as the return to previous material seems to provide some resolution, of sorts. The harmony, too, exhibits some amount of this.



Excerpt 94

Bars 78- 81 of 'L'Odorat'

It again seems that timbre has gone on to shape the harmony. As can be seen from the block diagram – figure 30 – the full orchestra is working collaboratively for the first time in the movement, and they create a texture where they form one background mass of sound. The only times that the static foundations are deviated from are during moments of brief imitation of the solo clarinet phrases by other wind instruments. This allows the clarinet to fully explore the themes which have been forming throughout the movement, and concerto.

The ending chord of the movement (mm. 82) where the orchestral accompaniment is at its most static, comprises the horns, woodwind and strings, together. The chord is played so softly, with horns muted, as to not allow for any note to be audibly isolated from the mass. Again, the harmony is atonal and ambiguous, with nine of the twelve notes covered.

However, there are moments in *D'OM LE VRAI SENS* that do seem to use some amount of instrumental and orchestral synthesis. Primarily, these take place before the clarinet plays a multiphonic on its E – an important pitch centre for the concerto, and an important note for the clarinet, as an instrument. A good example of this is during the first movement *'L'Ouïe'.* Here is the overtone series on this note (concert D).

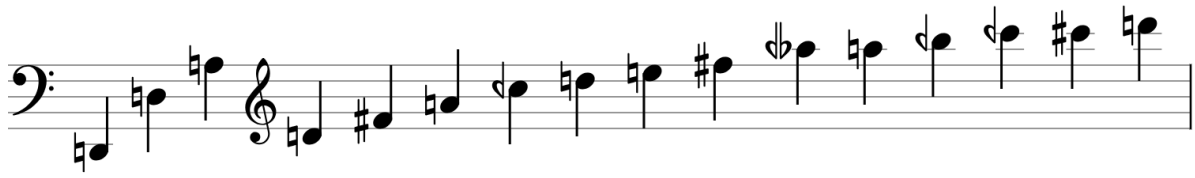
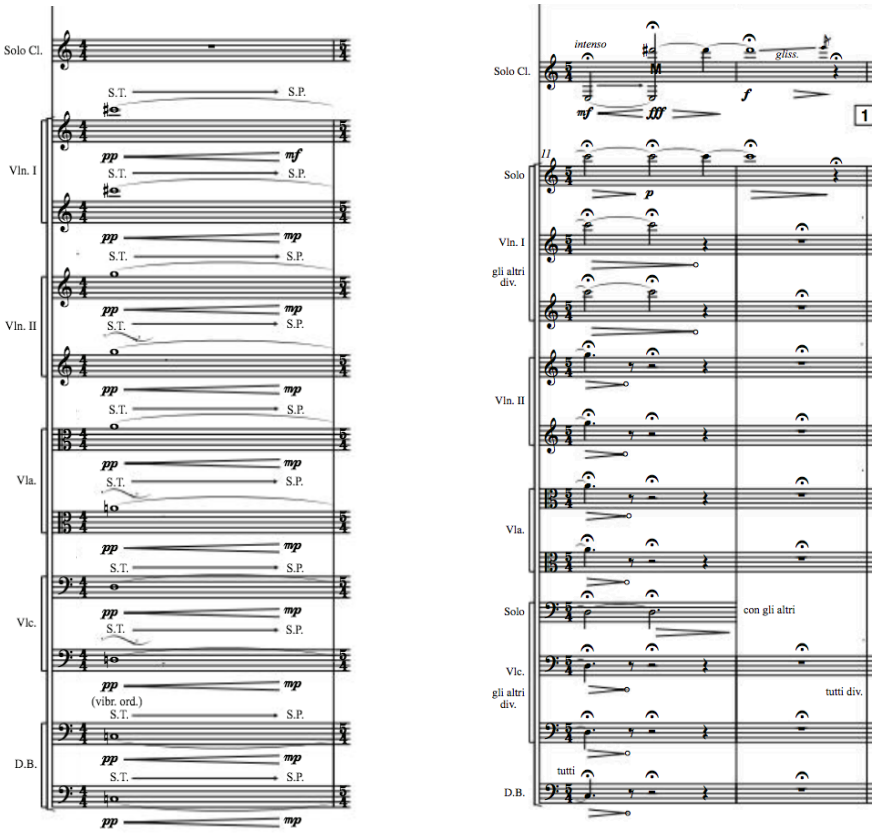


Figure 19

Overtone series on concert D2

At bar 11, the solo clarinet begins the concerto with this note, which is split into a multiphonic before remaining on one of the upper harmonics. The strings section has been holding the chord shown below since bar 10.



Excerpt 95

Bars 10 and 11 of 'L'Ouïe'

The first violins are already holding the note which the clarinet splits up to – the 14th harmonic – and the rest of the section plays notes that are all within a quarter tone of notes in the series, which seems purposeful. Saariaho is, after all, known to round microtones and remove certain intervals in her spectrogram use.[200] This technique also takes place at the beginning of the final movement, '*A mon seul Desir',* where the clarinet opens with a phrase crafted from multiphonics.

In *D'OM LE VRAI SENS,* continuity is achieved and tripartite structure is created through the use of prominent pitch centres. But more importantly, the use of timbre seems to have helped shape the harmony – particularly in *'L'Odorat',* where the harmony can be described as 'blurry', through the use of close intervallic relationships, particularly based around semitones. Spectralist use of orchestral synthesis is not strict, or as obvious as Tiensuu's use in *Puro,* but it does seem to be a technique which has helped create some amount of cohesion between the clarinet and orchestra.

[200] Kankaanpää, 'Dichotomies, Relationships', *Kaija Saariaho: Visions, Narratives, Dialogues,* 173-74.

IIId: Pitch and Harmonic Structures in Lindberg's Clarinet Concerto

'I'm deeply concerned with harmony, and yet it is the aspect of composition that is the most predetermined methodically.'[201]

Unlike Saariaho and Tiensuu's concerti, Lindberg does not explicitly reference spectral ideas. Instead, an overall sense of unity in the form of the work is created through the use of pitch centres and recurring chords. The key of C major is alluded to throughout, although it is not until the closing bars of the work where a full C major chord is clearly heard. Rather than a tonal piece, Lindberg's Clarinet Concerto seems to reference non-functional tonality within an atonal setting. There does seem to be a slight disagreement throughout the concerto between the clarinet and orchestra, harmonically. As was discussed earlier, the soloist plays through melodies which are derived from the opening pentatonic motif. However, the orchestra is somewhat more ambiguous in its approach to tonality, with a large number of atonal chords which are set against the clarinet's melodies.

Much of the harmonic planning is derived from the first 20 bars, where the clarinet plays through themes which are to be developed throughout the concerto. The opening phrases make use of the pentatonic scale, as well as highlighting the importance of the minor third relationship. The key of C major is alluded to throughout the work, but it is not until the closing bars of the piece that the full chord is finally heard, despite the clarinet confidently remaining on a held note of D. As well as this, the orchestral chord also contains an F sharp – played by the 4th horn, bassoons and the lower desks of the second violins. This tritone serves as a reminder of its importance as an interval throughout the concerto. The chord is a prime example of a tonal harmony within an atonal world – despite the tonality not being functional, it ends with a tonal chord embellished with two dissonant notes.

[201] Lindberg and Cody "Magnus Lindberg in Conversation," 38.

Tonal harmonies are prevalent within the work despite the fact they are often hidden in the score, as they are sometimes very aurally apparent to the ear. Further analysis surrounding harmony can be applied to the entire work, and these prevalent harmonies in the concerto are outlined in the reduction which follows. These chords have been selected due to their prominence – many are held, *forte,* and accented, as well as being played by a full orchestral section – and they are able to become a foreground feature which is immediately aurally recognisable to the listener.

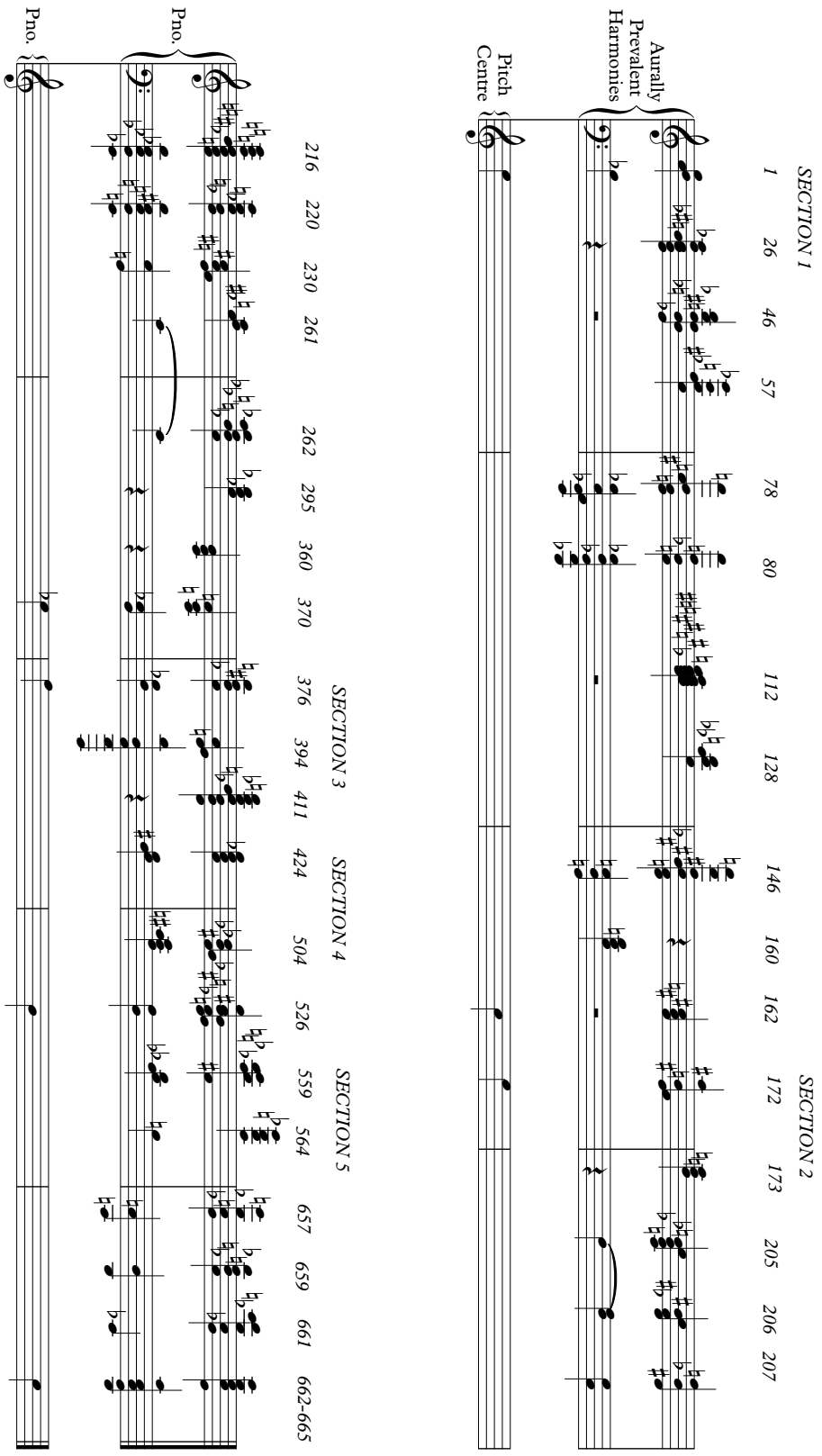


Figure 20: Lindberg's Clarinet Concerto, harmonic reduction

It can clearly be seen that on several occasions, Lindberg has used tonal chords to punctuate the beginning or ending of subsections within the first part of the concerto, and this is not limited to the opening: there is use of tonal harmonies throughout.

Careful orchestration is used to ensure that the consonant harmonies are heard, even within a dissonant chord. This is often achieved by wind instruments outlining a tonal arrangement, with the dissonant notes in other octaves and played by unrelated instruments. At bar 360, the horns outline an C major chord, which is clearly heard, despite being surrounded by dissonance.

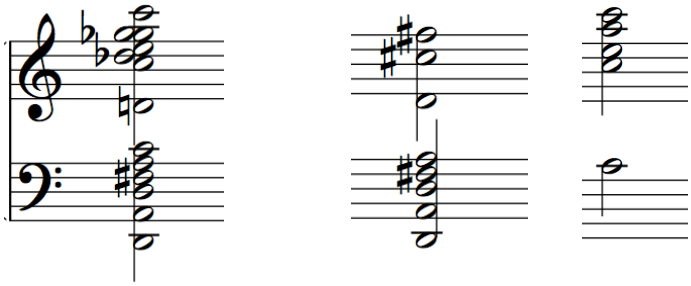


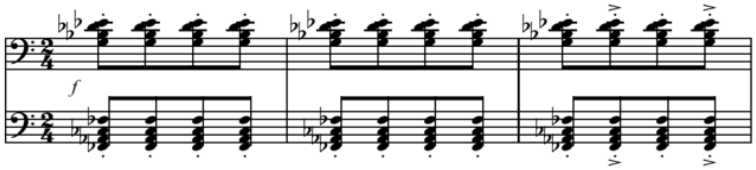
Figure 21

full chord at bar 360

Tuba, Trumpet 1-3, Bass clarinet, Clarinet 1&2, Oboe 1&2, Flute 2

The above example shows a chord which consists of eight notes – this is a bitonal polychord, with the horns, first flute, and first trombone playing a C major triad, which is prevalent to the listener, and the remainder of the orchestra playing a D major seventh chord. In this instance, two tonal chords are used simultaneously to create bitonality. This method is somewhat Stravinskian – the Augurs chord in *The Rite of Spring*, which sounds 200 times, is the combination of two tonal chords, which comprise F flat major and E flat major.

Trombone I. Horn 1, 2, 3 ,4, Flute I



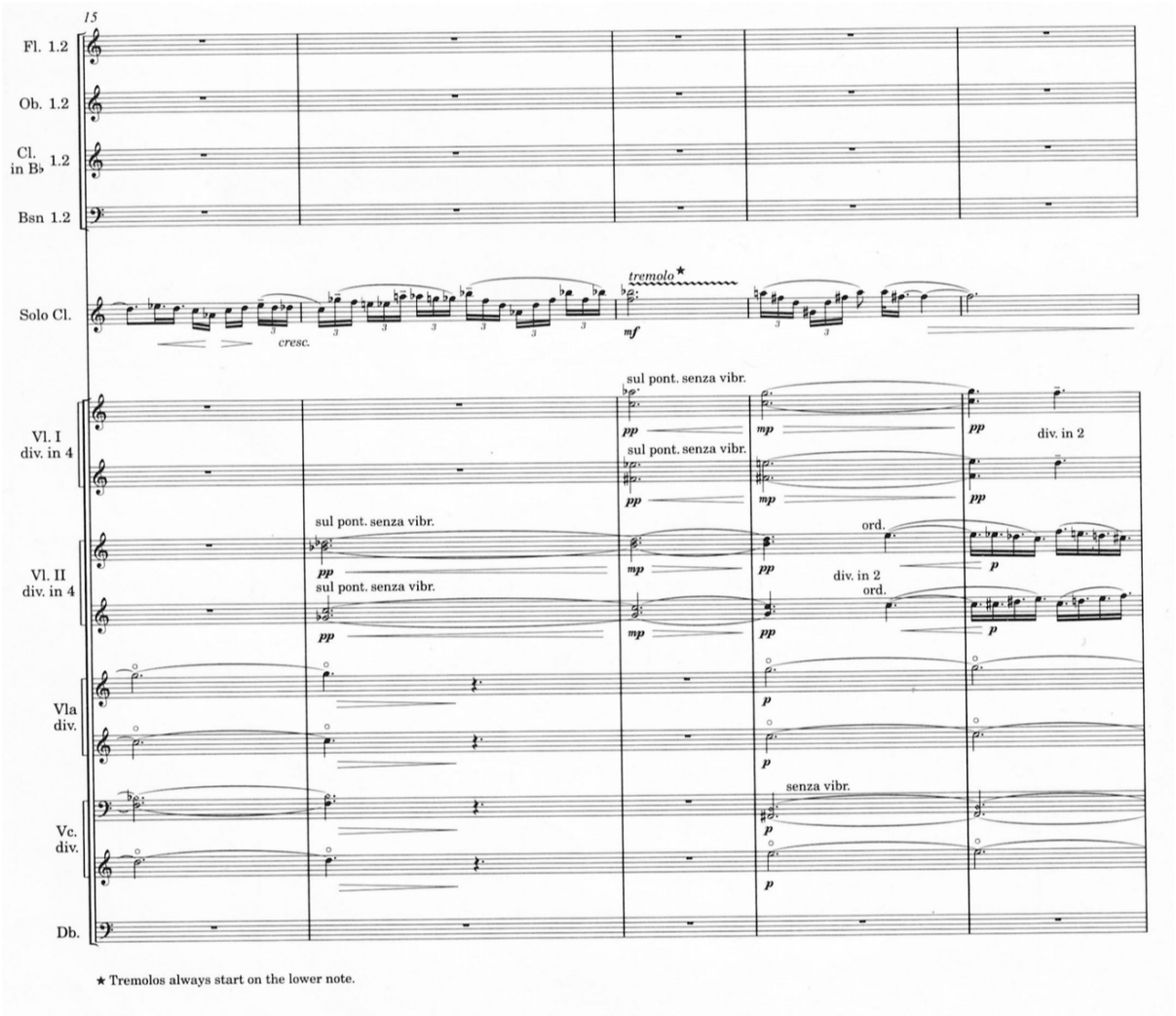
Augurs chord, The Rite of Spring

Figure 22

However, in that instance the two chords are separated by a semitone, rather than a tone, and are somewhat more disguised – the orchestration does attempt to hide the fact that two tonal chords are being played simultaneously, whereas Lindberg seems to bring attention to his use of a C major chord through the orchestration of aurally prominent tones.

There are other instances where cunning orchestral arrangement is used to ensure that consonant harmonies are heard, even within a dissonant chord. For example, there is a D minor triad played by the oboes at bar 173, but the dissonant notes which surround it have begun a bar earlier, and are already rapidly decreasing in volume to *piano,* when the oboes and cor anglais enter *mezzo forte,* to join the solo clarinet and play the triad, which is clearly heard as consonance due to the orchestration of these harmonies

Consonant harmonies are prevalent throughout the clarinet concerto, especially with the use of the tetrachords. Arguably, the most important tetrachord in the work is the first chord used in the concerto, with its first appearance in bar 13, across the strings (C, D, F, G). The last chord of the work – a pentachord (C, E, F sharp, G, D) – sounds across the full orchestra. Despite the use of atonal chords, Lindberg has embraced melodic consonance over his harmonies, and used these chords to support the pitch centre of C during bars 15-17, which sets the scene for the rest of the concerto.



Excerpt 96: Bars 15-19 of Lindberg's Clarinet Concerto

Another instance of a tetrachord used in a way which suggests tonality (although not in a functional way) is with the (0, 1, 3, 7) chord. This is derived from the dotted motif discussed earlier in the solo clarinet opening, at bar 10. This is used from the opening section of the concerto onwards, and first appears in bar 16, played by the second violins (G flat, B flat, C, D flat). This could also be described as a G flat major triad with an added C natural – with Lindberg alluding to the importance of C from the very opening of the work, with the use of dissonance within a tonal chord. It then appears in bar 18 in the first violins as a transposition up a major third (F sharp, C, E, G), or a C flat major triad with an additional F sharp – the same orchestral chord which closes the work. This is overlapped with the prime, to create (0, 1, 3, 6, 7, 9). During this time, the pitch centre changes from B flat to F sharp, with these two harmonies pre-empting

the pitch centre shift by several beats each time. This chord returns at bar 45 and 104, each time to close a subsection.

Referring back to figure 35, the chords which are often atonal seem to be symmetrical – something which is not rare in the composer's output. When asked 'Do you use symmetry?' in interview with Cody, Lindberg admitted 'I do use it, particularly in building harmonies: I like symmetrical pitch assemblages.'[202] It seems to be the case that when a non-tonal chord is used within this concerto, it is symmetrical – such as during three occasions which either open or close one of the five main sections (bars 376, 423, and 558). This allows Lindberg to reuse and recycle the chord at other instances within the piece, but to be able to change the root or the prominent note, whilst keeping the assemblage of pitches the same.

However, the use of symmetrical chords has something of a functional capacity. All modal scales can be used to create one symmetrical diminished triad. This contains a tritone, which traditionally was used to create resolution, as the leading note and subdominant moved either inwardly or outwardly onto the tonic triad.[203] In atonal music, therefore, a symmetrical chord containing a tritone has the ability to create an amount of functionality, when, and if, the tritone resolves. In conversation with Joshua Cody in November 1999, Lindberg said:

> 'I've been thinking very much about functional harmonies in an essentially atonal world. I'm jealous of composers like Wagner and - why not? - Mahler, for whom the building blocks of harmony were grammatical as well as simply lexical. It's obviously quite a difficulty to create your own functional syntax in the post-tonal era. But this is the subject of an entire seminar.'[204]

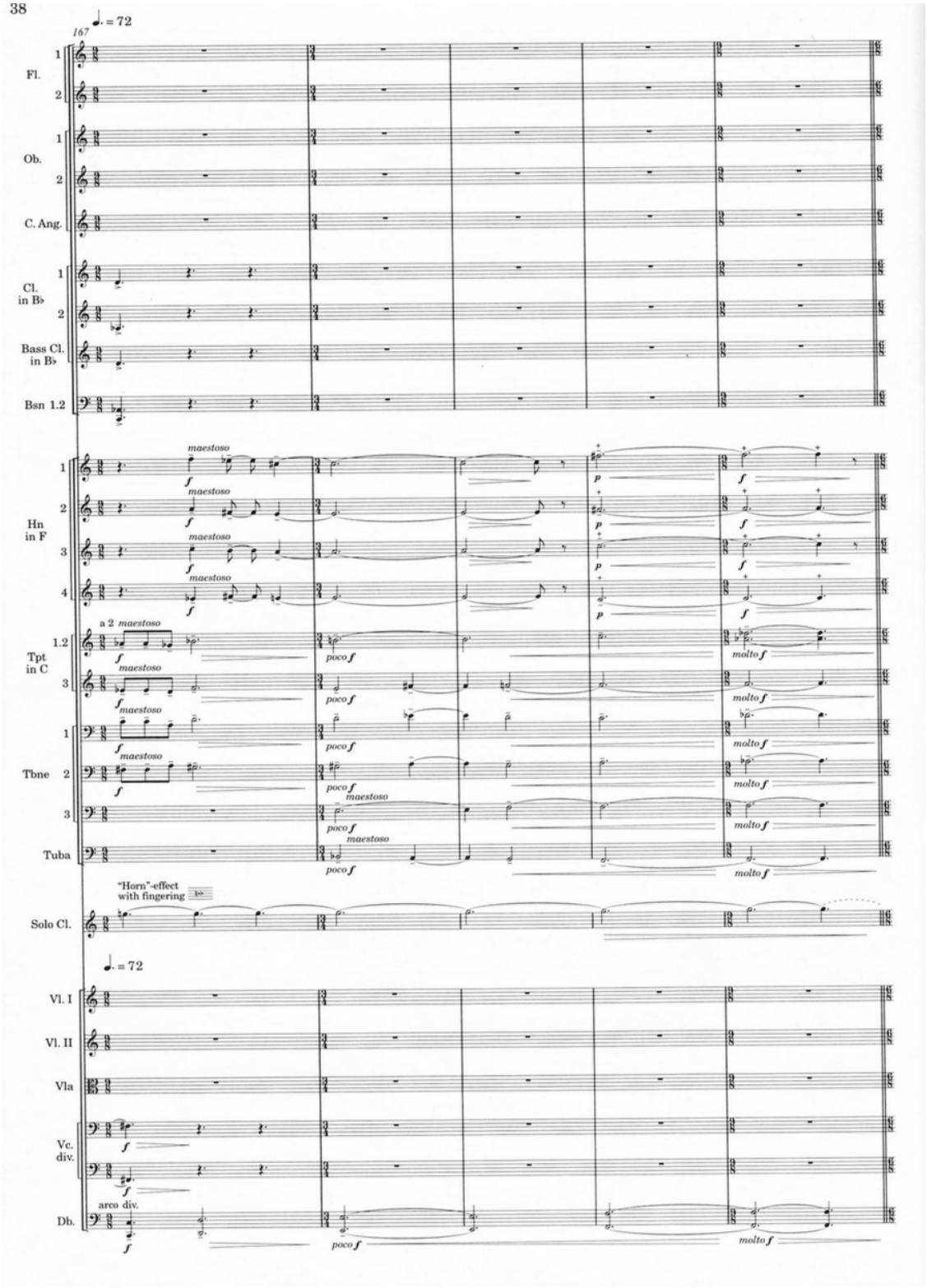
With the composer considering the use of 'functional harmonies within an atonal world' so close to the writing of the Clarinet Concerto, it must be considered as a method which may possibly

[202] Lindberg and Cody "Magnus Lindberg in Conversation," 38.
[203] Paolo Susanni and Elliot Antokoletz, *Music and Twentieth-Century Tonality: Harmonic Progression Based on Modality and the Interval Cycles* (London: Routledge, 2012), 66.
[204] Susanni and Antokoletz, *Music and Twentieth-Century Tonality,* 33.

have been used. If there are harmonies in this work which are functional, the most likely place for these to take place would be at times where symmetry is used. Despite this, there is no aural functionality to the progressions – the only thing in the writing which 'resolves', as it were, is the solo clarinet, as it plays the section from 376 – 380 covering notes from the pentatonic scale which opened the concerto.

It is also of interest to examine whether voice leading plays any role in instances such as the chord progressions from bars 170-71. Lindberg said in 2000 'One of the most important lessons I learned was from Berio, who remarked that the orchestra remains a hierarchy - soprano, alto, tenor, bass - which, however simple an idea, was provocative for me.'[205] During chord progressions, each instrument does move in a step-wise manner, with the double basses moving scalically upwards from a C to an F, over the five bars from 167-171, reaffirming the pitch centre as F (which the solo clarinet has been holding since bar 167). It can be suggested that the clarinet often seems to predict the harmonic changes, as it were, by holding a note which, although is initially dissonant, comes to some form of resolution through its eventual consonance within the chord. With this progression, there is essentially a shift from E flat minor to a chord built upon its relative key of G flat (here, respelled as F). Although this is not strictly tonal, it can be seen that these pitch centre changes are between notes which are related, as to not abruptly stop the continuity of closing statements to each section.

[205] Lindberg and Cody "Magnus Lindberg in Conversation," 37.



Excerpt 97: Bars 167-171 of Lindberg's Clarinet Concerto

What this brief analysis has uncovered is that a range of harmonies are used in Lindberg's Clarinet Concerto – which include tonal, symmetrical, 12-tone, and bitonal chords. The functionality of these isn't aurally apparent, but the ability for a listener to discern that

there is an ever-changing harmony is. This leaves the question, *how* was Lindberg able to use such a range of harmonic structures within a work which sounds incredibly continuous? It can be theorised that this is due to the soloist's use of a prevalent pentatonic scale.

Béla Bartók considered this in his article "The Influence of Peasant Music on Modern Music," where he discussed the harmonic possibilities of music which uses melodies involving the pentatonic scale. He wrote: 'It may sound odd, but I do not hesitate to say: the simpler the melody the more complex and strange may be the harmonization and accompaniment that go[es] well with it.'[206] He then goes on to say that the use of pentatonic folk melodies in much of Stravinsky's music, from *The Rite of Spring* onwards is what helps the composer to explore greater harmonic possibilities. Lindberg may have opted to use the pentatonic scale for a similar reason, and his choice to use this scale is also unequivocally tied to Finland, through Finnish folk music and Sibelius, who used pentatonic, folk-based melodies in both his Lemminkäinen Suite (1895, rev. 1897, 1939) and the Fifth Symphony (1915), inspiring Juhani Alesaro to label him 'a composer made for modes.'[207]

The use of consonant harmonies, albeit in a non-functional manner, is an element which Lindberg appears to have taken to the 'extreme' in this concerto, although a listener familiar with his earlier works may not have expected this to be the way in which he decided to treat the harmony. However, with the lyrical and melodic motifs, some amount of consonance is needed, so as not to distract from these. What this results in is a work which is slightly more approachable to an audience, with the consonant chords often isolated from atonal assemblages, and thus signposting important moments, or formal structures, during the concerto. There is also often a sense of resolution, with chords changing whilst others stay in place, often when hexachords are used, to eventually combine to reach something which is more consonant, and 'close' a statement, as it were. There is a resounding nod to classicism using this neo-tonality, which creates immediate aural associations for the listener. The lack of true functionality may have been to ensure the work remains non-linear, and for the composer

[206] Béla Bartók, "The Influence of Peasant Music on Modern Music," *Tempo* 14 (1949): 19-24.
[207] Juhani Alesaro, "A Composer Made for Modes," *ESKA* 15 (2008): 7-16.

to be able to use other means to create drive towards climactic moments, other than relying on harmony, which would help the listener to predict the progression of the music.

IV: Hand in Hand

The Composer and Kari Kriikku: Exploring Technique

All three works discussed in *Reinterpreting the Concerto* use a large range of contemporary extended clarinet techniques. This is probably due to a number of factors. To begin with, new music is often filled with techniques which explore innovative ideas – on many levels. But with extended technique comes a whole new range of timbre, dynamic, sound, and pitch, and to be able to explore that widens the compositional possibilities. As well as this, working with certain soloists results in pieces of music taking certain paths, of which Martin Suckling, composer and violinist, wrote: 'that personal relationship will have an impact on the music you write for them, and the chances are you're going to want to highlight a special aspect of their playing. 'Virtuosity' of some type becomes the end result.'[208] Kriikku is well-known and admired for his ability to play contemporary music and these new practices well,[209] and there is a likelihood that Saariaho, Lindberg, and Tiensuu decided to highlight his virtuosity through his expertise in these techniques. It is worth defining some of these and their use before going on to discuss how they are used in these concerti.

Harmonics: usually played through overblowing on a note – the fundamental – to bring out a singular overtone. Harmonics can also be played on certain notes by physically blocking off the end of the clarinet with a mute.

Multiphonics: can either be 'proper' or 'broken', but generally consist of a 'fundamental' (the lowest note), and 'partials' (the notes which sound as a result of the fundamental).

Broken/split multiphonics are when the clarinettist uses their own embouchure to split the tone on a certain note, to bring out the partials above it, at the same time. These are most

[208] Martin Suckling, email correspondence with the author, 14th November 2018.
[209] Dunn and Kriikku, *Upbeat,* 27th October 2015.

commonly and easily produced by the lowest notes on the clarinet, and work best at a *forte* dynamic.

Proper multiphonics are when the clarinettist uses a specific fingering to create the multiphonic – these vary much more in their sound compared to broken multiphonics, as each hole that is either open, closed, or covered, has its own effect on the sound.

Fluttertongue: an effect created by vibrating either the tongue or the palette, to produce a very fast buzz, or tremolo, on a note. This is one of the more basic extended techniques, and one of the first to be invented.[210]

Glissando: a transition (either rising or falling) from one pitch to the next, with some amount of pitch bend between the notes. On the clarinet, this cannot be entirely smooth over the full range, due to limitations concerning fingering. This can be either normal, overtone, or multiphonic.

Overtone glissando: this is used on overtones – the highest notes – and the glissando creates a 'scale-like transition between overtones',[211] through manipulation of the clarinettist's embouchure (the fingering does not change).

Multiphonic glissando: similar to an overtone glissando, in execution by the player, but this is an ascending glissando from the lowest multiphonic to the highest notes on the clarinet, which passes through several more multiphonics.

Double-Tonguing: usually used where more than eight notes per second are to be tongued.[212] The amount of the mouthpiece that needs to be in the clarinettist's mouth makes this technique rather difficult, and the most common way to execute it is to use a combination of 't' and 'k' sounds with the tongue and throat, respectively. This means other techniques which use the embouchure cannot be used at the same time.

---

[210] Raasakka, *Exploring the Clarinet,* 164.
[211] Ibid.
[212] Ibid

Chain Trills: a large number of consecutive trilled notes, whereby the clarinettist uses the top two side keys to constantly trill between notes. This means removing the right hand thumb from the thumb rest in order to use a full range of fingerings.

Slap-Tongue: a percussive sound created by 'clicking' the tongue on the roof of the mouth.

Teeth on reed: as suggested, putting the teeth on the reed to create an incredibly high, unspecified, pitch. Usually notated with an upwards pointing triangle.

There are other techniques used which are not defined, as they are more well-known and are produced on the clarinet in a way not dissimilar to other instruments. These include normal trills, tremolo, *diminuendo al niente* and *crescendo dal niente*, microtones, portamento, and vibrato. A majority of these techniques are used in Tiensuu, Lindberg, and Saariaho's concertos, with some forming the basis of movements, or the concerto themselves. It is no coincidence that when these are used, they are employed in their most perfect sense – it would be difficult to believe a clarinettist was not involved within this compositional process. By examining the way in which these are handed within the works, it is possible to compare their use, as well as theorise how much Kriikku himself had to do with the formation of the work.

A technique which seems synonymous throughout all three concerti is the use of split multiphonics on the lowest note of the clarinet – E.[213] It is worth explaining the physical acoustic properties of the instrument in order to understand the ramifications of this lowest note. The clarinet works physically as a 'closed tube' – as one end (the mouthpiece) is not open to air at normal atmospheric pressure, which results in the wavelength being much longer. This means that they have a large range, but that they have much lower notes than for example, the flute which is an 'open tube'.

[213] In B flat.

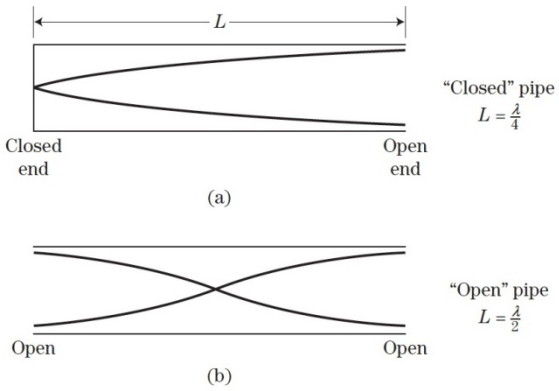


FIGURE 6–6

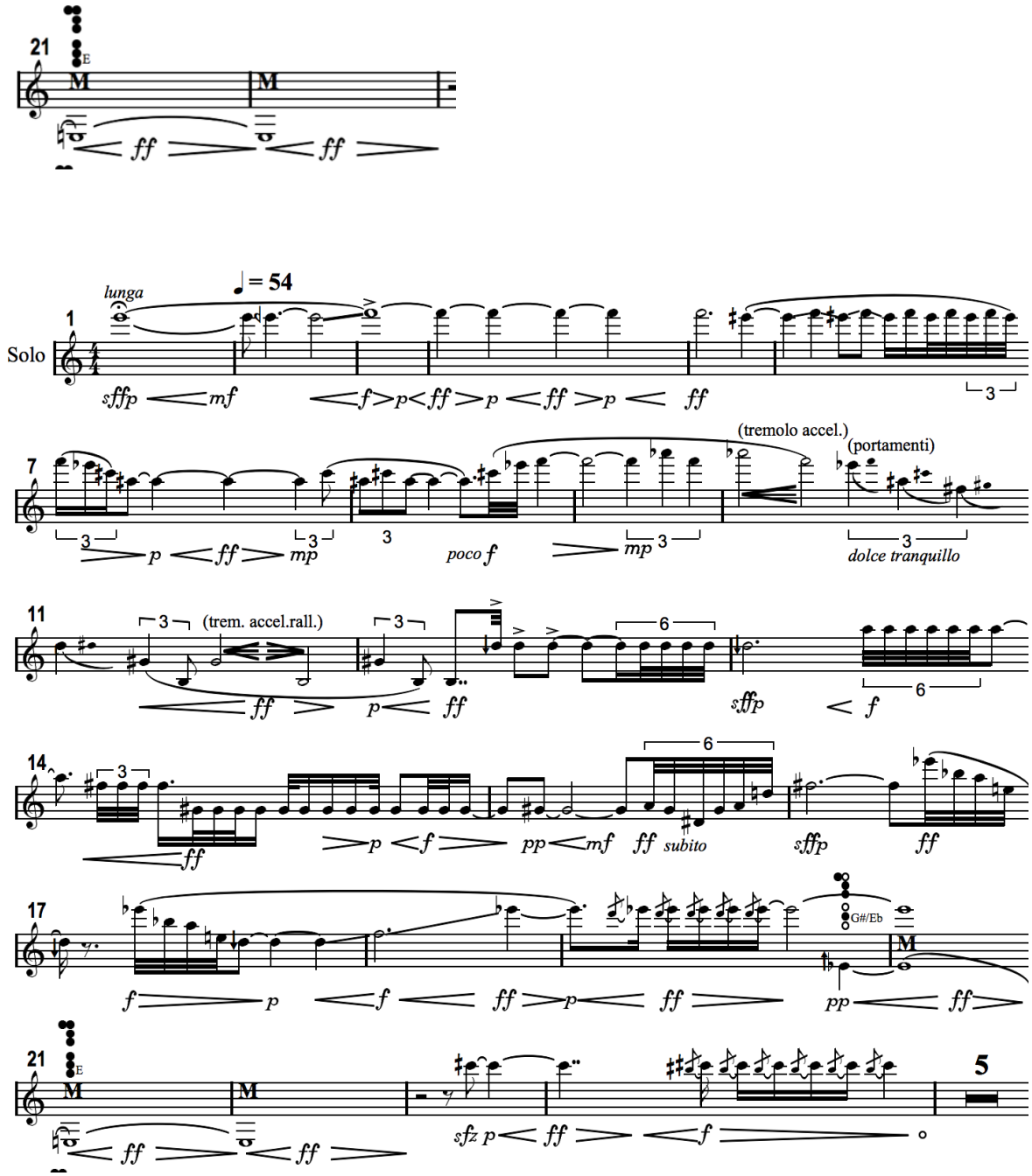
Standing waves in a pipe. (a) One end closed and (b) both ends open. Organ pipes are operated with this standing wave profile. The amplitude of the standing wave as the air blows is maximum and acts as an open end. Only the fundamental modes are shown.

Fiaure 23

Wavelength in a closed vs. open tube[1]

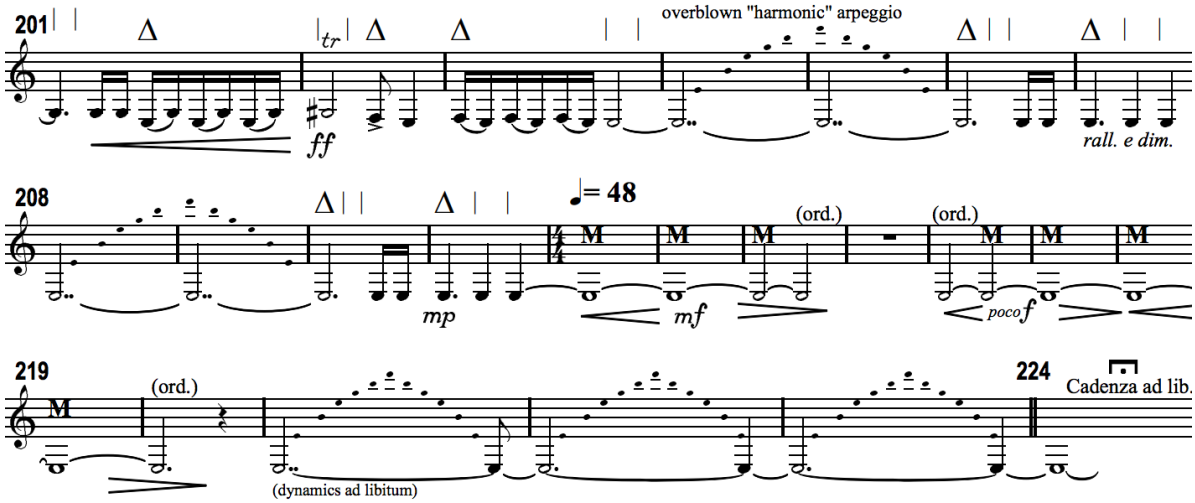
Technically speaking, each finger that is taken off the clarinet effectively shortens the length of tube that sound waves are resonating in, which changes the pitch. When playing the lowest note, all fingers are on keys, which means the length of tube that sound waves are resonating in is the longest it can possibly be. This opens up the instrument to a wealth of acoustic opportunities. In fact, the only way to produce multiphonics on the lowest notes of the clarinet is by using broken tones – proper multiphonics do not exist at this range. By splitting the tone, the resulting effect is of the fundamental pitch with the overtones over the top, leading some clarinettists to refer to these as 'spectral' multiphonics, which can be used in different ways and combined with a number of techniques.[214] Tiensuu's treatment of this split multiphonic is used in a spectral way, with the overtones of the clarinet's low E forming the pitches used in the opening of the concerto. Sallinen said that Kriikku and Tiensuu had recorded the multiphonic on this note, seen in bars 21 and 22, and Tiensuu had gone on to extract the overtones, and create the tonal basis of the work purely around this, which led Sallinen to write that the piece was 'cleverly but simply constructed' although it still manages to create music that is 'surprising and original'.[215]

[214] Heather Roche, "Spectral Multiphonics," *Heather Roche,* Sep 26, 2016, accessed Sep 5, 2018, https://heatherroche.net/2016/09/26/spectral-multiphonics-bb-and-bass/. This contains several sound files of these techniques combined and played by Roche herself.
[215] Sallinen, Email correspondence with the author.



Excerpt 98: Puro's multiphonics

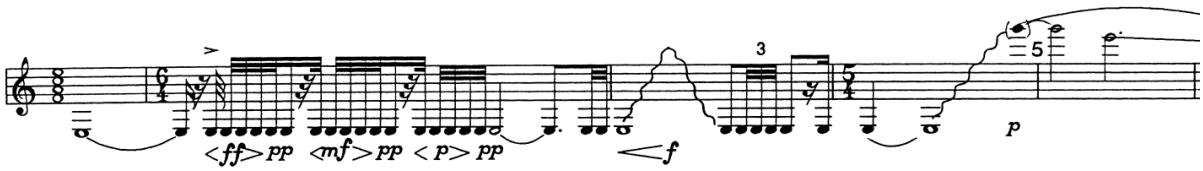
The held broken multiphonic at bars 21-22 should produce several of the partials which have been explored during this opening, showcasing the importance of this note. This sets the scene, as it were, for the rest of the concerto. In fact, the solo clarinet does not return to this note again until bar 201, as the material for the cadenza is prepared.



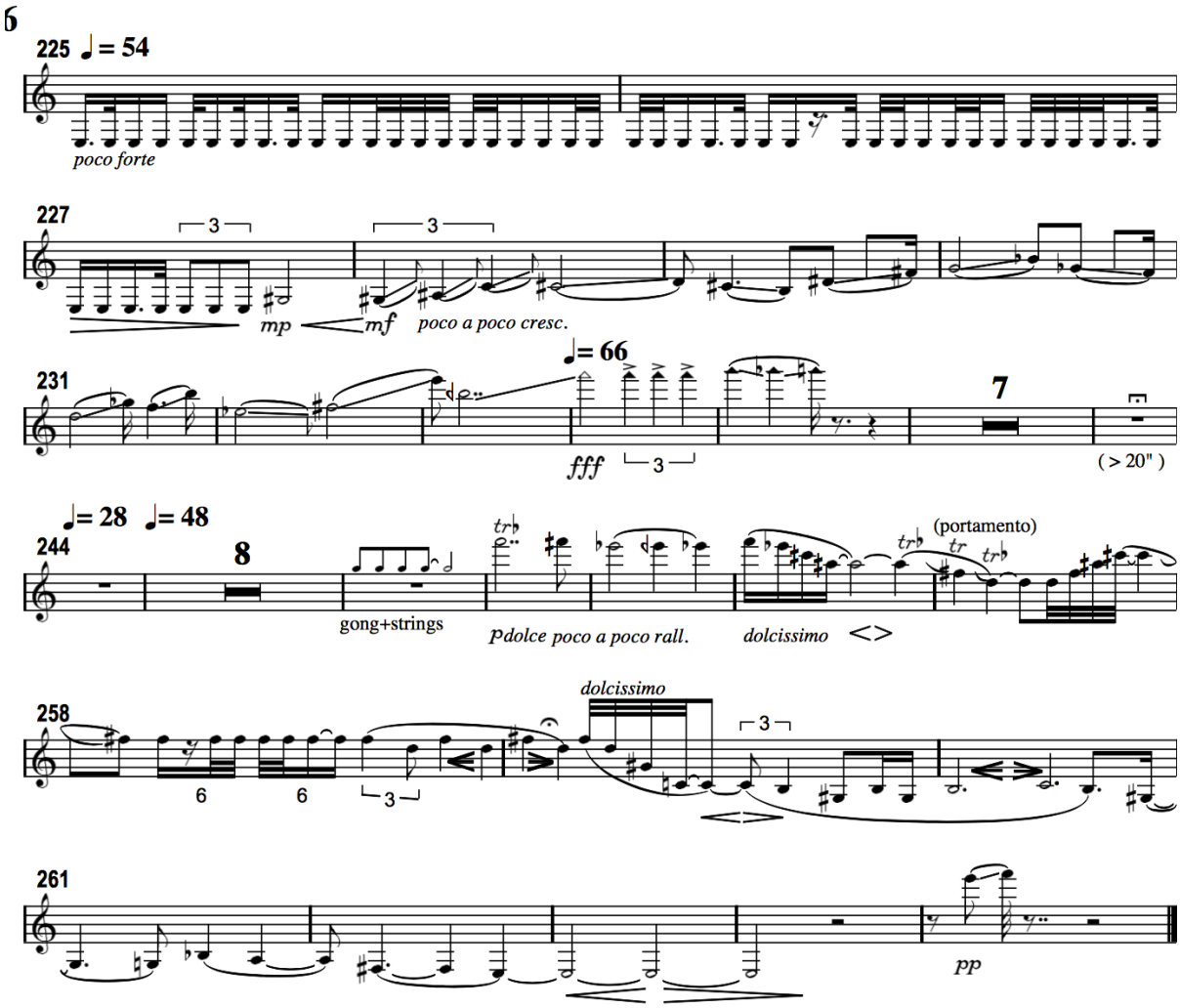
Excerpt 99: Puro's multiphonics, continued

The preparation for the cadenza using the clarinet's E begins at bar 204, and this exploitation of the note continues until the cadenza itself: at no other point is any other pitch used – the only difference between the variations on the E is the rhythm or technique – here either a harmonic glissando, broken multiphonic, or an unembellished, 'pure' tone. To add to the jarring preparation, where the soloist's roaring broken multiphonics soar over the orchestra, the second clarinet joins in (bars 213-219). With two clarinets playing multiphonics simultaneously, a greater range of overtones are covered, as it is almost impossible to play a strong broken multiphonic which incorporates all of these. This still rings true for bars 221-223, where the two players glissando through the overtones within the multiphonic. Although it is more audibly obvious at this point that more than one clarinet is playing, for example, because one will be ascending whilst the other is descending, the lines are still blurred, and it results in a greater range of the overtone spectrum sounding at once.

The cadenza uses material derived from previous ideas, and although this is encouraged to be improvised, Tiensuu includes a 'suggested' version at the end of the clarinet part. Interestingly, Kriikku's 2008 recording with the *Avanti!* Chamber orchestra uses a majority of these themes, often interspersed with additional improvisatory material. This cadenza begins on a repeated E, and when we return to the written music at bar 225, it is again on a repeated E.



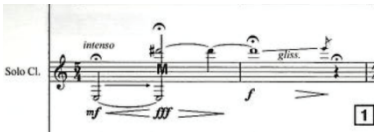
Excerpt 100: Opening of the 'suggested' cadenza



Excerpt 101: Repitiion of E in Puro

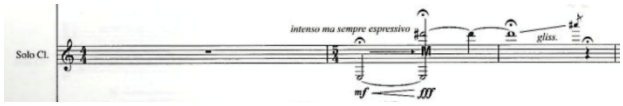
It can be seen that the final bars of the soloist's phrases in *Puro,* begin and end with this E – at first to seamlessly blend back into the work after the concerto, and ending to reach some form of resolution – until the final glissando, which is somewhat comical. This ending is also reminiscent of the opening. The use of recurring themes and ideas, as well as a constant pitch centre in *Puro,* ensures some degree of circularity and continuity. The use of the E, specifically, also is the most idiomatic use of a split tone, due to the fact that the longest length of tube possible is being used.

Other idiomatic uses of this multiphonic also occur in both the Saariaho and Lindberg concertos – at several points. In fact, the first clarinet entry in *D'OM LE VRAI SENS,* at bar 11, is a split E multiphonic which eventually breaks into an upper harmonic.[216] This is repeated in this movement twice, as one of four soloist interjections within the opening section of the movement (bars 1-34).



Excerpt 103

Bar 11



Excerpt 102

Bars 18-19

Whilst these are used in '*L'Ouïe',* the upper strings are holding the upper overtone, which the clarinet ultimately ends the phrase on. The reasoning behind the use of this technique is unclear: it may be to allude to the spectral background of the composer, or it may simply be that this opening technique is an attention-grabbing sound, which truly encourages the audience to *Listen* – the name of the movement itself.

Lindberg, like Saariaho and Tiensuu, also uses the low E multiphonic at important moments within his concerto, with the startling sound hard to miss. After all, the first thing Kriikku said to Lindberg in regard to the concerto was: 'Write something *fortissimo* but allow

[216] The use of harmonics is not something which is uncommon. However, no other composers before Lindberg have used the term 'horn effect', which suggests this was a technique possibly coined by Lindberg and Kriikku, together.

the clarinet to be heard!'[217] A solo clarinet playing a broken multiphonic loudly on an E would audibly carry over a majority of orchestras, not just due to the volume, but also to the rather ear-piercing timbral qualities of the overtones. This is used as a multiphonic which increases in volume and overtones over the course of three bars, from mm. 134 to 136, before the soloist plays a 'horn effect' – a timbral effect where a harmonic is played on a note.

This recurrent use of the low E multiphonic may exist for several reasons:

1. The composers are using this 'spectral' multiphonic to allude to spectralism itself.
2. The close bond between composer and soloist is being used well, with the composers each taking into consideration what Kriikku excels at (extended techniques), and using this to benefit both the composer and performer.
3. It's a well-known extended technique which is easy to produce and distinctive, and regularly occurs in new music for clarinettists.

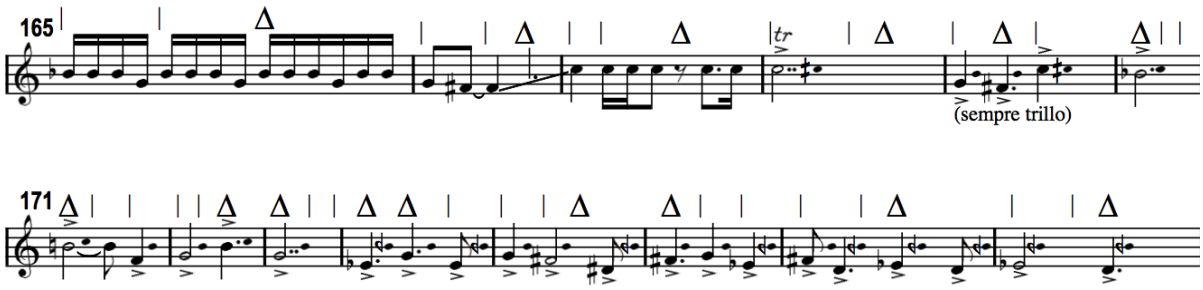
It may also be some combination of the three. It is known that all three composers have ties with spectral music, with Lindberg and Saariaho studying at the IRCAM in Paris, where Saariaho still resides, and Tiensuu 'interested in spectral analysis and how to manipulate the natural harmonic series to create unusual sounds'.[218] This, combined with a well-known technique, which Kriikku has come to perfect, has resulted in a sound used widely in all three concerti.

Roche agrees that spectral multiphonics are perhaps overused, and somewhat cliché for contemporary music if they aren't 'embedded in the language of the composer'. However, she doubts whether that would be a problem for the likes of Tiensuu, Saariaho, and Lindberg.[219] She also spoke of spectral multiphonics being the 'perfect way to access the spectrum', and wondered if these composers were using it in a way which was more outright than an

[217] "Magnus Lindberg: Clarinet Concerto," *Kari Kriikku*, accessed Sep 15 2017, http://www.karikriikku.com/projects/magnus-lindberg-clarinet-concerto/.
[218] Kimmo Korhonen, *Part II: New music of Finland* (New York: Pendragon Press, 2002), 222.
[219] In email conversation with the author, 15th November 2018.

allusion.[220] Considering this, we can return to the likes of Grisey, and consider how he used the trombone low E in *Périodes*. In fact, in his 1981 work, *Solo pour deux,* for trombone and clarinet, he uses the multiphonics on the clarinet's E in a similar way to the composers analysed within *Reinterpreting the Concerto.*

Other instances within the three works also suggest how closely each composer and Kriikku may have worked, due to the perfectly idiomatic nature of the compositions themselves – particularly when it comes to the extended techniques Kriikku plays with such ease. One of these is the 'chain trill' section in *Puro* (bars 169-199), aptly named by Raasakka.[221]



Excerpt 86

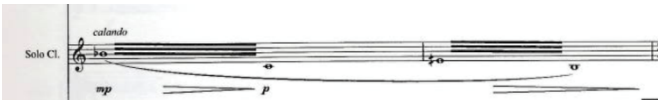
'Chain trill' section of the solo clarinet line between bars 166 and 178

Seen here between bars 166 and 178, this is the longest section which is comprised of nothing but trills – and Kriikku seems to circular breathe in order to make sure the trill is constant. The music itself is rather continuous, and the trill constantly even in its sound due to the notes used: rather than trilling using the adjacent finger each time, as would usually be expected of a clarinettist, Tiensuu has used notes which can all be trilled using the same two keys. The player removes their right thumb from the rest, and trills two side keys evenly with this, ensuring all their fingers can still reach the correct note to be trilled from. This ensures the melody can smoothly move between different pitches, whilst the rhythmic and aural effect of the trill remains the same. By using a smaller range of notes – just under an octave – Tiensuu is able to

[220] Ibid.
[221] Raasakka, *Exploring the Clarinet,* 178-180.

keep the continuity in sound through the idiomatic writing for the clarinet, with which Kriikku possibly assisted, as this technique of trilling with side keys slightly less common with clarinets, as the pitches produced are not always even-tempered.

'Le Goût', the fifth movement of *D'OM LE VRAI SENS,* is reminiscent, at times, of the 'chain trill' section in *Puro.* Although Saariaho uses a range of extended techniques throughout the work, it is in this penultimate movement in which this becomes an important focal point for the music. In fact, there is not a single phrase which does not use an extended technique – and every note that is of crotchet length or longer is embellished in some way. The movement opens with wide tremolos which are in the same range of notes as *Puro,* which means the performer is able to use side keys to trill, if they desire, although, there are also moments where side keys are not needed.

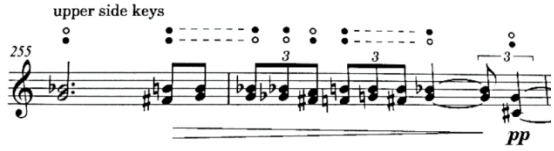


Excerpt 104

Bars 29 and 30 of 'Le Goût', solo clarinet

Trilling between the notes in bars 29 and 30 of '*Le Goût*' is a time at which the side keys could be easily used to ensure smoothness of the tremolos. If it weren't for this shortcut, the clarinettist would be forced to trill by completely removing their entire left hand from the keys, and move their index finger and thumb to the two keys above normal hand position, and back again. With the use of the side keys, the left hand can stay in the normal position, with the keys pressed down, whilst the thumb of the right hand presses the side keys. It is no coincidence that here, too, each and every trill and tremolo takes place between notes which can easily and freely be moved between – avoiding harder ranges, which include notes 'over the break' (between concert G sharp and A).

Finally, Lindberg's Clarinet Concerto also utilises this technique – between bars 255 and 260, with a melody played which includes tremolos where the clarinettist is able to use side keys – again happening in the same range of notes seen in Saariaho and Tiensuu's concertos. Lindberg uses a special symbol, seen below, to show the soloist where side keys may be used.



Excerpt 105

Solo Clarinet, Lindberg's Clarinet Concerto, 255-6

The use of the clarinet tremolo using the side keys will always be within this range of notes – below the break, with the upper note being between A and B flat – due to the position on the 'tube' of the clarinet of the vents for these keys. This results in a technique which creates similar sound worlds within the three composer's concertos – which could be due to Kriikku being aware of and conveying how the best tremolos are played on the instrument. Heather Roche wrote on collaboration with composers and soloists:

> 'It's all about layers, and isolation of various bits of the instrument and then layering all those isolations… And it's about developing an understanding about how certain aspects of the instrument function and how you can use them. Sometimes this is about taking one note and adding layers of different articulations, singing, multiphonics, *etc.* on top.'[222]

This kind of collaboration is what would be expected between a soloist and a composer, and does not only suggest the kind of relationship the two would have, but also shows the learning

[222] Heather Roche, "On Using the Register Key," *Heather Roche,* March 30, 2014, accessed Oct 26, 2018, https://heatherroche.net/2014/03/30/on-using-the-register-key/.

process involved by both parties to create something unique. The combination of Kriikku with each of these composers has clearly resulted in a shared knowledge of *how* and *when* certain techniques are possible.

The largest exploration of extended techniques, in general, is within the fifth movement of *D'OM LE VRAI SENS,* '*Le Goût',* where the idea is arguably one of the things which creates a lot of the duality within the movement. Aesthetically, the clarinet is now in full view, and playing in front of the orchestra, again with a spotlight and on a podium if 'necessary'.[223] This seems to mimic the tapestry, with the unicorn standing in the foreground on its hind legs, with his head facing the viewer, and the other subjects in the tapestry looking straight at him. The tapestry suggests that the unicorn is the main focus in '*Le Goût',* with the others taking a reduced role, and creating some amount of duality between the two forces. This idea seems to be conveyed in Saariaho's aural representation. Saariaho writes that the soloist 'serves' the sound of extended techniques to the orchestra, which suggests that this movement is perhaps more focused and defined through the sounds of the clarinettist, with the orchestra taking an accompanimental role. This results in some amount of timbral opposition which ensues between the two, as well as contrast between the clarinet itself – through the use of either normal or embellished sounds. The way in which she has used these clarinet techniques suggests a type of variation form, as also seen in *'La Vue',* with melodies contributing to a sense of complementary opposition – with these phrases ultimately derived from the same source, but used in a way which suggests contrast.

The glissando is another technique which is fairly easy to execute when used in the right range. Trying to play a smooth glissando 'over the break' of the clarinet is incredibly difficult, as all fingers on both hands need to press keys to produce the A, and there is only so far a clarinettist can pitch-bend before having to change their finger positions. However, used within a certain range, it is possible to glissando as smoothly as a string instrument would, by using the correct combination of finger and embouchure manipulation. In Tiensuu's *Puro,* there is a

[223] Saariaho, *D'OM LE VRAI SENS.* (Score).

glissando which takes place over the 'best range', of D5 and the F sharp 6, as shown in Raasakka's *Exploring the Clarinet*.[224] Any other glissandi within this range of notes, therefore, would also arguably be one of the easiest to execute. It is no coincidence, then, that a majority of the glissandi in *D'OM LE VRAI SENS* seem to take place over these group of notes, including the longest of the work – from bars 142 to 148 of the second movement.

The glissando acts as a technique which is more of a pitch-based manipulation to the instrument than a timbral one, such as slap-tongue, and it can be suggested that this is used to create tonal ambiguity. Other instances of tonal ambiguity created through technique include the idea of unpitched notes using teeth on the reed, and Saariaho's 'chromatic' arpeggios. With the use of the teeth on the reed, there is a certain amount of instability which results, as small changes in the player's embouchure or breath can impact the note which is produced. All three composers make use of unpitched high notes within their concertos.

Tiensuu shows this technique by using triangle note heads, where the performance markings state 'As high as possible, with the given dynamics and articulation.'[225] The only instance of this in the work (which is not in the written cadenza) is during bars 234 – 235.

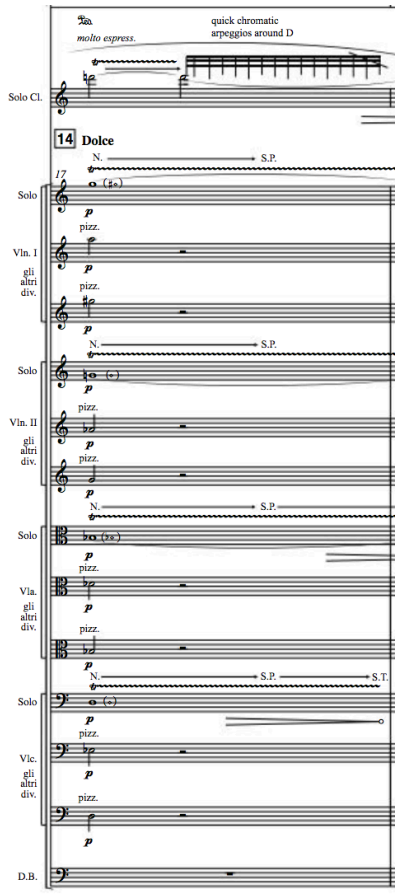
Excerpt 106

Puro, Solo Clarinet, bar 231

The use of these notes, alongside illustrations for slight (but not exact) changes in pitch, as well as glissandi, create a moment where the clarinet line is truly atonal. This moment is accompanied by the rest of the orchestra playing in triads within each instrument section, however, clashing tones and semitones between these groupings create something which is aurally very difficult to discern.

[224] Raasakka, *Exploring the Clarinet,* 154.
[225] Saariaho, *D'OM LE VRAI SENS*.

Saariaho names moments similar to these in her concerto as 'chromatic arpeggios',[226] and these occur frequently in *D'OM LE VRAI SENS.* The player executes them in a similar way, with a combination of teeth on the reed and overblown harmonics. These are first seen in bar 17 of the third movement, '*L'Odorat'.*



Excerpt 1070

'L'Odorat', bar 17

As was the case in *Puro,* these are used alongside complex orchestral harmonies, which are atonal, and it can be suggested that at these moments in both works, the clarinet and orchestra work in a complementary fashion to create the sense of unstable atonality.

Of these concerti, the Lindberg uses extended techniques the least, which raises questions as to why this may be the case. With the allusions to tonality within his concerto, it is

[226] Saariaho, *D'OM LE VRAI SENS.*

possible that overuse of extended techniques would create a large amount of atonality – as glissandi, multiphonics, and flutter tonguing all produce tones which are not even tempered, in varying extents depending on their use. However, Saariaho and Tiensuu's concertos both exploit ideas which can be linked to spectralism, and so the use of microtones further embellish the pitch arrangements they have chosen.

It is not uncommon for contemporary music to incorporate new instrumental techniques, as innovative timbres are searched for, so a certain number of these would be likely. However, the idiomatic nature of their use within the clarinet line suggests that Kriikku has worked closely with each composer to create a concerto that works well for not only the clarinettist, in general, but for himself. A contemporary player known for his technique, he was always likely to end up having his virtuosity showcased through these means.

VI: Reinterpreting the Concerto

'All of the pieces I have written for soloists have something to do with the personalities of the musicians themselves. They become, more or less, portraits of these people.' [227]

Kriikku's Crossover

Throughout *Reinterpreting the Concerto,* one musician has been the focal point of all the works discussed: Kari Kriikku. Raasakka called him 'the greatest single source of inspiration for Finnish contemporary music'.[228] His contribution to contemporary clarinet music in not only Finland, but worldwide, is beyond compare. It is hard to find any other living, professional, clarinettist who has the same number of concertos written with, or for, them. This may be for several reasons: many of the most well-known clarinettists play mainly Classical and Romantic era music, not necessarily due to their own preference, but as a result of the demand by the listener. As well as this, Kriikku seems to have spent most of his professional career as a chamber and solo musician, rather than an orchestral player, which many other clarinettists, such as Sabine Meyer and Andrew Marriner, have done. There are exceptions of course, and Swedish clarinettist Martin Fröst (born 1970) has travelled a similar path to Kriikku, with chamber and solo ventures which involve Swedish and Eastern European composers. In May 2014, he received the Léonie Sonning Music Prize – making him the first clarinettist to be given the award.

Despite this, the rapport Kriikku has built with his contemporaries in Finland has made him a central figure in the country's contemporary scene, as his knowledge and expertise of the instrument propel him through his career. He's stated that his 'biggest aim is to bring modern

[227] Service, "Meet the Composer", 12.
[228] Raasakka, *Exploring the Clarinet,* 18.
This is a rather bold claim. While Kriikku is probably one of the most influential *performers* in Finland, it could be suggested that the largest influences for Finnish contemporary music are more likely to be a handful of composers, including Sibelius, Rautavaara, and Heininen. Despite the death of Sibelius, it is his lasting legacy which has helped to shape the Finnish composers of the modern day.

music to the classical music scene, which is often very conservative'.[229] His friendship, too, with composers, has helped him become the player he is today. He studied with Salonen, Lindberg, and Saariaho, and remarked that the four of them being able to study together and have a 'good time', meant they were able to create their own concerts and own experiences, which ultimately lead to the foundation of the *Avanti!* ensemble, and Kriikku finding the music of 'our time'.[230] Kriikku went on to add that the concertos that have been written for him are 'so good, that when I pack my suitcase and my clarinet and travel… wherever in the world it might be, I know it will be a success.'[231]

Although Kriikku is well-known for his contribution to the contemporary scene, he enjoys playing classical music, and considers it important for any player to continue doing – he spoke of the importance of phrase structure.[232] He also spoke passionately in the interview regarding the idea of 'crossover' – where different musical or artistic ideas are combined within one work. He said: 'Everything is full of crossover… but it is not always interesting. The idea has to be good. It's not wonderful if you don't have a really good idea.'[233] The works discussed in *Reinterpreting the Concerto* all use ideas of crossover – especially the crossover between a traditional and established structure, explored in a modern way. This takes us onto the final chapter – where it is possible to begin theorising how each composer has reimagined the concerto, and what, if anything, these works have in common.

What is a concerto?

To outwardly suggest defining features of each of these concerti comes with an amount of uncertainty – to discuss the work of living composers comes with some risk. Jonathan Cross's chapter in *Identity and Difference: Essays on Music, Language and Time*,[234] titled 'Writing about

[229] Dunn and Kriikku, *Upbeat,* 27th October 2015.
[230] Dunn and Kriikku, *Upbeat,* 27th October 2015.
[231] Ibid.
[232] Ibid.
[233] Ibid.
[234] Jonathan Cross et. al., *Identity and Difference: Essays on Music, Language, and Time* (Leuven: Leuven University Press, 2004).

Living Composers: Questions, Problems, Contexts', discusses important factors to consider when approaching this music as a musicologist or analyst. He wrote:

> 'All those of us who write about living composers are perpetually aware of the fact that the ground is constantly shifting beneath our feet… This clearly makes writing about living composers different from writing about dead composers. Anything we say has a provisional status. This is both the challenge and the excitement about working in this area. No-one has written about this music before. We have to take risks and what we say may in the long run prove to be wrong. Little wonder, then, that many cling to the life-belt of the composer's own words in order to lend an aura of authenticity to what they say.'[235]

Although both *Puro* and Lindberg's Clarinet Concerto have been previously discussed, analytically by Howell, and on a performance basis by Morrell and Raasakka, the ideas of three people still amount to a relatively small amount of information, especially when considering the amount of writing one would find on many prolific historical composers. With this in mind, it needs to be considered that these early writings, including *Reinterpreting the Concerto,* may be disproved in the future, and that they can in no way cover everything that occurs within these works. Rather, they exist as a starting point for the musicologist, performer, or listener, to tackle features which the author considers important. Cross also discusses the demand for biography and programme notes, and suggests that these may not always be true or definitive, citing Stravinsky and Craft's relationship as an example of this.[236] He goes on to conclude:

> 'What is clear is that we need to be aware of the context within which we work, of the institutions that support and frame both the appearance of new work and the writing that accompanies it, of the cultural values we promote, and of our own roles and

[235] Ibid, 19.
[236] Cross, *Identity and Difference,* 10-14.

> responsibilities in creating an appropriate climate within which new music can sympathetically be received.'[237]

This leaves the musicologist in a delicate situation, where context must be applied, but not used as an absolute truth. No wonder, then, that Tiensuu made the decision to omit programme notes from his compositions.

Cross's thoughts on this matter are relevant not only to *Reinterpreting the Concerto,* but to new music, as a whole. Although suggestions have been made surrounding the techniques and ideas employed in Lindberg' Clarinet Concerto, Tiensuu's *Puro*, and Saariaho's *D'OM LE VRAI SENS,* these cannot exist as a definitive answer for the way in which each of the composers approach the traditional idea of the concerto. Instead, they serve as recommendations and concepts, which have been informed through consultation of a wide range of sources: books; journal articles; interviews; correspondence with composers and performers alike; as well as contextual writings. Despite this, several ideas can be said to constitute key attributes of these works.

From the conception of the concerto model during the Baroque era, compositional technique and style have understandably changed. With this, ideas relating to these pre-existing practises have also undergone a certain amount of transformation, resulting in something today which is more of an amalgamation of hundreds of years' worth of expertise than one concept alone. It is no longer necessary to follow certain criteria in order to use the word 'concerto', with composers seeming to decide on their own methods in their works. Despite this, there are still references to traditional forms and ideas, which emerge in various ways. Suckling spoke of traditional structure creating the 'basis by which an audience will encounter the piece', and this often suggested, even when it is not deliberately showcased.[238] It is also of use to return at this

[237] Ibid, 39.
[238] Martin Suckling, email correspondence with the author, 14th November 2018.

point to a discussion started at the beginning of *Reimagining the Concerto,* where the origins of the word 'concerto' were discussed.

> *Concerto*: to agree (Italian)
>
> *Concerto*: from *concertare* - to compete (Latin)

This duality between definitions is reflected in the composition of concerti – not just in the modern day, but since the origins of the work. There has historically always been some amount of opposition within a concerto, usually between the soloist and the orchestra, but this can then go on to be reflected on several more levels, which usually include the following:

Soloist	Stasis	Continuity	Fast	Loud	Melody
↓	↓	↓	↓	↓	↓
Orchestra	Dynamism	Discontinuity	Slow	Quiet	Accompaniment

Throughout *Reimagining the Concerto*, these oppositions have been discussed, and we can reflect upon the new ways in which Tiensuu, Lindberg, and Saariaho explored this pre-existing musical genre. Each has used historical foundations, as it were, to create their modern-day setting of the concerto. The idea of duality seems to always be present – traditionally, and now.

Playing with Time: Why and How Continuity is Achieved

With a lack of tonality in all three works, each composer has found new ways to ensure continuity, and much of this is through the treatment of melodic material. The use of fragmented melodies, which are altered and extended repeatedly, until they form a full phrase, evokes suggestions of Brahms's 'developing variation', which may have been learned through each composer's time spent studying with Heininen. The emphasis on melody and thematic

ideas in the concertos is not necessarily a defining feature of any of the composer's style, but occurs as a result of writing a concerto.

Continuity is also created in these three concerti with the use of background pitch organisation. In Tiensuu's *Puro,* this is through the overtone series and the importance of the clarinet's E. In Lindberg's Clarinet Concerto, it is through the allusion to C which is carried throughout. In Saariaho's *D'OM LE VRAI SENS,* pitch centres and static harmonies carry the listener through each movement, with pairings across movements also prevalent through these techniques.[239] It could be said that all the works are what Kramer refers to as 'nondirected linear music'.

It is clear that in the concerti discussed during *Reinterpreting the Concerto,* each composer tackled this historical model in unique ways, using differing structures, forms, and pitch organisations. However, there are a certain number of similarities – mainly in the use of the solo clarinet. As Saariaho said, 'the style of a concerto is always born of a particular interest not only in the instrument but also in a specific soloist'.[240] The use of long, beautiful phrases, with a range of extended techniques, is something Kriikku enjoys, and excels at, playing. He spoke of Tiensuu's compositional language during *Puro,* and said that 'he did not give up any of his style',[241] and repeatedly returned to this statement, reaffirming its importance. The crossover between Kriikku and Tiensuu's styles are undeniable, and the special relationship which has historically always existed between the composer and performer in a concerto allows a piece of music to be created which truly evokes complimentary duality. As Lindberg said, ''All of the pieces I have written for soloists have something to do with the personalities of the musicians themselves. They become, more or less, portraits of these people.' [242] The birth of the

[239] Melodic pitch centres would usually be a foreground feature, but as the pairs of movements are never consecutive, it is difficult for the listener to make these associations in a normal performance, and hence, the pitch similarities between movements become a middle to background feature.
[240] Kaija Saariaho, 'Some thoughts on my Concertos', in Anne Sivuoja-Gunaratnam (ed.), *Elektronisia unelmia. Kirjoituksia Kaija Saariahon musiikista,* (Helsinki: Helsinki University Press, 2005), trans. Andrew Bentley, quoted in Howell, *Kaija Saariaho,* 133.
[241] Dunn and Kriikku, *Upbeat,* 27th October 2015.
[242] Service, "Meet the Composer", 12.

solo clarinet in Finland post-1989 is undoubtedly due to the extraordinary relationship, as professionals and friends, between Tiensuu and Kriikku, and the resulting masterpiece of *Puro*.

Bibliography

Books

Cross, Jonathan, Jonathan Harvey, Helmut Lachenmann, Albrecht Wellmer, and Richard Klein, eds. *Identity and Differences, Essays on Music, Language and Time.* Leuven: Leuven university Press, 2004.

Frisch, Walter. *Brahms and the Principle of Developing Variation.* Berkeley, University of California Press, 1984.

Goss, Glenda Dawn, ed. *The Sibelius Companion.* London: Greenwood Press, 1996.

Gritten, Anthony, and Elaine King, eds. *New Perspectives on Music and Gesture.* Surrey: Ashgate, 2011.

Hailey, Christopher. *Alban Berg and his World.* Oxford: Princeton University Press, 2010.

Hillila, Ruth-Esther, and Barbara Blanchard Hong, eds. *Historical Dictionary of the Music and Musicians of Finland*. Connecticut: Greenwood Publishing Group, 1997.

Hirose, Akira and Karl E. Lonngren, eds. *Fundamentals of Wave Phenomena*. New York: SciTech Publishing, 2010.

Horlacher, Gretchen Grace. *Repetition and Continuity in Stravinsky's Music.* Oxford: Oxford University Press, 2011.

Howell, Tim. *After Sibelius.* Farnham, Surrey: Ashgate, 2006.

Howell, Tim with Jon Hargreaves and Michael Rofe, eds. *Kaija Saariaho: Visions, Narratives, Dialogues.* Farnham, Surrey: Ashgate, 2011.

Hutchinson, Mark Aled. *Coherence in New Music: Experience, Aesthetics, Analysis.* London: Routledge, 2016.

Korhonen, Kimmo. *Finnish Concertos.* Helsinki: Finnish Music Information Centre, 1995.

———. *New Music of the Nordic Countries.* Pendaragon Press, 2002.

Kramer, Jonathan D. *The Time of Music.* New York: Schirmer Books, 1988.

Leopold, Silke. *Monteverdi: Music in Transition.* Oxford: Clarendon Press, 1991.

Mäkelä, Tomi, ed. *Music and Nationalism in 20th-century Great Britain and Finland.* Hamburg: Von Bockel, 1997.

Moisala, Pirkko. *Kaija Saariaho.* Illinois: University of Illinois Press, 2009.

Mooney, Kevin. "Harmony." In *The New Grove Dictionary of Music and Musicians Volume 25*, edited by Sadie Stanley, 584-596. Oxford: Oxford University Press, 2001.

O'Connell, Jeremy Day. *Pentatonicism from the Eighteenth Century to Debussy*. Woodbridge, Suffolk: Boydell and Brewer, 2007.

Ockleford, Adam. *Repetition in Music: Theoretical and Metaphysical Perspectives.* Aldershot: Ashgate Publishing, 2005.

Raasakka, Mikko. *Exploring the Clarinet: A Guide to Clarinet Technique and Finnish Clarinet Music.* Helsinki: Fennica Gehrman, 2010.

Ross, Alex. *The Rest is Noise: Listening to the Twentieth Century.* London: Fourth Estate, 2007

Schoenberg, Arnold. *Style and Idea.* Translated by Leonard Stein. Berkeley: University of California Press, 2010.

Searle, Humphrey and Robert Layton, eds. *Twentieth Century Composers, Vol. III, Britain, Scandinavia & The Netherlands.* London: George Weidenfeld and Nicolson, 1972.

Smith, Richard Langham. *Debussy Studies.* New York: Cambridge University Press, 1997.

Susanni, Paolo and Elliot Antokoletz, eds. *Music and Twentieth-Century Tonality: Harmonic Progression Based on Modality and the Interval Cycles.* London: Routledge, 2012.

Articles and Book Chapters

Alesaro, Juhani. "A Composer Made for Modes." *Musurgia* 15 no 1 (2008): 7-16.

Anderson, Julian, "Spectral music." In *The New Grove Dictionary of Music and Musicians, Volume 24,* edited by Sadie Stanley, 166. Oxford: Oxford University Press, 2001.

Bartók, Béla. "The Influence of Peasant Music on Modern Music." *Tempo* 14 (1949): 19-24.

Beach, David. "Motivic Repetition." In Fineberg, Joshua ed. "Guide to the Basic Concepts and Techniques of Spectral Music." *Contemporary Music Review* 19, no. 2 (2000): 61-80.

Boudet, Jean-Patrice. "*La Dame à la licorne* et ses sources médiévales d'inspiration." Translated by the author*. Bulletin de la Société Nationale des Antiquaires de France*, (1999): 61-78.

Bullock, Philip Ross. "Sibelius and the Russian Traditions." In *Jean Sibelius and his World,* edited by Daniel M. Grimley, 3-49. Princeton: Princeton University Press, 2011.

Christiansen, Jean. "The New Modernism of the 1980s." In *New Music of the Nordic Countries,* edited by John D. White, 225-275. New York: Pendragon Press, 2002.

Clarke, Eric F.. "Levels of Structure in the Organisation of Musical Time." *Contemporary Music Review* 2, pt. 1 (1987): 211-238.

Hasegawa, Robert. "Gérard Grisey and the 'Nature' of Harmony," *Music Analysis* 28*,* no. 2 (2009): 349-371.

Howell, Tim. "Magnus Lindberg: Narratives of Time and Space." *Contemporary Music Review* 33, no. 4 (2014): 355-372.

———. "Musical Narratives: Studies in Time and Motion." *Contemporary Music Review* 33, no. 4 (2014): 339-340.

———. "Out of the Shadows and Silences: The Lotta Wennäkoski in Profile." *Tempo* 66, no. 259 (2012): 2-14.

Hutchings, Arthur. "Concerto." In *The New Grove Dictionary of Music and Musicians Volume 6*, edited by Sadie Stanley, 240-255. Oxford: Oxford University Press, 2001.

Hutchinson, Mark Aled. "Snapshots in Sound: *Mystère de l'instant* and the Legacy of Moment Form." *Contemporary Music Review,* 29, no. 5, 497-512.

Kramer, Jonathan D. "Moment Form in Twentieth Century Music." *The Musical Quarterly* 64, no. 2 (1978): 177-94.

———. "Discontinuity and Proportion in the Music of Stravinsky." In *Confronting Stravinsky,* ed. Jann Pasler. Berkeley: University of California Press, 1986, 174.

Kramer, Jonathan D. ed. "Time in Contemporary Musical Thought." *Contemporary Music Review* 7, no. 2 (1993).

Lindberg, Magnus. Interviewed by Peter Szendy, "Interview with Magnus Lindberg," *IRCAM's Notebooks: Composers Today*, (1993): 48.

Lindberg, Magnus, Joshua Cody and Kirk Noreen. "Magnus Lindberg in Conversation. Moving between Extremes." *The Musical Times*, Vol. 141, No. 1872 (Autumn, 2000): 33-35 and 37-38.

Nickel, Helmut. "About the Sequence of the Tapestries in 'The Hunt of the Unicorn' and The Lady with the Unicorn.'" *Metropolitan Museum Journal* 17, (1982), pp. 9-14.

Pasler, Jann. "Debussy's, "Jeux": Playing with Time and Form." *19th-Century Music* 6, no. 1 (1982): 60-75.

Parsons, Jeremy. "Paavo Heininen." *The Musical Times* 119, no. 1628 (1978): 850-53. doi:10.2307/957787.

Pousset, Damien. "The Works of Kaija Saariaho, Phillippe Hurel and Marc-André Dalbavie." *Contemporary Music Review* 19*,* no.3 (2000): 67-110.

Rickards, Guy. "Nordic Women's Composers: Part 1, Finland and Sweden." *Nordic Sounds,* no. 1 (February 2006): 4-12.

Saariaho, Kaija. "Timbre and Harmony: Interpolations of Timbral Structures." *Contemporary Music Review* 2, no. 1, (1987): 93-133.

Sivuoja, Anne. "Books: A Serious Proposal for the Sibelius Connection in Finnish Modern Music." *Finnish Music Quarterly*. No. 1, (2007): 40-41.

Tiensuu, Jukka. "Harpsichord — A mother of Necessity?." *Contemporary Music Review* 20, no. 1 (2001): 3-15.

Recordings

Sakari Oramo, The Finnish Radio Symphony Orchestra & Kari Kriikku. "Clarinet Concerto." *Lindberg: Clarinet Concerto, Gran Duo, Chorale.* 2005, CD.

————————. "D'OM LE VRAI SENS" I-VI. *Kaija Saariaho: D'OM LE VRAI SENS – Laterna Magica – Leino Songs.* 2011, CD.

Jukka Tiensuu, Susanna Mälkki, Kari Kriikku, Avanti! Chamber Orchestra. "Puro." *J. Tiensuu: nemo – Puro – Spiriti.* 2008, CD.

Scores

Brahms, Johannes. *Clarinet Sonata no. 2 op. 120.* London: Boosey & Hawkes.

Hakola, Kimmo. *Clarinet Concerto.* (2001) PDF Accessed online at: https://nuotisto.s3-eu-west1.amazonaws.com/store/da8750511783abd86b055b959b9fcae800079d458d69ed3b0a6ad37f755a.

Lindberg, Magnus. *Kraft.* Helsinki: Wilhelm Hansen, 1985.

————————. *Corrente.* London: Chester Music, 1992.

————————. *Clarinet Concerto.* London: Boosey & Hawkes, 2002.

Saariaho, Kaija. *D'OM LE VRAI SENS*, London: Chester Music, 2010.

Stravinsky, Igor. *The Rite of Spring.* Moscow: Muzyka, 1965.

Tiensuu, Jukka. *Puro.* (1989) *

————————. *Missa.* (2007) *

* unpublished PDF provided directly from the composer

Websites

"Jukka Tiensuu: Puro." *Kari Krükku.* 2015. Accessed Jan 18, 2018. http://www.karikriikku.com/projects/jukka-tiensuu-puro

"Magnus Lindberg: Accused." *News,* London Philharmonic Orchestra. Jan 15, 2015. Accessed Oct 18, 2017. http://www.lpo.org.uk/news/magnus-lindberg-accused.html.

"Magnus Lindberg: Clarinet Concerto." *Kari Kriikku*. Accessed Sep 15 2017,. http://www.karikriikku.com/projects/magnus-lindberg-clarinet-concerto/.

"Magnus Lindberg: Concerto for Piano and Orchestra." *Music Sales Classical.* Accessed September 9, 2017. http://www.musicsalesclassical.com/composer/work/5837.

"Magnus Lindberg: Programme note for Concerto for Piano and Orchestra." *Music Sales Classical.* Accessed September 9, 2017. http://www.musicsalesclassical.com/composer/work/5837.

"Paavo Heininen." *Studies in music and other writings. Jan 7, 1980.* Accessed Feb 1, 2018. https://relatedrocks.com/1980/07/01/paavo-heininen/.

Burton, Anthony. "Kaija Saariaho: Biography." 2006. Accessed Sep 15, 2018. http://saariaho.org/wp-content/uploads/2017/08/170118-Bio-ENG-KS.pdf.

Carter, Tim and Geoffrey Chew. *"*Monteverdi [Monteverde], Claudio." *Grove Music Online.* Accessed March 15, 2018. http://www.oxfordmusiconline.com/grovemusic/abstract/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000044352.

Clark, Edward. "Magnus Lindberg's Clarinet Concerto." *Classical Source*. Aug 2007. Accessed Jan 28, 2018. http://www.classicalsource.com/db_control/db_features.php?id=4770.

Harri, Suilamo. "Jukka Tiensuu." *Music Finland.* Accessed Feb 12, 2018. https://core.musicfinland.fi/composers/jukka-tiensuu.

Hartikainen, Jarkko, Trans. Jaakko Mäntyjärvi. "The Constant Variation of Creation." *Finnish Music Quarterly*. April 2, 2013. Accessed June 5, 2019. https://fmq.fi/articles/the-constant-variation-of-creation-on-paavo-heininen.

*Heininen, Paavo. "*Music Finland." Accessed 05/06/18. https://core.musicfinland.fi/composers/paavo-heininen.

Nieminen, Risto. "Notes from the Boderland – An Interview with Jukka Tiensuu." *Finnish Music Quarterly.* Sep 1, 2007. Accessed June 10, 2018. https://fmq.fi/articles/notes-from-the-borderland-an-interview-with-jukka-tiensuu.

Nordlinger, Jay. "New York chronicle." *The New Criterion.* April 2010. Accessed May 3, 2016. https://www.newcriterion.com/issues/2010/4/new-york-chronicle-5254.

Oramo, Ilkka. Paavo Heininen," *Studies in Music and Other Writings, Jan 7, 1980,* accessed Feb 1, 2018, https://relatedrocks.com/1980/07/01/paavo-heininen/

————————. "'Chaconne Principle' And Form in the Music of Magnus Lindberg." *Studies in Music and Other Writings*. Dec 12, 2004. Accessed Oct 5, 2017. https://relatedrocks.wordpress.com/2004/08/12/chaconne.

———————— "The Sibelius Problem." *Studies in Music and Other Writings.* Jan 10, 2007. Accessed Jan 17, 2018. https://relatedrocks.com/2007/10/01/the-sibelius-problem/.

Roche, Heather. "On Using the Register Key." *Heather Roche,* March 30, 2014. Accessed Oct 26, 2018. https://heatherroche.net/2014/03/30/on-using-the-register-key/.

———————— "Spectral Multiphonics*." Heather Roche.* Sep 26, 2016. Accessed Sep 5, 2018. https://heatherroche.net/2016/09/26/spectral-multiphonics-bb-and-bass/.

Ross, Alex. "Kriikku's Kraft." *Alex Ross: The Rest is Noise, Books, Articles, and a Blog, by the critic of the New Yorker.* September 25th, 2009. Accessed 19/19/18. http://www.therestisnoise.com/2009/09/kriikkus-kraft.html.

Service, Tom. *The Silence of Sibelius.* The Guardian. Sep 20, 2007. Accessed Nov 20, 2018. https://www.theguardian.com/music/2007/sep/20/classicalmusicandopera1

————————"A Guide to Magnus Lindberg's Music." *The Guardian*. April 16, 2013. Accessed Oct 5, 2017. https://www.theguardian.com/music/musicblog/2013/apr/16/contemporary-music-guide-magnus-lindberg.

"Transition (i)." *Grove Music Online.* 15 Feb. 2018. https://doi.org/10.1093/gmo/9781561592630.article.28271.

Theses and Essays

Morell, Katie. "Contemporary Clarinet Music in Finland: Three Concertos by Finnish composers commissioned for Kari Kriikku." Ohio State University, 2014.

Powell, Richard. "Articulating Time: Listening to Musical Forms in the Twenty-First Century." PhD Thesis. University of York, 2016.

Sallinen, Lauri. translated by the author, "*Puro klarinetille ja orkestrerille. Muodon ja harmonian analyysi*." Sibelius Academy, 2009.

Littler, Sapphire. "Stravinsky in Transition: Listening to the Discontinuous." University of York, 2015-16.

Wolfe, Brian Thomas. "An Analysis of Texture, Timbre, and Rhythm in Relation to Form in Magnus Lindberg's "Gran Duo"." The University of Oklahoma, 2013.

Lectures:

Tiensuu, Jukka. 'The Future of Music." Lecture for *SEARCH EVENT I*, The University of California, San Diego, April 16, 2000. Transcript available at https://tiensuu.fi/FutureOfMusic.pdf.

Radio Interviews

Kriikku, Kari. Interviewed by Clarissa Dunn. "Upbeat." *Radio New Zealand.* Oct 27, 2015.