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The creative process in contemporary polyphonic music

a study and reflection on the main activities and processes in the act of composition

Proefschrift voorgedragen tot het behalen van de graad van
Doctor in de kunsten: muziek

2014

Acknowledgments

I gratefully acknowledge the members of my dissertation committee, Dr. Godfried-Willem Raes, Dr. Marc Leman, Richard Barrett and Dr. Dirk Moelants, for their support and assistance during the completion of this project.
I offer a special thank you to all the composers I interviewed, who found time to participate in this research: Joachim Brackx, Guy De Bièvre, Frederik Neyrinck, Frank Nuyts, Thomas Smetryns, Jan Van Landeghem, Petra Vermote, Lukas Huisman, Kristof Lauwers, Bart Vanhecke, Kris De Baerdemacker, Thomas Vanhauwaert and Sebastian Bradt.
The research gave me the opportunity to collaborate with a number of fine musicians that I also want to thank: Charlotte Otte, Anne Davids, Dirk Moelants, Elisa Medinilla, Katrien Gaelens, Ivo Delaere, Lukas Huisman, Birgit Eecloo, Ester Van Nuffel, Catherine Laws, Tomonori Takeda, Yukari Uekawa, and the musicians of the Spectra Ensemble, Zwerm and Ensemble Besides.
A special thanks goes to my colleagues at the School of Arts (Ghent) for all their warm support: Laura, Ruth, Joren, Florian, Liselotte, Wannes, Lukas, Daan and Françoise. With my colleagues at the Orpheus Institute I had many inspiring discussions: Juan, Kathleen, Peter, Luk, Gerhard, Darla, Anna, Bart, Paulo, Catherine, Bill, Stefan, Valentin, Michael, Tiziano and Einar of the ORCiM research group.

And I give deep thanks to Tine, for her loving support and patience of many years.

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List of Abbreviations

CP = the creative process
CPs = creative processes
CPMC = the creative process of music composition

Audio Recordings on CD

Track 1: Guy De Bièvre *Schillinger 91*
Track 2: Marc Cammeren *Aria Ubriaca*
Track 3: Frederik Neyrinck *Aphorisme IX*
Track 4: Frank Nuyts *Divérance*
Track 5: Jan Van Landeghem *Yantra*
Track 6: Petra Vermote *Skizze*
Performed by Charlotte Otte (piano), Anne Davids (flute), Dirk Moelants (viola da gamba). Recorded at the Bijloke Studio. Date: 20 June 2013. Recording: Wannes Gonnissen

Track 7: Thomas Smetryns *Point and Line to Plane*
Performed by Elisa Medinilla (piano), Katrien Gaelens (flute), Dirk Moelants (viola da gamba). Live recording recording at the School of Arts Ghent. Date: 27 March 2012. Recording: Wannes Gonnissen

Track 8: Hans Roels *Threeway II*
Performed by Ensemble Besides (harp, synthesizer, percussion and electric guitar). Live recording at the School of Arts Ghent. Date: 24 February 2011. Recording: Hans Roels

Track 9: Hans Roels *Chunks & Streams*
Performed by Zwerm. Live recording at the Orpheus Institute, X-periment festival (ORCiM Research Festival). Date: 6 October 2011. Recording: Juan Parra Cancino

Track 10: Hans Roels *Eigengang*
Performed by Ivo Delaere, Lukas Huisman and Hans Roels. Live recording of a rehearsal. Recording: Hans Roels

Track 11: Hans Roels *Centra*
Performed by the Spectra Ensemble. A live recording at the School of Arts, Ghent, Week van de Hedendaagse Muziek. Date: 28 March 2013. Recording: Hans Roels

Track 12: Hans Roels *(fl)ASH*
Performed by students from the School of Arts Ghent (percussion solo: Birgit Eecloo). A live recording at the School of Arts Ghent, Week van de Hedendaagse Muziek. Date: 31 March 2014. Recording: Wannes Gonnissen

Track 13: Hans Roels *Points to make*
Performed by Birgit Eecloo (percussion), Ester Van Nuffel (trumpet), Lukas Huisman (piano), Tomonori Takeda (clarinet), Yukari Uekawa (saxophone) and Hans Roels (toy piano). Studio recording at the School of Arts Ghent. Date: 11 February 2014. Recording: Wannes Gonnissen and Hans Roels

Data on accompanying SD card

Transcribed interviews of the group study, in two folder ('pre-interviews', 'post-interviews')
Transcribed verbal reports of the self-study, in three folders ('eigengang', 'centra' and 'flash')

 PART I: INTRODUCTION

PART I: INTRODUCTION

1 General introduction

Artistic Research anno 2014 is a research domain in full development with an increasing body of literature. Elkins (2013) states on PhDs in the arts:

> Viewed in retrospect, 2011 stands out as the first year in which it became impossible for any single person to read all the literature on the PhD. (p. 10)

There are many debates on the epistemological questions, methods, relevance and aims of this new kind of research (Barrett and Bolt 2007; Biggs and Karlsson 2010; Hannula, Suoranta, and Vadén 2005; Wilson and van Ruiten 2013) but there is no agreed-upon, common definition of artistic research and the way it should be performed. Kjørup (2011) makes a plea for diversity and comes to a description of the practice of artistic research:

> One of the worst misfortunes that might hit the budding tradition of artistic research is if it should get squeezed into one single format. Fortunately, the concrete activities that go on around the world under the umbrella of ‘artistic research’ and related terms like 'arts-based' or 'practice-led' do not show any signs in that direction. Whether they have the status of PhD-studies or not, they are as diverse as one might wish. If there is any common denominator at all, it seems to be that artistic research is any kind of research and development – any kind of production or original use and dissemination of knowledge – that artists make as part of or in connection with their artistic creativity. (p. 24)

It is within this diverse tradition of trying to connect research and artistic practice as closely as possible, that this dissertation resides. This research aims to use and fully exploit my expertise as a composer and produce knowledge and insights that are meaningful for my practice and even change it. Knowledge is flowing from my artistic practice into my research and vice versa.
The focus on the creative process of music composition in this dissertation is a consequence of this aim to create a deep interaction between research and practice. Authors and researchers from artistic research have expressed their preference for studying the process of creativity instead of the products – the art works – : in ”the first full-length focused methodological analysis of the new academic *modus operandi* or discipline called 'artistic research'” (p. 9), the book *Artistic Research*, Hannula, Suoranta, and Vadén (2005)write :

> Artistic research means that the artist produces an art work and researches the creative process, thus adding to the accumulation of knowledge. (p. 5)

A similar – more historical – statement is found in Kjørup (2011):

> When I first got involved in the discussion of artistic research in Norway nearly 20 years ago, several of us theoreticians were looking for the special contribution that artists can make to the body of knowledge in the world, and our answer was that it would be natural for artists to study creative processes with their own work as the main example (Kjørup 1993). Our reasoning was that if artistic research is supposed to be different from all other kinds of research, it is natural to focus on the artist as the researcher, and what is specific for the artist is her or his privileged access to her or his own creative processes. (p. 25)

This “privileged access” is a thorny issue, as can be read in the overview of methodological

discussions on studies of the creative process of music composition (p. 33). Researchers from 'outside' artistic research – from different fields such as music theory, sketch studies, music psychology – had been researching the creative pocess in music composition (CPMC) in the past but within these studies an important paradigm shift occurred at the beginning of the new millennium: while in the 1980s and 90s the distant, objective researcher studied compositional creativity – mainly of students and beginning composers –, in a laboratory setting, thus keeping far away from the 'subjective', professional composer, new researchers such as Donin (2012), Collins (2005; 2007) and McAdams (2004) stressed the importance of the composer as a source of valuable, first-hand information and have set up empirical studies with expert composers in their natural, ecological setting.

Within these renewed studies of the CPMC, the composer attained a more active role (within the research); Collins (2007, 247) views the composer a co-researcher. One of the exponents of the new empirical studies of the CPMC, Nicolas Donin, goes one step further and accepts that composers have their own (artistic) agenda and may actually 'benefit' from the research. Donin (2009) thus adds another dimension to this role of the co-researcher.

> When we devised this research project with the composer, he was already thinking about a new work that would exploit possibilities not utilized in *Voi(rex)*. Leroux therefore took an interest in the genetic reconstruction of *Voi(rex)*, not only for its value in producing knowledge about his compositional process, but also as a resource that he could make use of in his future artistic activities. (…) Due to Leroux's long-term interest in learning more about his own ways of working, our collaboration offered benefits for both parties while preserving the integrity of the reconstructive project on the part of the composer and the autonomy of the artistic project from the perspective of the researchers. (pp. 194-95)

It is at the crossroads of current studies of the CPMC and artistic research that this dissertation is to be situated.

There are two main, connected studies in this dissertation: a study of eight composers (from hereon called the 'group study') and a self-study. Apart from the research focus on the creative process (CP), a closer interaction between research and artistic practice was also obtained by weaving a common theme – hyperpolyphony – through these two studies. Hyperpolyphony has been at the heart of my composition practice since 2007-2008 and it has conceptual, compositional-technical and perceptual connotations: on a conceptual level it stands for the intention to express ideas of diversity and simultaneity in my compositions; on a technical level techniques and procedures to create distinct layers, combinations of layers and musical structures that remain this distinctness throughout the development of a composition play an important role; and finally, questions on the perception of simultaneous layers in music have shaped my concept of hyperpolyphony. In the group study I commissioned eight composers to produce a short composition and closely followed the CP of these compositions. I also added a polyphonic task to the commission. This is an illustration of how the 'hyperpolyphony' theme is interwoven in the two studies to obtain a 'short-cut' between research and practice.
Because the 'I' of the researcher and composer is present in this dissertation, reflection needs to be part of the research. This corresponds with a general sensitivity within recent qualitative research for researchers' preferences and worldview and their possible effects on the research. In this

dissertation the reflective inquiry (in 'PART V: REFLECTION' p. 235) focuses on the influences of the research on my composition practice and it happens after the self-study of the CP. Thus a distinction can be made between on the one hand, a systematical analysis of a CP (according to methods within this research field) resulting in an overview or reconstruction of this CP, and on the other, a retrospective reflection, focusing on my experiences.

The CP is not only a research object in this dissertation; it – or more precisely the study of the CP – is also a tool to examine and reflect on other elements of the composition practice. The two studies of the CP – the group study and a self-study – act as a lens through which I can reflect in a more systematic and profound way on my composition practice.

During my research I did not explicitly aim to have my research change my compositional practice. I didn't evaluate the influence of the research on my composition practice as right or wrong if I noticed that some of my composition practices were changing. The theme of hyperpolyphony is woven through the whole research to create a link between research and practice but in general, this dissertation is a Cagean, non-intentional experiment: I did not intend to produce effects on my practice, in the end – in the 'REFLECTION' part – I look upon my composition practice and wonder what happened.

1.1 General outline

In the part 'STUDY OF EIGHT COMPOSERS' (p. 53) a study is made of the CP of eight composers, producing a short composition that was commissioned by the author. This group study focuses on the main activities in the CP and the influence of the commission on the CP. In the next part (p. 157), a self-study follows, in which I research loose or more independent composition activities and focus on the interaction between these activities and the production of compositions. The self-study offers an in-depth, holistic study over a longer time span of one composer's creative processes. In the part 'REFLECTION' (p. 235) I reflect upon the influence that the previous research activities have on my own compositional practice. These parts are preceded by a general discussion of the methods in this dissertation ('DESIGN AND METHOD' p. 27) with an extensive review of methods in studies of the CPMC (as in the group study and self-study) and reflective inquiry (as in the part 'REFLECTION').

In this introductory part, I give i.a. background information on studies of the CPMC and radical forms of polyphony since the 20th century.

1.2 Problem statement and research questions

This is a short overview of the main research problems dealt with in my dissertation (a more detailed description and a contextual review of the research questions and problems is found in the chapters on the method (p. 27), group study (p. 53) and self-study (p. 157)).

Central to my study is the question what the main activities and procedures that composers perform during the composition process are, and which of these concern only details and local problems? A number of studies have tried to answer this question, which looked at groups of composers, not just one single composer. But their research methods, foci, choices in terms of the

sample of studied composers are not necessarily suitable to detect categories of main compositional activities among composers of contemporary-classical (acoustical) music. In many cases children and students have been the objects of these studies, or they were only based upon retrospective interviews. Within recent empirical studies on the CPMC, that collect explanatory data and traces during the CP, there is a tendency towards more convergence in design and method, but comparisons of CPs across studies remain difficult due to the low number of studied professional composers and the different theoretical framework. In this study, the focus is on the main compositional activities in the CP, whereby the activities of eight composers are studied using a common method and analysis framework.

Outside empirical studies on the CPMC, literature suggests that compositional activities, such as sketching or developing software patches, take place without a clear connection to finished compositions. However, in current empirical studies that collect real-time data on the dynamic CP, such more independent compositional activities are not being studied as yet. Questions on the appearance and frequency of these activities, their relation and influence on the CPs of finished compositions thus remain largely unanswered. At the same time in studies of the CP, phenomena such as inspirational ideas or theorising seem to emerge, without having a pre-history. The self-study part of this dissertation studies links between these 'spontaneous' processes in the CP of finished compositions and the more independent activities.

This dissertation is part of a much wider field of studies to which the CP in its naturalistic setting is pivotal. However, as studies do have different views on what constitutes the 'real world situation' of music composition (see 'Naturalistic setting' p. 29 and 'Multimedia summary of the CP' p. 59), a more elaborated and mature paradigm of naturalistic studies of the CP is needed, whilst it is also important to study how the research design itself may influence the compositional practice. This in itself is achieved via two ways. On the one hand, a task is included in the commission (to compose a short work for this research) that is the basis of the group study, and therefor the influence of this unusual task and the commission is studied. On the other hand, the 'REFLECTION' part (p. 235) after the self-study reflects upon the influence of the research activities, as set out in my dissertation, on my own compositional practice. It provides an extensive example of a reflective practice within naturalistic studies on the CPMC, and at the same time it also demonstrates how complex the notion of 'real world research' is in music composition. Moreover, in studies where the researcher and composer are the same person, the need for reflection is even higher but the quest for an appropriate method for this reflection was until now open (see chapter 'Evidence-based reflection' p. 46). In this dissertation I propose a method, based on having an evidence-based overview of the own artistic practice, to reflect on the research influences.

To develop a meaningful analysis and understanding of the compositional practice, its dynamic context has to be taken into account. Music composition is a situated, dynamic and multi-faceted activity with ideas, actions, feelings, decisions and music that change often during a time span of several months and more, which makes it difficult for the researcher doing the research and the reader, reading research literature, to focus on a research question and simultaneously understand its context and situation. Therefor, the first attempts in literature to create visual or multi-modal summaries of (parts of) the CP require further development. (see also 'Data analysis' p. 41). It is a creative challenge to summarize ideas, decisions, actions and musical developments in one visual

illustration.

Finally, in the self-study (p. 157) I also address methodological issues in self-studies of music composition. Researchers/composers have often concluded at the end of their research, that their research method hindered them while composing and that they could not fully compose as they wanted to (see 'Computer-based data collection methods' p. 38 and 'What is reflection?' p. 47). This is related to questions on the technical data-collection methods and the level of additional reflection and analysis, integrated in the research method. To enhance self-studies in music composition in the future, it is pivotal to continue the search for research methods that do not interfere too heavily in the act of composition. In the self-study I aim to design a method that collects both explanatory and factual data about my own CP. A reflective pre-study to individualize the research methods proved to be indispensable to reach this aim.

To summarize, the following research questions are central to this dissertation:

- Which composition strategies and cognitive activities can be detected in polyphonic composition?
- Which composition problems take place while composing, how do these problems evolve and interact with each other and how are they solved?
- Are there compositional processes that operate more independently of the production of finished compositions than others?
- How do such more independent processes relate to the other compositional processes and what is their function within the overall constellation of compositional practices?
- How to develop a personalized real-time data-collection method, that fits the individual composition practice of a composer?
- Which data collection methods can be designed to study and monitor more independent compositional activities that are not directly linked to (finished) compositions?
- How can summaries of the CP be created? How can the chronological reconstruction of the actions and music-in-progress be visualized?

1.3 Delineation

First, this dissertation is about the act of *composition.* No clear and definite distinction can be made between composition and other creative music activities like improvisation or performance, as the definition of composition in the New Grove Dictionary (Blum 2001) clarifies:

> The activity or process of creating music, and the product of such activity. The term belongs to a large class of English nouns derived from the participial stems of Latin verbs (here composit-, from componere: ‘put together’) followed by the suffix -io/-ionem. Etymologically, the primary senses of ‘composition’ are ‘the condition of being composed’ and ‘the action of composing’. Since the 16th century the English word and its cognates in other languages have been applied to pieces of music that remain recognizable in different performances as well as to the action of making new pieces. Both the creation and the Interpretation of compositions in this restrictive sense are commonly distinguished from Improvisation, in which decisive aspects of composition occur during performance. The distinction hinges on what performers are expected to do in various situations and on how they prepare themselves to meet such expectations. (p. 186)

Therefore a more general description of composition – as an elaborate preparation of performed or realized music – is used in a flexible way, also encompassing practices of composers producing open, graphical or text-based scores.

Second, the studied field is not composition in general, but *contemporary-classical and experimental composition in Flanders* (Belgium). All the studied composers in this dissertation are active within this field. Since the second world war Flanders has a rich and diverse tradition of composers working in areas such as electronic music (Louis De Meester, Lucien Goethals), experimental music (Godfried-Willem Raes, Moniek Darge), music for acoustical ensembles (Karel Goeyvaerts, Luc Brewaeys, Serge Verstockt), music theatre (Andre Laporte) and cross-over music between contemporary-classical music and other genres (Frank Nuyts, Peter Vermeersch). On top of this (non-exhaustive) list Flanders has a vivid scene of younger composers (Annelies Van Parys, Stefan Prins, Kristof Lauwers, Daan Janssens, Paul Craenen) active in one or several of these fields. Wennekes and Delaere (2006) compare the diversity of the contemporary music in Flanders to the Flemish – anarchic – landscape, which is divided into many, small parcells:

> Ein derart hohes Mass an Vielfalt, Chaos, Eigensinn und Kompromissbereitschaft erlaubt es, die zeitgenössische flämische Musikscene mit einer Parzellenlandschaft zu vergleichen, wo jeder ungehindert sein (oder ihr) Häuschen baut. (p. 78)

Finally, it is the *creative process* of music composition which plays a central role in the current study. It should be clear that composition activities such as rehearsing, performing or taking part in artistic, cultural or political debates are not the main focus in this dissertation.

1.4 Aims of the current study

This dissertation has four purposes:

1. to provide a deeper understanding of the CPMC, specifically of the broad categories of activities and strategies when producing a composition
2. on a methodological level, to explore real-time data collection methods that can be used over a long time-span to study the CPMC and that encompass more independent compositional activities (not directly related to a finished composition)
3. to provide a more complete picture of the compositional processes, one which also includes activities that are not directly related to 'finished' compositions
4. to turn a reflective eye on the influence of research activities on composition practice.

1.5 Theoretical framework

The theoretical framework on music composition that underlies this dissertation has a lot in common with the 'ecology of composition' as explained by G. Folkestad. This researcher has performed research on music education, technology and creativity and in his dissertation (1996) on computer-based creative music-making, he adopts a sociocultural theoretical framework within music. This framework has been further developed and described in the book chapter *Digital tools and discourse in music: The ecology of composition* (2012). He implements ideas of *situated*

cognition and *situated learning*, and stresses the importance of taking the full context into consideration in the analysis of creative activities. The situational context does not only exist of the physical environment but also of the musical situation in which the creative artist is placed. Next he states (talking about experiments):

> In order to understand and explain this, a theoretical perspective was needed which emphasized the situatedness and the cultural-historical dimension brought into the situation by the participants themselves and by the tools they used for composition. (pp. 194-195)

The interaction between the musician and the situation is further elaborated through the concept of 'affordance' , this concept is explained by Gibson as follows:

> The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill. The verb to afford is found in the dictionary, but the noun affordance is not. I have made it up. I mean by it something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment. (Gibson as cited in Folkestad 2012, 196)

Folkestad adds:

> In Gibson's theory -in which 'man', in these respects, is included in the category 'animal'- the surroundings and the organism together define the affordances, which can be positive as well as negative, and be understood as *being-in-time*. Moreover, everything is fundamentally situated; learning means to perceive new affordances, and in doing so perception and cognition cannot be separated. (p. 196)

Within the holistic view of Folkestad the “total situation” – which he calls the context, including external conditions, the physical environment, the persons involved in the practice and the cultural and historical background of these individuals – is dynamic, i.e. the situation and the creative acts change, and consequently the affordances. This view also implies that music-making, activity, knowledge and learning cannot be viewed as separate processes as they are integrated. Moreover, the creation of music also involves learning how to create music. Speaking about the previous integration he writes:

> this paradigm implies that while a researcher might study how music is created, s/he also simultaneously studies how the participants learn to create music. (p. 195)

The concept of self-learning and the importance of a situated practice appeared in the work of Donald A. Schön (1983). In fact, this author and Folkestad are situated within the “tradition of educational theorizing about the relationship between knowing and doing”, starting with the philosopher John Dewey. Schön's book *The Reflective Practitioner* (1983) had a major influence on the theoretical framework underlying this dissertation, especially his notions of reflection-in-action and reflection-on-action. These notions implies that although professional practitioners rely on tacit recognitions, judgments and skillful performances, they often think about what they are doing, even while doing it. This reflection is not only directed towards the tools and materials, Schön writes:

> As he tries to make sense of it, he also reflects on the understandings which have been implicit in his action, understandings which he surfaces, criticizes, restructures, and embodies in further action. It is this entire process of reflection-in-action which is central to the “art” by which practitioners

> sometimes deal well with situations of uncertainty, instability, uniqueness, and value conflict. (p. 50)

These notions -and related ones like 'knowing-in-action'- are developed by Schön as a reaction against the reign of Technical Rationality, the ruling paradigm, in which practical problems are solved through the application of theoretical models.

To summarize the conceptual framework of situatedness in this dissertation, I consider the creative process as a dynamic and transformative process between the composer and the context, i.e. between individual experience, aspirations, cognition, actions on the one hand and tools, materials, musical language, music history and the musical discourse in progress. Within this process there is not one main agent/force, for example the composer is not merely driven or moulded by his aspirations or his cognitive abilities, he also changes these aspirations, for example through the interaction with the produced musical discourse, or he extends his (musical) cognitive abilities through reflection and self-learning.

The frequent use of the term 'compositional *activities*' in the this dissertation has to be understood within this framework of situatedness. It does not imply a split between acting, thinking and perceiving, on the contrary it expresses an embodied vision in which action, intention, imagination and perception interact with each other. Consequently, compositional activities stand for a whole range of activities ranging from purely cerebral actions like imagining a new musical idea, over physical actions such as improvising music based on a rough sketch, to making a digital copy of a draft while changing a few details.

Next arises another question related to the terminology in this dissertation: how do I call the products (in the mind or materialized in some artefact) of these compositional activities, understood within a situated paradigm?

Kathleen Coessens ask a similar – more general – question in her article *Sensory Fluidity: Dialogues of Imagination in Art* (2012):

> Which role does the body, and more specifically experiential embodied thoughts, feelings and patterns, play in our constructions and distortions, in our understanding and fantasies in and about the world and our interaction with it? How do the brain and the body integrate and translate in multi-sensory ways unidimensional information? How do we find ways to imagine imagination, to express the fantasies, elucidate the exuberations of what we usually think is the territory of understanding and concepts, and as such linked to the mind? How can we transfer and share our imagination with others? (p. 453)

In this dissertation I have chosen the term 'idea' for the products of these compositional activities. This word is to be understood within an embodied and multimodal view as a 'product' integrating auditory, haptic, visual and verbal sensory modes. I did not find any word that expresses the multisensory nature of these products, I have chosen 'idea' although I could just as well have labeled it 'image' or 'thought'.

1.6 Compositions

My compositions that were produced during the research, are a recurring theme in this dissertation, especially in the self-study and refection parts. My compositions are never explained or analysed one by one, they are woven into the whole architecture of my dissertation and analysed in light of specific research questions. Therefore I present a short description of each composition composition, followed by the chapters in which specific elements of these compositions are explained in detail.

Threeway II
The four parts in this composition have a high degree of independence in this composition. The instrumentation is free, but one of the parts is to be performed on a synthesizer. The score is in Appendix 19, and the course of action (summary) of the CP in Appendix 27. A live recording of this composition is on the accompanying CD.

Chunks & Streams
This composition was made for the electric guitar quartet Zwerm. The performance requires improvisation from the performers and the setup consists of two speakers (guitar amps) for each performer. These speakers are located at different positions in the performance space. The score is in Appendix 20, and the course of action (summary) of the CP in Appendix 28. A live recording of this composition is on the accompanying CD.

Eigengang
This composition was made for three performers playing on one (grand) piano and using several extended (inside piano) techniques. The score is in Appendix 21, the course of action (summary) of the CP in Appendix 29 and the main problems that were encountered while composing are found in Appendix 33. A live recording of this composition is on the accompanying CD. A description of the interaction between my theories (personal collections of knwoledge) and the CP of Eigengang is given in the self-study on p. 219.

Centra
This composition was written for the Spectra Ensemble. The piano and the piccolo – playing at a different location in the performance hall – have the most important role in this piece. Both parts have their own tempo and distinct character. The other instruments of the ensemble play short and diverse fragments. The score is in Appendix 22, the course of action (summary) of the CP in Appendix 30 and the main problems that were encountered while composing are found in Appendix 34. A live recording of this composition is on the accompanying CD.

(fl)ASH
This composition consists of many, short fragments of pre-existing music, played by an on-stage and two off-stage ensembles. One percussion player has a solo role and does not play fragments. The graphical score is in Appendix 23, the course of action (summary) of the CP in Appendix 31 and the main problems that were encountered while composing are found in Appendix 35. A live

recording of this composition is on the accompanying CD. A description of the interaction between my 'loose ideas' and the CP of *Eigengang* is given in chapter 6.5 of the self-study on p. 213.

Night Included
This composition consists of a a text score, which gives general improvisation instructions. The work is built upon a circadian rhythm, the alternation between day and night during one day. The score is in Appendix 24, and the course of action (summary) of the CP in Appendix 32.

Points to make:
This work was made for a visual installation of the artist Alice De Mont. The composition consists of five sections that can be performed in any order, with repetitions and/or omissions. The instrumentation is free and the musicians are invited to find different ways to perform staccato sounds (with pitch) on their instrument. The timing of these short notes is written in free time, resulting in a heterophonic texture.
The score is in Appendix 25. A recording of this composition is on the accompanying CD.

2 The creative process of music composition

In the following review of research on the CPMC I will give a – roughly chronological – overview of this research. In general, the empirical studies of the dynamic and situated CP have been most influential on this thesis. These studies are dealt with extensively throughout my dissertation and therefore the overview in this chapter of these studies is relatively short and full of cross-references to other parts of my dissertation.

This review starts with a description of the work of two pioneers, Bahle and Reitman, and then looks at studies in the 1980s and 1990s before advancing to the empirical studies. Next creativity studies and artistic research on the CP is dealt with. I will end with a short overview of other research disciplines which have examined aspects of the CP but which have not been crucial to the design, aim and concept of my dissertation.

2.1 Research pioneers: Bahle and Reitman

Bahle's relevance lies in the development of introspection-based research on the CP. Bahle (1936; 1947) considered the thoughts, concepts and experiences of composers in action as an important source of information. Holtz (2009) remarks that Bahle's research was inspired by the methodology of the Austrian composer and musicologist Friedrich von Hausegger (1837-1899), who asked famous composers such as R. Strauss and E. Humperdinck to answer a questionnaire on how and why their music came into being. Still according to Holtz (2009) Bahle added a number of methods to this methodology: composers such as A. Schönberg, C. Orff and A. Honegger were asked to observe themselves while composing, and he also performed experiments during which composers solved composition tasks in a laboratory. Bahle also asked composers to compose music on given poems and to reflect on the CP. Based on the analysis of these data, Bahle concluded that there were two categories of composers: the working type and the inspirational type. The working type of composer consciously and systematically constructs new music while the inspirational type is less aware of the sources of ideas and insights. He produces music in an eruption of creativity. Bahle considers, for example, Bach, Beethoven and Reger to be representatives of the former type, and Schubert, Tchaikowsky, and Berlioz to be representatives of the latter. Bahle also states that the inspirational type, being controlled by the process, cannot verbalize thoughts and decisions, whereas the working type is a better source of data for a psychologist. The criterion of selecting composers based on their ability to articulate the compositional experience is found for example in Nicholson (1997).

The second pioneer of research on the CPMC is Walter Reitman. In 1965 Reitman (1965) published a remarkable study in a chapter called *Creative Problem Solving: Notes from the Autobiography of a Fugue*. This study was part of a larger research project by Reitman to design an information processing theory. The study of the composer producing a fugue functioned as a test case for his computer model. Reitman was the first researcher to apply the problem-solving paradigm to a study of the CPMC. Composing was classified as an 'ill-defined' problem and this classification reappears in various later studies (Newman, Collins). Reitman designed an early

version of a real-time data collection method to study the CP of a composer writing a fugue. The composer spoke into a tape to describe his thoughts while composing. Verbal protocols are discussed in detail in the chapter on method (p. 33). Next, Reitman states that on the one hand there are global constraints (duration of composition, instrumentation, number of parts,...) at work which exist even before the act of composition starts, while on the other hand new constraints emerge as the original problem is transformed during the CP. Reitman coins this phenomenon '*constraint proliferation*'. Another problem-solving technique he described, after analysing the protocol, is '*attribute discontinuity,*' where some attributes of a problem (such as harmony) are not addressed in order to work on other aspects of the problem (for example rhythm):

> Thus, at one point the composer ignored all attributes of a pair of melodic lines except the arrangement of the harmonic intervals they formed. At another point, he may focus solely on rhythmic or dynamic considerations. (p. 175)

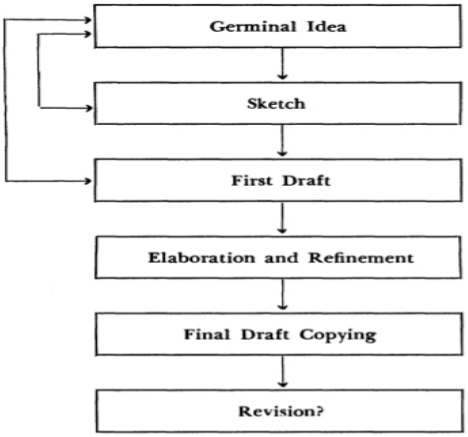
The author also points out how the composer delays plans or ideas until the right and suitable conditions occur for their implementation, this is termed 'connected alternates'. Because the final outcome – the fugue – is so different from the initial idea (the initial definition state as it was called in his information-processing paradigm), Reitman does not implement the results of his fugue study as a computer program or model for such a program.

2.2 1970 - 2000

The process of musical creation was further investigated by Bennett (1976) in a series of semi-structured interviews with eight professional composers of classical music. Based on these data, the author presents a model of the CP consisting of several stages through which the composers proceed while composing. It is important to mention that Wallas (Runco 2012) had already designed an influential stage theory, postulating the existence of four stages in creativity: preparation, incubation, illumination and verification. Bennett added a recursive element to this linear model by providing feedback mechanisms between the first three stages.

The composing process frequently involves first discovering a "germinal idea." This may take a variety of forms, from a melodic theme, chord progression or texture to a total picture of the work. Bennett also stresses that sketches may be put aside for a while and problems are often solved by a night's sleep or a brief walk. He refers to this procedure as proactive inhibition, but this phenomenon strongly resembles the incubation phase in Wallas. The author also discusses the role of emotions in the stages of the CP and concludes that compositional activity occurs most frequently in association with feelings of tranquillity, security, and relaxation.

Illustration 1: Bennett's Schematic of the Composing Process



In 1985 Delalande (Chion and Delalande 1986; Delalande 2007) also studied a group of composers, by taking interviews after the composers had produced an electro-acoustic work. Each composer started from a given sound fragment (see further p. 54).

In the same year Sloboda (1985) hypothesised an approach which he does not consider to be a theory or explanation, but rather a way of describing the elements and their possible relations in the CP. His 'model' is derived from theories of problem solving and very diverse retrospective accounts by composers. It focuses on two main stages, an inspirational stage during which the composer becomes conscious of ideas and an execution phase where these ideas are transformed into deliberate and more conscious processes. Sloboda points out the important role of acquired skills and experience held in long-term memory. The compositional activities in the previous two stages interact with long-term knowledge, for example when the form of a composition is evaluated or inspiration emerges during the first phase. It must be noted though, that the content of the long term processes is heavily influenced by classical, tonal music and its focus on thematic development.

Otto Laske is a researcher known for this contributions to the rise of music cognition, a research discipline that investigates the understanding of music. He also is a composer of algorithmic and computer-assisted music that was inspired by the algorithmic composer G.M. Koenig, among others. During the 1970s and 80s, Laske was also interested in the computational modelling of the process of music composition. In 1990 Laske (1990) presented a model which he called Composer.[1] It was probably based on his own experiences of the CP because Laske never conducted studies on the CPMC. Laske's attempt to understand the CPMC by creating a simulated

1 This model is not be confused with algorithmic composition, i.e. a technique to create music by using algorithms, with or without the aid of computers. In this art form the main aim is to generate new music and not to model or understand how human composers create music compositions.

procedure via computer programs is taken up by Wiggins (2012). He presents a hypothetical model based on the notion that the vast majority of learning does not happen explicitly but “implicitly, from direct experience of the musical context.” His model of the non-conscious musical creative mechanisms uses statistical procedures to generate tonal melodies and harmonies. The music produced is rather simple and based on familiar procedures from (tonal) music theory, and as such it is not very useful in this thesis on contemporary classical and experimental music. Moreover, his clear-cut distinction between conscious and non-conscious processes in the CPMC is highly disputable. It contradicts the notions of reflective practice and self-learning expressed in the chapter 'Theoretical framework' (p. 7). For example, the reflective practitioner, as described by Schön (1983), engages in reflection in and on action, thus managing to become aware of tacit and unconscious dimensions of his practice. But Wiggins' modelling, predictive approach and his focus on the auto-generative cognitive mechanisms is original within studies on the CPMC. Together with the work of Baroni (2001)and Eduardo Reck Miranda (2012) it provides a valuable addition to this research domain of studies.

Since the 1980s, several studies have been conducted on the creativity of children inventing music. Bamberger (2013) has been a pioneer in this field, and Webster (2007; 2002) and Hickey (2002) have made extensive reviews of the publications in this domain. This educational research has delivered important insights such as the development of computer data collection methods (see 'Data-rich approach in studies of the CPMC' p. 33 and the notion of musical creativity as a situated learning practice (see 'Theoretical framework' p. 7). In the light of this thesis it is important to note that “children are creative in the sense that they invent new material, but their creativity is not what we would consider professional creativity.” (Lehmann, Sloboda, and Woody 2007, 141)

2.3 Empirical studies of the dynamic and situated CP

Since the new millennium a new approach, building upon cognitive sciences, anthropology, music psychology and recent developments in qualitative research, is found in studies of the CPMC. The most important characteristics of this new approach or paradigm shift are:

1. professional and experienced composers are studied in a naturalistic setting (real world setting)
2. the music studied is the 'usual' music in the cultural field in which the composer operates, consequently simple musical exercises are no longer studied
3. the researchers gather a wide array of sources, often collected during or soon after the composition process
4. the experience and account of the composer are seen as an important part and source of information on the CP
5. stage theories of the CP stress the non-linear, non-discrete and iterative characteristics of the stages
6. a situated, contextualized view of creative practices is proposed

The first four items are explained in more detail and discussed in the 'DESIGN AND METHOD' part on p. 27. The fifth item refers to stage theories on creativity in general (Runco 2012) and the model on music composition proposed by Collins (2005; 2007), the latter being based on a long-

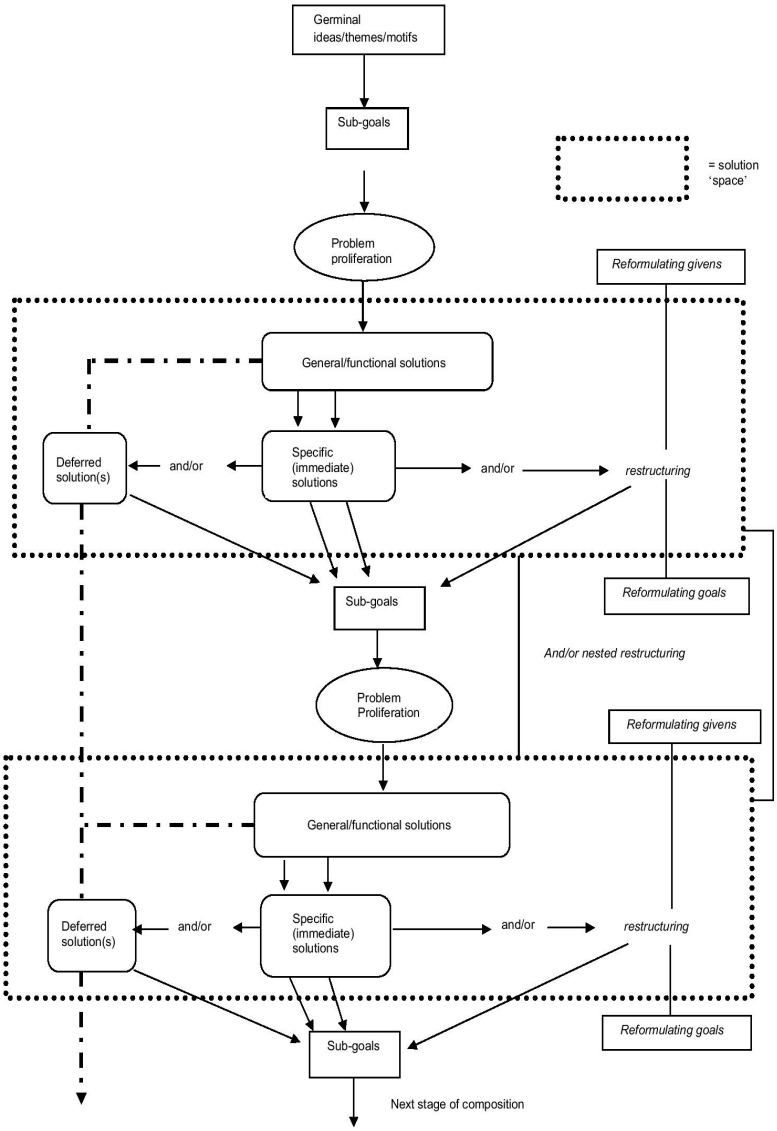
term study of a film composer. The most important characteristics of this model, see Illustration 2, are:

- stages and solution spaces in the CP do not develop linearly but recursively
- goals are not well-defined, the goals are reformulated and transformed through a process of problem proliferation and solution implementation
- moments of insight (illumination) do not occur once, as transitions from one stage to another, but several times: they can be located in a search for general or specific problem solving
- compositional strategies at a micro level are embedded "into a cycle of recursive iteration and re-iteration"

Currently, about nine *professional* composers have been studied since 2000 by researchers within this field of empirical studies of the CPMC, with *a variety of real-time data* obtained in a *naturalistic* setting. This rough count is based upon the composers Philippe Leroux, Stefano Gervasoni (Donin 2009; Donin and Theureau 2007; Donin and Féron 2012; Donin 2012), an anonymous film composer (Collins 2005; 2007), Michael Finnissy (Bayley and Clarke 2009), Roger Reynolds (McAdams 2004), an anonymous composer (Pohjannoro 2014), Newman (Newman 2008), another anonymus composer and Bennett (J. Bennett 2012).[2] I believe it is too early to derive models of the CP from this sample of composers. In this thesis I will focus on specific aspects of the CP (the main activities in the CP in the group study, processes which are more independent from finished compositions in the self-study). At the same time, I remain open to a number of emerging phenomena, which arise from (the analysis of) the data, although initially they were not searched for. Through this approach I hope to enhance the comparability of CPs studied.

2 This number is rather rigid but it gives a good indication of the current state of research on the CPMC. Real-time data is to be understood as data collected during or soon after the CP studied. For example, I excluded studies (Féron 2011) on compositions that were written many years before the actual study.

Illustration 2: Collins' Hypothetical model of the compositional process



2.4 Creativity studies on the experience of composition

Research on creativity is a very broad field, in which may aspects of creativity are studied, such as the influence events in a composer's life, the dominant factors, everyday creativity, enhancement of creativity, etc. One recurring issue concerns the domain-specificity of creativity: whether creativity in one domain (e.g. music) is different from creativity in another (e.g. sports). Howard Gardner (2011) is one of most cited researchers on this topic, and he stated that 8 intelligences (his term for domains of creativity) exist, musical intelligence being one of them. The question of the general versus domain-specific nature of creativity is still unresolved (Baer 2011). Another important researcher in this field is Csikszentmihalyi (1996), who launched the concept of 'flow' – the focused, single-minded immersive experience of performing an action – based on a large set of interviews with creative individuals in may different disciplines.

A number of studies within the tradition of creativity research, often inspired by concepts of Gardner and Csikszentmihalyi, have studied the experience of the CP by solely relying on interviews. Although this thesis focuses on the *dynamic* and multifaceted character of the CP and uses both real-time and data-rich collection methods, these studies are described in the following paragraphs, mainly because they provide a valuable background to this thesis and more specifically because these are *group* studies in which more than one composer was studied.

Katz (Katz 2012; Katz 2009; Katz and Gardner 2012) performed a group study of 24 composers of contemporary classical music to investigate “the prototypical ways that pieces take shape and the core ideas and impulses that catalyse the process.” (Katz and Gardner 2012, 107) Based on interviews (during which the composers could talk about their 'normal' creative process and two specific compositions) she concludes that the creative process in this group of composers can be characterized in part by a single Stage Theory, and specifies that two prototypical compositional strategies exist: the beyond-domain processes (influenced by concepts from outside the music domain) and inside-domain processes (in which the inspiration is mainly musical). She adds that a third group, a mixture of beyond and inside-domain, also exists. The stages of the two (main) prototypical processes are explained in detail and according to Katz there are many similarities within a group for every creative stage.

Although Katz repeatedly confuses the activities within the CP with the retrospective experience of the CP, Nicholson (1997) makes a clear distinction between the two in his research. In his extensive, qualitative study the author aims to produce detailed descriptions of the experience of musical composition and therefore eight professional contemporary classical composers are interviewed in three interviews each. His analysis leads to eleven themes (composers' thoughts, flow, motivation, influences, technique, conception, generation, choices, voice, play, and artistic development) of which several, especially the 'conception' and 'generation' ones, are closely related to the CP. Next, Nicholson offers a new narrative, interactive model of compositional experience, that is not based upon a theoretical model but on the key themes, found through the analysis of the interviews. In this proposed model there is a narrative on each of the eleven themes and all the themes interact with each other continuously in a non-linear way.

Although the study of Nicholson is a profound and thorough piece of research, one may doubt if a 'supra-experience' (the model derived from eight summaries of individual composition experiences) can exist without becoming a one-size-fits-all description of experience. It would be a

challenge to find a reconstruction of a CP (in contemporary classical music) that does *not* fit into this very broad and general model. But this may be a strength and weakness at the same time: the model provides a truthful, detailed and complex – often chaotic – description of the *experience* of music composition within contemporary classical music but at the same time it is too general to offer an account of the gamut of decisions, thoughts and actions that are going on in a specific, individual CP.

A similar conclusion – that there are many similarities in the CPs of composers – can also be detected in the study by Holtz (2005; 2009) on subjective theories of music-creating artists. For this study 17 composers of contemporary classical music, electronic music, musicals, movie scores and jazz musicians in Southern Germany were interviewed. Some the interview questions are similar to questions in the two previous studies. The main aim of this study was to find types of music-creating artists, starting from the types described by Bahle along three dimensions:

- the work and inspiration type
- the musical content and self-expression type
- relationships to the listeners and to society

Holtz (2009) concludes that a typology is to be based on the last two dimensions and not on the work type (the first dimension):

> In summary, the interviewed musicians differ from each other in the ratio of deliberate, cognitive, constructional work and of intuitive improvisation and experimentation. However, the construction of two separate types of musicians along this dimension appears to be problematic, because almost all musicians report the need for an alternation between phases of deliberate construction and of intuitive experimentation. (p. 214)

Finally, the author proposes three types of music creating artists: the avant-gardists, the neo-romantics and the self-disclosing artists.

2.5 Creative processes in artistic research of music composition

The number of artistic research projects in music composition focusing on the CP is limited. The authors De Baets, Eckhardt, and Schuermans (2011) conducted an experiment with 15 music students who composed a soundscape. After a period of workshops and lectures, students received a music fragment that they could process freely and hand over to another student who could use the received fragment to produce a composition. Consequently, three chains with five individual compositions were generated. In a following phase, the students could exchange experiences and discuss the process and results of their individual compositions. Finally, the students were interviewed and the data were analysed by the researchers. The description of the research methods and CPs of each student are very short. The authors conclude that the students mainly reacted intuitively to the given fragments and used familiar techniques to process them. The research confronted the students with unknown terrain by enhancing their reflection on the CP. The main concept of the project is the *misunderstanding*: choices are not all made by the composer but these misunderstandings in the communication can lead to a creative and challenging results. This concept is situated within communication theories of the German sociologist Niklas Luhmann by the philosopher Rudi Laermans in the publication of the project (Laermans 2011). The same

publication also contains the audio recordings of the 15 compositions.

Another refreshing research design for a project on the CPMC is found in the project *Patterns of Intuition* by the composer and researcher Gerhard Nierhaus. The project started in July 2011 and is not finished yet. At the moment of writing, no written publications on the project have been released. In a joint presentation with the author of this thesis Nierhaus (Nierhaus and Roels 2012) explains the design and goals of the project: more than ten professional composers each provide the researchers with compositional ideas and strategies, and then Nierhaus and the programmer Daniel Mayer design algorithmic procedures that match these strategies. In a cycle of evaluation by the composer and adaptation of the procedures by the programmers, the ideas are further elaborated according to the preferences of the composers. In the meetings between composers and researchers, emerging musical questions and results are discussed. Finally, each composer is free to use any of the generated material or procedures to compose a work for string quartet or piano solo. These compositions are performed by professional ensembles in a public concert. It was deliberately decided to choose composers with different aesthetic backgrounds and methods – i.e. not algorithmic composers – to ensure that the project deals with a broad spectrum of composition methods and problems.

2.6 Other texts and studies of the CPMC

2.6.1 Composers' texts

Several composers like Aaron Copland (1953), Jonathan Harvey (2004) and Robert Platz (2010) have written texts on how they compose. Nicholson (1997) has written an extensive review of this literature, from which he derived five broad categories: composers' texts on inspiration, form, process of composing, aesthetics and musical consciousness. The author makes an important remark on this literature which also explains why the this dissertation does not use this literature extensively:

> this literature does *not* differentiate between the general practice of composing and the inner *experience* of composing (p. 80)

In this dissertation I make a distinction between the real-time practice and experience of composing and the retrospective experience of the CP. What a composer thinks, feels and does while composing – in the act of composition – is not necessarily the same as what he experiences and explains a few months or years later. As explained in the 'Theoretical framework' (p. 7), the CP is a dynamic process. It is not only the product of the process – the composition – that changes but also the composer, his knowledge, practices and experiences. Another review of composers' writings on their CP is made by Newman (2008). Collins (2007) describes Janacek's fascinating self-generated protocol, one of exceptions to the rule who did try to find a (real-time) approach to knowing what he was doing while composing.

2.6.2 Research on the (collaborative) CP in pop music

Bennett (2012) has done research on collaborative songwriting teams in pop music. The authors describes song as a market-driven art form with many constraints which he lists. Within this commercial environment it is very difficult to find artists that want to participate in his research, therefore he studied himself (being a professional songwriter) in collaborative sessions with other songwriters. Based on the results, he proposes a stimulus evaluation model to explain this co-writing process. Stimuli (chord progression, title, melodic phrase, drum loop,...) not only occur at the beginning of the process but at any stage when collaborators come up with new ideas. These stimuli are evaluated and can be adapted, approved, negotiated or vetoed. Stimuli are not to be understood as only short or fragmentary ideas, sections or the whole song can function as a stimulus which are evaluated. Bennett explains well how his research method (see also p. 33) and results are situated within the field of pop music, and this explains why his results are not further used in this dissertation.

2.6.3 Sketch Studies

Sketch Studies consists of research on the traces of composers, mainly motivated by a musicological concern to explain the genesis of a composition – often a 'canonical' work – and not the cognitive processes, actions and experiences of the composer (Hall and Sallis 2004). In most cases, historical compositions are examined (e.g. Beethoven), and often only fragments of the sources have survived. Sketch Studies is important to this thesis because it is a field with a rich history of data collection and analysis methods of composers' material traces (see 'Data-rich approach in studies of the CPMC' p. 33) and it studies a broad range of compositional traces (see 'Review and research questions' p. 158).

3 Radical polyphony

The theme of (radical) polyphony is interwoven through the whole current dissertation, although it is not the main research focus. To understand the musical background of the two studies and my compositions in this dissertation, I have added the following text. It consists of an overview of the concept of polyphony and polyphonic music in Western music history since 1900. The focus is on more radical attempts to push the difference between simultaneously occurring musical events to extremes. Consequently, forms of polyphony such as Ligeti's micro-polyphony or cluster-polyphony are not treated. I must add that in general, the term polyphony was not explicitly favoured by many composers in the 20th century, because of its associations with more traditional parameters such as pitch, melody and harmony.

Stephen Kern (1983) points at the historical context of the rise of the simultaneity concept in the arts at the beginning of the 20th century. The author distinguished two forms of simultaneity that arose within Western European society: a temporal one, i.e. the presence of the past, present and future, and a geographical one, the presence of different locations in one location. He relates both notions to new cultural, technological and social developments: the influence of the past on the present in work of the psychoanalyst Freud, and the advances of technologies like precise clocks (global time), telephone (ability to speak in 'real-time' across far distances) and transport advancements (trains, automobiles).

In this period simultaneity became an important, productive artistic concept in works of artists such as the Futurists, James Joyce and early cinematography. French writers such as Henri-Martin Barzun, Blaise Cendrars and Guillaume Apollinaire wrote 'simultaneous poetry', often consisting of parallel lines to be read at the same time by different voices. One of these, Barzun, presented his theories on simultaneity in a newly founded journal (la revue *Poème et drame)*. Film appeared as a new art form in that era and the new montage techniques were ideally suited to suggest ubiquity and simultaneity. Futurists such as Marinetti wrote plays (*Simultaneita*, 1915 and *I Vasi Communicanti*, 1916) with simultaneous actions taking place on a (divided) stage.

In music, Charles Ives was the main pioneer in combining music from different (American) regions, styles and social backgrounds. Very different elements are juxtaposed using different simultaneous rhythms, tempi, tonalities and tuning systems (layers playing in quarter tones versus the usual 12-tone octave division). Moreover, Ives experimented with locating instruments at different places of the concert hall (spatialization). His very adventurous *Fourth Symphony* (1910-1916) unites these techniques in a remarkable way. Other important polyphonic works are *Three Places in New England* (1903) and *The Unanswered Question* (1908), written for the unusual combination of trumpet, four flutes, and string orchestra (with the strings playing offstage). Ives' philosophy was a combination of individuality, love for freedom and nature (influenced by transcendentalist writers Ralph Waldo Emerson and Henry David Thoreau), religious feelings and American patriotism. The complex music of Ives foreshadows a large part of modern classical music in the 20th century and its relation to polyphony. This is expressed well in the description by Varése (2004):

> When new instruments will allow me to write music as I conceive it, the movement of sound-

> masses, of shifting planes, will be clearly perceived in my work, taking the place of the linear counterpoint. When these sound-masses collide, the phenomena of penetration or repulsion will seem to occur. Certain transmutations taking place on certain planes will seem to be projected onto other planes, moving at different speeds and at different angles. (p. 17)

Composers such as Varèse and Ives strived to create a (perceptual) separation of sound layers at certain moments and fusion into colliding sound-masses at others. Varèse's description is typical for the use (or non-use) of the term 'polyphony' by many composers in the 20th century. In their discourses they prefer to talk about constellations, density, and directionality of sound layers in stead of voices or parts. In *Penser la musique aujourd'hui* Boulez (1963) gives his own interpretation to polyphony, homophony and heterophony. Parts or voices are defined by him as constellations:

> d'événements obéissant á un certain nombre de critères communs, une répartition dans un temps mobile et discontinu, suivant une densité variable, par un timbre non homogène, de familles de structures en évolution. Ces constallations, ces répartitions, seront responsables les unes envers les autres, tout spécialement en ce qui concerne leurs heuteurs et leurs durées; (p. 153)

Ives' music and personality was a great inspiration for the work and philosophy of another pioneer of American experimental music Henry Brant (1913-2008). Throughout his musical career Brant experimented with the juxtaposition of simultaneous different styles and the spatialisation of instruments and performers. His preference for spatial music started in 1953 with *Antiphony I* and lasted more than fifty years, resulting in more than 100 works in which the location of instruments is a crucial compositional building stone. His love for popular music and music from different cultures, often resulted in compositions with large instrumentations consisting of sub-ensembles (with specific instruments linked to a style). *Meteor Farm* (1982) for example is written for symphony orchestra, large jazz band, two choruses, West African drum ensemble (and chorus), South Indian soloists, large Javanese Gamelan ensemble, percussion orchestra and two Western solo sopranos. Brant (1979) is the most outspoken representative of the role of space in radical polyphonic music in the 20th century:

> if the objective is extreme polyphonic density with utmost contrast between the linear constituents, then spatial methods will furnish the most efficient means for the clearest results.

From the mid-1950s on Brant expressed that his music was an echo of the hectic, every day life where many things happen simultaneously. In 2002 he again describes his preference for simultaneity in an interview (Brant 2002):

> I like music that is complicated. I like a lot going on because you have some chance of remembering it if there's more stuff to remember than the alleged manipulations of material. In ordinary life it's never simple. You're aware of so many things and music has the advantage. It's temporal, like ordinary experience. Well, I've never been a great fan of the simpler, cut down music with fewer things. It seems to me that's arbitrary. It just isn't true in ordinary life. Even now, look at the amount of things that are happening in this room both known and unknown to us and things that each of us is aware of. Why should music (I've figured after a long tortured cogitation about this) cut itself off from the experience of the most ordinary kind of life? It seems to me that since many different things happen, they should happen.

Another American composer, John Cage, enriched the concept of simultaneity in music with the

notion of chance and indeterminacy.[3] In analogy to the everyday objects (ready mades) turned into 'art' objects by his friend Marcel Duchamp, Cage started encompassing 'non-musical' sounds in his music in the 1940s and 50s. He became fascinated by indeterminate procedures (often based on the I Ching, the Chinese Book of Changes), and also started applying them to existing music by other composers. Furthermore, his political (anarchist) ideas, inspired by Thoreau became more outspoken in the 60s, while creating more events or happenings. All this culminated in large-scale 'theatrical' works where many pre-existing compositions, texts and actions were simultaneously combined on stage. Examples are *Musicircus* (1967), *HPSCHD* (1969), *Apartment House 1776* and the series of five *Europeras*.

Polyphony had traditionally been characterised by a balance between horizontal and vertical elements. One of the criteria to rate the linearity was the fact that a separate voice or melody could (figuratively) stand on its own. In Cage's large-scale works the global composition consists of a recombination of not just fragments, but fully autonomous works, which are also effectively performed separately on stage in other concerts. In earlier work (such as the *Concert for Piano and Orchestra* (1957-58)) Cage had already decided that the individual parts of this concerto could be played with or without the other parts (thus, the result could be both a solo or an 'orchestral' concerto). This radical notion of polyphony dismantles the work-identity concept, prevailing in Western classical music. A composition like the *Concert for Piano and Orchestra* or *Renga* (1976) can have a very different appearance. Bruno Maderna had also composed a large scale work, *Hyperion*, which consisted of separate live and tape compositions. As Hoban (2004) notes, Maderna did not even determine which parts actually constitute the larger work *Hyperion*.

The combination of autonomous compositions into new, global compositions is mixed with the concept of a cycle composition in the 'poly-works' of Mahnkopf (2002). Cycles normally consist of individual works, performed sequentially after each other, with many references or a (constructed) coherency in between the individual cycle works. Mahnkopf's cycles, such as *Kammerzyklus* and the *Kurtag cycle*, consist of separate works that can (partly) be performed separately, sequentially or simultaneously. There is a deliberate meta-construction, not as chance-inspired as in Cage's simultaneous works.

While listening to a large-scale of Cage such as *HPSCH*, the audience is not seated but can walk around. In 1958 Cage (1973) had already written:

> to dispose the audience around-among the performers, bringing a unique acoustical experience to each pair of ears (p. 53)

The focus on the perceptual experience is also found in the outdoor music theatre of the Canadian composer R. Murray Shafer. His ecologically oriented works, such as the *Patria* cycle (1966-now), have to be performed by the sea-shore or a lake. A new dimension to the concept of polyphony arises, one focused on the perception by the audience: through the location and/or movement, each member of the audience is hearing different music. Not only several layers in the music exist, but there is also a multitude of possible perceptual experiences. The idea that the audience can 'choose' which music(al layer) they listen to in a composition, shows up among several composers or writers discussing contemporary-classical music. Hoban (2004), for example describes the

3 In general Henry Brant rejected elements of indeterminacy in his music, however his involvement with indeterminacy is more extensive than expected (Hunt 2014)

experience of listening to Maderna's cycle (*Hyperion*) as a “virtual polyphony in the listener's mind”. The use of citations of existing music, as in the work of B. A. Zimmermann, adds another dimension to this perceptual polyphony: different people recognize different quotes and may attach different meanings to the same quote. The other Zimmermann, the composer H. W. Zimmermann (1971), writes:

> Wir leben heute in der Welt des musikalischen Pluralismus, in einer Vielfalt von historischen und exotischen Musikidiomen, die durch Schallplatte und Tonband unbeschränkt verfügbar geworden ist. Wahrhaft polystilistische Polyphonie ist heute möglich geworden, weil heute das musikalische Bewusstsein polystilistisch geworden ist. (p. 225)

Finally, a different kind of association between simultaneity (in music) and theater resulted in the image of individual layers as human characters (or actors). This is a conceptual, metaphorical notion held by composers such as Olivier Messiaen ('personnages rythmiques') (Healey 2004) or Elliott Carter.

As Powell (2002) notes, this notion is tied to a more subjective and expressive vision on music that tended to disappear from much music after 1945. Several works of Carter (*A Symphony of Three Orchestras* (1976), *Triple Duo* (1982)) aim at a far-reaching independence of individual layers and ensembles. Especially in the String Quartets Carter experiments with these possibilities and the notion of voices as human characters is further enlarged to encompass a (vision of a truly democratic) society. In the foreword to the *String Quartet No.4* (Carter 1989) and *String Quartet No.5* (Carter 1998) he writes:

> A preoccupation with giving each member of the performing group its own musical identity characterizes my String Quartet No. 4; thus mirroring the democratic attitude in which each member of a society maintains his or her own identity while cooperating in a common effort - a concept that dominates all my recent work. (Program note string quartet 4)
>
> In this score the matters of human cooperation with its many aspects of feeling and thought was a very important consideration. (Note from the Composer, strinq quartet 5)

To conclude, the current (non-exhaustive) overview shows that the notion of polyphony in the 20th century partially overlaps with artistic concepts related to space, (poly)styles, heterogeneity, chance and music perception. Through the encounter with these new phenomena, the meaning of polyphony has been extended from a purely musical one into a simultaneity of sounds and events, produced and shaped by the individual intentions and concepts of composers.

 PART II: DESIGN AND METHOD

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Considering the qualitative nature of this dissertation, this methodological chapter will firstly elaborate on central notions of qualitative research, such as interpretation, naturalistic settings and the holistic view, and explain their meaning and function in my research of the CPMC. The underlying theoretical framework (see p. 7) of my dissertation sees compositional practice as a *dynamic* and *situated* process whereby the composer interacts with music and a specific context. The questions on how to obtain data of such a dynamic process that contain knowledge on different aspects (actions, products, insights and ideas) of this process are reviewed extensively in the following chapter 2.1 p. 33.

In a substantial part of this dissertation I am both the researcher and the composer that is being researched, making reflection necessary to be aware of the concepts and ideas that influence my compositions and research. In chapter 2.2 the aims and methods of reflective research are reviewed to clarify the role of reflection in this dissertation. Finally, I end this part with a short overview of the global design and method in my dissertation.

1 Real world research

1.1 A holistic view on composition practice

This current dissertation is part of the evolving practice of qualitative research, in which methods “attempt to provide a holistic understanding of research participants' views and actions in the context of their lives overall” (Snape and Spencer 2003, 7). A holistic view on artistic practice, in this case music composition, faces the problem of finding a delineation of composition practice which is both feasible and meaningful. The holistic stance in this dissertation is expressed by excluding a segmentation into small, 'isolated' activities as for example in a study focusing exclusively on imagination. The meaningful 'holistic' unit in this study is the creative process of music composition, i.e. the creative preparations made by the composer which ultimately – not necessarily linearly – lead to the production of a score and a performance. It is meaningful because the composer knows that this unity of actions, feelings, ideas and intentions is part of his everyday life as a composer and constitutes one of the main ingredients of his artistic practice. By choosing a meaningful and feasible segmentation in this research, I do not pretend that this statement on the CP is a general truth. I do not exclude that this segmentation is open to individual and contextual adaptations. The awareness of the chosen (time) framework, as an element of reflexivity within research, is permanently present in most phases (from the research questions to the analysis methods) of the group study and self-study. In the self-study the segmentation of compositional activities is one of the fundamental issues of the study. I explore and transgress the limitations of a segmentation, in order to give a more complete description of the creative processes in my practice, including the ones which are not immediately and linearly directed at finished compositions.

1.2 Interpretation

> Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that makes the world visible. (Denzin as cited in (Snape and Spencer 2003, 2–3))

Interpretation is a central notion in qualitative research, humans not only perceive an experience or act based on an experience, they also have an understanding of what the senses tell them. A researcher has to take these 'interpretations' of social reality into account.

> qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them. (Denzin as cited in (Snape and Spencer 2003, 3))

Snape and Spencer (2003) explain that this interpretive look at the world has serious repercussions

for both the researcher and the research participants:

> we acknowledge that personal interpretations are important both in terms of study participants' perspectives of reality, and in terms of researchers' understanding and portrayal of study participants' views. (p. 20)

The personal interpretations of the composers are considered an essential part of the group study. Together with other insights and results from the analysis, their general and specific visions on music (called 'concepts' in the analysis phase of the group study) enable me to answer the main research questions in the group study.

Additionally, I try to be aware and transparent of my identity as a researcher and composer, to avoid being biased in the group study. This is highly relevant as in the last ten years the collaboration between researcher and composer has become closer (this is further discussed in the following review in 2.1). In the self-study I am strongly present, being both the researcher and the object (the composer whose practice is studied). To clarify the combination of my two roles, the dissertation part called 'self-study' is delineated: it gives a more 'complete' overview of my compositional activities as an answer to the research question on the role and influence of more independent activities on my compositional practice. In the discussion part of the self-study the results are discussed in light of other studies of the CPMC. In the following part of my dissertation, the Reflection chapter, I focus on the influences that the research in the self-study and the group study has on my composition practice. The (systematical) overview of my practice in the self-study provides a basis to reflect on and interpret my own practice but I clearly split this interpretation from the data collection in the self-study. Consequently I hope that the structure of this dissertation clarifies the two roles – composer and researcher – I play.

1.3 Naturalistic setting

In an attempt to define case study research Swanborn (Swanborn 2010) writes:

> Studying ‘a phenomenon in its natural context’ means that the researcher does not set apart individuals from their normal life situation. (p. 15)

In studies of the CPMC no common description of 'naturalistic setting' is found or explained in detail. This might be related to the young age of empirical research in a naturalistic setting of the CP, or to the diversity in CPs. Folkestad (2012) who has performed educational research on the CPMC writes:

> the design of our empirical studies might be described as experimental in the sense that they involve creating a situation as similar as possible to an out-of-school situation: that is, they re-contextualize out-of school activity into the research context. However, once the situation has been created and the activity has started, a naturalistic approach has been used in which the settings were not changed. (p. 197)

Consequently, for Folkestad naturalistic means a realistic *reconstruction* of the context. Another example of the vague or contradictory nature of the term 'naturalistic' is found in Newman (2008, 19) who describes his self-study as naturalistic but at the same time sets himself strict time constraints (because a studio in which his technological research instrument is set up is only

available for one, fixed week). Moreover, his composition is not performed at the end of the CP and he shows reservations concerning a possible performance:

> my own assessment of the work reveals musical shortcomings that, as of this writing, lead me to not want it extensively performed. (p. 216)

Newman relates these 'musical shortcomings' partly to his work in the strict studio environment with his technological research instrument:

> Yet, in sum, the technical problems with my research instrument did affect my creative processes, the product of these processes, and the study. Because I felt stress and time constraints, I was not as discerning in my assessment of musical ideas as I might have been. Furthermore, I did not employ relaxation techniques and breaks as I normally do. With more time, I'm not sure that I would have written more notes or more music, but perhaps the quality of the music I wrote would have been better. (p. 219)

Finally, another meaning of a 'naturalistic' setting is present in the following quote of Donin and Féron (2012), which points at the *occasion* as an important part of the real world setting:

> Our interest resides in a real, and not a realistic nor a likely, creative process. Such a process does not come into being as a result of a research project: its autonomous existence is an essential component of the composer’s creative course and the history of music as a whole. (p. 263)

In this dissertation I use the term 'naturalistic setting' in the following explicit way. First, a naturalistic approach supposes that a full and meaningful activity is performed and not split up into tasks or exercises to study separate parameters. Second, in light of the 'naturalistic setting' discussion, the following parameters and questions should be taken into account::

1. Place: can the composer compose in the place that he wants to, or that he is used to?
2. Timing of the compositional act: can the composers work at the pace that he wants to, or that he is used to?
3. The external restrictions from the commissioner, such as instrumentation, time /deadline, duration of composition,...: are these the usual constraints for the composer?
4. Occasion: how does the composition come into existence? Is this different from how the composer usually starts composing?
5. Goal: is the composition meant to be performed on a concert? Is it a soundtrack for a movie? ...
6. Financial contribution for participation in the research

By giving information on these features, I hope the reader can decide which elements are naturalistic or not in this dissertation. Especially in the studies of a *professional* composer it is important to note that the goal of the composition – point 5 in the previous list – also forms the naturalistic setting. For example, in classical-contemporary music a composer does not aimlessly produce work at home. The goal of composition activities is to present music to an audience and the format and characteristics of this presentation are shaped by the context in which this composer operates. A classical composer usually creates music for a public performance; film composers want their music to be recorded and added to a film as part of the soundtrack. This drive to create for an audience is an important force in the creative process and hence, it is important to give information on these issues in a study of the CPMC.

1.4 Iterative research

In qualitative research the analysis process starts from the moment a researcher collects data (Decorte 2009, 436). There are no clearly separated stages in the analysis process of a research, the process of understanding takes place during all the research activities, even the data collection method (a.e. while taking interviews). The process of (gradual) understanding informs both the data collection and the (further) analysis phases in a feedback loop.

> in qualitative research praxis the meaning-making process occurs as an *iterative process* (not a linear one) and meaning emerges through labeling, identifying, and classifying emerging concepts; interrelating concepts and testing hypotheses; finding patterns; and generating theory. (Hunter, Lusardi, Zucker, Jacelon, and Chandler (2002) as cited in (Leavy 2009, 10)

In this dissertation the cyclic or iterative nature of the analysis process is particularly visible in the self-study, because this is a more exploratory case study than the group study. In the self-study the reflection on the real-time data-collection method led to a pre-study of the material conditions and customs in my composition practice; next, this led to a more individualized data-collection method. The iterative analysis method also brought compositional activities to the forefront which I initially didn't consider as a compositional activity (such as the 'theoretical' activities) and this raised questions on finding a method to collect data on these activities. An example of the iterative nature of the analysis process in the group study is the 'main activities' analysis framework (see p. 115). Initially, I intended to make individual analyses for each composer to make sure that the individuality of each process was respected. But the analysis of the data sources made me realize that a common framework was necessary to distinguish individual from common characteristics, and consequently a cross-sectional analysis was applied.

1.5 Intersubjectivity

Situatedness – as explained in the chapter 'Theoretical framework' – is the main underlying concept of this dissertation. It is obvious that the situation or context of a composition practice not only consists of the direct environment (the music created, the composer with his preferences, the involved performers,...) but also of a wider field of language-users (using the same style or genre) and/or a community that shares values and practices.

Holtz (2009) describes the connectedness of a musical identity, using theories based on the work of Vygotsky (which Folkestad (2012, 194) also recognizes as a major influence on his concept of situatedness):

> (…) in any kind of musical activity (including listening to music, playing music, and creating music), people develop a musical identity, which itself conversely influences a person's musical activities. This musical identity is mutually related to a person's core identity and other identities (Hargreaves, Miell, & MacDonald, 2002) and is formed in interaction with others, while also influencing future interactions with others. (p. 209)

To have a scope on composition practice, wider than the own practice, this dissertation includes a study of a group of composers next to the self-study. These composers are active within the same

field of contemporary-classical and experimental music. On the one hand the new insights of the self-study can be compared to the ones of the group study, on the other I can move outside the private world of my own creative process in the Reflection part. This intersubjectivity can avoid that a reflection on the own practice becomes idiosyncratic and closed. Comparing not only leads to discovering similarities, it also provides an insight on differences. Expressed musically: it is through the placement of a countertheme, that the characters of both the theme and the countertheme become more clear. Without a profound knowledge of how other composers compose, it is impossible to discover what is unique or common in an 'individual' creative process. Hence, in this dissertation reflection is not considered as an individual cognitive activity of a closed identity, reflection on others interacts with the introspection of the self (and vice versa).

2 Design and method: review

2.1 Data-rich approach in studies of the CPMC

Methodological problems in composition research are discussed at length in two articles by Collins (2005; 2007) and in both he stresses the importance of real-time data collection, especially by using a verbal protocol and collecting different computer data (from notation, audio or sequencer software). All this data, obtained at different moments in the creative process, helps to reconstruct a rich picture of this dynamic process. Although not all the methods that are proposed by Collins are applied in this dissertation, his research work and insights on methodology are treated extensively in this dissertation because he was the first to make a detailed review and an in-depth discussion on methodologies used in studies of the compositional process.

2.1.1 The domain and duration of studies of the CPMC

After giving an overview of empirical studies on the compositional process between 1965 and 2003, Collins (2005) provides a five-point summary which is important to contextualize the design and methods in this dissertation study.[4] Firstly, he notes that “very little of the empirical data outlined above has been obtained in a ‘real-world’, naturalistic setting.” Since the publication of this article in 2005, more naturalistic studies have appeared, including the work of Collins himself (see overview on p. 15). But this statement makes clear that although the real-time data collection methods have developed and shown their value in experimental settings, it remains a challenge to adapt them to an ecological setting. For example, Bennett (2012) researched collaborative songwriting practices in pop music using a real-time observation method. This is rather problematic because of the highly competitive and economically driven environment of the music industry (songwriters don't want to participate in unpaid research, they fear some form of 'industrial spionage', “doubt that their collaborative practices would stand up to scrutiny by industry peers,...”) Moreover, a romantic authenticity in pop songs is not only visible in the omnipresence of the first person sympathetic protagonist (in the lyrics) but also in the content of interviews with songwriters. Additionally, informal networking is extremely important in the songwriting creative industry. Finally, he finds the best suitable method within this context to gather real-time data:

> Firstly, I act as co-researcher, writing songs with many different collaborators, recording the process in real time, and interviewing the co-writer immediately retrospectively about our shared experience of the process. Secondly, I draw upon a large number of previously published interviews with successful songwriters, together with the limited (and certainly edited) footage of successful songwriters at work, balancing these artefacts’ arguable status as primary sources with the risk of participants and mediators romanticizing the creative process. Thirdly, I have referenced the manifold ‘how-to’ songwriting texts, most of which include at least a section on co-writing. (p. 150)

4 Collins' fifth remark, on the quality of sound cards, is technically out-dated and not discussed in the current review.

It is within the young tradition and search for ecological, real-time data collection methods, that this dissertation study is to be situated.

The second remark that Collins makes in his overview of empirical studies on the compositional process concerns the music studied: “Only a few of the studies observe other than monophonic composition.” This observation is underpinned by a long list of studies between 1977 and 1996. Many of the cited studies used a laboratory setting in which participants had to compose or change a melody or rhythm. Again the comment should be made that the research situation has changed since the turn of the millennium and that composers have been studied while they were writing more complex music (McAdams 2004; Pohjannoro 2014; Newman 2008; Donin 2012; Donin and Féron 2012). In these cases, the composers were writing the kind of music that is 'common' within their genre or social and artistic field (contemporary classical music, jazz), which leads to more complex music than the laboratory 'tasks'. This dissertation explicitly focuses on polyphonic music, both in the group study and the self-study.

In his third observation, Collins states that previous 'time-based studies' using computer-based data collection have reconstructed broad categories of compositional actions “at a macro-level”, but “The finer-grained tracking of musical process over time is not evident in the literature.” His study and subsequent studies (Donin and Féron 2012; Donin 2012; McAdams 2004) have succeeded in describing and analysing actions and decisions on a micro-level (small units of meaningful actions) but then the following questions arise: how are these different studies – with this “finer-grained tracking” – related to each other? Can the results of these studies be compared with each other? How much do the resulting strategies depend on aesthetics, style or genre and do these contexts influence the relation between micro- and macro-level activities (and thus the comparability of the studies)? Hence the analysis in this dissertation is taken one step further: instead of focusing on micro-level actions, as Collins did in 2005, the global picture of the CP and the macro-level with the main compositional activities on the one hand and if possible, its comparability and relation to micro-level actions on the other, are at the forefront.

The fourth observation by Collins (2005) is:

> Only one study (Reitman, 1965) attempts to track larger-scale creative thinking processes exemplified in musical composition over a significant period of time.

Collins' study should be added to the Reitman study: he followed a film music composer for three years to track the process in real time. Donin and Theureau (2007) make a similar conclusion on the low amount of long-term research:

> (...) many activities can be described and explained only if several time horizons are considered. Among them are creative activities, for example, the activity of musical composition that we will consider here: just as the creative instant counts, so does the composition of some meaningful part of the work, as well as the composition of the entire work, and even more, its place as part of the composition of a set of works, or as part of the composer’s intervention in the artistic debates of the time-period. Although there has been a host of speculations about these creative activities, very few empirical studies of them exist. (p. 233)

Although there is no clear definition for the duration of the research period in a long-term study, the following are three examples of long-term studies:

- for three years Collins (2005, 2007) followed a film composer who composed one long

composition and two shorter ones

- between October 2003 and spring 2006 the French composer Philippe Leroux participated in research by Nicolas Donin, Jacques Theureau and Samuel Goldszmidt on the genesis of two compositions: *Voi(rex)* and *Apocalypsis* (Donin 2012)
- Stephen McAdams tracked the composition *The Angel of Death* by Roger Reynolds between late 1997 and the premier performance in June 2001 (McAdams 2004)

Furthermore, the need to transgress the boundaries of the CP of one composition is expressed firmly by Deliège and Richelle (2006). They have written briefly on the problem of 'timing' in the study of the CPMC. In the introduction to the book Musical Creativity, they write:

> One major methodological difficulty in the study of creative acts is the time dimension. Supposing adequate tools are available, when exactly shall we apply them? In other words, at what point in time does the sonnet begin in the poet's mind, or the symphony in the composer's brain? And how does the process develop in time? Is it continuous or discontinuous? (p. 3)

In a study by Donin and Theureau (2007), a similar remark is found (relating to a composition studied, a miniature, which is part of a cycle of compositions):

> The remark is an incentive simultaneously to study the compositional process on several levels: that of the minimal significant unit of action, that of the piece (in this case, the miniature), that of the cycle as a whole, and finally broader levels such as that of a period belonging to the composer's career or creative path. (p. 281)

Especially in the self-study of this dissertation, this time issue provided an important insight to produce an appropriate research design. In the self-study I monitored my compositional activities for more than two years (2011 – 2013) and additional compositional activities from the years 2009-2011, preceding this period, were also taken into account. The list of long-term studies above demonstrates how current empirical studies (in the CP) focus on finished compositions. Through the self-study – in particular, the reflective pre-study within this study – I started to realize that 'loose' ideas and sketches are an important part of the creative activities of a composer. 'Loose' ideas are compositional acts and thoughts that are not immediately aimed at producing a finished composition. Within the young discipline of 'time-based', naturalistic studies of the CPMC, these more independent acts are not yet researched, which means that there is a lack of real-time data collection methods to capture these loose ideas. This dissertation makes a first attempt at developing a data-collection and analysis method for these loose ideas.

2.1.2 The composer's view and verbal protocols

In 2007 Collins wrote the article 'Real-time tracking of the creative music composition process' in which he evaluates the verbal protocol methodologies and – to a lesser extent – the computer data collection methods that have been used in previous music composition cognition studies. With respect to verbal protocols, the author points out the landmark work by Ericsson and Simon (1984) (1984) and specifically the discussion on concurrent and retrospective accounts to gather information on thought processes. When someone speaks aloud while he is performing a task, this

is labelled as a concurrent protocol and it provides valuable information for analysing thought processes. But Ericsson and Simon also state that immediately retrospective reporting is a good alternative, because the information should still be available in the short-term memory of the participant. These reports are made immediately after a block of production time. Collins (2007) points out that these retrospective reports have more potential for studying creative activities because they are less obtrusive than concurrent reports and avoid an overload of (often incomprehensible) data. The verbal protocol had to be adapted during Collins' three year study of a composer because some references (to files or musical themes) in the protocol were confusing or did not make it possible to follow the dynamic evolution of the composition (and its bar numbering). Moreover, at certain moments the accounts merely contained a list of actions and

> the amount of data generated (protocol transcription, MIDI files, etc) emerging often in 'trickles' was becoming unwieldy and open to potential misinterpretation or confusion (such as relating verbal data with sonic data). (p. 247)

Solutions – in the form of personalized procedures – were generated through a closer interaction between the researcher and participant:

> Additionally, the role of the participant acting as co-researcher (Persson and Robson 1995) and reflexive partner (Gadlin and Ingle 1975; Steier 1992) became increasingly important. (p. 247)

The adaptation of real-time data collection methods to a naturalistic setting in studies of the CPMC is not without controversy, especially if established or professional composers are observed. Sloboda (1985) used a self-generated protocol in a self-study of composing a choral composition. At certain moments – when he is fully engaged in the act of composition – it is impossible for him to continue narrating his protocol.

> Something happened next which is of considerable importance in coming to understand the strengths and weaknesses of a protocol like this. Shortly after I arrived at bar 50, I began on the next section of the composition; but I became immediately aware of a difference in the quality of the compositional experience. It was as if I had a more urgent sense of direction. There came a wish to capture an unfolding shape before I lost it. As a result, I found myself incapable of continuing with the protocol, and embarked on an intense period of composition which produced the next 35 bars in an uninterrupted period of work. (p. 136)

One decade later, in a lecture for the Third European Conference of Music Analysis, Sloboda (2001) is rather pessimistic about the psychological study of composition. After summing up a number of methods to isolate the mental operations in composers, which he believes will not succeed, he suggests that only speak-aloud protocols might be successful, but he lists a number of problems with this approach. The first one is: "no one can demand this degree of intrusion of a composer." (p. 77) This argument returns in the study by McAdams (2004) for which he followed the composer Roger Reynolds for more than three years:

> It should be noted however that we are not using a real-time technique involving "speaking-out-loud" while solving the problem, but after-the-fact reflection and recounting. The delicate nature of artistic creation and the solitude it requires precluded the former approach. (p. 398)

Other similar objections against the verbal protocol are found in Bennett (2012, 149) and Pohjannoro (2014, 4). Although Collins (2005, 2007) succeeded in implementing an adapted

version of the verbal protocol, the previous researchers have remained sceptical. In the group study of this dissertation I have also considered it impossible to use this kind of verbal protocol, especially because this study concerns professional composers. This decision was not only based upon the literature but also on personal experience – knowing many composers – and professional experience – as a concert organizer – with other professional composers. For example, composers of contemporary music need to meet deadlines, after which the scores are handed over to the performers. The use of concurrent or immediately retrospective reports could slow down their work and possibly cause conflicts with these deadlines.

The function of the verbal protocols in studies of the compositional process is to provide information on activities, thoughts, ideas, feelings and meaning. Retrospective interviews, conducted as soon as possible after the actual action, can also fulfil this role. Pohjannoro (2014) collects the data for her study of one professional composer by utilizing the stimulated recall method. Sketches, visual plans, drafts and scores are used to help the composer remember the creative process.

> Indeed, retrospective interviews may be one of few methods of tracing the subject's thinking, without disturbing the actual thinking process – particularly in lengthy processes in which the mind works faster than the mouth, where forgetting is an issue, and where pre-reflective thinking plays an important role. (p. 4)

Stimulated Recall has been applied in a large number of studies and according to the extensive review written by Lyle (2003), this method has its strengths and weaknesses. Pohjannoro (2014) sums up the strengths of the Stimulated Recall method (STR) in composition studies, compared to other methods:

> First, unlike protocol analysis, the STR procedure neither interferes with thinking in action nor disturbs the process under study (Collins, 2007; Ericsson & Simon, 1984/1993; van den Haak, de Jong, & Schellens, 2003). Second, STR facilitates the informant's recollection of long processes – a recollection, which decreases over time – and allows the interviewer to steer the informant's attention to concrete acts. The resulting minimization of reactive (explanatory, justificatory) elements in the accounts is more difficult to achieve with un-stimulated interviews. The STR method also allows the focus to be directed by the interviewer to issues relevant to the research questions, which is not possible when using protocol analysis. Further, divergent empirical data collected through the STR procedure – in this research, the interviews and the manuscripts – can be analysed and evaluated separately, and thus validated against each other (see Ericsson, 2003). (p. 4)

The memory recall function of sketches, plans and scores was also used in the group study and self-study of this dissertation. In a similar method as Pohjannoro the group study is built upon (two) interviews per composer in which the researcher uses these data as triggers for the memory. But in the self-study there were no interviews: retrospective verbal reports were used and in this case the memory recall function was provided by going through the main actions (and its traces of the previous working period) just before speaking into the microphone and recording the verbal reports. Moreover, the fear – expressed in the previous citation from Pohjannoro – that a verbal protocol without an interviewer may lose its (research) focus, is not unavoidable. In the self-study I designed a short list of questions for the verbal reports. By doing so I avoided forgetting important issues and talking about totally different topics in each retrospective verbal report.

2.1.3 Computer-based data collection methods

Apart from verbal protocols or interviews, a second – and equally important –- source of data on the CP consists of the traces of this process, i.e. sketches, drawings, texts, drafts on paper or in a digital format. In his review, Collins (2007) indicates the importance of computer data collection methods, which developed from the end of the 1980s onwards. Researchers aiming at enhancing creativity in music education also recognized the potential of the new technology. Webster (1990) describes a child composing music at the computer and continues:

> Throughout the entire process, the computer has saved every moment of the child's work and can "replay" the "electronic sketches" in exacting detail. Although this is of little interest to the child, it is of great interest to the teacher, who can use these electronic sketches to evaluate the student's progress. (p. 27)

Folkestad (1996) turned this collection method into the MIDI 'save-as' technique: the participants – composing by using sequencer software – saved the MIDI files under different names. As the MIDI files have a time stamp, the evolution of the new composition can be reconstructed afterwards. The fact that real-time data are collected from a dynamic process is not the only advantage. Folkestad adds:

> One important advantage of this method is that the participants can work in privacy, without having another person watching them in close proximity. One general problem with observations and studies of working processes is, as mentioned, that the presence of the observer/researcher might disturb and influence the work itself, which might jeopardise the validity. (p. 118)

Collins was the first to apply these computer data collection methods in a naturalistic setting and he reports that at certain moments there were significant gaps where a period of days may have lapsed between adjacent 'save-as' files. The decision to save a new version is left to the composer, as the researcher is not present during the CP. The composer saves a new file every time an important step is made in the evolution of the composition. Consequently, this 'save-as' procedure requires a certain amount of discipline from the composer. Historically, observation techniques are replaced by computer data collection methods, but this in turn forces the composer into the role of the co-researcher. It is important to realize that the relationship between real-time data collection and a naturalistic setting is complex and full of tensions. Putting too much weight on the data collection method – the verbal reports or interviews on the one hand, and the computer data collection methods on the other – risks forcing the creative process into a tight procedure and undermining the notion of a real-world study. Newman's self-study (Newman 2008) offers an example of the strained relationship between the research method and a naturalistic setting. In a studio he designed a research instrument to record different streams of audio, video and MIDI data. In the first week he started to compose a new work for two pianos in this studio while recording this 'thick' stream of data. The studio was only available for one week. After this week, he continued composing in the places where he usually composes (at home, at work) and saved regular versions of these digital notation files. At one point the author describes his study as taking place in a naturalistic setting, but at another point he states, when writing about his week in the studio:

> A stressful environment was created by a combination of factors: the imposition of a limited schedule of composing, the nature of being recorded to later be examined and analyzed in great

> detail, the interruptions of changing tapes every hour, and technical problems that occurred. To push through my frustration and continue working, I often used force of will. Under the circumstances the use of willpower served as a practical survival mechanism and may have worked to produce material, but was a less-than-desired way of dealing with a stressful situation or feelings of frustration during composition. The quality of my ideas most likely suffered as a result. (p. 212-213)

Through this self-study of Newman, I became aware of the important but delicate balance between a real-time research method and a comfortable composition environment for the self-study in this dissertation. Moreover in studies with a separate researcher and composer – as in the research by Donin with the composer Leroux – the role of the composer in the research has become more important because

- a non-obtrusive, real-time data collection method has to be found and this is an delicate issue which requires the participation and consent of the composer
- this data collection takes a lot of time and therefore the study should also have 'benefits' for the composer. Donin (2009, 195) explains how Leroux was interested in the genetic reconstruction of his composition, partly because he considered this a resource that he could make use of in his future artistic activities.

Collins (2007,247-248) recounts how the research method was adapted in consultation with the composer, prospective reporting (on the imagined future evolution of the new composition) was added and the 'density/complexity of instrumentation' was reduced. For a composer these are important issues, but the reflections of the composer are not among the research outputs. Other researchers like Donin and the team of researchers in the Angel project (with Stephen McAdams and Marc Battier as principal investigators) have gone one step further and invited the composers to write down their reflections on the research project and the topics studied. These examples, like Leroux (2010) and Reynolds (2004a) provide valuable models for the 'Reflection' chapter in this dissertation.

Although Collins' research takes place in a naturalistic setting, he chose the composer in advance. Because his 'save-as' method relies heavily on the computer to collect data in real-time, Collins (2005) states:

> For this three-year study a professional composer was purposively selected. (…) His preferred mode of writing music was via a home computer-based system, and therefore the data collections methods were not an artificial or unnatural intrusion. (p. 200)

This raises two questions: can we apply these real-time methods to composers who are not used to working with a computer? Are there real-time methods for studying the CPMC that do not rely (solely) on the computer? By dealing with these questions and adapting the real-time data collection methods to the individual setting or style of a composer, more composers can be studied. It is at this point that the research traditions of sketch analysis and genetic studies prove their importance.

2.1.4 Situation simulation interview

In the book chapter 'Empirical and historical musicologies of compositional processes: towards a

cross-fertilization' Donin (2012) pleads for a cross-fertilization between empirical and historical musicologies studying the creative process. He points out the differences between these musicologies, however, claiming that one particular branch of these historical musicologies – sketch studies –

> has devoted itself over the last half-century to documenting the creative processes of many nineteenth- and twentieth-century composers. These reconstructions, being almost exclusively based on archived collections containing the material traces of a composer's activity, seldom, if ever, include commentary from the composer or any other real-time-generated data. (p. 1)

The disregard for the composer's report or intention is present in the following citation of one of the exponents of sketch studies William Kinderman (2012):

> The most rigorous basis for the study of artistic creativity comes not from anecdotal or autobiographical reports (although they have their role), but from original handwritten sketches and drafts and preliminary studies, as well as from revised manuscripts and typescripts, corrected proof sheets, and similar primary sources. (p. 1)

The previous statement should probably be read as a statement on the study of *historical* creativity. The reports of historical composers are often fragmented, undated and not first-hand. Sketch studies have accumulated important skills and techniques about dating and comparing music documents and examining manuscripts. Even if the composers are alive and can be asked for extra information, some of these skills are still important, for example when composers do not solely rely on the computer and produce paper sketches and plans.

Donin (2012) underlines that all research – and the analysis and reconstruction – of a creative process is always based on a model of creative cognition and that this model needs to be made explicit:

> As long as this model remains implicit (and undoubtedly linked to the analyst's personal experience as both a musician and a writer), no serious discussion can afford to satisfy questions linked to cognition, and the study of the creative process keeps focusing on philology and music analysis." (p. 2)

Donin places research methods within an epistemological framework. Methods to analyse the creative process are linked to a vision on the act of composition and the type of composer-researcher interaction. Further in the article he points to the novelty of the approach of the psychologist Sigmund Koch in the 1980s, his focus on 'tacit knowledge', the view from 'inside' – the artist's account – sounds similar to concepts introduced by Schön (1983) and Polanyi (1966).

As a data collection method, Donin (2012) proposes a 'situation simulation interview', the working environment of the composer is simulated or reconstructed, including all available traces of the past compositional activity. By keeping en eye on these sketches, digital scores and other data, the researcher can check if the discourse of the composer in the interview matches these traces. In his study of the composer Philippe Leroux (Donin 2009), the diverse traces consist of sketches and plans on paper, files in the program OpenMusic for computer-assisted composition and files for an audio editor. During the interview the composer is sitting in this simulated environment and re-enacts the composition. The interview proceeds as follows:

> First was the selection of the materials needed for the reconstruction of each movement's genesis.

> Often Leroux himself executed this first step without direct discussion, though some snatches of verbal expression accompanied his gestures. The next step was a reconstruction of the composer's anticipations, plans, and expectations at a particular moment within the period of compositional process that was under scrutiny, for example, in relation to the beginning of a movement or a significant passage within it. Finally, ans most importantly, the composer reenacted the course of score writing, through a verbal and gestural expression of simulated past situations. (p. 197)

Every interview is recorded on video and transcribed, including gestures and hesitations. In the study of Leroux's *Voi(rex)* the situation simulation interviews were taken several months after the work was finished and premiered. In the study of Leroux's following composition *Apocalypsis* the interviews took place during the compositional process – at regular intervals of one and a half months –. Donin (2012, 10) notes that in the latter case the process was documented in much greater detail than in the former.

These situation simulation interviews require a CP that produces enough traces to reconstruct a situation and act as memory triggers. In an article on a study of the composer Gervasoni Donin and Féron (2012)acknowledge this problem:

> The greater the number of existing memory triggers, the more we could rely on them during the recollection sessions. However, when no preparatory documents were available, we then sought out alternative traces of the activity in order to call it forth. (p. 267)

To solve this problem – there were almost no traces for the very beginning of the studied composition Gramigna of Gervasoni – the authors use role-play as an alternative:

> the researchers plays the part of the composer at the beginning of the writing process faced with a blank page. He then either lets himself be guided by the composer’s instructions, or alternately takes initiatives and waits for the composer to approve or correct them. (p. 271)

A fundamental question concerning the limitations of re-enacting a situation in the situation simulation interviews should be asked. Authors such as Folkestad (2012) and Schön (1983) have stressed the self-learning activities in creativity and professional activities. Composers can learn from a situation or solve a problem and use this experience in a following situation. The question related to the situation simulation interview is: is it possible to move from a known situation back to an unknown/ignorant state of mind? Minimisation of the temporal distance between the act of composing and its reconstruction can probably partly solve this issue, as the authors suggest in a discussion on the role-play alternative (p. 271). Donin (2012) calls his approach a hybrid of two distinct fields: activity analysis and sketch studies (genetic analysis). The activity analysis relate to the work of the cognitive anthropologist Theureau with whom Donin has written several articles.

2.1.5 Data analysis

In contrast with the extensive discussions on the design and data collection methods in studies of the CPMC, less information is found in the literature on the way the data are analysed. Researchers using real-time, data rich data collection methods, often immediately move from the data collection description to the analysis results or only a few sentences are written about the data analysis method (McAdams 2004; Donin and Theureau 2007; Donin and Féron 2012).

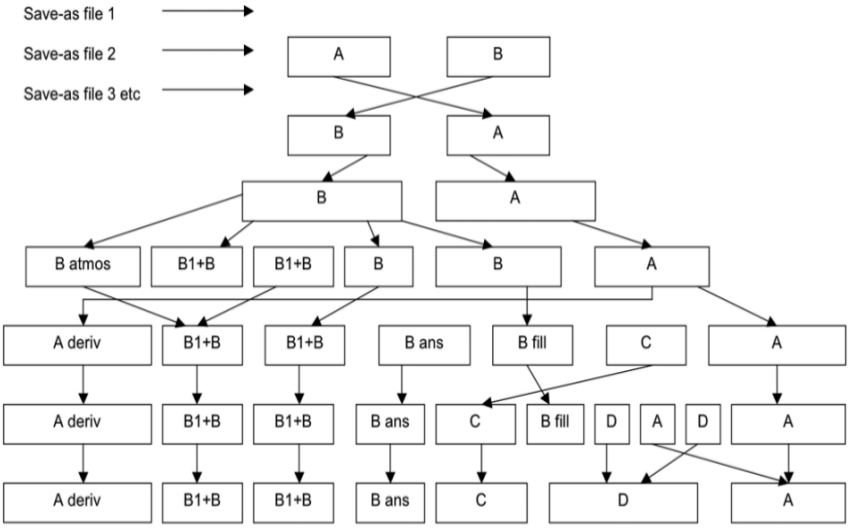
The most elaborate data analysis method is found in Collins (2005; 2007) and it occurs

along three paths called 'real-time mapping', 'thematic mapping' and 'structural mapping'. The real-time mapping functions as a diary of sound and verbal data. In this mapping process the MIDI save-as files are collected, ordered and compared with the verbal protocols, specifically in terms of statements by the composer relating to reflection and planning. The 'thematic mapping' is the coding process of the verbal protocols and interviews. Through reading and rereading emergent categories appear, as in Grounded Theory and these are again subject to scrutiny until saturation and four final categories are reached:

> perspectives (by the composer of elements and sub-elements of the composition)
>
> approaches (to composing, in general and in particular)
>
> processes/strategies (at a micro level – e.g. dynamics, instrumentation, pitch)
>
> processes/strategies (at a macro level – e.g. placement of themes, sections)" (Collins 2005, 202)

The aim of the third analysis path – the structural mapping – is to create a graphical and global representation of the evolution of the music. This mapping (see Illustration 3) is based upon the screenshots of the sequencer software used by the composer. The representation gives an overview of the consecutive stages of the composition from the initial two musical themes to the final composition.

Illustration 3: Collins' Structural mapping



In the analysis method of Pohjannoro the coding of the text data (the interviews in this case) are the dominant activity. This coding is “supported by sketch analysis of the manuscripts” (p. 6) and in an endnote she clarifies:

> Please note that the analysis of the manuscripts, as well as the musical analysis of the completed score only served subordinate purposes. (p. 18)

As seen in the previous description of the three mapping strategies of Collins, triangulation -the use of different methods- is an important part of the analysis work. This was already acknowledged by Folkestad (1996) in his study of young people composing. Interviews, observational data and MIDI files, were read through several times and compared with each other. Next, he makes an important observation about the status of the data and the analysis:

> The different parts of the collected data which form the basis for the analysis, consist of data from both perspectives. The interpretation of the computer files is done from the perspective of the researcher, whereas the interviews try to capture the participants' perception of the course of events. In the observations both perspectives occur: the course of events as perceived by the researcher, and the researcher's descriptions of how the activity was perceived by the participants. (p. 127)

In a study of the French composer Leroux, Donin and Theureau (2007) use categories “inspired by Peircian semiotics” to analyse the course of action within a given window of time (of the CP) which “contains a sufficiently varied accumulation of data.” In their analysis they also take the context in account:

> the significant characteristics of composer's cognition can be identified in accordance with both its dynamic and its situated aspects (it manifests and transforms itself based upon a determined physical and cultural environment, personal history and socio-historical context). (Donin 2012, 10)

Although the information on data analysis methods in real-time, data rich studies of the CPMC is rather limited, some key issues are noticeable: first, the analysis of *text* data is currently the most elaborated, presumably because coding already has a strong history, including many debates, in qualitative research; second, the analysis of the diverse sketch material (and the integration with the text data) is less worked out and described; third, there is the underlying question “to which extent are the data retained in context?”, or stated inversely, “starting from the data, how high should the level of abstraction be in the analysis and results?” This issue is still largely undiscussed and unresolved but it seems that, on the one hand, the method of Collins, rooted in the cognitive 'problem-solving' paradigm, explicitly seeks to propose an abstract model of the composition process (David Collins 2007; Dave Collins and Dunn 2011) and allows the analysis to raise to a high level of generalization, while, on the other hand, Donin and Folkestad want (a part) of the analysis to take place with a strong link to the situation.

As the composer (and his perspectives) are part of the context, the previous question on the level of abstraction can be reformulated as: which role do the perspectives of the composers play in the analysis stages of the data? It is important to realize that the level of abstraction might be related to a dominance of the text data in the analysis. In studies of the CPMC which are only based on interviews (Nicholson 1997; Katz 2009) coding strategies are used in which the initial codes or themes are grouped together and made more abstract until the satisfying, general

categories emerge.[5] The sketch data and their different modes of non-textual thinking (visual, musical, multimodal) are more resistant to a high level of abstraction, although this might partly be caused by the lack of a methodological discourse on the role of these data in studied of the CPMC. It is worthwhile mentioning that there is great variety in sketches and other source data according to musical styles and materials used by the studied composer and this variety might also partly explain the lack of a methodological discourse. The film composer in the study of Collins mainly generates computer files (MIDI files) and text (interviews, and verbal protocol). The French composer Leroux, in the study by Donin and Theureau (2007), generates scores, paper drafts, sketches with plans, chord schemes, fragments of poems, loose notes, printed screen shots with annotations, files in audio editor (ProTools), live electronics (Max/MSP) and algorithmic composition software (OpenMusic).

I believe that it is important to contrast the second issue, the minor role of sketches in the analysis of data, with the descriptions of the CP (and especially the initial phases) as a multimodal and/or embodied practice in the literature. Nicholson (1997) describes the first ideas of a new composition as the “vague and ideal mental structure, image, or vision of a potential work”; Bailes and Bishop (2012) examine 'musical imagery' in the music composition and define this as the faculty or action of producing mental images of what is not present and as a creative mental ability (p. 53). Next they state:

> Musical imagery is a multimodal phenomenon, with the potential to include interactions of visual, kinaesthetic and haptic dimensions of imagined sound. Harvey cites Brian Ferneyhough writing on the subject of his compositional experiences, where the compositional idea is far from being a purely auditory one:
>
> The first sensation, the experience which begins to persuade me that I am actually going to write a piece, is very often a cross between a tactile, a visual and an aural one. That is, I tend to perceive a mass, almost a tangible sculptural or sculpted mass, in some sort of imagined space, which is made up of these various elements. (p. 63)

A more detailed and explicit role for the analysis of sketches can ensure that the multimodal aspects of the CP become present in the whole analysis process. This in its turn could lead to results which deeper reflect the multimodal nature of the CP.

Finally, there is an analysis phase which is only tacitly present in several studies of the CPMC. I refer to the creation of a chronological overview or summary of the events and music in a CP. This phase may be called the 'synthesis' stage and its importance lies in generating an overview and context within which the actual research questions can be answered. Moreover, through this overview a researcher starts making sense of the data. A synthesis stage, as an essential part of the analysis method, is quite common in qualitative research:

> At some stage, the original data will need to be reduced from their raw form of verbatim text, observation notes, documentary evidence or whatever it may be. This reduction is an inherent and essential part of the analytic process, without which the analyst will not be able to make sense of the

5 The rate of abstraction is further enhanced by the fact that these studies often compare more than one composer. Moreover, they are not only cross-sectional but also 'cross-compositional', i.e. they combine information from several CPs of the same composer.

> evidence. (Spencer, Ritchie, and O'Connor 2003, 210)

The synthesis phase in the analysis phase of real-time, data-rich studies of the CP is a dynamic one, it contains a chronology because there is an evolution from nothing (no idea) to a finished composition. As said, a 'dynamic synthesis' is currently only tacitly present in studies. Collins (2007) writes about his structural mapping, a graphical representation of the structure of the composition in development:

> The structural mapping exercise became integral to any increased understanding of the compositional processes undertaken by the composer, since it not only allowed an immediate overview, but also clarified complex moments in the verbal protocol, which were best represented graphically. (p. 252)

Pohjannoro (2014) studies the role of intuitive versus reflective modes of thinking in the CP and in a discussion of her methods she explains:

> In this study, it became obvious that it was indispensable to gain an overall understanding of the whole process, and especially of the role of the Identity Idea included within, in order to be able to categorize the verbal data into type I (intuitive) or type 2 (reflective) processing modes.[6] (p. 4)

But the author does not give any additional or detailed information about the "overall understanding of the whole process." A similar, shortly described chronological synthesis is found in Donin (2012, 17) in his overview of the framework of the MUTEC project. In this case the dynamic synthesis is called the 'course of action', there is no extensive example of such a reconstructed 'course of action' but presumably it is a chronological list of compositional actions. In his self-study Newman (2008) gives a very extensive chronological 'narrative' in which all the data and insights from previous analysis phases are woven back together. This "constructed representative story in a literary style", at the end of the analysis process, is presented as a research result and it is (partly) based upon a chronology or time line from a previous research phase (one which the author labels the "compositional order").
The confusion about the function of a synthesis within research is also found in McAdams (2004). Here a (short) chronological account of the main events in the CP is introduced as:

> For the analysis that will follow, it is crucial to understand the order in which things occurred during the compositional process. (p. 397)

In this case the author presents the synthesis as a necessary element *for the reader* to understand the following answers to the research questions. The same author also does not give any description of his data analysis method which makes it difficult to judge if his short chronological account has a function for the researcher.

Notwithstanding the vagueness and confusion in current literature, I believe that a synthesis phase is necessary within the analysis to generate an overview of the whole CP on the one hand and a first understanding of (more narrowly defined) research topics on the other. This dynamic synthesis can constitute of a chronology of one or more items such as the music-in-development (cfr. the 'structural mapping' of Collins), compositional activities, or external events related to the composition. Such a synthesis is a necessary step in the elaboration of a situated view on music composition (see p. 7) into a context-dependent research method. Moreover, McAdams has

6 The Identity Idea is the main inspirational idea in the CP studied by Pohjannoro.

recognized the important function of the synthesis for the reader and community of researchers to include this synthesis in a publication. Together with other information such as a short biography of the composer, the score and recording of the studied composition, a synthesis helps other researchers to fully understand the range and context of the research topics questions and answers in a study of the CPMC. The main contours of the context from which several features (or activities) are isolated, is understood more easily by adding such a synthesis.

2.2 Evidence-based reflection

The reflective research in this dissertation is interwoven with the study of the creative process. In the following paragraph the history, aims and methods of reflective research will be reviewed to contextualize and clarify the definitions, aims, design and methods in the reflective part of this dissertation.

2.2.1 Selection of sources

Before the actual review, two explanations of the selection of sources in this literature review need to be given. Firstly, one of the main aims in reflective research is the development of the reflective stance of a 'practitioner'. Very diverse disciplines such as teacher education, health professions and architectural design have embraced these aims and developed varying research traditions within the reflective paradigm. Within music research, this paradigm is present in the work of Burnard (2012) and Bamberger (2013). The process of experiential and lifelong self-learning is closely connected to the idea of critically thinking about the situation and context of a practitioner. Therefore there is a thin line between the educational and non-educational approach in the literature of reflective research. Although educational literature is included in this review, literature which deals solely with young children is excluded because this is not considered relevant to this dissertation.

Secondly, the close link between reflection and action/practice in reflective research produces an overlap with related disciplines such as action research and artistic research.[7] This is enforced by their shared paradigm to value knowledge from inside the situation, as opposed to objective knowledge obtained by an 'outside', distanced researcher. Although action research has a different history than reflective inquiry (McNiff and Whitehead 2006), McIntosh (2010) points out the many, diverse relationships between reflection and action research in an overview of researchers' and philosophers' ideas on this topic.

> The nature of action research, for Elliott, is reflective. Indeed, what Schon and others term ‘reflective practice’, he terms ‘action research’. For Elliott, action research is fundamentally about the transformation of practice. Its role is not purely philosophical, though he recognises that it has philosophical qualities. It is an empirical approach to the importance of data in reflectively improving practice. It is not merely the application of reflection to practice to achieve an aim or end-product – such as the way in which reflection is used to validate a professional value base in learners, for instance in nursing or social work – but the quality of the data that is collected to achieve it. Reflection and the quality of data are therefore intertwined, for in Elliott’s view one

7 Artistic research as an overall term for artistic, practice-based research and research in the arts

> cannot improve upon the methodology of action research without considering philosophical reflection. (p. 34)

The close link between reflective and artistic research is recognized in Barrett and Bolt (2007, 1), and Gray and Malins (2004, 22). Because of this overlap between reflective action and artistic research, sources from these three fields are used in the following review.

2.2.2 What is reflection?

Lyons (2009) situates the current discussions in reflective research within a historical and theoretical context and reveals three major historical strands: one following John Dewey (1859-1952) and focusing on reflective inquiry as a kind of thinking, one, Donald Schön (1930-1997), which concentrates on knowing in action and a third, inspired by the work of Paulo Freire (1921-1997), which critically reflects on the social, cultural and political contexts of learning. The characteristics of these strands have implications for reflective inquiry: research founded on Schön's theories interprets reflective research as identifying knowledge in and about action while researchers that use Freire's concepts see reflection as uncovering critical (political, social, cultural) contexts through investigation. And although Lyons describes research, in line with Dewey, as 'learning how to think', she points out that the importance of acting and doing is not to be underestimated in Dewey's philosophy. Therefore she describes the attitudes – according to Dewey – that need to be cultivated in research. Starting with open-mindedness and whole-heartedness, she continues:

> and, Responsibility – defined as considering the consequences of what one has learned. The irresponsible refuse to acknowledge the consequences, the meaning of what they have learned from their beliefs and actions. Finally, Dewey added directness, a fourth attitude. By directness he implies faith in human action, that is, belief that something is worth doing; the act of addressing a problem rather than being resigned to it. Importantly, for Dewey, these attitudes are the means of acquiring a reflective attitude of mind; they constitute in effect the method/s of engaging in inquiry. (p. 13)

While Lyons describes historical roots to explain the large number of (implicit and explicit) definitions and interpretations of the term 'reflective research', Burnard and Hennessy (2006, 5) provide a list of seven forms of reflection from different fields such as psychology, philosophy and education. The lack of a common definition of 'reflection' – also described as the main problem of reflective research in Rodgers (2002) – indicates the importance of an explicit description of reflection in this dissertation. One of the forms of reflection listed by Burnard and Hennessy is “critical reflection as a form of judgement”, which resembles “evaluation” in the CP as I discuss it on p. 115. Evaluation is one the many activities (or thinking skills) that takes place in the CP. Although some authors such as Burnard and Hennessy label this artistic evaluation as a kind of reflection and the notion of reflection-in-action in Schön's *The Reflective Practitioner* also includes evaluation, the reflective part of this dissertation (in the Reflection chapter) is not about reflection-in-action during the CP. The reflective part is based upon a retrospective reflection on the CP. The assumption that evaluation is a form of reflection, combined with the notion of reflective inquiry to support 'reflection', leads to problems of obtrusiveness. The CP can be obstructed because,

according to this line of reasoning, reflective research is meant to enhance the evaluation activity.

The ambitious (and fascinating) self-study by the composer Church (1996) provides an example of a study to enhance this reflection-in-action (which Church also describes as 'evaluation') and encounters these obstruction problems. Church includes a questionnaire that he wants to answer in his written journals. These questions operate on three levels:

- technical evaluation: an examination of the techniques and constructive processes and sub-processes of the compositional act
- creative evaluation: description of ideation, conception and inspiration
- critical evaluation: an ongoing appraisal of the success of the work

Church describes himself as

> a composer-analyst making a conscious attempt to be more aware than usual of the thinking and actions which comprise and characterize his compositional activity. (p. 128)

He wants to become more aware of his actions and thoughts while composing. But he had to abandon the questionnaire part way into the study and use a more informal journal approach. In his conclusions he admits that it was often impossible to carry on these two tasks – ideation and analysis – simultaneously (p. 128). In fact the design of his study reveals two major problems:

- he wants to use (written) journals as a concurrent, in-time data-collection method (this issue was already dealt with in the chapter 2.1)
- he confuses analysis with reflection and wants to enhance this 'reflection'(-in-action).

Newman (2008) makes a similar evaluation of Church his self-study:

> But more importantly, there is an underlying problem in Church's design revealed here. The problem lies in his conception of the journal as an "analytical approach"; his representation of his process was hindered by his use of a questionnaire that required an in-depth formal analysis. Though it could be claimed that through writing down and representing events, any type of journaling is a basic form of analysis, usually the journal writer is not required to break down their experience into pre-determined parts or themes, as Church's questionnaire demanded. (p. 14)

In this dissertation I decided to separate reflection-in-action from reflection-on-action: in the verbal reports (in the self-study), made soon after a composition session, I report on what I have been doing and thinking (including evaluations) while composing but I do not add 'extra' reflections on the spot about these reported thoughts and actions (see p. 168 for further details on the verbal reports in my self-study). I also make a clear distinction between the formal self-study of my composition practice (in the self-study part of my dissertation) and the reflections (Reflection chapter). The formal self-study is systematic, uses a defined method and focuses on a limited number of research questions. The reflections focus on the experience of research influences (including 'side-effects' of the research) on my practice.

2.2.3 Reflective research and self-study

The goal of reflective research is to raise the consciousness of ourselves as actors and practitioners. Lyons quotes Dewey to explain the full extent of the term 'consciousness':

> it is a name for the purposeful quality of an activity, for the fact that it is directed by an aim. Put the

> other way about, to have an aim is to act with meaning, not like an automatic machine, it is to mean to do something and to perceive the meaning of things in the light of that intent. (Dewey as cited in Lyons 2009, 41)

Next Lyons raises an important question, citing the work of David Boud:

> David Boud and his colleagues – early exponents of reflective inquiry – ask the question: “Why is it that conscious reflection is necessary? Why can it not occur effectively at the unconscious level?” They also answer their query: “It can and it does occur, but these unconscious processes do not allow us to make active and aware decisions about our learning. It is only when we bring our ideas to our consciousness that we can evaluate them and begin to make choices about what we will and will not do” (Boud et Al. 1996, p. 33). These authors go on: “For these reasons it is important for the learner to be aware of the role of reflection in learning, and how the processes involved can be facilitated.” (p. 41)

In this dissertation, these important questions are translated as 'why is conscious reflection important in the research on the CPMC? Does it lead to better results? Are there unconscious, automatic activities in the CP which should better remain unconscious? These are difficult and complex questions to answer. In the Reflection chapter I will only give a personalized, individual answer. A crucial issue in providing an answer is to be aware of not just one, but a number of activities in our CP. Otherwise, the accepted goal ('raising awareness') could lead to a higher awareness of one activity/situation without taking other activities and thoughts into account and it seems debatable whether such a selective higher awareness (for example of a detail) is productive. Therefore the reflection on my practice happens after a systematic data collection, analysis and synthesis process has taken place. I consciously choose a number of activities and construct a meaningful whole – a n overview – on which I can reflect.

Although reflective inquiry can be a group process and take place through dialogue, Lyons notes that:

> a primary avenue for practitioners to engage in inquiry is through investigations into their own professional practices. (p. 41)

She adds that self-studies are a fast growing research area. Pinnegar and Hamilton (2009) situate self-study within other (qualitative) research domains in which the 'I' of the researcher plays an important role. After explaining the historical backgrounds, goals and main methodological questions in Narrative Research, Autoethnography, Phenomenological Research, Life History and Action Research, they describe the differences between these domains and writes:

> Self-study research explores practice, the self in relation to practice, and the self in relation to other. (p. 75)

In this dissertation I explore the practice of music composition, my own practice and the relationship with other related practices in contemporary classical music. The self-study is not an auto-biographical account, related to the creative process of an artwork (as in Leal (2003)) or an auto-ethnographical research of a composer “to represent the personal, political and cultural dimensions of my place as a composer in society,” as in Newman (2008, 35).

2.2.4 Tools for reflection

The tools to foster reflective enquiry in literature are very diverse: from writing, keeping a journal, logbook or diary to talking (dialogue), games and digital technology (Burnard and Hennessy 2006). Although journal-writing is considered an important tool for reflective and artistic research (Gray and Malins 2004, 59), the use of journals, logs or diaries in self-studies of music composition is often described only vaguely (as in Lalama (1998)). Almost no information is given on the focus of the journal, the regularity and duration of its usage and the method of extracting information and insights from the journal entries. In his self-study, in which score analysis plays an important role, the composer and researcher Schroeder (1993) only comments that he has used a 'creative journal' for several months. The structure of his self-study is original as it is built upon selected entries from his journal to which he adds comments in retrospect (this structure re-appears in the self-study of Lalama which was published six years later).

A more elaborate method, called the Creative Process Journal, is developed outside the field of music (composition) research, in the Awaken project (Glasgow School of Art) (Stephen-Cran and McGilp 2009; McGilp and Stephen-Cran 2007; Stephen-Cran, Britt, and McGilp 2013). This project in fashion and textile design, aimed to reinterpret archive material for contemporary textile-related design work. Studying inspiration and its sources is at the heart of this project.

The authors stress that the Creative Process Journal is part of a systematic study of artistic practice:

> The varied processes and development work involved in the creative disciplines are very rarely self-evident within the final outcome. Although the sketchbooks, notes and prototyping etc., commonly generated in the formative stages, can provide useful records, these are often discarded and (by their nature) rarely comprehensive. A systematic approach to observing and recording practice, drawing in the various sources, underpins the Creative Process Journal process. (Stephen-Cran and McGilp 2009, 38)

In a previous article (McGilp and Stephen-Cran 2007), the Creative Process Journal is described as “an innovative method for research- based learning through the recording, analysis, evidencing and explicating of practice.”(p. 9) The artists using this method pass through a number of stages during which they collect data in a research log, participate in group discussion sessions and organize the data into groups and sections to draw out themes, questions and developing theories. The Creative Process Journal is intended for the visual arts, and the logs are on paper. Design plans, pictures and other sketch material can be drawn, printed or glued onto the paper and the final stage integrates text and visuals or 'other media' to create a work that can be exhibited. Notwithstanding this visual orientation, the Creative Process Journal is an important example for this dissertation as it provides a method to reflect on the creative process that is both systematic and comprehensive.

3 Design and method of this dissertation: overview

The main characteristics of the design and method of the group study (p. 53) and the self-study (p. 157) are:

- a naturalistic setting: within both studies the composers could compose in their usual, preferred environment, manner and time schedule. However the group study contains a less naturalistic element: the (polyphonic) task in the commission
- professional composers: all the composers studied have at least five years of experience of writing music for professional performers
- time span: in general the CPs in the group study are rather short (a few days to three months) while the self-study covers a longer period of two years
- data-rich approach: a diverse set of data (sketches, scores, interviews etc.) is obtained which provides both factual (actions, products) and explanatory (meaning, intentions, evaluations etc.) information on the CP. In the group study two interviews were taken and (paper) sketches, (digital) score versions and emails were gathered. In the self-study retrospective reports were made immediately after a block of composition time, and paper sketches and digital files (recordings and scores) were collected with an individualized data-collection technique.
- critical timing: in the group study the first interview was performed as soon as possible after the end of the CP and the other data in this study were generated during the CP. In the self-study, data were collected in real-time. Most of the composition periods are covered by several types of data
- triangulation: the different data are compared with each other in an iterative analysis cycle
- synthesis: to understand the actions and thoughts in the CPs studied, a summary or reconstruction of the CP was made. This summary is dynamic, showing the development from the beginning to the end of the CP.

A detailed description of the methods is given in chapter 4 and 5 of the group study and 4 and 5 of the self-study.

In my dissertation two terms are used frequently in the following sense:

- *data-rich method*: a method which does not collect one type of data to study the CP but a range of diverse data such as sketches, scores, interviews, verbal reports, etc.
- real-time method: a method which sees the timing of the data collection as crucial. This data collection takes place during or soon after the CP. Real-time in this sense is a broad term encompassing concurrent speak aloud protocols, immediately retrospective reports and interviews taken during or soon after the end of the CP.

PART II: DESIGN AND METHOD

Design and method of this dissertation: overview

 PART III: STUDY OF EIGHT COMPOSERS

PART III: STUDY OF EIGHT COMPOSERS

1 Review and research questions

1.1 Studying more than one composer

In the current group study, the CPs of eight composers have been researched. In the existing literature there are a number of studies in which more than one composer is followed but five observations are to be made on these studies:

1. they study children, teenagers or students and non-professional composers
2. they do not not take place in a naturalistic setting but in a laboratory
3. they rely on interviews instead of a data-rich collection method, including real-time data
4. they focus on a limited set of features and not on finding the most important, salient activities
5. they study electro-acoustic and computer music instead of (acoustic) contemporary classical music

In the following review I will explain and discuss some of these group studies, focusing on the question: what are the most important activities (including thought processes) in the CPs studied?

Some studies focus on very basic compositional activities by children, for example in Kratus (1991), 60 children between 7 and 11 years old have to create a melody (on the white keys of a keyboard) within a time frame of 10 minutes. The composition strategies are based upon simple activities such as repeating pitches/patterns/rhythms, changing a pitch or duration in a pattern, exploration of new musical material using adjacent scale steps or bigger intervals. Folkestad (1996) studied children that were older (between 15 and 16 years old) with at least one year of musical experience, while they were creating music on a computer. None of them had created music before the project. In his analysis two main categories of creating music – horizontal and vertical – are found. Horizontal creation starts by producing the melody and harmonies for the whole composition with or without using the computer. In a next phase arrangement and instrumentation is done, aided by the computer equipment. In vertical music creation, however, the music is created section by section. Every section is completed before the next section is composed.

In the horizontal strategy, composition and arrangement are separate processes, whereas in the vertical strategy they are integrated. Folkestad makes a distinction between composing a basic version of a new piece and revising it step by step on the one hand, and composing a new composition with its complex features all at once on the other. Although the two categories may provide important insight into creative activities with children, it remains dubious whether they can be applied to professional creative practices. For example, in studies of professional composers (McAdams 2004) and composers' writings (Reynolds 2002), planning and the systematic preparation of the writing process have been described as crucial in the act of composition.

In 1984, fourteen composers were invited to create a short electro-acoustic composition in the computer studio of the Groupe de Recherche Musicale (GRM) (Chion and Delalande 1986;

Delalande 2007). Each composition was to be based on a short sound fragment of a few seconds. The overall objective of this 'Germinal' project was to create an entire work out of one given sound. Among the participating artists were composers such as François Bayle, Daniel Teruggi, Philippe Mion, Denis Dufour and others. Twelve of these composers were subjected to an interview and this was used as the source for the study by Lalande (2007) of the CP of these electro-acoustic composers. The author finds four levels of criteria governing the decision-making process: technical quality, grammaticality, the musical idea (a sounding idea that appears on its own) and the objective (the part of the project that can be formulated in words). The first two link with a search for regularity in the new composition (built upon existing techniques and experiences) while the latter two suggest a desire for singularity (creating an 'unique' composition, for example built on a specific idea). Next Delalande describes five degrees of poietic approaches which are related to how goal-oriented and fortuitous an action by composers is. In the next phase of the analysis, the author describes three strategies in detail, “equipped with this analytical chart of levels of decision and poietic approaches.” This description is based on a single point of view: the place given to the chance discovery, or to singularity discovered through listening. One example of these strategies is the 'Savouret strategy' in which the composer first imagines sounds internally, works in a goal-oriented manner in the studio with little room for chance discovery, except at the end when creating the final mix of all the voices. In electronic (and computer music) a composer works directly with the sounding material, so no symbolic music notation or performers are necessary. Sound samples are manipulated and composers can hear the results immediately or after some processing and editing has been done by the computer. Although Delalande's vision of the role of chance is refreshing in a way among studies of the CPMC,[8] his vision also bears resemblance to studying the evolution of constraints in the CP. It is uncertain to what degree Delalande's insights are valuable for acoustic composition, for example the focus on chance discoveries might be related to the directness of electro-acoustic composition.

Another group study was conducted by Brown (2003) who studied five professional composers of computer-assisted music (Steve Reich, David Hirschfelder, David Cope, Brigitte Robindoré and Paul Lansky). The main research questions in Brown's study focus on the nature of the interactive relationship between composer and computer. Related questions are:

> How do composers express their musical ideas through a digital medium?, What are the characteristics of a digital music system designed for composition? and In what ways are composers’ musical ideas amplified or distorted by computer music systems? (p. 55)

Brown uses a real-time data collection method in which a rich array of data sources are gathered. The main sources are interviews but software files, draft scores, recordings and pictures of the composer's workspace also provide important information. His method is inspired by Sloboda (1985), activity theory and studies by Laske and DiScipio:

> some research into computer-assisted composition takes into account the task environment (Laske 1992a, Di Scipio 1995). The role of computer system design is highlighted in the compositional process and, therefore, a detailed understanding of the computer system itself emphasised. Di Scipio’s (1995) study of three Italian composers working on electroacoustic pieces, including

8 There are similarities between studying constraints in the CP and goal-oriented vs chance-related activities. If there are many constraints and the solution space that the composer allows himself becomes very narrow, there are less opportunities left for chance discoveries.

> himself, focused on the role of representation in revealing and corralling the musical directions of the composers. (p. 56)

The different data are triangulated with each other and analysed, but there is no reconstruction of the whole CP of each composer:

> I was concerned with how the computer supports compositional activities rather than seeking to establish a protocol description of every stage of the composition or gather evidence of computer influence on the musical outcome via a note by note analysis of resulting works. (p. 56)

Because there is no overview of the whole CP, it seems difficult to know which (computer-supported) activities are important or decisive, but next Brown introduces the concept of engagement through which he analyses the results of the study. Engagement is described as a "feature I have identified as being common to all the composers," despite differences in equipment, musical style, and social context.

> When composers are immersed in creative activity, their perception of the world, both physical and imagined, is altered such that they have a unique perspective on things they see and hear. I refer to this state as compositional engagement (...) (p. 84)

Brown then presents five modes of engagement that are further refined in Brown and Dillon (2012), where they are presented as five modes of meaningful engagement with music composition in general; thus the modes have become less computer-dependent. Although the link between the concept of engagement and the five modes is rather loose, I give a description of these five modes because they immediately relate to the main activities in the CP that are examined in the group study.

- Attending: the composer listens or attends to an objectified composing medium, tool , score or performer
- Evaluating: the composer examines works or materials in an analytical or judgemental way
- Directing: the composer consciously manipulates musical materials to shape them into a desirable form
- Exploring: without having a clear goal, the composer experiments with musical materials
- Embodying: an improvisatory and intuitive mode of working by falling back on learned patterns and habits.

These modes of meaningful engagement take place in three contexts according to the authors: a personal, social and cultural context. By combining these contexts with the five modes, a 'meaningful engagement matrix' is obtained that acts as "a tool for categorising and examining compositional practice." (p. 85)

I want to make two fundamental remarks concerning Brown's studies (which also explain why his framework was not followed in the current group study). Firstly, the term 'compositional practice' implies a wider study field than the CP, encompassing rehearsals, performances, discussions with member of the audience after performances etc. Secondly, in his framework salient and important activities are reduced to ones that create a flow experience of the composer, a meaningful engagement which he states is "common to all composers". But in interviews with composers there are often testimonies of how cumbersome composing can be (McCutchan 1999). There are also other creative activities that are difficult to describe as 'flow' (or meaningful

experience): incubation for example, the act of forgetting an issue for a while and putting it on hold in the background, recurs in academic literature on CPs (Runco 2012; S. Bennett 1976). Moreover, what distinguishes *professional* composers from amateurs and certainly children and teenagers, is the fact that professional composers have repeatedly created end *products* for a specific context (recording, performance). They might (try to) find a balance between the experience of the CP and the product-oriented requirements, but it remains unknown if this is the case in every CP of a composer.

Summarizing the previous paragraphs, there are a number of group studies but the research method, focus, choice or sample of studied composers makes it questionable whether the detected categories of main compositional activities are relevant for composers of contemporary classical (acoustic) music. If one of the previous categories or analysis frameworks were used in a study of contemporary classical composers, important activities might be overlooked or others might be less relevant because they are only related to the research method or focus and not to the individual context of the studied composer. Similarities and differences between composers might not only be related to the nature of their CP but also to the categories used and analysis frameworks.

There is one example of a study of more than one experienced composer, using data-rich and real-time data collection methods, focusing on the CP. This is the MUTEC project in which the creative processes of nine composers were studied. But the big majority of these CPs are at least 20 years old. During this project some composers were still alive and could provide extra information, while others had passed away. Although a data-rich approach was used, with a whole range of sketches, scores, computer files, texts, teaching material, etc., the data were not obtained in real-time in seven out of nine cases, the study on compositions of Stefano Gervasoni and Jean-Luc Hervé being the exceptions. The MUTEC project provides a historical time line of CPs (from the 1930s to the present day) that detects the composer's degree of innovation and use of common methods. For example, according to Donin (2012) the working method of Leroux has many features in common – e.g. how he plans his work – with spectral composers like Gérard Grisey and Jean-Luc Hervé. Moreover, the MUTEC project is based on a common set of notions and transversal rules (Donin 2012, 17) that enables the MUTEC researchers to find similarities and differences. This 'framework' has a lot in common with the framework that is used within this dissertation (the need to reconstruct the course of action, the inclusion of reflection of the composer in the research, the focus on a number of themes etc.).

1.2 Comparing real-time, data-rich studies of a single creative process

Although the number of real-time, group studies of professional composers is limited, some researchers have tried to detect the main compositional activities and the decision process across several individual studies.

In the research by Donin, who was one of the principal investigators in the MUTEC project and also performed the real-time, naturalistic studies on Leroux, an attempt is made to detect common compositional activities – macro-level activities – in the CPs of the composers in the MUTEC study. These compositional activities are described by Donin (2012) as “broader and emerging issues in compositional cognition”:

> Broadly speaking, the working methods of these composers can be split into two directions. In the first, *synoptic planning*, a composer defines the project around one or several global concepts that command the material's characteristics. The piece's form is designed around one or more charts upon which different projected variations (parametric, ontological, stylistic) are plotted on a time axis (metric or chronometric). (…) The second direction is the primacy of *heuristic ideation*: a composition's essential properties emerge throughout the writing process, as a result of recurrent or accumulated local compositional procedures, or as influenced by ideas (melodic, harmonic, parametric, organological) that operate continuously throughout every stage of writing. (p. 19)

Apart from this initial classification (of common and different methods) in a real-time, naturalistic research project with more than one composer, it is difficult to compare (the results of) the studies by different authors. I will illustrate this with the studies by Donin and Collins (2005; 2007). The film composer in the latter case spends much time on moving sections (themes), deriving other sections from existing material, and on elaborating/adapting the instrumentation, phrasing, and other forms of small-scale editing work. But in Donin's study of Leroux, the author clearly notices two periods, a classification that is very different from the activities in the Collins' study:

> (...) a preparation period (during which musical ideas are developed alongside the technical constraints that define the projected final work) and a writing period (during which a musical manuscript is written and computer files are produced). By Leroux, these periods are comparable in length. Composition throughout these two successive periods of preparation and writing reveals itself to be an activity that first *constructs* the elements of compositional situations and then *exploits* these situations. (Donin 2012, 12)

Donin also studied the creative process of another composer, Stefano Gervasoni (within the MUTEC project). In this case yet another overall strategy is found: the composer composed the whole piece in one day, without much precompositional work before the first page was written. The first draft contains hardly any revisions and is almost identical to the final score. In his analysis, Donin (2012) describes how Gervasoni's writing process is characterized by the production of rules that shaped the evolution of pitches or rhythms.

> These rules governed the direction of musical motion (ascending or descending, step-by-step or disjunct), the type of pace between two occurences, and so on. At each new iteration of one rule, the rule itself could be modified, disputed or stopped. Rules could pile up or even contradict each other. We thus observed an overflow of underused rules, whose lifespan was often too small for the listener, or even a patient analyst, to permeate their mechanisms. (p. 20)

This rule generation (while writing) is not found in the film composer, studied by Collins, although the absence of planning and preparation seems to characterize both composers' CP. It is unclear if the differences between the previous CPs are caused by the collection and analysis methods (e.g. verbal protocols in Collins), the genre of the music (film music versus contemporary classical music) or whether they reflect important differences between the CPs of the composers. The last hypothesis would lead to the conclusion that the model proposed by Collins only relates to one specific composer. This model is shortly described on p. 15.

Although in general the studies of Collins, Donin and Pohjannoro (2014) use a real-time and data-rich approach, there are different results which may be caused by differences in:

- conceptual framework: the study of Collins is greatly influenced by problem-solving and stage theory; dual process theory is the main paradigm through which Pohjannoro analyses

the CP of her studied composer, while activity theory is an important – but flexible – framework for the studies by Donin;

- focus: the main question in Collins' study is how problems are found and solved. He goes even further and proposes a hypothetical model of problem proliferation and successive solution implementation in the CPMC; Donin focuses on a range of topics and is more hesitant to propose theories or features common to all CPs in music composition while Pohjannoro focuses on the dynamics and functions of intuitive and reflective modes of thinking;
- data collection method: although the three authors use data-rich, real-time methods, there are still clear differences (see the discussion of methods on p. 33);
- analysis method: the data analysis in both Collins and Pohjannoro is based on (coding) methods from qualitative research, but Collins' approach is closer to Grounded Theory while Pohjannoro uses coding categories that are both data- and theory-oriented; more information on their analysis methods is given on p. 41;
- terminology: words like exploration, preparation or planning can have a implicit, vague meaning or a different meaning; to clarify the terminology authors such as Pohjannoro encompass a glossary in their study;
- style and aesthetic concepts: while a film composer is the object of Collins' study, contemporary classical music (but in different European countries) is the main genre in the studies by Donin and Pohjannoro;

These differences indicate a need to have results on the CP of several composers, studied within a common research framework. This helps to distinguish the differences in research design and method from the differences in the studied CPs. Collins distinguishes between the macro-level mapping of the compositional process and the finer-grained tracking of musical process over time, the second option being the one he takes in his study. Next he finds activities such as the ones mentioned before (in the comparison with Donin). A group study within a common framework could reveal whether there is a *general* distinction (and not only in the composer studied by Collins) between macro-level and micro-level categories in CPs of music composition. At this point a relevant question emerges: are compositional activities (e.g. writing or planning) at the forefront in some CPs, while having a less important (or even no) function in other CPs?

1.3 Multimedia summary of the CP

Another problem, related to the 'analysis method' point in the previous list of research differences, is the lack of clarity concerning a synthesis in the analysis phase, as extensively described in the general data analysis review on p. 41. Will it not be easier to compare CPs, even across studies by authors with different theoretical frameworks, if a synthesis is included, i.e. one chronological summary of the main actions and another of the development of the music-in-progress? Moreover, the use of non-textual media enhances the understanding and sense of overview in these syntheses, as the visual illustrations and figures, particularly those used by Collins ('structural mapping', see Illustration 3) and to a lesser degree Newman (2008) illustrate. It is a challenge to create such

multimedia synthesis and the question arises: are there general (non-textual) ways to create such a synthesis or do they depend on the style and aesthetic concepts of the composer and/or the composition? Collins' 'structural mapping' (2007, 252) provides initial evidence that this is possible, but it remains to be seen whether his type of synthesis can be used for composition within a contemporary classical idiom. The music of the film composer studied by Collins is characterized by motives and themes and this is mirrored in the visualization of his structural mapping. Moreover, Collins' structural mapping is built upon screen shots of sequencer software and it is unknown if this mapping could be applied to composers relying less on computers. There are other examples of multimedia presentations of the CP (Bayley and Clarke 2009; Bayley and Clarke 2011; “Montage Hypermédia: Une Page Du Journal De Composition d’Apocalypsis” 2013) but these provide examples or snapshots and not a summary of the CP.

1.4 Influence of research on the CP

In the 'DESIGN AND METHOD' part (p. 29) I have discussed the different appearances of the 'naturalistic setting' in studies of the CP. Although there is an – implicit – paradigm to depart from the laboratory settings of CP studies in the 1980s and 90s, it is not clear yet what the most important parts of a natural setting should be in current studies. This is not only important for the choice of a data-collection method that aims to avoid obstructing the preferred and usual ways a composer works. There is a second reason: the non-naturalistic elements in the setting may influence the research results. To give an example: giving a composer the task to create a composition based on a sound fragment (as in Delalandes study (2007)) might already trigger a CP in an unusual, different direction (for composers who never work with sound fragments). This echoes a general concern in naturalistic studies (and literature on real world research) to be aware of the methods and sensitizing concepts that are used in a study. Most current studies of the CPMC do not incorporate a study of the influence of the research on the CP, although this could result in a more elaborated and mature paradigm of naturalistic studies of the CP. A related concern – giving voice to the composer and his reflections on the studied CP – has been part of studies by Donin and McAdams (see chapter 2.1.2 p. 35). Although in general the current group study takes place in a naturalistic setting, the inclusion of a task is not usual in contemporary music (in Flanders). Therefore I consider it necessary to study the influence that this part of the research design has on the CP of the eight composers. It is also a challenge to find a method to examine this influence in a group study in which only one composition is made. In general, the differences between CPs prevent us from simply comparing a process with and without a task.

The question about the influence of the commission (and thus the research) on the CP is also relevant for artistic research. Authors such as Borgdorff (2012) have underlined the importance of a performative relationship between text (theory) and practice; in artistic research there is

> interaction and reciprocal influence of theory and practice. Not only do thinkers and doers need each other, but in a certain sense thinkers are also doers, and vice versa. (p. 20)

The thinking, theoretical activity is crystallized in a research design, and so it is important to examine the influence of this research design on the artistic process. Artistic researchers from the

visual arts such as Carole Gray (2009) have set up experiments within a setting that combines elements from both naturalistic and laboratory settings. These artistic experiments explore ‘knowing through making’ and 'material thinking' in the CP. Recognizing the impact of the research design – compared to the usual naturalistic context in a specific type of visual arts – is not only relevant for the experiments themselves but for those types of artistic research that incorporate a mixture of naturalistic and laboratory settings in their design. In the current group study I question the artistic practice (in the research) and its relation to the 'commonplace' artistic practice of the specific artist and the artistic field in which this artist participates.

1.5 Summary

Summarizing the previous paragraphs, there are a number of studies that study groups of composers but the research method, focus, choice or sample of studied composers makes it questionable whether the detected categories of main compositional activities are relevant for composers of contemporary-classical (acoustical) music. Within real-time, data-rich studies of one composer, there is slightly more convergence in design and method, but comparisons of CPs across studies remain difficult. The question is open as to whether the resulting insights, categories and models of compositional activities in these studies are valuable and meaningful if a larger group of composers is studied. Finally, to further explore the paradigm of naturalistic studies, the effects of the research on the CP studied need to be taken in account. Apart from giving space to reflections by the composer, this does not happen and currently there are no methods to study the influence of research.

1.6 Research questions

- What are the main compositional activities and what is their role in the CPs of each composer?
- How do these activities relate to the content of the inspirational ideas and the composer's general vision of his or her music?
- What decisions does the composer take while composing?
- Can the genesis of a short composition, from the first ideas to the final version, be reconstructed?
- How can summaries of the CP be created? How can the chronological reconstruction of the actions and the music-in-progress be visualized?
- Which constraints, other than the ones that are part of the research architecture, are present in the creative process?
- How does the given task function within the creative process?
- Can an experiment with a common task for a group of composers lead to a comparison of the concepts and strategies of individual composers?

2 Design

In this study, the creative processes of eight composers, composing a short composition (including a 'task'), will be researched. While the overall setting of this study is naturalistic, the commission (to compose a short work) included a polyphonic task. The data collection method uses a data-rich approach (with both factual and explanatory sources) and tries to obtain as many real-time data as possible on the dynamic CP. In general a balance is sought between the high number of participating composers, the real-time data collection method and the wish to disrupt the CP as little as possible.

On the one hand, I examine several topics in each CP (the concepts each composer uses with respect to the short composition, his/her music in general and polyphony; the composition procedures, the development of constraints during the CP, the main problems and the tools and actions). On the other hand a timeline with the most important ideas, decisions, versions and drafts will be produced. Based on these findings, I will summarize and analyse the most salient features of each process. Additionally, if CPs contain characteristic, specific phenomena, these are also described and explained. Moreover, special attention is paid to the impact of the task on the CP because this is the main unusual element in the naturalistic setting of this task.

On p. 6 I have already provided a short description of contemporary classical music in Flanders. To contextualize the commission and task of this group study, it is important to know that there are several ways for a composer of such music to have his/her music performed in Flanders:

- composers receive commissions from ensembles, orchestras or cultural organizations
- composers write music for performers without an official commission; these performers are mostly professional artists (now and then contemporary composers produce works for amateurs or children) and perform the new composition within concert series of classical, contemporary or other music, in cultural, educational and/or local institutions
- composers are also performers and create works for the ensembles or groups in which they participate

In the Appendices and the accompanying CD, contextual information on this group study is given:

- the scores of the short compositions in the current group study (Appendices 1 to 8)
- a recording of the short compositions in the current group study is found on the CD, accompanying my dissertation.[9]

9 One recording, of Brackx's PolyStudy is missing due to a technical mistake.

3 Pilot Study in 2010 – 2011 with six composers

In 2010 – 2011 I performed a pilot study which in general was very similar to the current group study. It included a commission to write a short composition, the composers were interviewed twice and the short composition was performed during a small concert. In comparison to the current group study, the pilot study gave more attention to the study of the technical solutions and methods of the composers to compose polyphonic music and less to the CP itself. Other differences include:

- the number of compositions: the composers were asked to write *two* short compositions
- the inclusion of a musical theme: a short musical theme was given which the composers had to use in one of these two short compositions
- differences in musical style: some composers wrote pop music and jazz
- intensity of the interviews: the interviews were much shorter that the ones in the current group study and they also contained a set of answers from which the composer could choose
- perception test: after the short compositions were performed and recorded, a listening test was performed with the short composition in several classes in music schools to detect which layers in the short compositions were perceived as the most different.

From the answers in the interviews it was clear that most composers did not just perform the commissioned task but also added their own artistic goals and preferences, which made the evaluation of the composition by using a listening test problematic.

The main choice to be made after this pilot study was the one between focusing either on the compositional-technical aspects and perception of (radical forms of) polyphony or on the creative process of the short composition and the individual vision on polyphony. The last option was chosen because this would provide me with a wider and richer source of information. The results from the pilot study demonstrated that there was not one kind of 'polyphony' or 'difference' at work, but several related visions, and that the definition of what constituted a technical task or element, was part of a more general, but individual, view on music and art. Moreover, the first option also created a methodological problem: a criterion had to be found to select composers that would perform the commission 'literally'. This seemed impossible to do. For example, in the pilot study two composers mentioned that the difference between the voices was the main aim of their composition. They solved the problem in the commission quite 'literally'. But to the first of these composers, polyphony – or any related phenomenon – was absolutely not a point of artistic interest. For the second, polyphony and creating very different layers in music, now and then was a point of interest. Consequently, the interest in polyphony could not be used as a criterion to select composers. Moreover, having to ask a direct question on the ability to solve a compositional task in a literal, technical way, would not be a good starting point for an academic study.

The other conclusions that were derived from this pilot study in light of the current group study were that:

- the composer working outside the field of contemporary-classical or experimental music does not add new or unexpected insights on polyphony

- questionnaires with a set of standardized answers result in very incomplete and therefor too cryptic information on the individual insights and visions of the composers
- requesting two short compositions does not deliver additional information in comparison to writing just one composition, which avoids the confusion about which answers of the composers belonged to a specific composition.
- a given musical theme in the commission does not provide valuable results; moreover, several composers expressed that they had struggled with the given theme.

4 Procedure – data collection

4.1 Commission and choice of composers

Between 25 October 2011 and 30 November 2011, composers were asked to participate in this research project. They were asked by email to compose a short composition. The email contained the following information and practicalities:

- the instrumentation was fixed at piano, flute and viola da gamba
- the required duration was 'minimum 40 seconds with all three voices playing simultaneously'
- no spatialisation could be applied; performers were not spread out in the concert hall
- all composers were expected to attend the rehearsal and performance
- the deadline for the two short compositions was set as the 31st of January 2012
- the composers were offered 100 euro in payment for the short work
- the composers were going to be interviewed twice, once before and once after the performance
- the composition didn't necessarily have to be a 'finished' composition, it could also be considered as a 'fragment or exercise'.
- the performance was not going to be public: only the other participating composers and the performers were going to be present during the performance.

The email also contained a task with two basis requirements for the composition:

- the three voices should be as different as possible
- the three voices should be clearly perceptible, i.e. they should not overrule each other.

The main reason to include this task was to provide a link between this group study and my own (polyphonic) composition practice (see 'General Introduction' p. 3). Moreover, the task functioned as a common starting point to study the individual trajectories of the composers and in this way it is similar to the task in the Delalande's study (2007) with a group of electro-acoustic composers.

24 composers (19 male, 5 female) were contacted and nine (7 male, 2 female) agreed to compose the short composition. Two (1 male, 1 female) other composers considered doing so but in the last month before the deadline they informed the researcher that they were unable to compose the work because of time constraints. I decided not to use the data provided by one of the nine composers because this composer had not composed a new work but had only come up with a new instrumentation of (a fragment of) an existing, nine-year-old work. That meant that I only had data about the instrumentation process and not the compositional process. Consequently this is a study of the creative processes of *eight* composers.

All the composers contacted were selected because they had written contemporary classical or experimental music in the past and because they had experience with composing music for acoustic instruments. This was done to obtain homogeneity in the sample of composers, to reduce the

amount of data to a manageable level and to ensure a meaningful link could be made with my own compositional practice and the reflective part of this dissertation.

I already knew five out of eight composers quite well before this study. Because Flanders and Belgium are not big regions and contemporary music consists of a limited number of concert halls and institutions, I had met these composers before on several occasions. I used my contacts as a composer and concert organizer to find the initial 24 composers, along with information from the websites of the Flanders Music Centre (“Muziekcentrum Vlaanderen” 2014) and MATRIX (“Matrix - Centrum Voor Nieuwe Muziek” 2014).

All the composers contacted had substantial professional experience. Table 1 shows the number of years that the eight composers had been active. This table also contains the composers' full name. One composer chose to remain anonymous, his name is replaced by the fictitious name 'Marc Cammeren' in this dissertation.

	Age	**Years since first performance**	**Years since first commission**
Joachim Brackx	36	19	14
Marc Cammeren (N.N.)	54	22	18
Guy De Bièvre	50	29	26
Frederik Neyrinck	26	11	5
Frank Nuyts	55	38	35
Thomas Smetryns	34	12	10
Jan Van Landeghem	57	29	25
Petra Vermote	43	25	17

Table 1: Professional experience of composers in the group study

'Age' = age of the composer in years, at the moment of the pre-interview
'Years since first performance' = number of years since the first publicly performed composition was written
'Years since first commission' = number of years since a composition had been written as an official commission from a performer, ensemble, orchestra or curator

In a second email at the beginning of December, the names of the performers were provided: Elisa Medinilla (piano), Katrien Gaelens (flute) and Dirk Moelants (viola da gamba). The composers were also asked to store preparatory material such as sketches, recordings, computer files etc. because it was useful for the research project. I did not give them a detailed list of archival techniques in advance (e.g. write the date on a paper sketch, use save-as files to create back-ups of your digital sketches etc.) because I considered this too obtrusive for their creative process. After the short composition had been written, i.e. during the pre- or post-interview, I did ask the composers if they agreed to search through the back-up folder of their music notation software. In two cases extra digital music notation files were found (five extra files with the composer Cammeren, four with Vermote).

Between November 2011 and July 2012, the eight composers were each interviewed twice, for

the first time before the performance of the short compositions (the 'pre-interview') and for the second time after the first performance (the 'post-interview').

The rehearsals and performances took place in two separate groups of 4 and 5 composers on 27th and 29th March 2012. All the composers were present. This session was recorded: the rehearsal with a stereo microphone (Schoeps MK5 CMC) placed at the front of the stage, the performance with the same microphones plus an additional set of miniature microphones (DPA IMK 4061) located close to the three instruments. A video recording of the performance was also made with a Sony HDR-UX7E. Between 2nd May and 16th July, the composers were interviewed a second time by the researcher (the post-interview).

4.2 Interviews

The two interviews were an important source of information on the creative process of the eight composers. The interviews were semi-structured. A set of questions was prepared in advance but there was room for additional questions and answers during an individual interview. Because comparing the creative processes of different composers was one of the objectives of this study, I asked all the composers the same questions. But at the same time, the meaning of the topics and terms in these answers depend on the personal context and vision of the composer. Therefore I left enough space to describe this individual context in depth. For example, during the interviews it turned out that concepts like polyphony or voices have a very different meaning for different composers. The difficulty in applying an open interview style while at the same time trying to stick to the prepared questions is well expressed by Willig (2008):

> The interviewer needs to find the right balance between maintaining control of the interview and where it is going, and allowing the interviewee the space to redefine the topic under investigation and thus to generate novel insights for the researcher. This can be difficult. (p. 24)

A similar plea for flexibility in a qualitative interview is made by Mortelmans (2007):

> Ook al leggen wij bij onze voorbereiding een bepaalde volgorde van vragen en thema's vast, deze moeten steeds inwisselbaar zijn tijdens het interview zelf. Het doel van het kwalitatief interview is om diepte te krijgen in het verhaal van de respondent, waardoor de interviewer zich zo veel mogelijk dient aan te passen aan de geïnterviewde. Zoals gezegd gaan postmoderne benaderingen van het interview hierin heel ver. Maar ook zonder de klassieke interviewvorm helemaal te laten vallen moet een kwalitatieve interviewer bereid zijn afstand te doen van zijn voorbereiding en de natuurlijke loop van het gesprek voorrang te geven. (p. 213)

The interview process also developed as time went on. The answers and the feedback from the first pre-interviews contained some new insights that were transformed in two new questions that were added to the list of fixed questions. To make sure that all the composers had the same basic set of questions, these new, extra questions were sent by email to the composer about a week after the pre-interview. The question “What do the three voices have in common?” was one of these two extra questions. Our initial set of fixed questions only had two questions about the difference between the voices (verwijzen naar concrete vraag in appendix) but after some interviews, I realized that hearing the composers speak about the common elements created a fuller picture of the composer's vision of the task (in the commission) and on the importance of polyphony (or the

absence of polyphony) in their short composition.

During some of the pre-interviews it was not always possible to fully understand the details of the genesis of the composition and the number of sketches generated. After listening to the recorded interviews, I sent an email to some composers with practical questions about sketches, such as: “could you find this specific paper sketch that you described in the interview?” or “Could you copy the back-up folder of your music notation software?” I choose not to wait until the performance or second interview to ask these follow-up questions because I feared that in the mean time these sketches and information could get lost. For example, the buffer of the back-up folder of software is mostly limited to a fixed number of files and they are constantly replaced by new files (once the software is used again).

In one case – Neyrinck – I asked extra questions by email, six months after the post-interview. This was done because the ongoing analysis of his data revealed that his short composition was part of a cycle of compositions.

The actual list of questions can be found in Appendix 9. These were the general themes:

- Background facts (age, years active as composer etc.)
- Creative process of the short composition (germinal ideas, constraints, tools, workshop, timing and order of ideas and activities in this process)
- Vision or narrative on the short composition
- Vision on the task (and the included problem and applied solutions) and on polyphony

I did not include a prepared question on the composers' concepts of their own music (in general) because of the risk that this would turn into a long story, far removed from the short composition and its genesis. I opted for an 'emic' approach, letting the concepts arise spontaneously and asking further questions if necessary when they did.

During the interviews I tried to establish an atmosphere of trust and good will with the composers to make them feel at ease (Mortelmans 2007, 215). By doing so I hoped to obtain in-depth information on the creative process. A relaxed atmosphere could help them to remember the different ideas, aspirations and problems that they met while composing. Moreover, because the commission contained a musical task (which is unusual for professional composers) and the short compositions were going to be performed for an audience of other composers, I wanted to assure the respondents that this was not a competition or examination and that all opinions on and solutions for the 'different voices' problem were valuable (even the ones that considered it a minor or even non-existent problem). Mortelmans (2007, 221) has pointed at the importance of the order of the questions in an interview. To built up and atmosphere of trust and to get used to the interview environment, I started by asking more 'neutral' questions. I did not probe too long into a single topic, for example when a composer had difficulties remembering ideas in the CP, but chose to return to the topic at the end of the interview. Additionally, the approach of Donin and Theureau (2008) on the workshop environment of a composer resulted in greater attention to the composer's material environment in the interviews. In several cases neutral, 'material' questions, such as 'where did you sit while composing?', 'did you touch your piano while composing?', triggered the composers to remember previous ideas or early versions of compositions.

All interviews except one were conducted face-to-face as this is a precondition for a profound interview. In one case, the post-interview with Brackx, was held on the phone because of the composer's busy schedule.

In general, the pre-interview contained more fixed, standardized questions (on the creative process), giving he sketches and other traces a memory recall function to help the composer remember the phases, decisions and actions within this process. The memory recall function of traces is also used in studies by Pohjannoro (2014) (also see p. 33). The time between the interviews was used to listen to the recorded interviews (the transcriptions were not finished yet at that point), go through the available sketches, scores and emails and evaluate all this information in terms of its validity, completeness, relevance and clarity (Mortelmans 2007, 243). This produced a list of topics that needed more clarification and follow-up questions (Rubin and Rubin 2005, 173). The post-interview had more individualized questions and fewer standardized ones; it tackled issues that arose from the first interview and dealt more with the performance of the short composition. The post-interview also functioned as a verification session. The composer was asked to clarify some data and traces when the explanation from the pre-interview was insufficient or when these data were unreadable, obscure or only contained partial information. Therefore a different sheet was prepared for each post-interview, with individualized questions and other relevant information (including excerpts from the pre-interview or information from the biography).

After the interviews I made a short report of the interviews, especially when the interviewee was frequently pointing at music fragments on scores or drafts. Due to practical and financial considerations, I did not have a video recorder and assistant available who could film these indications. In one interview (the pre-interview with Smetryns) the composer remembered an important idea (from the CP) just as the recorder had been switched off and dismounted. This idea was notated immediately after the interview.

In the chapter on design and method in this dissertation, I have described the importance of the timing issue in obtaining information on the dynamic creative process. Minimizing the temporal distance between the CP and the interview is crucial to ensure that the compositional actions and ideas are still available in the memories of the composer. This is how Folkestad (1996) described the timing issue (in his research with teenagers):

> The time factor turned out to be important in determining the results of the interviews about the compositions. When the interviews were held close in time to the composing, the participants were mostly able to describe what they had done and what they had thought about it. It became clear though that those things were soon forgotten, and in some cases the participants did not even recognise their own compositions when listening to them a month later, even concerning compositions they had given a lot of information about in an interview just a few weeks earlier. (p. 122-123)

The pre-interview in the current group study was done as soon as possible after the composer had notified the researcher that the composition was finished. In Neyrinck's case, the temporal distance was the furthest, i.e. the interview took place 12 days after he had sent the first draft of the score. This temporal distance is comparable to the one in the study of Pohjannoro (2014):

> To minimize memory-related biases the interviews in this study were conducted within a fortnight of the actual events. (p. 14)

The fluctuations in the timing of the interview depended on the time available to the composer

and researcher once the composition was finished. Despite the deadline, it was not easy to predict when the short composition would be finished: Nuyts was interviewed in November 2011, because his short composition was already finished two weeks after the initial email (with the commission) was sent; Cammeren was interviewed in February 2012 during the CP because he had indicated that the composition would be finished by the interview date, which was not the case.

All the interviews were transcribed verbatim. False starts, repetitions and other characteristics of spoken language were left unchanged. But after every meaningful segment (sentence or part of a sentence) and broken sentences, commas were added for readability. When a fragment was totally inaudible, '(niet)' was added. Finally, a question mark between brackets (?) was added if a word or part of a sentence was not clearly understood.

In the following chapters I refer to the interviews as pre-interview or post-interview followed by the time indication (in the interview) in hour:minutes:seconds, all between brackets, for example (pre-interview 00:49:32). A sample of the interviews (in Dutch) can be found in Appendix 10. The interviews have time indications at the end of every question or answer.

4.3 Naturalistic setting

As explained in the DESIGN AND METHOD part on p. 28, this study generally took place in a naturalistic setting: the composers could compose at home or anywhere they wished and they could do this in a manner of their own preference, (at their own pace, in their own style and with their own working method). Other naturalistic elements are:

- the short compositions were made to be performed in concert
- there were restrictions in the instrumentation and duration of the composition.

The only unusual or 'unnatural' element was the task described above (“the three voices should be as different as possible...”) included in the commission. In the field of Belgian contemporary classical music, commissions hardly ever prescribe musical features or problems, but in this case they did. The following elements are a bit unusual, although they appear now and then in contemporary music practice in Flanders:

- a composition duration of minimum forty seconds
- the 'private' character of the performance
- a restriction on the use of spatialization

A last unusual element was the 'mild' form of the surveillance effect: the composers knew in advance that they would be interviewed and their sketches would be archived.

4.4 Quantity and quality of the data sources

The following Table 2 presents an overview of the collected data for each composer in the group study. On top of these data, for each composer there are two interviews and a score that was used for the performance in March 2012. The duration and the number of words (for each interview) are shown in Table 3.

Composer	**Number of pages of paper sketches**	**Number of digital music files created before the first performance (the performance score not included)**	**Number of digital music files created after the first performance**	**Number of emails before the post-interview**	**Number of emails after the post-interview**
Brackx	1	0	0	2	0
Cammeren	0	5	0	5	0
De Bièvre	11	0	0	2	0
Neyrinck	3	0	2	4	1
Nuyts	4	0	0	3	0
Smetryns	2	0	0	2	0
Van Landeghem	0	2	1	2	0
Vermote	4	3	0	2	0

Table 2: Amount of data in the group study

Composer	**Date pre-interview**	**Duration pre-interview in minutes**	**Word count of pre-interview**	**Date post-interview**	**Duration post-interview in minutes**	**Word count of post-interview**	**Total duration interviews in minutes**
Brackx	02/17/12	34	4917	05/09/12	19	2995	53
Cammeren	02/11/12	87	13936	06/15/12	45	6895	132
De Bièvre	02/07/12	53	7156	05/15/12	36	5343	89
Neyrinck	02/08/12	59	8386	05/16/12	35	5287	94
Nuyts	11/07/11	45	6283	05/02/12	54	8814	99
Smetryns	02/28/12	57	6244	05/11/12	41	5843	98
Van Landeghem	02/14/12	54	8183	05/10/12	30	5335	84
Vermote	02/10/12	60	11112	06/04/12	33	5805	93

Table 3: Duration and dates of the interviews in the group study

In Table 3 one can see that the duration of the interviews varies greatly from composer to composer. In (the longer) interviews with composers such as Cammeren, Nuyts or Peter, it was a challenge to stick to the main interview questions and to avoid getting sidetracked too much. In other interviews, the composer only gave sparse information and the researcher had to ask

additional questions or return to similar questions later on in interview. In retrospect – having analysed the interviews – I may have been too oriented towards triggering the composer to remember ideas, versions and activities from the CP. This orientation stemmed from the supposition that there should be many ideas and versions in any CP. Especially in Neyrinck's case this orientation was a problem because during the pre-interview it became clear that Neyrinck had composed the piece straightforwardly, without much planning in advance or reflections and revisions afterwards. Because I – unconsciously – considered this kind of CP quite unrealistic, I assumed that he had forgotten previous ideas and versions. If I had known the article by Donin and Féron (2012) at that moment – which was impossible because it did not appear until months later – I would have read about a similarly straightforward CP, and I could have used a different interview technique, inspired by the adaptation of the 'situation simulation interview' in the study of Gervasoni and focused on the actual act of writing.

Several composers (Van Landeghem, Cammeren) spontaneously talked about their individual vision of music and their musical preferences. But others gave less information, and in these cases I could have added a direct question about these general preferences and concepts. Having these answers would have given me the opportunity to test whether 'a less talkative composer' also had a 'less extensive and elaborated discourse on his/her own music'.

Although in general I have collected a set of data which is large enough to answer the main research questions in this group study, the number of data for each composer is certainly smaller than in the self-study or a study in which a large collection of real-time data were gathered with a verbal protocol as in Collins (2005, 2007) or Newman (2008). Of course, the composition that was made by the composers in this group study, was short compared to the works in the previously cited studies. In four CPs (De Bièvre, Neyrinck, Smetryns and Landeghem), there were additional sketches whose existence was unsure. In these cases the composers thought that they had written down ideas but they couldn't find the sketches. Two sketches got lost in the CP of Van Landeghem, thus in general between zero and five sketches have been lost. It is also important to note that most paper sketches did not have an exact date, Brackx's sketch was the only exception.

As seen in the Table 3, the shortest interviews are the ones with Brackx. Additionally, the number of sketches and versions in his case is small and according to the interview his CP developed linearly without deviating ideas. This brings up a fundamental question: is the lack of data (and the 'simple' CP) related to the research methods (especially the data collection) or to the composer's vision on the short composition? This difficult problem in the analysis of Brackx's CP reappears several times in the further analysis and is dealt with separately on page 113.

5 Analysis method

5.1 Overview of Analysis Method

The following figure 'Illustration 4: The analysis process in the group study' summarizes the analysis process in this group study. On the right, four phases are shown (Data Sources, Triangulation & Coding, Themes, Research Questions) to answer the two main research questions at the top: what are the main compositional activities and what is their role in the CPs of each composer? ('MAIN ACTIVITIES?') and what is the influence of the commission (task included) on the CP? ('INFLUENCE TASK?')?

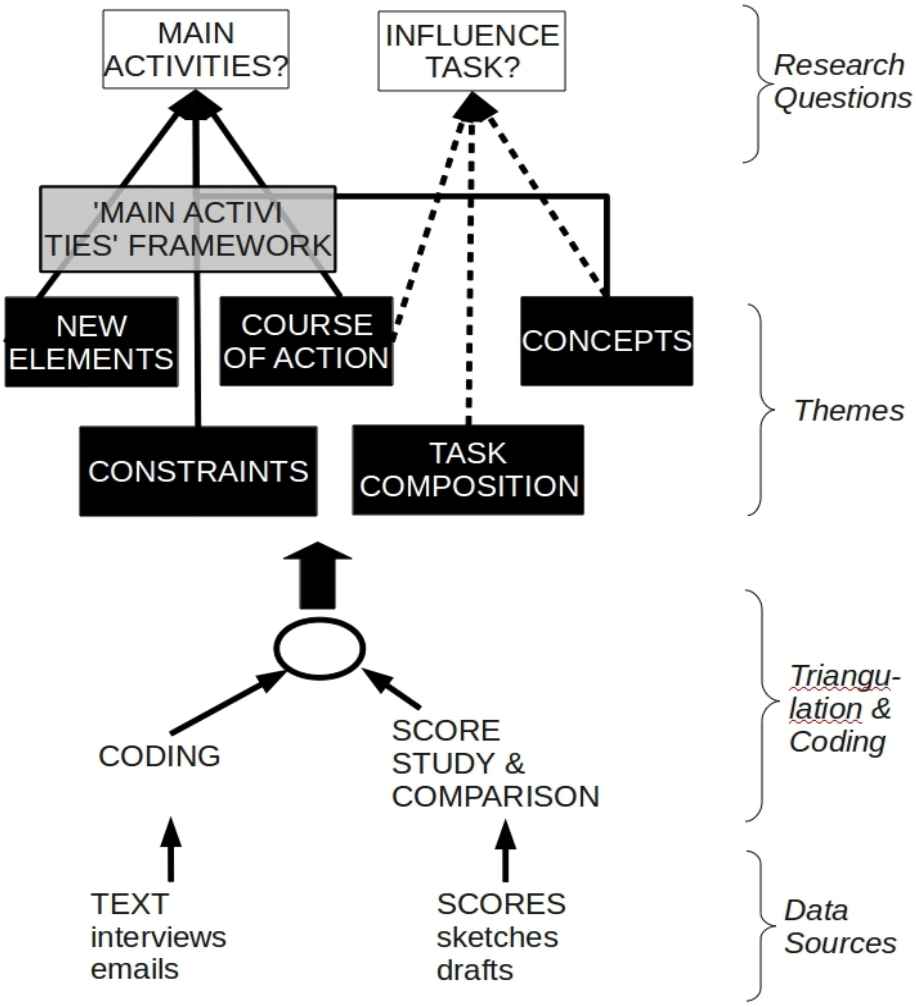
The text data are first analysed through a process of coding while the sketches and scores are compared with each other to track differences between the consecutive versions. This analysis phase is described in the current chapter. Then these two kinds of information are compared with each other in the triangulation process to detect a number of themes which finally are bundled together to answer the main research questions. The themes act as summaries of information from the text data, scores or the triangulated information. The themes are described in chapter 6. The themes are:

- 'COURSE OF ACTION': a chronological reconstruction of the main activities and ideas in the CP; this theme includes two visualisations, one of the course of action and another of the developing music (called 'structural mapping')
- 'NEW ELEMENTS': a list of elements from the CP that were considered new by the composer
- 'CONSTRAINTS': summary of the evolution of the constraints in the CPs
- 'CONCEPTS': summaries of the vision of the composer on his or her music in general, the short composition composed, the procedures and techniques and polyphony

The last theme 'TASK COMPOSITION' – the vision of the composer on the nature of the short composition (was it an 'exercise' or a 'composition'?) – only relates to the second research question on the influence of the commission. Therefore it is described in the analysis chapter 7.1 where this research question is answered.

Next an analysis framework ('MAIN ACTIVITIES FRAMEWORK') is proposed that enables me to answer the main research question (on the role of the main activities (see 7.3.1)) in every CP with the same criteria.

Illustration 4: The analysis process in the group study



5.2 Sketch analysis, coding and triangulation

5.2.1 Introduction

In this analysis phase, the different sources are analysed and compared with each other. In the following paragraphs I will explain the three main analysis activities in this phase in detail, i.e. sketch analysis, coding of interviews and triangulation. The analysis process in this phase is a *recursive* process, i.e. the activities are not performed separately, but simultaneously, and they lead to insights and results that enrich the other analysis activities. These four activities finally lead to a number of themes per composer. These themes act as summaries of relevant topics per composer that are necessary to answer the three main research questions. These themes are described in chapter 6 p. 80.

In this phase in the group study, the analysis is performed *per composer;* there is no cross-sectional analysis yet. Once the individual context (the themes) of each CP is reconstructed – in chapter 6 – cross-sectional analysis starts to play its role in the analysis phases.

What are the characteristics of the different data in this group study? For every composer there are at least two interviews plus a score that was used for the performance of the short composition in March 2012. Additionally, there are emails, paper sketches, digital sketches (in music notation) and drafts. The text data (interviews and emails) contain different kinds of information on:

1. a musical idea
2. events or activities
3. timing of events, activities, ideas or products
4. the explanation of the composer (intentions, feelings, reflections, concepts, composition techniques etc.)

I refer to point two and three in this list as factual data, one as music data and four explanatory data. The other sources (the sketches and drafts) contain the same kind of information but in general there is less explanatory information and the medium is more dense and diverse, i.e. the information is given through music notation, drawings, schemes, calculations or text (jottings, key words etc.). They also contain less factual data but – obviously – contain more information on the music. Consequently, in the light of the analysis, the text and sketch data cannot simply be separated and classified into two basic categories explanatory (text) versus factual/musical (sketches), in reality there is an overlap between both. The multimodal, vague and indeterminate nature of (the beginning of) the CP (also see p. 44) reminds us to be cautious with a separate analysis of factual and explanatory data at an early stage of the analysis.

5.2.2 Sketch analysis, coding and triangulation

Sketch analysis was one of the main activities in this analysis phase. If the music notation was detailed enough, a comparative score analyses were performed. This was done after a sequential order of sketches was reconstructed. The comparison was done by indicating all the changes

(changes, additions and omissions) between a sketch and the preceding one. These 'track indications' were made on copies of the sketches where additional explanations were added. The most important changes were listed and summarized in a text document. This analysis procedure is similar to Newman (2008, 134). Special attention was given to small remarks, corrected and overwritten notations, information in the margins of the sketch, etc. To understand numerical series, calculations or rule systems I had to rely on the explanation of the composer (if this was available in the interview), on the analysis of accompanying music fragments or the final score to detect the application of the rule system in the music. If the composer mentioned additional systems or structures such as 12tone series or characteristic instrumentations, this information was verified by a targeted analysis of the score.

The analysis of the text data was done through a process of coding (in the software Nvivo): the texts were read several times and fragments related to specific topics (codes) were indicated. The coding of the interviews was driven by the research and interview questions on the one hand and emerging insights on the other. The latter originated from the composer's words (in the interviews) or the ongoing analysis of the data. This combination of an inductive and deductive approach to analyse data is also found in the study of Pohjannoro (2014):

> The coding categories of compositional acts were constructed using both data- and theory- oriented approaches. (p. 6)

Coding the data led to a considerable reduction in the amount of (text) data and an initial categorization, but it was not treated as an autonomous process that should finally lead to a reduced number of abstract categories. The initial codes were triangulated with the information from the sketch analysis and by this combination of the different data I arrived at the overarching themes. Hence the themes were not produced by relying on one source – the text data – and a further distillation of the codes from the text data. The triangulation also ensured that the themes remained linked to the original sources and embedded in the context.

One part of the coding related to the research analysis itself because it gathered information (from the text data) that was crucial to understanding or analysing the other data. The code family 'mapping' served this goal and it was comprised of the following codes:

- timing: statements about when, for how long and in which order (of events) the composer was composing
- versions: statements in which the composer described the content of the ideas, sketches or versions that s/he had imagined or produced in the CP
- simul: information on other compositions that were made just before, after or during the CP of the short composition that was composed for this study
- sketches: information on how the sketches were produced and how they should be read and understood

The triangulation in this analysis phase is a 'triangulation of sources' in which data from various sources are analysed with different methods and compared. Its main aim is create a richer and fuller description by combining differents kinds of information from different sources. In light of the complexity and indeterminacy of the initial phases of the CP, this fuller description is a valuable extra. Denzin and Lincoln (Denzin and Lincoln 2005) describes the value of triangulation,

the use of multiple methods, as:

> The combination of multiple methodological practices, empirical materials, perspectives, and observers in a single study is best understood, then, as a strategy that adds rigor, breadth, complexity, richness, and depth to any inquiry (see Flick, 2002, p. 229). (p. 5)

Although there is discussion on the validity of triangulation (to verify data), I believe that it is indeed valid in studies of the CPMC.

> there is some debate among qualitative researchers about the extent to which triangulation is useful in checking the validity of data or whether it is more a means of widening or deepening understanding of a subject through the combination of multiple readings. Nevertheless a number of authors argue that triangulation also has some role in the validation of findings. (Lewis and Ritchie 2003, 275)

The validity of triangulation in studies of the CPMC lies in the comparison of factual data related to the timing of the CP. Although the content of a CP is too complex a phenomenon to be judged in terms of a 'right' or 'wrong' reconstruction of this process, the timing (When did activities take place? When did a compositional idea appear?) can be evaluated as less or more correct, even though an action or idea can emerge gradually in some cases. Information from different data sources (sketches, creation and modification dates of computer files, dates of emails) provides additional and important information on the timing, especially since the memory of the composer (in the text data) is not always a reliable source about the timing of events and often contains contradictory information.

5.2.3 Two examples

The following two examples give a detailed image of the current analysis phase with its recursive process of sketch studies, coding and triangulation. Both examples describe the analysis process leading to a 'course of action' of these specific CPs.

Cammeren

At the beginning of the analysis the main contours, including the main blocks of composition activity, could be derived from the pre-interview with the composer, although the explanations in the interview were very confusing at first sight. There appeared to be two periods before the interview and one after. Thanks to five backup files (in the backup folder of the notation software) this segmentation into periods could be further refined. There was an extra email (dated on the early morning of 30th January), in which the composer said that he finally had had an idea and notated the music of his A*ria Ubriaca*:

> op de valreep heb ik nog een inval gekregen en heb vannacht de muziek van m'n "aria ubriaca" op sibelius genoteerd
>
> (finally I have had an idea and notated the music of my “aria ubriaca” in Sibelius tonight.)

Thanks to the 'last modification dates' of the Sibelius backup files it became clear that 'tonight' (in

this email) only referred to the second half of the sentence. There had been three composition sessions before he had sent this email (the last session was just a few minutes before he had sent the email). One of the Sibelius backup files had a strange modification date, which had already been noted by the composer. The backup files had consecutive names (aria-ubriaca-1, arai-ubriaca-2, etc.) but the file aria-ubriaca-3 had the most recent modification date and time. It was modified 15 minutes after another version which the composer had shown at the pre-interview (11th February 2012) as the current version. Consequently, this modification date must have been a mistake, as suggested by the composer, for example generated by reopening an older file and saving it again.[10] By rereading the pre-interview and analysing the score of this version (aria-ubriaca-3), I noticed that it was produced after 30th January (previous version) and before 11th February (the pre-interview). Moreover, the composer explained in the interview that he had realized “about four days ago” that the task (in the commission) allowed him to make the short composition longer (the task in the commission said '40 seconds *minimum*'). The score of the 'strange' version is clearly a lot longer than the previous version of 30th January, which was exactly 40 seconds (noted by the composer in the email of 30th January). Hence, in the end I dated this version to approx. 7th February, i.e. four days before 11th February. Once the sequential order of the different versions was reconstructed, the (digital) drafts could be compared with each other. The main results of this comparative analysis were then combined with the descriptions and explanations of the composer (in the interviews) about the different versions (and the possible adaptations of these versions). Finally, the course of action, a time line with the main actions and evolutions of the music in the CP of *Aria Ubriaca*, could be reconstructed.

Nuyts

Apart from the usual interviews and the final score, Nuyts' CP included an email (sent on the day the short composition was finished) with a report (750 words) on his CP and paper sketches which contain chord schemes (written out in pitches in music notation), numerical series (with corrections) and text (snippets of text with key words) . The paper sketches are part of a sketch book with a blank space on the left page and (music) staff notation on the right. The chronology of the main two parts (before and after the crisis moment) in the sketches was difficult to recognize and seemed to contradict the course of events narrated by the composer in the email report and interview but in the second interview the composer clarified that the left pages are not necessarily simultaneous with the right pages. He does not start on a new left and right page when he starts working on a new composition. He continues working on a left page on the place where he stopped the previous time on the left page, and he does the same on the right page.
The interview and email report also contained information about the activities after the 'crisis' (see the course of action of Nuyts' CP in Appendix 14) and before the final score, but there is less of it and it tends to be vague. The modification date of the digital score and the headers of the email report constituted a important time frame for this post-crisis part of the CP. The further study of the sketches revealed how the numerical series matched with some of the notated chords and how both were revised and corrected. In its turn this led to a better understanding of the description by the composer of the harmonic structure 'in two layers' and – more importantly – of his concept of

10 Some software programs automatically save any *opened* file in the backup folder at regular intervals.

'minimal maximum of difference'. The analysis of the different data finally led to a reconstruction of the course of action in this CP, by ordering all the available information on a time line (in a separate text document). In general the information about the first part of the CP is mainly derived from the text data while the second part relies on the sketches.

6 Themes

6.1 General remarks

Based on the previous triangulation of data, a number of themes were detected in the CPs. In the next chapter 7 these themes are connected with each other and help to answer the main research questions in this group study. The themes in this chapter act as summaries of information from the text data, scores or the triangulated information. First I give a general explanation about each theme in this chapter. I also explain on which data these themes are based and if the interviews contained questions directly related to the theme. Then I present the individual themes of the composers, which in fact is mainly the short summary of the course of action. The extensive description of the analysed themes is to be found in Appendix 11 to 18. I end this chapter with some short remarks on the analysed themes in all the eight CPs studied.

A certain amount of overlap is unavoidable in the description of the basic themes, since the themes are not closed and separate entities. For example, if De Bièvre talks about the importance of the input of the performers, this is related to the themes course of action (as a description of his ideas and intentions while composing), constraints (not knowing the performers is a limitation for him) and concepts (his view on music in general and his short composition in particular).

6.1.1 Course of action (and two visualisations)

The generation of a 'course of action' per composer in this analysis phase is essential, as this course of action functioned as the first global overview of the CP and many loose (research) remarks, problems and insights started making sense from the moment the entire process was reconstructed. From that moment on, the other themes – constraints, task, concepts – could be situated within this dynamic sequence of events and ideas. The 'course of action' functions as a first synthesis of the CP as proposed in the review of this group study on p. 54. It provides a short, chronological overview of the CP and its activities (main intentions and ideas of the composer included).
The interviews contained prepared questions, directly related to the course of action.

Visualization 1: the course of action
In the 'course of action' paragraphs for each composer, the text is accompanied by a visual representation of the course of action. The information about other compositions that were made simultaneously with the CP of the short composition is added to the graphical presentations of each CP, along with the available data sources for this CP. The information on the simultaneous CPs is only based on the data from the interviews and emails because no sketches and drafts of these simultaneous compositions were collected in this study. These simultaneous CPs are a part of the temporarily 'situation' of the CP studied (that of the short composition) and as such they are

important. During the group study, the insight grew that one CP is often intertwined with other processes: the CPs of Van Landeghem, Neyrinck and Vermote provide examples (see the 'course of actions' in the Appendices, and the analysis of the main activities for each composer in chapter 7.3.2).

Visualization 2: structural mapping
Through the research process of coding, sketch analysis and triangulation, I realized that the development of the music is one of the few 'factual' accounts of the CP that can be reconstructed. From the moment this music is notated or concretised, it is possible to track the progress of the music as in the structural mapping of Collins (2007). The more real-time data there are on the CP, the more correct this development of the music becomes. Although most aspects in the CPMC are too complex to judge in simple terms of right or wrong, this time line of the progress of the music is to a high degree 'factual', i.e. it can be validated through the triangulation of the data. The structural mapping visualization, presenting the development of the music, is presented in the 'course of action' paragraph for each composer.

6.1.2 Concepts

General
In this paragraph a summary is made of the composers' vision of their own music (both product, process and related activities). These general concepts concern the meaning that the composers give to their composition activity and composed music. It is a summary of their discourse on this topic. The 'general' concepts can be very different from composer to composer: they can encompass emotional, philosophical, aesthetic or social drives, intentions and meanings that they attach to their music and artistic activity. It can also consist of a list of themes that fascinate or inspire the composers to write music.
This paragraph is mainly based on the data from the interviews and emails. If other sources are used, it is explicitly mentioned in the separate paragraphs per composer.
The interviews contained no prepared questions directly related to the 'general' concepts.

Procedures and techniques
Under this heading a summary is made of the compositional procedures and techniques that were used by the composer. Both general and specific procedures and techniques (for the short composition studied) are described because the general procedures can also provide insight into the CP of the studied composition and the cognitive actions and abilities of the composers. Moreover, some composers talk in a general, 'timeless' way about these procedures. Therefor it is not always possible to make a clear distinction between general and specific.

In the paragraphs on the procedures and techniques the term 'techniques' is used in the following sense: a method of organizing the sound material and music in a composition. The term 'procedures' has the following meaning: a *sequence* of compositional actions (implying a chronological order), (usually) part of an activity plan of the composer.

The summary in this paragraph is mainly derived from data in the interviews and emails, and this was compared with the information on the sketches, drafts and scores.

The interviews contained prepared questions, directly related to the 'Procedures and techniques'.

Polyphony
Here the view of the composer on the content of the task – particularly the first line of this task – is summarized. The composer's vision of polyphony, simultaneous contrasts and similarities (homogeneous and heterogenous polyphony) is summarized.

This paragraph is mainly based on the data from the interviews and emails. If other sources are used, it is explicitly mentioned in the separate paragraphs for each composer.

The interviews contained prepared questions directly related to the 'Polyphony' concept.

Work
In this paragraph, extra information on the meaning of the short composition and the intention of the composer when s/he was composing this work, is given. Thus I present the narrative of the composer on the short composition that was produced for this research. If there are no extra-musical narratives or intentions, this account tends to be quite technical and similar to a (score) analysis.

This summary is based on the data from the interviews and emails.

The interviews contained prepared questions directly related to the 'work' concept.

6.1.3 Constraints

This theme describes the evolution of the limitations during the CP and it deals with all kinds of restrictions such as ones imposed by personal taste, the technical limitations of the instruments or musico-theoretical systems such as ‘common-practice’ tonality or 'standard' use of an instrument. If the composer gives a motivation to go (or not go) beyond the constraints, this information is added to this theme.

The interviews contained prepared questions directly related to the 'constraints' theme.

6.1.4 New elements

In this paragraph a summary is given of elements in the CP that the composer considers new, unknown, little known or unfamiliar. This also includes discoveries and new insights that the composers have gathered during or after the CP. 'New' here means 'new to the composer'.

All this information is derived from the interviews and emails.

The interviews contained no prepared questions directly related to 'new' elements in the CP.

6.1.5 Timing and duration of the CP

The information on the duration and timing of the CP (when was the composer composing?) in the current group study is rather rudimentary. Nuyts' CP is the exception, perhaps because it was so short. Having a more accurate picture of when and how long the composer was composing helps to

fully understand the *real-time* importance of activities, ideas and feelings while reducing the risk of a retrospective explanation. Although there are different kind of data for each composer, in some cases it is difficult to estimate whether a composer was thinking about a specific idea for one month or one hour.

In the interview, timing information was obtained through several questions, for example on the start and end time of the CP. Moreover, the pre-interview also contained an attempt to gain more precise information on the *total duration* of the CP. This question was asked in the pre-interview.[11] Many of the composers found it very difficult to estimate how much time they had spent on composing.

	The duration of the CP given as an answer to the interview question	**Extra information given by the composer**
Brackx	3 days	“In total”
Cammeren	3 or 4 hours	*(none)*
De Bièvre	1,5 month	“but only now and then”
Nuyts	*(no answer)*	*(none)*
Neyrinck	10 days	*(none)*
Smetryns	1 day (6 to 8 hours)	“in total”
Van Landeghem	5 hours	“the writing process”
Vermote	one week (according to the interview), 30 hours (according to her email)	“starting from the first notes”

Table 4: Duration of the CP as estimated by the composers

As one can see in Table 4, there is huge range of variety in these answers. This in itself is not a problem, but these data are often inconsistent with the other obtained timing information (in the interviews, emails and sketches). De Bièvre, for example, does not give the duration of the CP but the whole calendar period during which he composed 'now and then', but even this is not very accurate because from the datings of emails and other information in the interviews and sketches, this total calendar duration must be at least three months.[12] To judge by the sketches, Neyrinck also gave the total calendar period, because he notated the start date on his first draft and exactly 10 days later he sent the first score to me. Cammeren's answer seems to be an underestimation, since during the phases [1] to [4] (see Appendix 12) he had already produced five detailed digital drafts at four different times.

Because the answers to this 'duration' question were so varied and inconsistent, they were not

11 Nuyts was the first to be interviewed, and before the pre-interview he had already sent an account of his CP with timing information. Therefor this duration question was not answered in his pre-interview.

12 Probably De Bièvre refers to the period after the defense of his PhD because from that moment on, he 'really started working' (in Dutch: beginnen doorwerken) on the short composition. This is what he explained in another part of the interview.

taken into account when comparing all the data to analyse the CP. There are many reasons to conclude that the 'duration' question in an interview was not the right method for obtaining detailed information on the timing and duration of the CP and that it was too difficult for the composers to answer this question:

- some composers work in a very fragmented way, composing in between other professional activities such as teaching or performing
- the creative processes of different compositions are often intertwined; while working on one piece, a composer may have an idea for another piece
- some composers spend a lot of time 'thinking' about the composition; it is difficult to remember the duration of a purely cognitive process when no physical actions are involved
- some composers cannot remember if this thinking process also involved notating ideas

6.2 Course of action per composer

In this paragraph only the short version of the course of action of each composer and the graphical presentation of this course of action and the structural mapping is presented. All themes (including a detailed version of the 'course of action') and their descriptions per composer can be found in Appendix 11 to 18).

The following text is a short explanation about the two visualisations presented for each CP. The graphical representation of the course of action is organized along several horizontal layers or rows. Underneath the name of the composer a horizontal time line is located which represents the months from left to right during which the studied short composition was produced. All layers underneath this time line are organized according to this time direction. The following horizontal layer is called *simultaneous compositions* and it represents other CPs of compositions in the same period. Depending on the individual composer and the number of simultaneous processes, there can be one or more rectangles. The next layer is called *creative process* and the black spot (or filled circle) represents the beginning and end of the CP, i.e. the date on which the composer received the commission and the date on which he sent the score that was used for the first performance. A dotted line in this layer indicates that according to the composer he was 'thinking about' the new composition in this period. The rectangles represent actions or ideas that were reconstructed based on the interviews or other data. Rectangles with dotted lines stand for ideas without a clearly defined date whereas normal, filled lines point at ideas that could be dated more strictly. The next layer, called *main ideas and actions*, contains short summaries of these ideas and actions. The numbers in parenthesis such as [1], stand for the number of the phase (of the CP) as in the extended description of the course of action in the appendices 11 to 18). Finally, the last layer represent the data sources and their date. A '@' stands for emails, 's' for sketches or drafts, and 'I' for interview. An 's' with a strikethrough stands for sketches or drafts that got lost or which might have existed according to the composer but were not found.

The 'structural mapping' visualisation is organized along three horizontal layers, representing the instrument parts in the short composition. Rectangles around a stave in such a part indicate that this

part was written, while rectangles with dotted lines represent rewriting processes. The phases (between brackets – for example [3] –) above the title refer to the phases in the reconstructed course of action, as in the course of action visualisation and the detailed courses of action in the appendices 11 to 18. Some of the composers use thematic material or sections that are repeated, in these cases the phrases or sections are indicated by letters (in circles).

6.2.1 Brackx – course of action

After receiving the commission in October 2011, Brackx started considering the research context and the content of the task and mentally ordered the sound parameters that influence the difference between the voices. At the beginning of February he wrote down a list of parameters and envisioned the instrument parts as separate worlds with distinct musical discourses. Next, he composed a lyric melody for the viola da gamba, then wrote down the flute part based on non-pitched and semi-pitched sounds. He finished by writing the rhythmic piano part based on two pitches.

The extensive course of action is placed in Appendix 11.

Illustration 5: Brackx's course of action

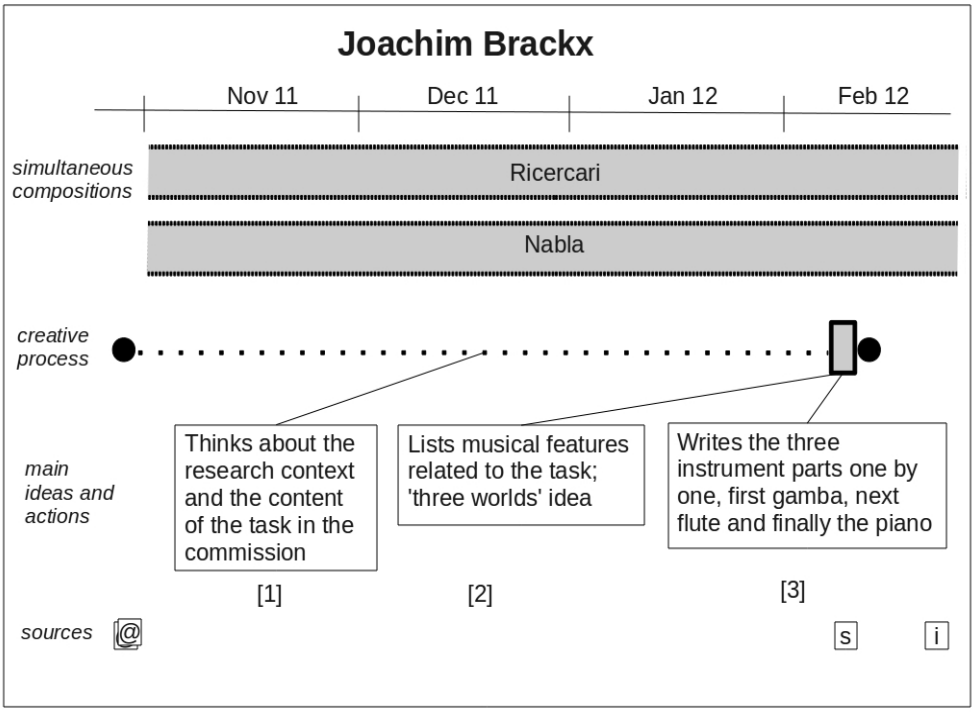
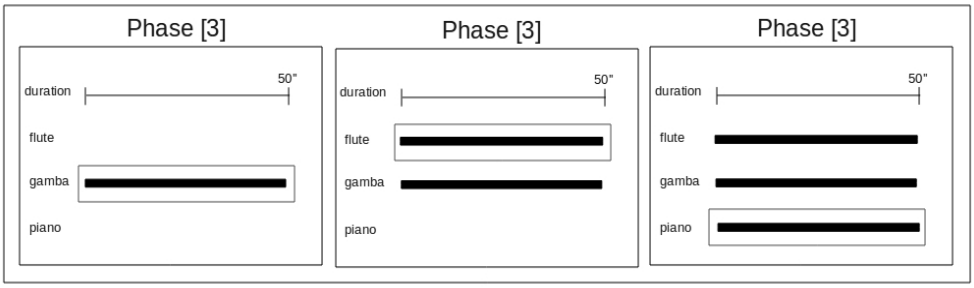


Illustration 6: The structural mapping of the music in Brackx's CP



6.2.2 Cammeren – course of action

The creative process for this composition started with a single moment of inspiration after which the composer wrote down a first version which contained a well-known melody and a rhythmic accompaniment, both with disruptive syncopations. Within a period of 4 weeks including at least 4 composition sessions, this version gradually evolved into a two-part composition which is still characterized by the combination of well-known melodies and syncopated rhythmic accompaniments. Apart from continuous refinement and work on details, the most important changes during this 4 weeks were: the development of a second (counter-)melody (from an idea in the first version), the addition of a second part, the abandonment of a section in this second part, the addition of a new, third melody and a second rhythmic accompaniment.

The extensive course of action is placed in Appendix 12.

Illustration 7: Cammeren's course of action

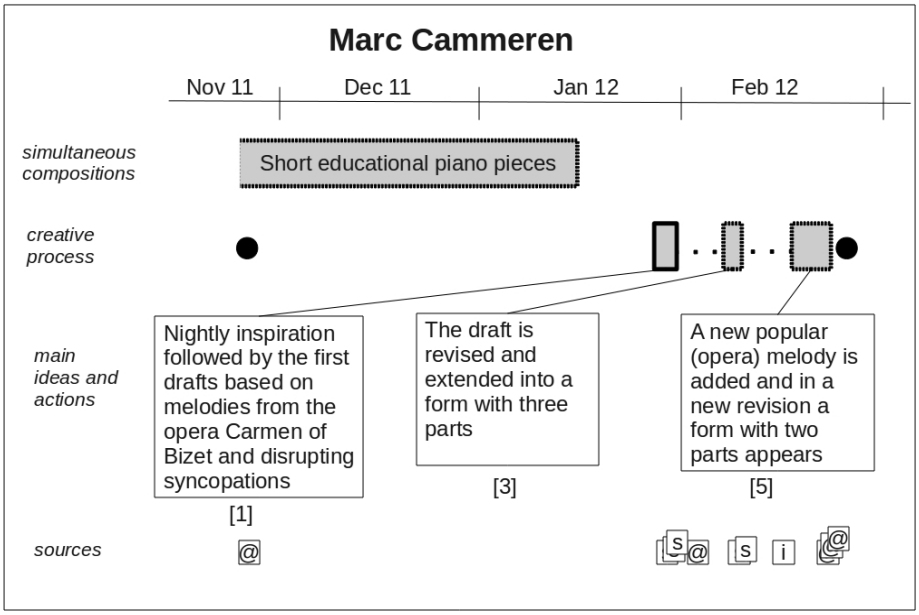
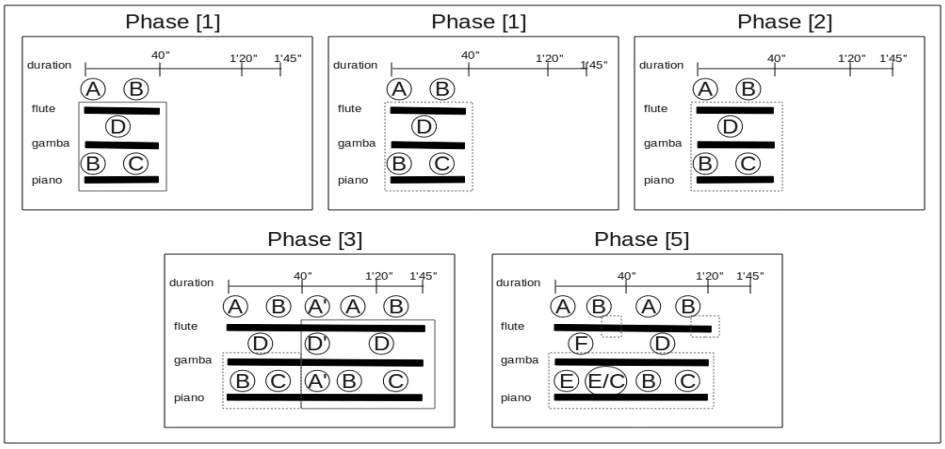


Illustration 8: The structural mapping of the music in Cammeren's CP



6.2.3 De Bièvre – course of action

After receiving the commission in November 2011, De Bièvre imagined music directly based on the task but soon rejected this music because it was not interesting and seemed too 'forced'. Then he 'found' an interesting chord by the film composer Herrmann and started elaborating an harmonic idea in which the three instruments go their own (harmonic) ways. Next he added the idea of a 'cross fade' in density between the flute and gamba and constructed the timing of this cross fade using an algorithm (in which the number 91 played an important rule). For a short while he also considered giving the piano a different meter and creating a polymetric composition. Based on the two main ideas of a harmonic route and a cross fade in density, he designed a system of scales and melodic patterns. He also decided to give more freedom (in timing and rhythm) to the piano part while the other two players are bound to a strict timing. Then he composed the gamba and flute part together, followed by the piano part.

The extensive course of action is placed in Appendix 13.

Illustration 9: De Bièvre's course of action

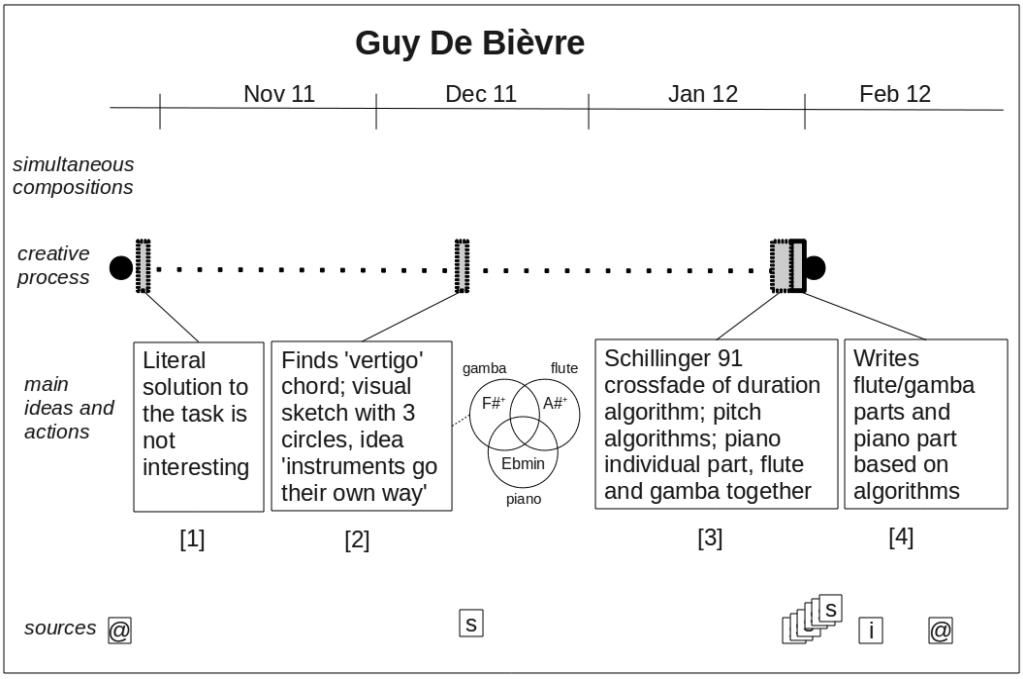
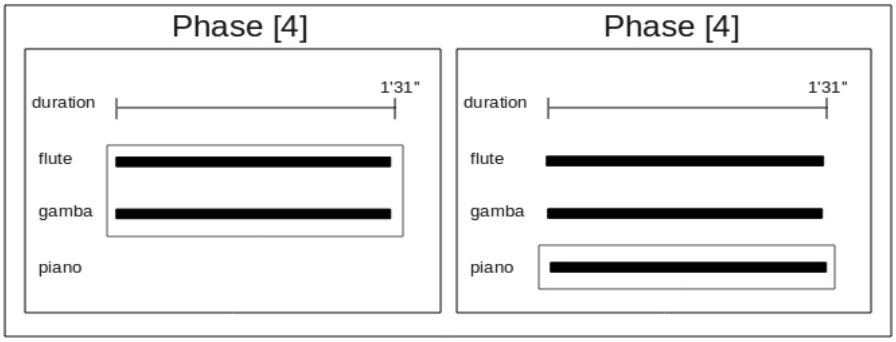


Illustration 10: The structural mapping of the music in De Bièvre's CP



6.2.4 Nuyts – course of action

Although the genesis period of this composition was very short (maximum two days), many different phases (between 5 and 9) within the creative process can be detected with an important rupture or crisis almost in the middle. Before this rupture, Nuyts was exploring composition possibilities with extended techniques, different simultaneous tempi and associations with visual arts (paintings, comics, movies). Next, at a decisive moment of insight, he abandoned these ideas and after this rupture he worked with very different material. He started from a harmonic base with a harmonic rhythm, added slightly different melodic figures for each instrument and arrived at the end version by writing an extra introduction and coda (both based on the same harmonic scheme).

The extensive course of action is placed in Appendix 14.

Illustration 11: Nuyts' course of action

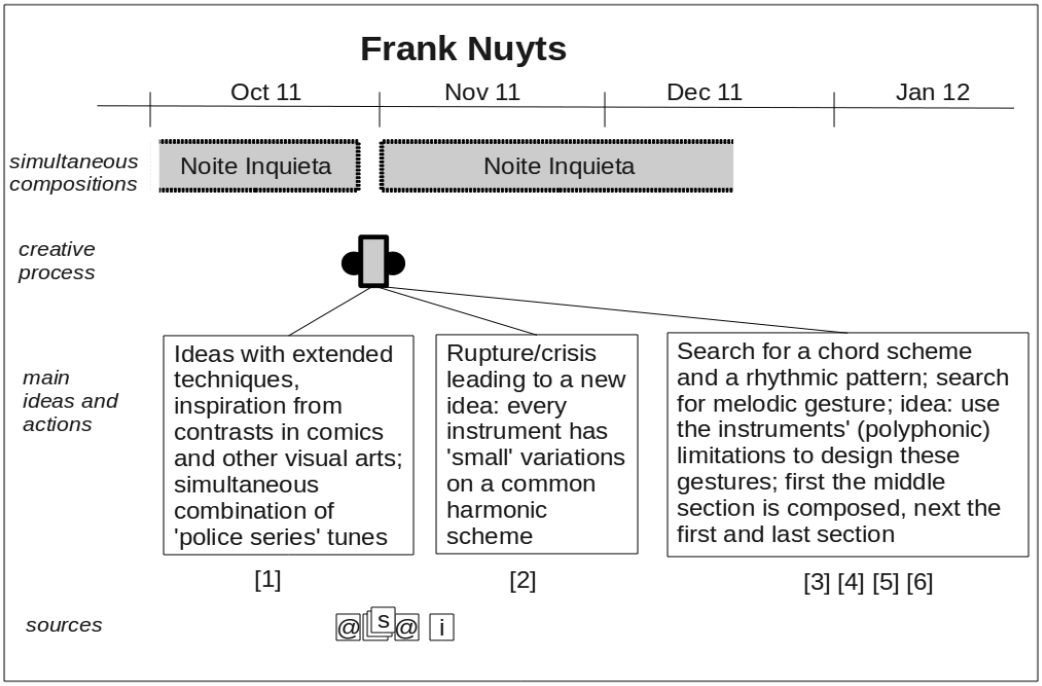
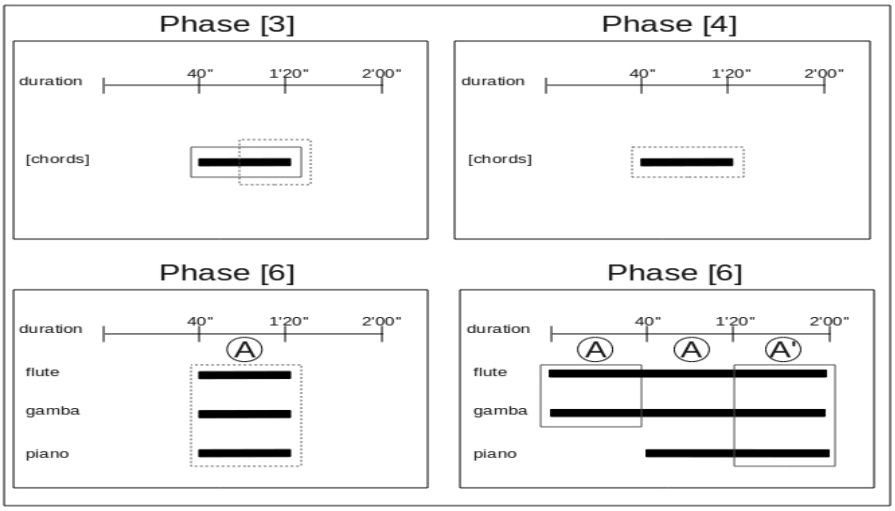


Illustration 12: The structural mapping of the music in Nuyts' CP



6.2.5 Neyrinck – course of action

The mapping of the compositional process is quite linear in Neyrinck's composition *Aphorisme IX*. At the beginning of January 2012, the composer played around with the idea of composing a lamento (in a slow tempo) on the piano. He rejected this idea and approximately two weeks later he composeed the whole work (with alternating slow and fast sections) in a few days' time and notated it immediately on a paper score. A week later he produced a digital copy of the final score.

The extensive course of action is placed in Appendix 15.

Illustration 13: Neyrinck's course of action

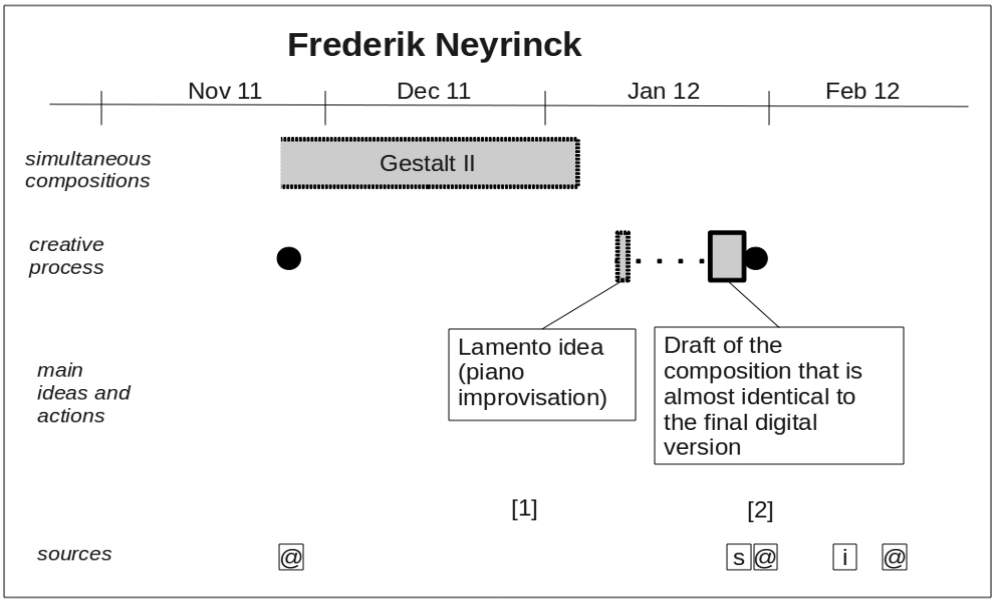
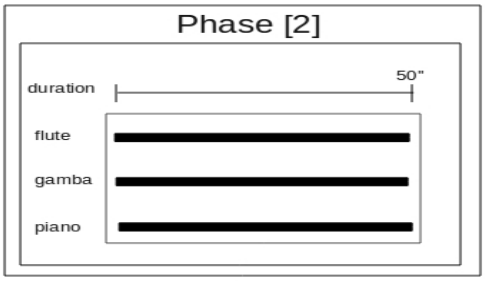


Illustration 14: The structural mapping of the music in Neyrinck's CP



6.2.6 Smetryns – course of action

A few weeks after receiving the commission in October 2011, Smetryns explored ideas related to this commission and synthesized them in an visual image of 'point-line-plane'. During the next month and a half he did not work on this composition but thought about this image now and then. At the beginning of February 2012 he sketched the piano part (the 'plane') and next, the flute part (the 'line'). Next he wrote out a very different idea for the flute but returned to his main idea and added some refinement/details to the first version for the flute. Finally, he wrote out the gamba part based on his initial image of 'point-line-plane'.

The extensive course of action is placed in Appendix 16.

Illustration 15: Smetryns' course of action

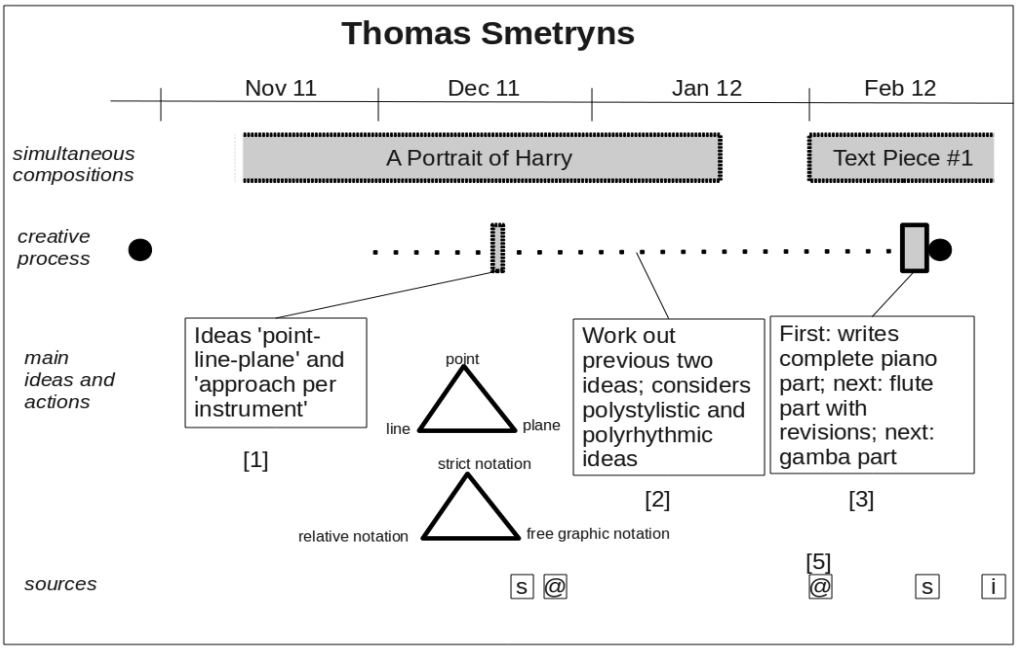
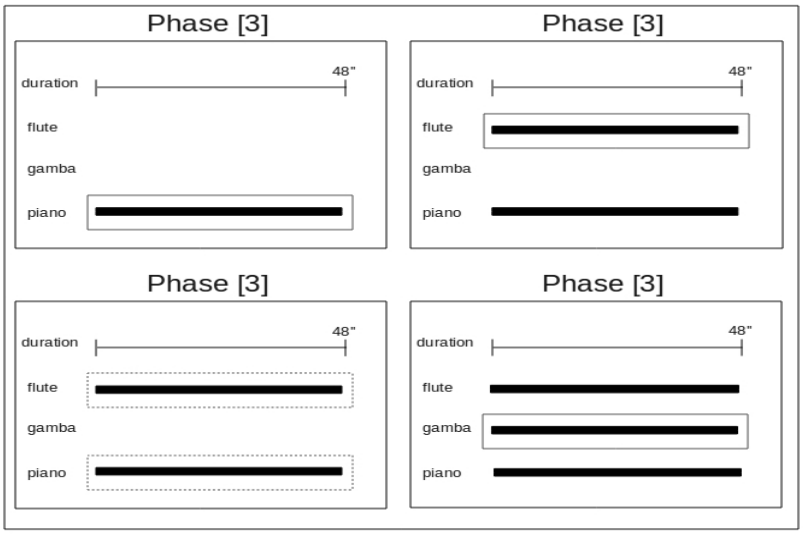


Illustration 16: The structural mapping of the music in Smetryns' CP



6.2.7 Van Landeghem – course of action

Less than a week after receiving the commission in November 2011 Jan wrote a first sketch which he soon came to consider uninteresting. He has a first idea to create rhythmically independent layers as in (Indian) Carnatic music. During the next two months he often thought about this commission, and may have written down a second sketch. At the same time he was composing a longer work, a marimba concerto. In February 2012 he started working on *Yantra*, exploring the potential of several pitch series, chords and polyrhythms and wrote a first draft. The next day this became the performance version by rewriting a few bars in the middle section and prolongating the end. Next, Van Landeghem continued working on the marimba concerto and added parts and procedures from *Yantra* to all three parts of this concerto as a unifying element.

The extensive course of action is placed in Appendix 17.

Illustration 17: Van Landeghem's course of action

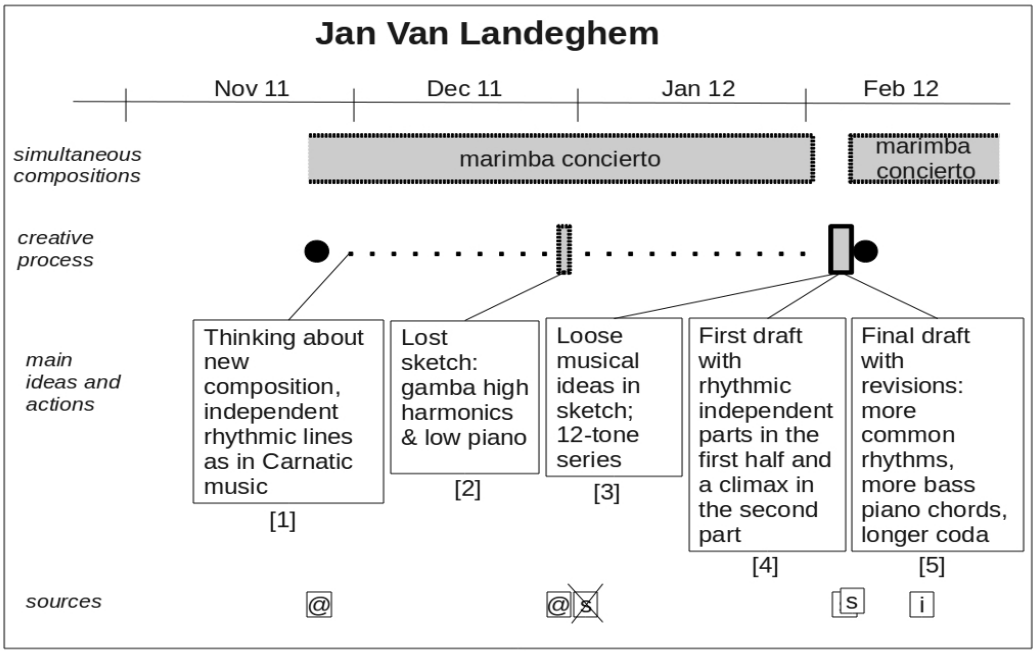
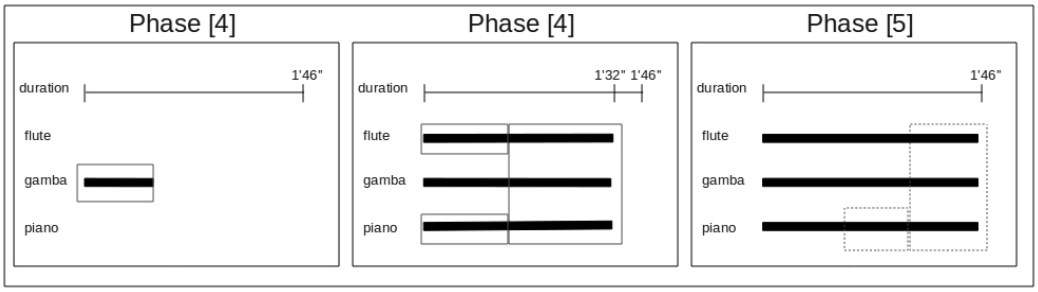


Illustration 18: The structural mapping of the music in Van Landeghem's CP



6.2.8 Vermote – course of action

After receiving the commission at the end of October 2011, Vermote started thinking about her future composition and two months later wrote down the first text sketches. She explored many different ideas and parameters related to the main idea of the task in the commission. In the following month she had several other ideas, some of which resemble the previous ideas whereas others do not. At the beginning of February she started to compose *Skizze* in a linear way almost without any revisions. The influences from some of the previous ideas are recognizable. About 10 days later *Skizze* is finished.

The extensive course of action is placed in Appendix 18.

Illustration 19: Vermote's course of action

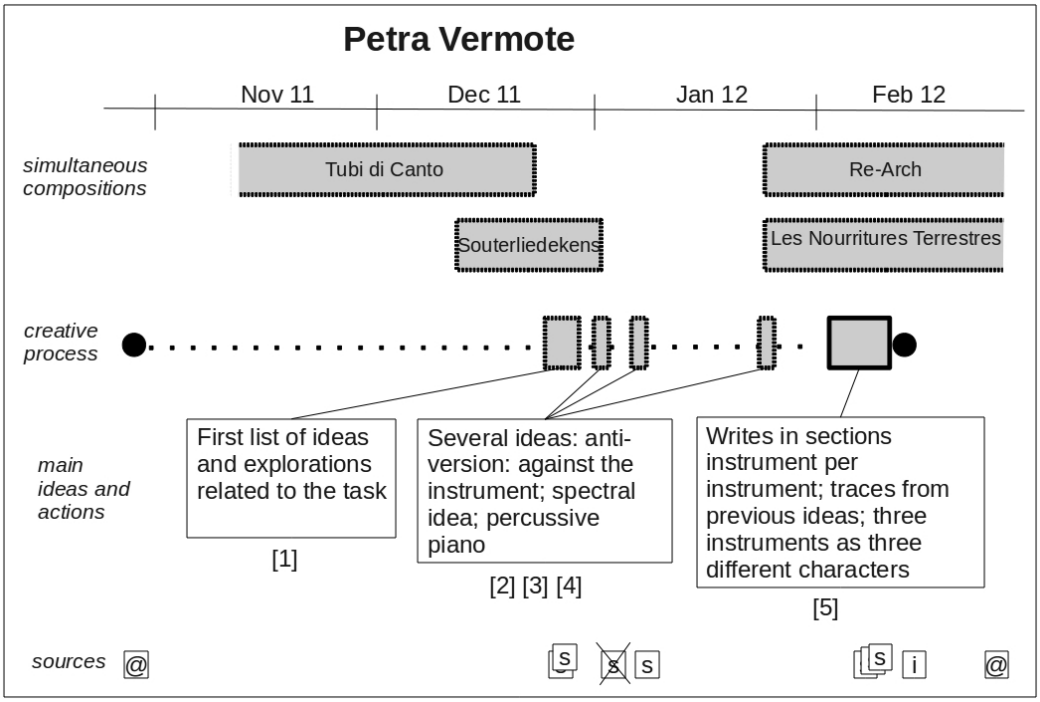
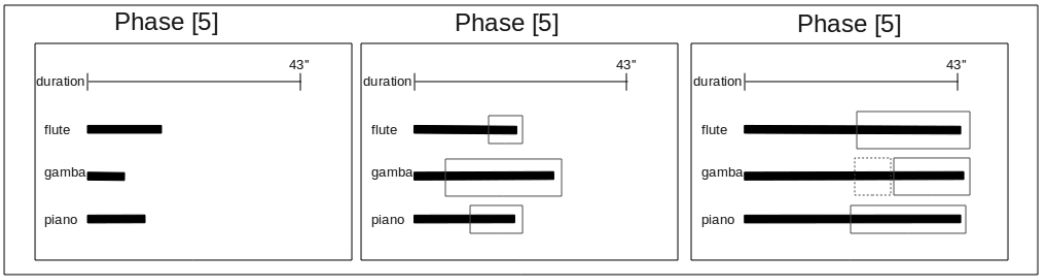


Illustration 20: The structural mapping of the music in Vermote's CP



6.3 Themes for all composers

In the next chapter 7 the themes analysed are used to answer the two main research questions *for each composer.* The following remarks concern the similarities and differences of the themes between all eight composers. These are important as they influence the way the two main questions can be answered.

Concepts
Not all the composers studied have a specific narrative about the four concepts (the short composition, composition procedures, polyphony and music in general). In fact this is only the case with three composers (Van Landeghem, Nuyts and Cammeren). In the other cases concepts are fused together or are missing. These are the main observations on the relationships between the concepts:

- composers (such as Neyrinck, Vermote and Brackx) have a technical musical view of their short composition and thus concepts on procedures and techniques almost overlap with their narrative of this short composition; in these cases the two concepts analysed are fused together
- some composers (such as Vermote and Neyrinck) relate almost no extra-musical (social, philosophical etc.) or emotional concepts to their music (in general), meaning that the analysed 'general' concepts are mainly a list of (musical) themes and problems that fascinate and inspire them; in these cases the 'general' concept is almost absent
- polyphony (in a musical sense) is not an issue in the composition practice of some composers (Neyrinck, Smetryns, De Bièvre), meaning that their concept of this issue is very limited
- some composers (such as Brackx and Nuyts) have a view on polyphony (partly) opposed to the view on polyphony in the task (as given by the commission), in these cases there is a negative connection between the concepts 'polyphony' and 'short composition'; in other cases (Van Landeghem, Vermote, Cammeren) there is an affirmative link or no link (if polyphony is a non-issue for them).

Due to these different relationships between the four concepts analysed, there are not always four concepts present. In a way, the separation into four concepts (for analysis purposes), proves to be contrary to the concepts that some composers have. For example, Brackx's concepts can be summarized as two concepts: firstly, his usual compositional preferences (closely related to what he considers as polyphony) and secondly, the creation of 'the biggest, possible difference between voices' (as in the task). Within the last concept, the procedures and techniques overlap with the account of the short composition.

Constraints

In general the constraints analysed result in two kind of CPs in this group study. First, there is a group of three composers (De Bièvre, Cammeren, Neyrinck) in whose process the constraints are quiet stable. The constraints only evolve slightly while composing and from the beginning of the process on, they are settled. Next, there is a group of three other composers (Nuyts, Smetryns, Vermote) in whose case the constraints change dynamically during the CP. In these three cases there is an evolution to narrow down the solution space and to add more constraints as the CP evolves; in Nuyts' case this evolution is very abrupt.

The lack of sufficient data (especially the loss of one or two sketches) makes it difficult to analyse the constraints in Van Landeghem's CP, although I would expect to see an evolution in the constraints in his case (based on the descriptions of ideas in his interviews). In Brackx's case, the constraints seem to be stable during the CP, but again the lack of data, and especially of several ideas in the CP, prevent a definitive analysis. The problem of analysing the CP of Brackx is discussed more extensively on p. 113.

7 Final Analysis and discussion

In this chapter the two main research questions of the group study are answered. First I analyse the influence of the task and commission on the CPs and second, I detect and interprete the main compositional activities in these CPs. Both parts start with a description of the criteria that were used to answer the research questions. In the case of the research question on the main activities – the second part of this chapter – these criteria are extended into an analysis framework. Each part ends with a discussion of the results.
In between the two parts of this chapter, I discuss the problematic analysis of the CP of Brackx.

7.1 The role and influence of the task and commission on the CP

To study the influence of the task and the commission on the creative processes of the eight composers, five topics will be examined:

1. the discourse of the composers concerning the task in the interviews
2. traces of the task in the sketches and digital music notation files
3. similarities between the initial, musical ideas in the pre-writing phase and the content of the task
4. relationships between the composer's narrative about the short composition (the analysed concept 'work') and the content of the task
5. the effect on the CP of the explicit restrictions (instrumentation, duration, performers etc.) and the context of the commission

Topic one to four concern the influence of the task on the CP, while topic five relates to the explicit restrictions (the 'practicalities' of the commission). The reason why several topics are taken into consideration is because there are differences in the quantity and quality of the sources. Some composers express themselves and their compositional ideas more extensively in the interview or emails than others, some composers have made and archived many sketches while others have almost none. By answering several questions, based on different data (interviews, sketches, digital scores etc.) it is possible to study the influence of the task and commission on every composer. Moreover, by using different data and comparing them with each other, I can obtain a balanced answer, which does not only rely on a single data source (i.e. the view of the composers expressed in the interviews).

The task and commission were already described in Chapter 4 on p. 65.

7.1.1 Composition, exercise, experiment

In the pre-interview the following question was asked: “Was creating a difference between the voices the main aim of the short composition or did you have other aims on an artistic, aesthetic or technical level?”

The answers to this question and related fragments at other moments in the interviews were

coded in Nvivo and summarized per composer. In general most of the composers (six of the eight) described their short composition as a mixture of a personal composition and a composition exercise or study. The balance between these two attitudes varies between the composers. One composer (Neyrinck) stated that he cannot write exercises and that he always produces his own compositions. One composer (Brackx) clearly indicated that this was a composition study for a research project.

These are the summaries for each composer:

Brackx
For Brackx *PolyStudy* is not a “finished” composition but a study or sketch, made within the context of research on polyphony. Other terms that he uses to describe *PolyStudy* are 'sketch' and 'experiment'. The main aim when writing *PolyStudy* was to respond to the task in the original commission.

Cammeren
Cammeren considered the commission as a mixture of a task, experiment and a composition of his own. As with other works, he sees this piece as a challenge to try out new things and a chance to expand his personal composition domain, in this case by taking the task seriously. But at the same time he is aware of using a lot of procedures and elements from his previous compositions and creative processes.

De Bièvre
De Bièvre believes that his composition was shaped by the original task but he only read the instructions for the task once, at the beginning of the creative process. He sees his composition *Schroedinger 91* as an experiment bearing his individual signature and not as a functional piece of music which only aims to respond to the task, since the latter would only lead to uninteresting music.

Nuyts
Nuyts wanted to respond to the task but at the same he genuinely wanted to produce a composition of his own, a composition which bears his signature and was recognizably written by Nuyts Nuyts.

Neyrinck
The main aim for Neyrinck was to write a good and interesting composition; the task was of less importance. After the initial email with the commission, he never reread the task. When he wrote harmony or instrumentation exercises as a student, he always added a personal touch. Merely composing an 'exercise' is unthinkable for him.

Smetryns
Within the limitations of the commission, Smetryns tried to produce a composition. He realized that a literal solution to the task would lead to a small number of formal solutions. Therefore he sought for how he himself as a 'human' composer could add something to this 'self-generating logic'. The visual image of 'point-line-plane' and the relations between the three performers are this

extra personal element. Thus for Smetryns this work was both an exercise and a composition.

Van Landeghem
Van Landeghem described the commission as a challenge to do this task (or exercise) on polyphony but at the same time he wanted to produce a good and personal composition.

Vermote
Vermote considered the commission as a mixture of an exercise and a composition. The task posed an interesting problem for her, especially because she had never consciously thought about this kind of problem before. At the same time she was driven to express herself musically, and while composing *Skizze* this drive was also present and shaped her work.

The email with the commission to write the short composition also contained the following phrase: “The composition doesn't necessarily have to be a 'finished' composition; it can also be considered as a 'fragment or exercise'. The performance is not going to be public, since only the other participating composers and the performers are going to be present during the performance.” In the interviews, only one composer (Brackx) stated that this influenced him as a confirmation of the experimental setting of his short composition. One other composer (De Bièvre) made a reference to the private character of the performance but added that this did not make a difference for him; the fact that his composition is performed before some kind of audience is the most important factor for him. The other composers never mentioned this statement in the commission.

There are big differences in the listed attitudes towards the task, from a task-centred to a composition-centred view and these two views relate to fundamental issues like self-expression, the function of music, etc. Twentieth century traditions like functional music (Massow 1995) and experimental music have turned the contradiction between the free artist (expressing himself) and the craftsman 'doing his job' into a simplistic dichotomy. For example, a composer like John Cage (1973) abandoned the ego and personal preferences in favor of neutral or non-subjective composition procedures that produce surprising and unexpected sounds.

> What is the nature of an experimental action? It is simply an action the outcome of which is not foreseen. It is therefore very useful if one has decided that sounds are to come into their own, rather than being exploited to express sentiments or ideas of order. (p. 69)

Thus, the more task-oriented opinions in the summaries – and especially Brackx's task-centred approach – should not necessarily be interpreted as unartistic. The difficult relationship between experiments in music and artistic results/compositions is described by Blumroder (1995, 136–140) through the many discussions among composers in the 2Oth century on this topic.

Finally, in the summaries two composers (De Bièvre and Neyrinck) explained that the task of the commission was merely a trigger to start composing. They read the email once in the beginning of the CP and never reread it.

> ik heb uw mail gekregen met uw opdracht, ik heb u toen nog een paar vragen doorgemaild, kheb het antwoord daarop gekregen en ik ben beginnen denken, maar vanaf dat moment ben ik nooit meer teruggegaan om die opdracht nog eens na te lezen om te weten ben ik hier wel juist aan het doen, is het wel dat dat hij vraagt, (De Bièvre pre-interview 00:27:29)

A: voor mij is het een, je leest dat en je denkt, ja tof en dan heb ik dat eigenlijk niet meer gelezen denk ik, (Neyrinck pre-interview 0:22:52)

7.1.2 Traces of the task in the sketches and digital music notation files

In the paper sketches of two composers, traces of the task and commission were found. On his first sketch Brackx wrote "*voor Hans, piano fluit viola da gamba 40'*" and "*3 stemmen zo verschillend mogelijk*". Vermote wrote down even more details (the content of the task, the instrumentation and "oefening, fragment, experiment") about the task on her first sketch. In the sketches of the other composers (De Bièvre, Cammeren, Neyrinck, Nuyts, Smetryns, Van Landeghem) there are no direct traces of the task. Although the absence of these traces does not indicate that the task was not on the mind of these six composers, I assume that the opposite is true for the two composers whose sketches bear the presence of the task: they must have thought about the task when they started composing.

7.1.3 Similarities between the initial ideas and the content of the task

The initial ideas were the first ideas that arose in the creative process of the composers. The reconstruction of the course of action of the eight creative processes is described in Appendix 11 to 18.

	Initial ideas	**similarity to the content of the task**
Brackx	three worlds idea	very similar
Cammeren	habanera idea	different
De Bièvre	harmonic idea that the 'instruments go their own way'	similar
Nuyts	ideas with extended techniques, polytempo etc.	very similar
Neyrinck	lamento idea	very different
Smetryns	ideas 'point-line-plane' and 'approach per instrument'	similar
Van Landeghem	independent rhythmic lines as in Carnatic music	similar
Vermote	first list of ideas	very similar

Table 5: Similarity between the initial ideas and the content of the task

The scaling (very different, different, similar and very similar) is only indicative and is to be interpreted as a tool to compare the answers of the eight composers. This is how the scaling was applied:

- Very similar: the initial idea contains a view which is essentially a technical musical one with a focus on the *greatest possible* contrast between the instrument parts
- Similar: the initial idea contains a view with an important role for some kind of simultaneous contrast between the instrument parts or between any kind of concept related to the parts or the performers
- Different: the initial idea contains a view with a minor role for some kind of simultaneous contrast between the instrument parts or concepts related to the parts or the performers; other musical or conceptual concerns dominate the content of the initial idea
- Very different: the initial idea contains no or almost no similarity to any kind of simultaneous contrast between the instrument parts or concepts related to the parts or the performers.

Two comments have to be made on the possible relations between the initial, musical ideas and the content of the task: firstly, this item concerns *initial* ideas, and not all the initial ideas were very decisive for the further development of the creative process. There are two extreme examples: Nuyts totally abandoned most of his initial ideas after the crisis moment in his CP while the initial idea in Smetryns' CP is present and influential during the whole process. Secondly, the initial ideas were derived from the interviews and/or sketches. As stated before on page 70, there are differences between the composers in the quality and quantity of these data.

7.1.4 Relations between the concepts and the task

Now the relationship between the composer's narrative about the short composition (the analysed concept 'work') and the content of the task will be examined. As noted on page 96, there can be an overlap between this concept and the other three analyzed concepts (general, polyphony and procedures & techniques); these other concepts may contain extra information about the short composition and its relationship to the content of the task. Thus, although I give a scaling to the relationship, remarks are added which clarify the additional concepts that I am examining.
The scaling is almost identical to the one in the previous paragraph:

- Very strong relationship: the concept contains a view which is essentially a technical musical one with a focus on the *greatest possible* contrast between the instrument parts
- Strong relationship: the concept contains a view with an important role for some kind of simultaneous contrast between the instrument parts or any kind of concept related to the parts or the performers
- Weak relationship: the concept contains a view with a minor role for some kind of simultaneous contrast between the instrument parts or concepts related to the parts or the performers; other musical or conceptual concerns dominate the content of the initial idea
- Very weak relationship: the concept contains no relationship with any kind of simultaneous contrast between the instrument parts or concepts related to the parts or the performers.

Composer	**Concepts**
Brackx	Very strong relationship. His concepts of his composition *PolyStudy* are the same as his views on 'creating the largest possible difference between voices'.
Cammeren	A weak relationship. Ideas such as distortion and strange twists are clearly the primordial concern in his discourse, but at the same time he considers it as crucial that all the voices get an opportunity to play in the foreground and that there is imitation, interaction, and dialogue among these voices.
De Bièvre	A very weak relationship with his concepts of his music in general or of polyphony; a weak relationship with his discourse on his composition *Schillinger 91*, descriptions like 'an independent route' suggest a link with motivations to write polyphonic music but other statements contradict this idea. Moreover the input and creativity of the performer are crucial to De Bièvre and if there is a conflict between the intention to create differences between the instruments and to give more responsibility to the performer, the latter solution is preferred.
Nuyts	A very weak relationship. The main idea in the composer's narrative is the 'minimal maximum of difference', i.e. the instruments have a lot of musical material in common (tempo, harmony, harmonic rhythm) but they create small differences within this common world.
Neyrinck	Very weak relationship: in general Neyrinck is more interested in blending/mixing instruments into one great instrument/timbre; within this constraint of one main timbre he does try to create variations or differences through the instrumentation, which could be seen as a minor link with the task.
Smetryns	Weak relationship: in a strictly *musical* sense of polyphony (as in the task), the relationship is weak; in a broader sense (see chapter 'Radical polyphony' p. 22) the relationship is strong: Smetryns wants to create three different attitudes of the performer towards their instrument.
Van Landeghem	A strong relationship between his descriptions of polysystematics, multiculturalism, polyphony and his composition *Yantra*. One important difference though, is the idea of uniting or reconciling different systems and cultures, which is also clearly present in his discourse.
Vermote	A very strong relationship. There is no separate narrative on her composition *Skizze*: it is a composition on polyphony and thus her view on polyphony and the applied polyphonic techniques replace this separate narrative. Her discourse on polyphony has a lot in common with the 'classical' theory on polyphony. She has a general fascination for creating simultaneous layers.

Table 6: Relation between the concepts of the composers and the task

7.1.5 The effect of the explicit restrictions of the commission on the CP

The commission contained explicit limitations for the composers: the required duration was 'minimum 40 seconds with all 3 voices playing simultaneously', the instrumentation was fixed (piano, flute and viola da gamba) and about one month after the initial e-mail with the commission, the names of the performers were sent to the composers. The composers were not consulted in the choice of these performers. The former three explicit restrictions were the most influential according to the interviews and other data. Therefore I will not elaborate on other restrictions (e.g. the deadline or the use of spatialization) in the commission.

7.1.5.1 Duration

Two composers – Nuyts and Neyrinck – indicated that they were attracted by the short duration of the commissioned composition. They considered it an artistic challenge to express something in a pure and succint way. Neyrinck in particular repeats this many times in the interview and he also adds that he enjoys writing short pieces because it is easier that making compositions with a longer duration. It is also important to know that Neyrinck had already written a series of short compositions, *Aphorismes*, and that he called the new work that was composed in this study *Aphorisme IX*.

> maar het is de vraagstelling vond ik zo interessant, het is een beetje een inherente vraag van veertig seconden, 't is azo van, het is weer makkelijker van iets te maken dat zogezegd een uitsmijter (?) is als ik het daarin kan vertellen en in tegendeel: het is zelfs dwingend, het kan niet langer, het kan niet korter, dat ga je ook wel horen en waarom is dat dat ? da vond ik op zich een interessant gegeven (Nuyts pre-interview 00:09:52)

> A: het was geen oefening, ik heb ook korte stukjes geschreven, zo acht voor de piano en dan, kging het eerst een andere titel geven, eigenlijk is het een soort van aforisme, dus die aforismes van een tot acht dat ik heb als pianosolo's en eigenlijk kzou het kunnen zeggen die stukken werken op resonantie met de middenpedaal en ook dak hier gebruik met die blokjes om te blokkeren zodat je verschillende lagen van resonantie kan hebben dat is eigenlijk ook hier aanwezig en daarom heb ik dat dan ook aforisme negen genoemd, ik schrijf ook graag korte stukjes, ik zie dat niet als een soort van oefening, eigenlijk doe ik dat heel graag (Neyrinck pre-interview 00:22:27)

Finally, one composer – Cammeren – mentioned the short duration as being problematic, as adding an extra difficulty to the task in the commission. The other composers did not mention the short duration in either a positive or negative sense.

7.1.5.2 Instrumentation

For 6 of the 8 composers studied (Cammeren, De Bièvre, Nuyts, Neyrinck, Van Landeghem and Vermote) the gamba was a new instrument for which they had never composed before. All of these composers read the guidelines on this instrument (provided by the gamba player in this study) and most of the composers looked for additional information. Based on what the composers said about

the gamba (see the individual paragraphs on 'new elements' in Appendix 11 to 18) and on the sketches and music they composed in the final scores, two composers – Van Landeghem and Nuyts – spent a lot of attention on specific problems related to this instrument and created a part that fit the unique qualities of the gamba well. Van Landeghem deliberately wrote double stops and checked this with a gamba player, while Nuyts considered the history of this instrument as a part of its perception and wrote in an idiom that was based on baroque gamba music (and also wrote double stops). One of the other composers – De Bièvre – did not make the gamba part too difficult to be sure that it would be playable. He explicitly mentioned that he taught about writing double stops but he did not include them in the piece because he had no experience with this instrument. Neyrinck seems to have based the gamba part mainly on his experience with the cello: he mentions the cello in the pre-interview as a guiding tool for writing the gamba part and after the first performance he produced a second version with cello instead of the gamba. In this new version that was used for a second performance by an ensemble in which the composer performed, the viola da gamba is substituted for the cello and this new part is almost identical to the gamba part.

In general, different strategies to cope with the newness of an instrument exist in the CP:

- explore and exploit the newness and uniqueness of the new instrument (Van Landeghem, Nuyts)
- reduce the unknown to an known instrument (Neyrinck)
- use a safe strategy: write in a neutral, easy (to perform) style (De Bièvre).

7.1.5.3 Performers

Two composers (De Bièvre and Smetryns) mention whether or not they knew the performers in advance and that this influenced them. Their context is quite similar: both often produce scores (particularly open or graphical ones) that require creativity from the performers and both have learned from experience that performers do not always appreciate this. This is why knowing (or not knowing) the performers is important to them. De Bièvre explicitly states that he produced a score that was less 'open' than usual because he did not know the performers in advance. He adds that he has used this 'safe option' before, for previous compositions. Smetryns did know the performers and he had collaborated extensively with the gamba player in the past. In his short composition he created the graphical score explicitly for this performer.

> als ik die viola da gamba partij gemaakt had, dan dacht ik aja das eigenlijk nog wel, dat ziet er eigenlijk nog wel geestig uit, kben benieuwd hoe dat het gaat klinken, en ook azo een beetje euhm allez voor mezelf, kweet dan dat dat Dirk is en kweet ook wel dat Dirk, Dirk gaat dat leuk vinden om te doen, gaat dat wat extreem doen, kweet ook dat die piano is die Elisa é zeker, die kan ook clusters luid spelen, zo een beetje, vooral die viola da gamba partij was echt naar Dirk zo. (pre-interview 00:40:18)

7.1.6 Conclusion: influence of the task and the commission

7.1.6.1 Influence of the task and the commission

In the previous paragraphs (7.1.1, 7.1.2, 7.1.3, 7.1.4) I closely examined the attitude of the composers to their short composition, their discourse about it and its nature on the one hand, and the ideas, activities and its traces in the CP on the other. Each time the similarities and relationships between the content of the *task* and these elements were studied. Now an estimation of the overall influence will be made by going through all these topics for each composer. It is important to realize that similar ideas do not necessarily mean that the task is influential. The starting point (the concepts of the composers, their compositional preferences and practices etc.) before they received the commission was different. Both Vermote and Van Landeghem stated in the interviews that they are interested in the creation of simultaneous layers and (style) systems. In these two cases, my estimation of the influence is slightly different from the one of the similarities.
Based on the analysis in the previous paragraphs, I have made an estimation of the similarity between the short composition, activities, ideas and concepts on the one hand and the content of the task on the other.

Not at all similar	**Not very similar**	**Similar**	**Very similar**
Neyrinck	De Bièvre Cammeren Smetryns	Vermote Nuyts Van Landeghem	Brackx

The estimation of the influence of the task on the overall CP is seen in the following table.

Very low influence	**Medium influence**	**Very strong influence**
Neyrinck	De Bièvre Cammeren Smetryns Vermote Nuyts Van Landeghem	Brackx

Table 7: The estimation of the influence of the task

Only one composer (Brackx) performs the task literally; he is also clearly influenced by the task. Most of the composers try to obtain a mixture or balance between individual (compositional) preferences and elements from the task, thus in these cases there is some amount of influence, although it is difficult to define how much because of the diversity in CPs and concepts of these composers. The task exerted almost no influence on one composer (Neyrinck).

In general the influence of the task is stronger at the beginning of the CP than in the following

phases. If one composer (Neyrinck) is left out of this consideration, the CP of the other composers demonstrate this influence, mainly in their initial ideas (see 7.1.3). Even in Vermote's case, where the initial idea is not strong and elaborated, the composer starts from a written summary of the task and then creates a collection of musical ideas derived from this summary. In Cammeren's CP, the initial idea is produced during the initial writing process but even then, the themes are chosen partly because of their polyphonic potential. Once the CP is fully in swing, the influence wanes.

In general the option to accept the *explicit restrictions* (see 7.1.5) is the most frequently adopted by the composers. Most composers do not pay much attention to practicalities like instrumentation or duration and accept it as a part (not really a restriction) of the commission, without much comment. But the practical context of the commission can also be seen as an affordance. If the explicit restrictions are considered one by one, a majority of the composers accept this particular restriction, but at the same time there are one or two (out of eight) composers that grasp the (artistic) opportunity. Either they create a link between the affordance and their existing compositional preferences/experiences or they take the opportunity to add a new practice and experience to their repertoire. In two cases the restrictions created a problem (the fact that the performers were unknown to De Bièvre, and the short duration for Cammeren), although not a major one. It is also important to note that the only composer (Neyrinck) who was not influenced by the task (or to express it otherwise: who did not find any artistic challenge in it), did find artistic opportunities in the explicit restrictions of the commission, particularly in the duration and instrumentation.

Thus, the composers consider the explicit restrictions of the commission either as a normal part of the composition context, an artistic opportunity or a problem. Once a study or artistic project involves more than one or two composers, the chance that a 'practical' part of the commission turns into an artistic opportunity or problem is quite high.

7.1.6.2 Summary of the influence of the task and commission for each composer

Next I will present an overview for each composer of the overall influence of the task and commission (the explicit restrictions), taking the five analysed topics (see p. 99) into account.

Brackx
Brackx's discourse, concepts and sketches bear evidence of his intention to find a literal solution to the task. He puts aside his 'normal' musical preferences and composed a study or exercise. Further on, in chapter 7.2, a more extensive analysis of his compositional attitude and the task is provided.

Cammeren
The influence of the task on the CP of *Aria Ubriaca* is not strong, although it is present. The personal ideas (popular songs, 'distortions') are clearly the dominant force as can be seen from the discourse of the composer on polyphony and *Aria Ubriaca* on the one hand and the course of action on the other. Moreover, the composer states that *Aria Ubriaca* has many things in common with his previous compositions. But at the same time Cammeren integrated polyphonic elements into his short composition, mainly by giving each instrument an important role and by using

contrasting themes.

De Bièvre
The task functioned mainly as a trigger in the beginning of the CP of *Schillinger 91*, thus it is in this part of the CP that it exerts some influence (on the initial idea). As the CP progressed, other influences became more dominant: Schillinger's theory, the composer's intention to create an open score with enough freedom for the performers and his interest in blending the instruments (to make them play together in an ensemble).

Nuyts
There are differences between the CP and the content of the task which at first glance could lead to the conclusion that the influence of the task was slight. His narrative about his short composition is very different from the content of the task but if the course of action is taken into account, the influence becomes much clearer. In this course of action one sees how in the first half Nuyts tried to follow the task more directly but that this caused an anti-reaction in the second half of the CP: both his compositional ideas and procedures and his discourse on the short composition were generated as a reaction against the (content of the) task. Thus although the similarities between the CP and the task are limited, the influence is strong and in this case it is not an impetus to follow the task – as happened with most of the other composers – but to react against it.

Neyrinck
Neyrinck did not pay a lot of attention to the task, since he wanted to create music that blended the three instruments (within the piano resonance). His concepts of music composition in general and his short composition are both far removed from the task. There is not even an idea at the beginning of the CP which is related to the task and this even casts doubt on whether the task functioned as an initial trigger. It seems more likely that the duration and presence of the piano were decisive for Neyrinck. These two elements created a bridge between the commission and his personal compositional world in which short pieces and a fascination with piano resonances are important issues.

Smetryns
In Smetryns' vision of music composition, creating differences between instruments is clearly not an issue but he did succeed in creating a mixture between personal preferences and the task. He connected a meta-oriented and less technical interpretation of polyphony with his fascination for graphical scores, visual arts and giving extra responsibilities to the performers (of which he knows two in this case). By creating a composition with three different performer attitudes and notation systems he thus produced a new combination of existing personal elements.

Van Landeghem
Van Landeghem's ideas on music composition in general – summarized in his term 'polysystematics' – bear several resemblances with the content of the task. Thus it is not always easy to distinguish similarity from influence. In the first phases of the CP there is a strong relationship between the task and the initial idea to create independent rhythmic layers as in Carnatic music. But at the end of the CP (just before phase [5], see course of action in Appendix

17) the Carnatic idea (and the task) loses importance in favor of the unifying climax and Van Landeghem's related enthusiasm for the harmonic possibilities of the twelve-tone series.

Vermote
The influence of the task on Vermote's CP is strong. Her discourse and narrative on the short composition and polyphony overlap each other totally: her short composition is about polyphony and that is the only story about *Skizze*. Other arguments for this strong influence are:

- the task leaves its traces in the sketches and on the applied procedures
- she claims that her short composition is different from her previous works
- the only influence from 'outside' (the spectral idea from a preceding composition) is rejected because it does not match the task.

The reason why it is not a very strong influence – as in Brackx's case – is because she sticks to her personal (musical) preferences (see analysis of 'constraints' in Appendix 18) and she refrains from trying out ideas (phase [2] to [4]) because she has no experience with similar (musical) situations. Moreover, the creation of simultaneous layers was already an important theme in older compositions (according to her own words in the interviews), thus the initial compositional preferences were in line with the content of the task.

7.1.7 Discussion: a naturalistic setting?

The two questions “is the composer being studied while he was composing in his usual manner (in this group study)?” and “is this research on a 'natural' CP?” are closely related to the previous questions about the influence of the task and commission. These two questions are important to answer in a qualitative study in a naturalistic setting and they seem to be easy to answer for the two 'extreme' cases in this study:

- Neyrinck, on the one hand, was composing in his usual way because he was hardly influenced at all by the task in the commission. In his short composition he further elaborated on individual (musical) themes that shaped the previous works in his *Aphorismes* cycle.
- Brackx, on the other hand, has put his usual compositional preferences aside and tried to solve the problems in the task as if it was an experiment or exercise. Thus, Brackx's CP was an unusual one that was shaped by the research itself.

Although this might be the correct answer, it certainly is not the full picture because the previous reasoning assumed that the CPMC is naturally stable (not changing) and autonomous (not reacting to external elements) but that might not be the case. The current group study can not give an extensive answer to the question of stability and autonomy: a study over a longer time span that takes the social and cultural context into account would be necessary for this. A first attempt can be made to answer these questions in the current group study by looking at the way composers react to *new* elements in the CP.

There are two elements that – in general – are new for the composers in this group study: the viola da gamba instrument (the new elements are listed for each composer in the Appendices 11 to 18) and the task. The viola da gamba is not a new element for all the composers, but for 6 out of 8

it is. The activities of two composers, Van Landeghem en Nuyts, and the music they produced, showed that these composers actively took the opportunity to try out something new on the viola da gamba (see 7.1.5), while others did not. Thus here is a first indication that not all CPs are stable and that there are differences between composers in the way they react to 'new' elements in the commission or the context of the composition. The influence of the task is a second indication, several composers were clearly influenced by this task (see the previous chapter 7.1.6.1).

Moreover, the relation between a composer and the commission is not a strict one. Fryberger (2013) is one of the first researchers to study the negotiation process between commissioner and composer in contemporary classical music in detail (based on interviews). She describes how a composer takes advantage of the negotiation process to push his compositional work in a new direction. In this example an established composer writes an open form piece for the first time because the commissioner is associated with a “bastion of American experimentalism.” In her research the CP appears as not neutral, in some cases the commission may trigger or push the CP in a specific direction.

Because the composers in this study were all professionals (and used to working with commissions), this negotiation process also happened during this group study. A few days after the composers received the email with the task and the question to write the short composition, five composers asked questions (De Bièvre, Neyrinck, Smetryns, Van Landeghem and Brackx), related to the task and its content but at the same time they asked what they were expected to do with this task and what they were allowed to do. Perhaps because a musical task within a composition commission is quite unusual, the negotiation between commissioner and artist involved not only the implicit give and take but also explicit questions like can I do with the task whatever I want, or can I do my own preferred kind of polyphony. Questions were asked like:

> Ik heb een vraagje: het is de bedoeling dat de 3 partijen zo anders mogelijk zijn he? En ik vul dat in helemaal in zoals ik dit wil? (Smetryns)
>
> bedoel je gewoon dat de stemmen van elkaar moeten verschillen (dus geen canons, imitaties of andere traditionele polyfone technieken) of echt dat de stemmen "zo verschillend mogelijk moeten zijn" (dus dat geen enkele van de parameters van die stemmen hetzelfde mag zijn) want dat laatste lijkt me niet echt haalbaar (Brackx)
>
> mag het micropolyfoon zijn of liefst gewoon polyfoon? mag het polyritmische of polypuls zijn? Dat zijn de terreinen die mij persoonlijk erg bezighouden? Ook vb isoritmie? (Van Landeghem)
>
> - je schrijft dat de drie stemmen van elkaar moeten verschillen, maar mogen ze dingen gemeen hebben (verwantschap)? (ik vermoed dat je wel een compositorisch verwantschap verwacht, anders kan je gewoon drie verschillende stukjes simultaan spelen...) - moeten ze op alle vlakken verschillen van elkaar (melodisch, ritmisch, harmonisch, dynamisch)? (De Bièvre)
>
> Is het de bedoeling dat de piano ook als een "eenstemmig instrument" gebruikt wordt? maw zonder akkoorden? (Neyrinck)

My answer to these questions was in general the same: I referred to the two requirements of the task in the commission (see chapter 4 p. 65) and added that I wanted to research how every

individual composer interprets this task and incorporates this task in the future composition. Thus I avoided giving more details and context on the task to leave the task open.

Fryberger (2013) states: “Already in the negotiation process, or when the composer accepts a commission, the creative process starts its work.” This group study shows that there are big differences in the conception of the commission as an artistic opportunity: the influence of the task and the explicit restrictions differ from composer to composer. Moreover, two composers (Nuyts, Vermote) in this study state that in general they want to compose by taking the givens in the commission as a starting point. They indicate that their creativity starts to work (partly) thanks to a commission and its context. The sketches in this group study indicate the importance of the task or commission in their case.

I conclude that on the one hand the CP of the eight composers is influenced (and changed) by this study, i.e. either the task or explicit restrictions have contributed profoundly to the CP; but on the other hand, recent research of Fryberger (2013) shows that the influence between commissioner and composer is actually the usual way of working in the artistic world, and the influence of the explicit restrictions in my commission of the group study, confirm her findings. Therefore, I argue for the inclusion of the discussion on the relation between the CPMC and the commissioner within studies of the CP. Research that does not take the (context of the) commissioner into consideration is based upon the implicit notion that an 'autonomous' CPMC only deals with 'neutral' commissions.

The notion of a naturalistic setting (in research on the CPMC) is a complex one: the researcher adapts himself (e.g. to find a non-obtrusive data collection method) to obtain enough good real-time data but the results from this group study show that composers adapt themselves – to a certain degree – to the context of a new commission. This seems to be a vicious circle: a researcher needs to know the CPs of a composer in order to study this composer in a naturalistic setting, but the goal of the naturalistic study is to know more about the CP! But this contradiction is too sharp: I think there are solutions to study a 'flexible' process such as the act of composition. First, by explicitly describing and analysing the influence of the researcher and commission on the studied CP (as in done in this group study). Thus other researchers can juxtapose the results (in the following chapters) with the influences. Second, by conducting long term studies, since this allows more time to know the practice of a composer. Third, by studying more CPs, researchers can gain access to a library of examples and this can ease and speed up the understanding of a CP in the preparatory part of a study. Fourth, by enforcing the role of the composer within studies of the CPMC, the researcher and composer can unveil more implicit knowledge from the artistic practice and both parties openly acknowledge that they may have 'benefits' in a cooperation.

7.1.8 Phenomenon: 'disconnected' task

Brackx was able to put aside his own compositional preferences and personality while composing *PolyStudy*. He states that *PolyStudy* was an exercise or study for a research project and his main concern was to provide a good solution for the task in the commission. And while polyphony – with phase shifts – is his usual field of interest in his recent compositions, there is no sign of any conflict when he puts his artistic preferences aside and focuses exclusively on the task. While many other composers in this study (Nuyts, Vermote, Van Landeghem etc.) try to find a balance between

the commission and their individual artistic preferences, Brackx 'switches off' his preferences. In a study by Holtz (2009) on types or identities of composers, the author briefly mentions a previous study from 2002 in which he studied a 'researcher' type of composer:

> An example of an exclusively deliberate compositional process came from a composer of experimental electronic music. This artist views his compositions only as traces of an act of research into the connections between mathematics and music. (p. 214)

While *Polystudy* can be described as a trace of a research activity, Brackx does have compositional preferences and artistic goals, as explained in the section on concepts in Appendix 11. The uniqueness of the 'switching' attitude is also found in the analysis of the constraints. In Brackx's case these are all derived from the content of the task: there is no evolution of these constraints during the CP.

Brackx is the only composer in this study who considers and questions the research context of the task and commission. This was already clear from the first mails immediately after the short composition was commissioned. From the (limited) amount of data in the interviews and sketches, it seems that in the first phase of the CP he spent even more time thinking about 'why this task?' than about the musical content of the task. All this leads to the same conclusion that he is able to disconnect his creative activities from his individual preferences. In this case this also meant that he was equally interested in the research aspect of the commission.

Another facet of this open attitude is the unwillingness to evaluate during the CP: his musical ideas and composition are part of a research task and it is not necessary to judge them before the rehearsal and performance have taken place. If it turns out during the performance that the composition did not correspond to the task, this failure might be valuable for the research.

> ik ga wachten tot na de uitvoering om te zien of dat wat ik gepoogd heb, gelukt is, maar ik vind het niet nodig om een oordeel te vellen over wat ik gemaakt heb, in de zin van oké, dit is wat ik gedaan heb, naar goed vermogen, de opdracht gevolgd, en als ik nu merk op die uitvoering, eigenlijk is dat compleet mislukt, dan is dat maar zo en dat is dan een deel van het onderzoek, neem ik aan, tis jammer dat het mislukt is, (pre-interview 00:19:03)

7.2 Intermezzo: a problematic analysis of the CP of Brackx

Compared to the other seven composers in this study, the amount of data on the CP of Brackx is low and this poses difficulties for further analysis. The description 'low amount of data' in this case consists of these four observations:

1. the total duration of the two interviews with Brackx is very short compared to the other interviews (see 'Quantity and quality of the data sources' p. 70); the amount of words per interview show the same trend.
2. in general the answers were formal and to the point
3. in the interviews almost no information is found on general concepts, fascinations or philosophies in and on his music; moreover, there is no specific narrative on this composition *PolyStudy*, it overlaps with Brackx's vision about polyphony and 'the largest possible difference between voices'. (see p. 96)

4. the 'course of action' of the CP of *PolyStudy* reconstructs a simple and straightforward process without major (or even minor) problems. Compared to the sketches, no extra musical ideas or versions (that were active in the CP) are found in the interviews with Brackx (see Appendix 11 for a detailed course of action).

Taken separately, observations three and four are not unique in this group study: a lack of information on the concepts (and an overlap in the analysis categories) was described earlier on p. 70 and a simple and linear course of action is also found in Neyrinck's CP. But the combination of these four observations is unique in this group study, and more importantly, it poses serious problems for the further analysis and interpretation of Brackx's CP. The question arises: is the low amount of data responsible for the analysis results (the disconnected attitude, his compositional activities, see chapter 7.3.2) or does his task-oriented way of composing result in a low amount of data? But precisely because of the low amount of data, it is impossible to give a decisive answer. The only way to answer this question fully would be by conducting a long term study in which several of Brackx's CPs could be compared with each other, but such a study is outside the scope of this dissertation. I decided to still include the CP of *PolyStudy* in the further analysis, since it might provide an important source of information if other researchers on the CPMC encounter similar cases.

There may also be possible *research* reasons that could explain the low quantity of the data in Brackx's case: one of the two interviews with Brackx (the post-interview) was done by telephone because of the composer's busy schedule of the composer, whereas all the other interviews in the group study were conducted face-to-face; the decision not to explicitly ask questions about concepts (see p. 67 and 70) may have had a high impact on the data of Brackx's CP, although this decision was applied to the interviews of all eight composers.

7.3 The main activities in the CP

7.3.1 Proposal of an analysis framework

At this point a common analysis framework was necessary to analyse the main activities in the eight studied CPs. It is only by analysing these eight different processes by the same criteria that differences and similarities are detected. The analysis framework that I propose, builds upon the difference between in sequence and outside sequence compositional activities from which four main activities are derived. I will first describe this difference, the proposed four main activities and the analysis framework, then present the interpretation of these main activities for each composer in all the studied CPs (in chapter 7.3.2), and finally discuss the proposed activities in these interpretations (in chapter 7.3.4).

7.3.1.1 Analysis framework to detect the main compositional activities

There is a crucial difference between thinking/acting/creating outside the sequence of the new composition and in sequence, because music flows from one musical event to the next, fuses into a stream and thus creates a dynamic of its own. This sequence of events (the new composition) is unidirectional, the music is meant to flow in one direction from start to end. While the fusion into a sequential stream is not equally strong in all music,[13] the tension between intentions and plans on the one hand, and the dynamics of the (created) music on the other, is present in many CPs. This dynamics is created from the moment music starts to take a detailed shape and is made up of a sequence of musical events. Most music generates several temporal segmentations simultaneously: motives, phrases, sections, larger parts etc. Any short musical opening statement is thus not just one linear sequence of musical events, but also a self-organization of temporal segmentations. It is perhaps this complexity of the musical language which creates the tension between thinking in sequence and outside sequence.

To clarify the distinction between the previous two categories, it should be noted that these two opposing notions are not the same as real-time versus non-real time. The 'sequence' (in the term 'in sequence') refers not just to any sequence of musical events (of which the composer might be thinking) but to the sequence of musical events of *the future new composition*. Thus if a composer is imagining all kinds of musical ideas and images at the beginning of the CP but does not have a detailed idea (or draft) of the beginning (or any section) of the new composition, I interpret this activity as an outside sequence activity. If I use the notion in sequence, in fact this always stands for 'in a *detailed* sequence of the musical events of the new composition' because it is through a flow of concrete, musical events that a dynamic system is created which might or might not be

13 Take Feldman's or Cage's compositions from the 1950s as an example.

opposed to the composer's intentions. Thus the term in sequence implies that there are enough musical events in the new composition to imagine, perform or notate this stream from one moment to the next.

From the difference between in sequence and outside sequence thinking, four main compositional activities, which constitute the core of my analysis framework, can be derived:

1. *planning*: an analytical activity, characterized by some degree of ordering or systematization of elements of the new composition, this activity takes place outside the sequence of musical events of the new composition
2. *exploring*: a more intuitive, heuristic activity, taking place outside the sequence of musical events of the new composition
3. *writing*: an activity producing a detailed sequence of musical events (for the new composition) without having a detailed *future* sequence[14]
4. *rewriting*: starting from an existing or composed stream of music, a composer rewrites/changes this existing music; thus this activity takes place within a sequence of events at a point where the sequence has a past and a future; the composer knows where the music came from and where it is heading.

Exploring and planning are outside sequence: they often take place before the sequence of musical events is produced or as the composer steps outside this sequence of events. Planning – mainly resulting in the ordering of musical material – is almost impossible without a more 'timeless', static, global overview of the material. When planning constitutes of making a time scheme or structure for the new composition, it is still outside sequence, since it is not yet a detailed flow from one event to the other (creating its own dynamic). Rewriting stands for editing and 'cut & paste' techniques: details or large sections are revised, the order of existing events or sections is changed, or instrument parts or whole sections are deleted or inserted.

I consider the four proposed composition activities – and the underlying difference between in sequence and outside sequence – to be crucial to the CP because the four activities are *productive:* they add something new (a music fragment, score, new version, visual plan etc.) to the composition in development. If none of these four activities is present, no new composition can be made. In this sense, my distinction between in sequence and outside sequence stands in opposition to a notion such as 'meaningful activities' (Brown) that are based on what the composer experiences in the act of composition (the 'flow' experience). If there is one common element to composition, it is the simple fact that -in the end- composers want to produce music in whatever written or unwritten form. My proposed activity framework is based upon productivity and consequently is an analysis tool to study a wide variety of CPs.

How are these four main activities detected in the data? Especially for qualitative research in a naturalistic setting, it is important to describe how phenomena are recognized in the naturalistic data. In general the material traces (sketches, drafts etc.) give information on three out of four activities (planning, writing, revising), for example the planning activity produces lists, plans and drawings with a systematic ordering of material. To detect the exploratory activities I mainly had to rely on the composer's words, i.e. the interviews and emails. Next, the information on an activity is triangulated with the reconstructed course of action and the structural mapping, because here the

14 I use the term writing for this activity, but my broad definition of this term also encompasses the realization of a detailed sequence of music in software (sequencer or audio editing software, as in film or electro-acoustic music).

development of the music (the composition in progress) is seen in detail. By situating the activities within the dynamic development of the composition, the difference between in sequence and outside sequence can be detected. Thus, there is an close relation between the real-time and data-rich method collection method on the one hand and the framework to analyse and interpret the main activities on the other. This reflects the underlying theoretical framework of this dissertation in which the composer's cognition, for example, is situated within the development of the composition.

The categorization into four main activities is not be read as a theory on compositional activities. It is a conceptual tool to analyse, compare and interpret the activities of the eight composers studied. Moreover, a creative process need not correspond to one the main activities: the CP may be characterized by a certain combination or order of these main activities. It is also important to note that one important activity is missing in the proposed four activities, namely the act of evaluation. Although evaluation is not productive in itself, it often leads to productive action. For example, a composer may evaluate a written section of the new composition, and based on this evaluation continue to write the following section, or decide to rewrite the previous section, or start exploring a new idea (outside the written sequence of musical events) because he believes that the written section is dull and without inspiration.

This framework with four compositional activities partly came into existence after rereading the interview and data from this study many times, and it is partly inspired by my own compositional experience and existing literature, mostly of a non-academic nature. Other composers have already drawn attention to the distinction between in-time and outside-time thinking. My framework is loosely inspired by the composer Xenakis (1992) who wrote that although music is time-based and a musical piece develops through time, it can also exist outside time, as an abstract representation. After a performance people may talk about a composition and they can do so because it becomes accessible as a whole for our memory. (Xenakis, *Formalized Music*) Related ideas on the in-time and outside-time character of music are also found in literature (Craenen 2011; Frisk and Karlsson 2010; Leroux 2010).

Apart from these theoretical texts, there are also experiences from composer that express a sharp dislike or preference for one of the four main activities. To me this was an indication that outspoken differences could be found based on the opposition between in sequence and outside sequence thinking/acting/creating. For example, in the book of McCutchan (1999) the composer Joan Tower expresses her distrust for rewriting:

> Very rarely will I rewrite a section of the piece, because once you start doing that, it’s like balancing a mobile. You take weight out of one place, and it shifts here, and pretty soon the whole thing has to shift somewhere else. (p. 57)

The same composer continues to explain her dislike for outside-sequence thinking. According to her, precompositional thinking is too one-dimensional and music has no personality if you isolate one element. She compares this form of thinking to building with only one brick. The composer Leroux (2010) uses a similar image of building a house to express the opposite, his preference for preparation and planning. Next he explains that the act of writing takes place at two levels: construction based on what was foreseen and reacting to the dynamics of the new composition creating unforeseen events.

> S'écrivent donc en parallèle deux histoires simultanées: l'une, à partir des plans et des matériaux préparés en amont, l'autre, ne réagissant qu'aux éléments imprévus déjà couchés sur le papier. Je parlerais volontiers pour la premiére d'écriture à caractère *extrinsèque*, car elle renvoie à un ensemble d' éléments prédéterminés lors de la phase de préparation, qui de ce fait, sont extérieurs au temps de rédaction de la partition. La seconde me semble de caractère *intrinsèque* puisqu'elle s'appuie uniquement sur les relations existant entre les événements musicaux tels qu'ils existent de façon autonome dans le temps de l'œuvre musicale. (p. 59)

7.3.1.2 Level of musical abstraction

While rereading the interviews and traces of the eight CPs, I noticed that there also were difference in the level of musical abstraction at which the activities takes place. Here I draw attention to one attribute of the four proposed compositional activities, as a part of the proposed analysis framework. The designed gradation or level of musical abstraction is loosely based on a general taxonomy of musical parameters (Lesaffre as cited in (Cornelis 2013, 15)). It classifies the level of musical abstraction *of the ideas and material* with which the composer is working and concerned while composing. The most abstract material – the highest level – contains ideas or representations from outside the music domain, which means the composer is working with material, knowledge and images from outside music to compose music.

Level of musical abstraction in compositional ideas	**Compositional elements**
Highest level	Emotion, philosophical ideas, actions & theatrical ideas, visual images, etc.
High level	Structural characteristics, tonality, development, (historical) styles and genres, etc.
Middle level	Melodic motives, rhythmic patterns, harmonic sequences
Low level	Pitch, time, harmony, timbre

Table 8: Levels of musical abstraction

The level of musical abstraction can be analysed in the interviews and explanations of the composer (thus in the analysed theme 'concepts' of the composer), and in the sketches. The differences between the four levels are not strict and overlaps can certainly occur. The main characteristic of this gradation are the isolated, local (musical) parameters at one end, the extra-musical descriptions at the other end, and terms in between that gradually refer to more global, bigger units of music.

7.3.1.3 Outline of the analysis based on the framework

In the previous chapter 7.3.1 'Themes' a context was reconstructed (the course of action, constraints

and concepts) by the analysis of the data. Within this context I now aim to detect the main compositional activities in every CP. This is done through the framework of the 'hypothetical' four main activities and the level of musical abstraction. This analysis framework is applied in a flexible way because other issues have to be taken in account:

- The difference between macro- and micro activities may be individual and other activities – than these four actions – may also appear at the foreground, thus I also look for the most salient features and actions in every CP. For reasons of comprehensibility, I describe these salient phenomena immediately after the interpretation of the main compositional activities for each composer.
- The chosen time frame of this study (from commission to first performance) may correspond with the main activities or not (see 'DESIGN AND METHOD' p. 33); important information may be missing if there is an imbalance between the main activities, the concepts of the composer and the time segmentation of this study.

In the interpretation, I search for the main compositional activities and interpret how important an activity is based on the following subquestions:

- how much time (in the CP) has the composer spent on this activity?
- what does the composer say in the interviews about an activity and what do the other data (sketches) reveal about this activity?
- what is the difference between the result (product) of an activity and the product of a previous activity in the CP? How creative is an activity? Does it add new elements to the composition in development?

An important issue in this interpretation is also the possible connection between the concepts of the composer (detected in the previous analysis) and the prevailing activities. This can reveal how meaningful these main activities are for the composer.

In the following paragraphs the CPs of the eight composers studied are individually analysed and interpreted. Next a discussion follows where global characteristics are discussed and the results are confronted with research literature.

7.3.2 Four main activities – individual composition strategies

7.3.2.1 Brackx

In the CP of *PolyStudy* the planning and writing activities dominate: no exploration or rewriting is found. The planning does not consist of creating a structure for the composition or developing a system, but mainly of listing and ordering musical features. In general the highest levels of musical abstraction are absent in the ideas and activities of the CP, and the ideas and imagery are never extra-musical. The references to a 'different idiom or style' per instrument are the most abstract ideas. The lowest level is especially present in the discourse of the composer (in the interviews), and here one notices that he thinks in a deconstructed, analytical way: the problem in the commission is fragmented and isolated in different parameters. But he is equally concerned with overall features, although – as said – the highest level of abstraction is not present.

There is almost no sign of evaluation activities in Brackx's CP. The composer *trusts* the analysis that he has made of the task and the set of features (per instrument) that he has derived from this analysis. Once he starts to compose he does not match the music with the ideas in the task again. It is in the rehearsals and performance that the final evaluation will take place and it does not make sense to him to evaluate the music and his thoughts about simultaneous, contrasting layers in music before these events have taken place.

> A: of die pianopartij, ja oké, er is nagedacht over die ritmes die af en toe zo eens, er is ook een diepe noot van waar zou ik die dan precies zetten, waarom wel waarom niet, zulke dingen wel, omdat fundamenteel over het, wel theeft er mee te maken dat ik denk dat de eigenlijk, de enige echte mogelijkheid om te zien of dit klopt, the proof of the pudding is in the eating, zullen we pas zien als het gerepeteerd of uitgevoerd wordt, kdenk dat het weinig zin heeft om nu nog in mijn abstracte denkpatroon al dingen te gaan veranderen, voor ik heb gemerkt of ze kloppen of niet (pre-interview 00:25:43)

> A: tis eigenlijk gewoon, ik heb gedacht, hoe kan ik conceptueel drie dingen zo verschillend mogelijk maken en dan heb ik de dingen individueel eigenlijk uitgewerkt, erop vertrouwend dat mijn conceptuele visie waarom die dingen verschillend zijn ook dat dat ook zo zal zijn (pre-interview 00:26:01)

In the CP of PolyStudy, the analytical thinking clearly dominates. The other compositional activity in this process – writing – is solely a consequence of this thinking process and its resulting list of features.

7.3.2.2 Cammeren

The main activity in the CP of *Aria Ubriaca* is rewriting music: revising, elaborating, re-arranging, moving or deleting music fragments and sections within a sequence of musical events. The writing occurs at the beginning of the CP and there is no sign of planning or exploration activities. In both writing and rewriting activities the lower level of musical abstraction is absent. The (musical) ideas and sketches of the composer, his imagination and the ideas (described in the interviews or materialized in sketches) all operate on middle or higher levels of abstraction: he talks about (melodic) motives and phrases, or gives (theatrical) descriptions for his composition (see Appendix 12).

Before focusing thoroughly on the rewriting process, the preceding writing process – and the discourse of the composer on this process – will be looked at.

The inspirational writing process

This writing process is relatively short (approx. half a day) and is followed by four weeks of rewriting. It is striking that this short writing process is 'mystified' by the composer. According to his own words the music 'arrives' 'in one block' while looking at the stars at night. Without any preceding ideas or versions, the arrived music is 'accepted'. At several moments in the pre-interview the composer gives a similar description of this nightly inspiration. His discourse on this initial inspiration, leading to the writing process, could easily be misunderstood, if one does not

take the whole CP into account. It is not a 'Mozart-like' story about 'divine' inspiration in which the composer receives the whole composition and then hastily writes it down. From the description of the course of action (see Appendix 12), it is clear that the original first version is seriously adapted during the weeks after this inspirational writing process.

The core of his initial inspiration consists of three elements, and its notation is followed by a long and intensive period of revising activities. These three elements are:

1. the use of a popular melody
2. the use of the aria from Carmen by G. Bizet
3. the use of syncopations and distortions

Not all the three elements (from this 'inspiration' list) are completely new for the composer. The first element in the inspirational process is without doubt closely related to the previous works he had finished a few works before. These were short (educational) works for piano based on popular melodies and the composer himself indicates twice that this influenced him. The third element – the syncopations, time shifts of themes and distortions – links to the fondness of the composer for the works of minimalist composers and György Ligeti. In the pre-interview he states twice that he has used these time shifting techniques many times before in previous works (pre-interview 00:27:38; pre-interview 00:36:58). The most specific element (2. the Habanera aria from Carmen) is the only really new element to him. In fact, this is the original element in his inspiration. Presumably it provided the initial spark for his inspirational writing process. The influence of the commission (and the task it entails) is noticeable in the evaluation he makes of the Carmen aria and the first version: according to the composer there is a nice contrast between the chromaticism in the main melody and the tonality of the bass and the melody of the middle section (pre-interview 00:44:17; pre-interview 00:47:59); interesting simultaneous melodic lines can be obtained from the melodic material and there is a stable bass that is ideal to apply time shifting techniques to. Hence the moment of inspiration consists of having found a specific melody/song which fits well with the commission (because it is ideal for counterpoint treatments). At the same time he operates within the sphere of recent compositional preferences (popular songs and 'distortion' effects). Consequently, the mystified description of the composers should not be interpreted as a precise description of a fast creation of a totally new composition.

On the one hand this short, inspirational writing process acts as a trigger for his future creative acts and imagination; on the other hand it provides the main ingredients of the new composition. The mystic writing process sets the limits of his future creativity in the CP and it provides him with the raw material for the rewriting activities, because he now has a sequence of musical events that he can shape and refine.

The initial inspiration and the consecutive writing process take place in a rather intuitive way (as the composer also states) and this provides some benefits to the composer: firstly, he doesn't have to spend a lot of conscious time on the writing process and can quickly proceed to the revising process, which is the core activity in the CP of *Aria Ubriaca*; secondly, accepting the intuitive ideas fixes the general idea and the main constraints of the future composition leaves him free to pay attention to other important issues (such as the structure, or instrumentation) during the rewriting.

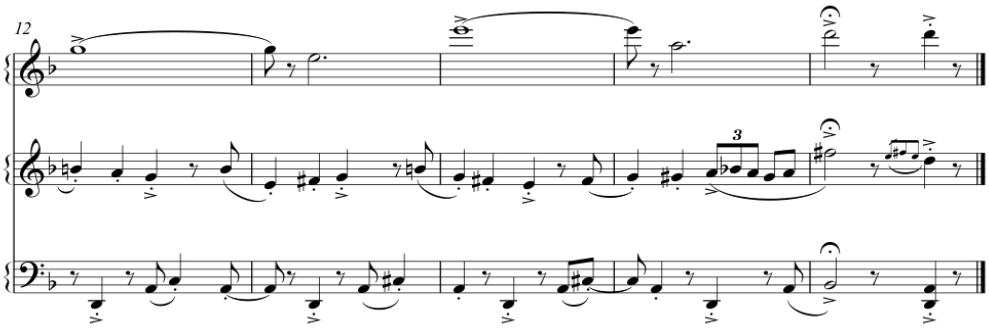
Problem-solving in the rewriting process

The first phase of the CP – the inspirational writing – has set the major constraints of his future composition and provided him with a global idea and a first version. Because there was no pre-compositional (pre-writing) planning or exploration, the composer has to tackle several problems in the rewriting process. The main problems are:

- structure: which form and structure shall I give to the composition? Is there a fine balance between the different themes?
- instrumentation: is a motive or fragment playable on one of the three instruments? How loud can it be performed? Does this motive fit this instrument well?
- main idea: does the current version represent the main ideas (of distortion and miscommunication) well?

These three problems are not solved sequentially but simultaneously and recursively. They are only settled at the end of the CP. The instrumentation – one of the three problems – changes throughout the CP: some of the themes are attributed to different instruments during the CP, e.g. the 'chromatic' theme is played on the piano in phase [3], but not in the other preceding or following phases. The evolution of the structure – the first problem – is clearly visible in the structural mapping visualisation in Appendix 12. The first version of *Aria Ubriaca* consists of one part, the version in phase [3] has three parts, while in the end there are only two. The structure is mainly built upon motives and themes (bundled in phrases and parts). For a composer it is important to recognize the (structural) potential of a theme: can a structure be built on this theme? Can it be repeated or developed? Does it need adjustments? This discovery of the structural potential of themes and motives takes place during the whole rewriting process. An example is the 'strange fermata' idea (see Illustration 21), consisting of two parts: a frozen chord (which does not fit in the D major or minor tonality), followed by a silence, and a fast end motive.

Illustration 21: The strange fermata (in bar 16) in Aria Ubriaca



This idea first pops up in the revision of January the 27th in phase [1] where it appears once. In the first long version (phase [3]) this idea (or one of the two parts) appears three times (twice in the middle part A') whereas in the final score it appears twice, located at structurally important points:

the end of the first part and the end of the piece. By rereading and reflecting on the written score, the composer (consciously or intuitively) recognizes the structural potential and the right place in the score to apply the 'strange fermata'.

As said, Cammeren does not try to solve problems in a sequential order, he acts on all problems simultaneously to create a constant feedback/interaction between the problems and solutions. The only level which might have a sequential order, is the notation and phrasing of the music. In the interviews the composer expresses his intention to write down the correct phrasing and the right notation of extended techniques at the end of the CP (when the piece is finished) but it must be added that according to the drafts the phrasing is already notated and changed (accents, legato/staccato, performance technique for the piano and gamba) in the phases [1] to [5] of the CP.

Evaluation and openness of experience

In the pre-interview, the composer judges existing and potential versions again and again. The large amount of evaluations in the CP of Cammeren is striking. 'Evaluation' means that the composer makes an assessment of his short composition (or parts, changes or ideas related to the short composition) in basic categories – such as 'good', 'bad', 'this doesn't work' – without necessarily making the criteria explicit. To give an idea of the high occurrence of these evaluations in the discourse of Cammeren (compared to the other composers in this study), especially in the first interview, the number of evaluations in the interviews of the eight studied composers were counted. Evaluations of the performance or works by other composers were excluded, just as evaluations of music in general. Every evaluation was counted, even if they might refer to the same idea or sketch.[15] I did not try to find identical evaluations (referring to the same idea or sketch) because no clear distinction can be made between an idea, a part of this idea or a variation on this idea. Moreover, most composers use oral language in the interviews which makes it even more difficult to define the details of an evaluated idea.

15 Except when the judgments followed immediately after each other, as in this fictitious example: “this is a great idea, I think this idea is good to make the work more consistent.”

	Number of evaluations in pre-interview	**Number of evaluations in post-interview**	**Total number of evaluations**	**Duration of pre-interview**	**Duration of post-interview**
Brackx	0	1	1	34	19
Cammeren	22	7	29	87	45
De Bièvre	2	7	9	53	36
Nuyts	3	1	4	45	54
Neyrinck	7	4	11	59	35
Smetryns	1	3	4	57	41
Van Landeghem	4	7	11	54	30
Vermote	5	2	7	60	33

Table 9: Evaluations in the CP of the composer Cammeren

The high number of evaluations (22) in the pre-interview of Cammeren is striking, more than three times higher than in the interview with the second highest number (7).
Here is an example of an evaluation that Cammeren makes in the pre-interview:

> 'k ga een keer kijken of dat daar op de juiste plaats is of niet of, dat ge zo'n dingen een keer, 'k vind het leuk dat die juist daar komt of zo of nee, 't is nog te vroeg of dat soort dingen. (pre-interview 00:49:32)

The explanation for the evaluation activities lies in the configuration of the main compositional activities in the CP of Cammeren. He immediately starts composing by writing a first version: no planning or exploration has been done before this writing. The writing activity happens fast and intuitively without much reflection. Important problems such as shaping/structuring the composition, discovering the potential of the musical material and ensuring that the composition matches with the main ideas that the composers wants to express, are left open for the rewriting process. The basic material for this rewriting process is a sequence of musical events and by reading (or playing or listening on the computer) the composer permanently evaluates this sequence. Because it is a full sequence of events, he can jump back and forward within this sequence while he is evaluating. The conclusion of my explanation is that although evaluation is considered a general creative activity by several authors (Brown and Dillon 2012, 82; Folkestad 1996, 132–159), the CP of Cammeren composing *Aria Ubriaca* indicates that evaluation, in the form of basic assessments, is highly present when rewriting and is the dominant compositional activity in the creative process.

Through the process of evaluation, the nature of the notated music (the draft) becomes very 'open' to changes and elaborations. Many of the evaluations concern potential (or imaginary) changes to the current version. The composer has a high sensitivity to new ideas and possible adaptations of previous versions, which can be labelled as openness of experience. This openness involves active imagination and an intensive sensitivity to finding alternative 'solutions' to the ones in the current version of *Aria Ubriaca*. This openness is prominently present is large sections of the

pre-interview, and not just at one moment but at several points in the interview. An example of this sensitivity to possible changes and transformations is found in the pre-interview when the composer explains extensively that he is considering changing the piece to obtain a more gradual transition from the 'undistorted' to the 'distorted' sections. About two weeks after this interview, he sends the final score and in the post-interview he explains that in the mean time he has had two new ideas,the 'Rossini' and 'tango' themes. Consequently, the revision with the gradual change from 'undistorted' to 'distorted' was abandoned again.

A second, partial explanation for these evaluations (and the related openness) could be the date of the pre-interview with Cammeren. This was the only interview in this study which (unexpectedly) took place during the CP itself (see chapter 'Interviews' p. 67).This could explain why he was still struggling with many musical ideas and remembered them very well. However, other composers were interviewed very close to the CP, especially Vermote and Van Landeghem. Vermote was interviewed on the day that she finalized her composition *Skizze* while Van Landeghem was interviewed six days after the end of the CP of *Yantra*. Moreover, Van Landeghem revised *Yantra* as a part of his future marimba concierto, so in a way he was still in the middle of the CP (and the revising process) of *Yantra* during the post-interview. Consequently I believe that the date of the interview is only responsible for the high amount of evaluations to a small degree.

To conclude, the main activity in the CP of Cammeren is without any doubt rewriting. This activity is preceded by a short period of fast and inspirational writing, mystified by the composer. The writing builds strongly upon previous compositional experiences and it sets out the general idea and the main constraints for the new composition. In the rewriting process several problems, such as the instrumentation or phrasing, are solved simultaneously. The main problem is finding an adequate structure for the composition, and this is solved by moving, adding and deleting sections of the composition in development. This 'structure rewriting' also requires that the composer recognizes the structural potential of motives and themes. An essential activity in the 'inspirational writing – structural rewriting' constellation, is the continuous evaluation of musical ideas in the written version. The assessment of ideas and versions is highly present in Hans' CP compared to the other CPs of the group study. The composer also demonstrates a high sensitivity to new ideas and possible adaptations of current versions of his work-in-progress.

7.3.2.3 De Bièvre

A large part of De Bièvre's creative activity composing *Schillinger 91* consists of planning and more specifically of creating rules. The rules function on a wide range of musical abstraction levels, e.g. some rules order the overall structure of the composition, while others generate the exact duration of phrases or the sequence of pitches within a phrase. The actual writing (in phase [5] of the CP, see Appendix 13) is merely a consequence or result of the algorithmic planning: only the pedal chord in the left hand of the piano appears as something new during this writing process, whereas all the other notated information on the score can be derived from the previous rules. Consequently, the writing activity is only creative to a small degree. The revising activity is almost not present in the CP of *Schillinger 91* , and some minimal rewriting has only taken place in the sketch of the piano part. Exploration is only present at the beginning of the CP when he imagines a “literal” solution to the task (and evaluates this as uninteresting).

It is clear that the planning activity dominates the CP of *Schillinger 91* and during the generation of rules new musical ideas and insights appear. But there are several contradictions between these ideas and the rules:

- the idea of an individual trajectory for the three instruments is based on three chords derived from the 'Vertigo' chord but these three chords have a lot in common (this contradiction is recognized by the composer and seen as a challenge)
- at the end of the CP, a pedal chord is added throughout the whole composition which (perceptually) masks the three separate harmonic trajectories
- the idea to create a cross-fade (of onset times) between the flute and gamba (see the course of action in Appendix 13) is somehow clouded or masked by the following rules on the number of pitches and the duration of every phrase (starting at every onset)
- the composer creates a dualism between the flute-gamba duo and the piano (with a more open, freely notated part) but – when talking about a possible performance – he leaves the possibility open that the pianist may not choose to 'oppose' this flute-gamba duo.

Although the planning activity dominates, the overall logic of this set of rules is vague. The composer does not have a clear composition plan that is being elaborated step by step in a rule system. The composer also indicates in the interview that he works quite intuitively. How 'logical' is the compositional strategy in which the planning activity dominates?

In the following section I dig deeper into the interaction between the two layers – the rules and the musical ideas – in De Bièvre's CP. During the planning activity – one might coin the term 'algorithmic bricolage' – the composer stacks rules (and the resulting musical material) on top of each other, without being particularly concerned with an overall system. Every rule not only generates musical material but simultaneously functions as a *trigger* for the imagination of the composer. In the following table 10 the rules are placed underneath the musical ideas (or insights) in one phase of the CP.

Timing within the CP indicated by the sketches	Phase [1]	'three circles' sketch [1][2]	Number sketch [3a]	Number sketch [3b]	Score sketches [4]
Rules		Circumference of circles	Sum of the numbers one to thirteen to determine the onset times	Pitch sets based on three chords derived from Vertigo chord, random choice of pitch sets and durations,	(conflicts between previous rules solved by note repetitions and ad hoc solutions)
Musical ideas	Task in commission, 'found' Vertigo chord, Schillinger ?	Three instruments go their own (harmonic) way	Cross-fade of onsets between flute and gamba, piano polymetric 13/4	Piano has a rhythmically 'free' notation; flute and gamba more strict	Piano left hand: focus on Eb minor triad (one of the 3 chords) as a pedal chord

Table 10: The development of rules and ideas in the CP of De Bièvre

Table 10 summarizes the simultaneous application of rules and the development of musical ideas in the creative process of Schillinger 91. The columns are organized in time from left to right: the beginning of the creative process of Schillinger 91 is at the left, the phases in row 1 refer to the phases of the CP described in the course of action in Appendix 13. Rejected ideas or rules are underlined.

Every layer (or rule) is added to the material of the previous step. The previous rules are not revised (and only two ideas and rules are rejected) or summarized in a general rule or plan for the whole composition. In this way De Bièvre's compositional process is clearly different from the usual algorithmic composition practice (or 'Computer Generated Composition' in the terminology of David Cope (2008) where a collection of rules is at work, including a systematic relationship within the rule set. The choice of which rules are used in De Bièvre's case is intuitive and is more dictated by his musical ideas and inspirational sources (e.g. the theories of Schillinger, the 'Vertigo' chord). But the whole collection of rules (and the musical ideas discovered during these different steps) is not totally inconsistent: they retain a minimum degree of consistency and at the end it is possible to generate the instrument parts from this collection of rules (and at that point contradictions are solved by ad hoc, intuitive solutions). In this way a combination of intuition and algorithmic procedures is obtained.[16]

16 I would like to add that the sketches appear very mathematical at first sight. These sketches only show the algorithmic procedures and calculations, and there is no sign whatever of the underlying intuitive – and musically more important – decisions. These decisions were made explicit in De Bièvre's explanations of the algorithms in the interviews.

Open scores

For De Bièvre, algorithms (rather than exploring, improvising or creating a visual planning diagram) are in line with his personal preferences and general concept of music composition. De Bièvre wants to create an open score that inspires the performers to create one possible version of this material. He wants to present material to the performers that simulates their creativity. The 'advantage' of the algorithms is twofold:

1. they produce musical material which he himself does not have to produce: the material is offered to him
2. algorithms partly switch off his personal taste, intentions and expectations and create a surprise effect

The first 'advantage' relates to his preference to find material and not to construct it. When talking about the Vertigo chord (at the beginning of the CP), he adds:

> je kijkt rond u wat dat er op de vloer ligt en je pikt iets op en je denkt “ik ga daarmee werken” omdat je toch met iets moet werken, van alle miljoenen mogelijke akkoorden, why not, een keuze maken is moeilijk, 'k ga zelden naar de gitaar of naar het klavier om iets te horen, omdat, ik kan heel slecht kiezen, ik ga uiteindelijk vijf akkoorden kiezen die ik allemaal iets hebben vind en ik ga niet kunnen kiezen, terwijl als ik iets op de vloer vind, bij wijze van spreken, dan is dat gemakkelijker, dan heb ik iets en dan verplicht ik me om daarmee te werken, toch als ik vind, dat is wel een akkoord dat voldoende substantie heeft om vanalles mee te doen (post-interview 00:33:45)

The different algorithms produce musical material, helping De Bièvre to make his future composition more concrete. He can pick something that he likes from the abundant material produced. His preference for finding is also related to his fondness for chance: twice he uses a random algorithm in the CP (in phase [3], see the course of action in Appendix 13) and from the interviews it becomes clear that a certain degree of randomness is part of his composition. For example, when answering a question on the technical production of polyphony, he answers that the counterpoint emerges by accident because he has written the separate parts linearly, one by one.

The preference for chance and finding (instead of 'production') is linked to De Bièvre's main concept (see Appendix 13): he wants to involve the performers in the creation of his music. His scores try to invite the performers to realize one possible performance of this score and he does not see himself as the only author of his music. Algorithms possess a certain kind of neutrality and objectivity where the importance of the ego (of the composer) is reduced and this is possibly a better explanation for their usage by De Bièvre than their logic or consistency ('advantage' 2). This outside-domain (Katz 2012) benefit of algorithmic procedures is reflected in the importance of qualities such as 'interesting' and 'surprising' when De Bièvre evaluates his own music and musical ideas in the CP. In the pre-interview he says (in a part about the end of the CP):

> ik was tevreden met het resultaat, dus, tevredenheid, toch op dit niveau heeft te maken of dat ik, als ik het achteraf bekijk van, ben ik nu benieuwd om dat te horen of niet en ik ben benieuwd om dit te horen, dat is het beste dat ik kan doen, dus dat ik mijn eigen nieuwsgierigheid geprikkeld heb, (pre-interview 00:48:20)

The desired qualities in the end product – the open score – also play an important role when he is composing and using algorithms. It is not the question 'how does this sound?' which is most important but 'Is this surprising? Is this interesting?' (as ground material for a music performance).

If the generated material is not interesting enough, he throws the dice again with a new algorithm and looks at the resulting combination of musical material. The surprise effect is not only aimed for when De Bièvre produces the open score in the final stages of the CP: he also wants to produce this surprise effect for himself, while he is composing. The importance of imagining the *performance* of the music (more exactly: the performance based on the open score) and not imagining the music or sound itself, may explain why the composer does not really worry about some of the musical contradictions mentioned earlier. He composes music relying on his imagination of how a music rehearsal and performance functions and next he relies on the creativity of the performers, triggered by the composed score.

To conclude, De Bièvre's CP is characterized by finding a balance between rationality and intuition on the one hand and the input of the composer and the performers in the future composition on the other. In obtaining these two balances the domination of the planning activity – visualized in the generated rules – has the following important functions:

- the algorithms function as a trigger to imagine and develop important musical ideas
- to a certain degree the 'objective' algorithms operate outside the individual taste or preferences of the composer and this enhances the unexpected surprise character of the musical material during the CP, which helps the composer to imagine the future input by the performers
- the algorithms contain enough consistency to lead to an end product

7.3.2.4 Nuyts

In the CP of *Divérance*, explorative activities have a prominent place in the first phase. Here Nuyts extensively tries out and explores several ideas without knowing exactly how and where they will be used in the the future composition. After the rupture (crisis moment) in the middle of the CP (see the course of action in Appendix 14), the exploration disappears and the other creative activities, writing and rewriting appear, with systematic activities (planning) also present in phase [3] and [4]. The writing in phase [3] takes place within tight constraints (see constraints in Appendix 14). The rewriting appears in two forms: first, as a revision, elaboration or correction of a previously written sequence and as the addition of an extra layer or instrument on top of an existing sequence.

The level of musical abstraction of the compositional activities is very diverse, from high-level, extra-domain ideas (from different visual arts, in phase [1]) through mid-level ideas (combination of 'police' tunes in phase 1) to the low-level planning of durations (in phase [3] and [4]).

In general, all four compositional activities are substantially present with different levels of abstraction. The overall balance is quite similar to the one found in the CP of the composer Van Landeghem. What is important to note though, is that there is a sequential or chronological order in these activities: they do not appear simultaneously. In the CP there is change from exploration [phase I] to a configuration of writing-rewriting-planning (phases [3] to [6]).
In a paragraph on 'creative music-making as situated cultural practice' Folkestad (2012) writes:

> In our studies, context has been defined as the total situation including not only the external conditions, such as the physical environment, but also the persons involved in the practice, and the cultural and historical background of these individuals. It also includes the music that is performed and created in that situation. In short, the context is defined in the activity itself. (p. 195)

In the CP of *Divérance*, the 'persons involved in the practice' – the composer – and 'the music that is performed and created in that situation' both create the dynamics through which the four compositional activities unfold.[17] The reason why the composed music and the compositional activities can be seen (in this interpretation) to function as a dynamic force itself, is perhaps because of the sudden rupture in this CP. This moment of crisis makes the CP of *Divérance* unique compared to the other processes in this group study. In the following paragraph I will explain how this CP is not just a process between the composer (with his musical concepts and background) on the one hand and his musical material and ideas on the other. The compositional activities themselves become a dynamic force within the unfolding context.

In the analysis of the procedures (in Appendix 14) I have already written that for Nuyts the singularities of a commission (and the resulting composition) are an important issue. He wants to start from the 'given' material: the instrumentation, duration and task. In the interview it becomes clear that he also knew the context of the commission very well: Nuyts knew about my research and fascination for hyperpolyphony and he had heard my previous compositions. In the exploration phase one sees how the 'givens' of the commission trigger his creativity and searching activity. But the exploration is very open (see analysis of constraints in Appendix 14), compared to the description that he gives of his general preference for pitch and tonality based music. Extended techniques and noise-sounds are far removed from his usual artistic practice. The goal of these explorations (in this phase) is to find an inspiring connection between the givens of the commission (especially the task) on the one hand and his own personality and (musical) preferences on the other. But the exploration does not lead to a plan or a sketch with musical ideas for the future compositions. The exploration also takes a lot of time (knowing that the composer wanted to finish the piece in two days). Next comes the crisis, the moment of insight, containing ideas about what he does not want to do (no inspiration from outside music any more, no extended techniques and noisy sounds, no polytempi) and a glimpse of a new idea (the three instruments will basically play the same music with some tiny differences).

In the further development of the CP there is a sense of reaction *against* this exploration phase and its ideas, and the related task of the commission. This reaction is present both in the (anti-)discourse of the composer and the following compositional activities. It is in the latter that the dynamic force of these activities is recognized. The discourse of the composer on his new composition (see concepts on Work in Appendix 14) is already fully developed when he finishes the composition, one day after the crisis. This is observed in the email written at the end of the second day of the CP (this email contains a report of his CP). His discourse on *Divérance* contains two main elements: first, the 'minimal maximum of difference', and second, the unique pattern played by each instrument. This pattern is connected to the technical characteristics and the sound world of the instrument and it was probably added in a second moment of insight after the rupture (see phase [5] course of action in Appendix 14). The discourse developed along with the genesis of

17 I interpret the phrase 'the music that is performed and created in that situation' as also consisting of imagined music (musical ideas and sketches) because the development from nothing to a composition is studied.

the composition, but against the exploration phase and its ideas. The discourse does not contain extra-musical (visual) ideas, compared to the exploration phase: it is a purely musical narrative. Moreover, the composer repeats a few times in the interview that his composition is not related to the task of the commission anymore and he adds that 'this is maybe not what you expected from me' and 'he didn't want to write contemporary music'.

Similarly, the writing activity, immediately after the rupture, contrasts sharply with the preceding exploration. The writing is strict, almost like a technical, harmony exercise, based on three musical constraints (see 'constraints' analysis). The feeling of reaction is present in the email report that the composer has written: there is a strong sense of physicality involved which is in accordance with the force of the compositional activities in the CP.

> Ik ben zelfs filmmuziekjes gaan beluisteren (Police van Pialat/ Maigret serie, Détective van Godard en Catch me if you can van Spielberg.)
>
> Mijn oorspronkelijk idee was de generiek deuntjes gewoon op elkaar te plaatsei, in verschillende tempi. Met elementen van blues, het gehamer op het goudgele geraamte van de piano en een haast aards gekraak (door verhoogde druk) op de boog.
>
> Het resultaat was al niets voor ik er aan begon.
>
> En kleur is reflectie en klank is druk. hebben niets met elkaar te maken. Het zijn ook verschillende golfvormen)
>
> Dan was het al 5 uur in de namiddag. En het angstzweet begon mij uit te breken. (email 29 October 2011)

As a final remark I repeat that the composer has set himself a tight time constraint: within two days the composition should be finished. In the very beginning of De Bièvre's CP a similar exploration and search for a link between the commission and the individual preferences is found but there is no strict time frame, and there is also no sharp crisis. It remains an unanswered question whether the composer (consciously) applies time constraints to create autonomous dynamics of the activities within the CP.

In summary, Nuyts' CP is characterized by the presence of all four compositional activities (exploring, planning, writing, rewriting) but they do not occur simultaneously. They occur sequentially in two main phases with a crisis and an important moment of insight in the middle. This crisis provokes a clash between the ideas, discourse and (compositional) activity of the two phases. The main compositional activities, bound by a strict time frame of two days, partly create an autonomous dynamic, leading to a more strict process in the second half of the CP and a discourse that stresses the differences with the abandoned ideas from the exploration phase.

7.3.2.5 Neyrinck

In the CP of Neyrinck producing *Aphorisme IX*, there is almost no pre-compositional (pre-writing) work and revision activity. The first paper version is written with almost no mistakes (see course of action in Appendix 15). It is clear that the writing activity, the creation of music within the sequence and timing of the musical events of the new composition, is the crucial activity in his CP. There is a small amount of exploration at the beginning of the process (the lamento improvisation) and also some planning (a scheme of durations of the future composition). But the latter activity is incorporated in the writing activity: it is only visible in one detail of the draft and in a general remark on procedures in the interview. It seems as if Neyrinck is very effective in writing music and in *solving musical problems in the act of writing* music (without a need to extensively prepare the writing process or return and rewrite).

There is a salient characteristic of the CP of *Aphorisme IX*: while composing, Neyrinck disposes of a cognitive toolbox of loose, equally important techniques and procedures. It is a *toolbox* because he applies new combinations of these techniques in a new composition. He does not make any attempt to systematize these techniques or to create a personal theory of composition based on these techniques. This is why the description 'loose' and 'toolbox' is used. The absence of an overall system means there are no rules about the *relations* or interactions between these techniques and this gives him the freedom to design a combination, tailor-made for a new composition.

An important characteristic of this cognitive toolbox is that the composer is very aware of these techniques. He consciously carries these techniques, like a piece of compositional luggage, from one composition to the next. The techniques and procedures that Neyrinck sums up are the highest in number compared to the other seven composers and the character of his procedures are very technical. Other composers often cite more 'general' procedures (personal habits), e.g. Brackx states that in the beginning of the CP he thinks a lot about a piece and elaborates it mentally or Cammeren explains that he needs long 'incubation' times during which he puts a composition aside.

In the CP of the other composers studied there are also techniques or rules that are made specifically for one composition. For example, Nuyts uses a numerical rule system during his creative process to organize the (harmonic) rhythm of his new composition. In the creative process of Neyrinck composing *Aphorisme IX* there is no indication in all the sources of a rule or technique that is new and designed exclusively for this composition, apart from two small details (a pizzicato secco and death stroke). All the applied techniques and procedures have already been used in previous compositions and he dwells extensively on these technical 'links' between *Aphorisme IX* and his recent oeuvre.

The techniques in Neyrinck's cognitive toolbox exist on different levels of musical abstraction, with some related to the structure and organization of the composition and others focusing on one parameter (e.g. pitch). But the highest level of abstraction is totally absent in Neyrinck's discourse. A description of his music based on visual arts or any other domain outside of music is not be found in his interviews and correspondence. A non-musical motivation is apparent during the CP in the case of a deceased relative and the desire to write a lamento but it is remarkable how the composer struggles with this non-musical influence and finally rejects the generated compositional ideas on musical grounds. The elements that fascinate Neyrinck or that drive him to create new

works are purely musical, just like the problems that he encounters while composing. The resonance of the piano, and finding a texture that incorporates the flute and gamba in this resonance, is his main fascination and drive while composing *Aphorisme IX*, and he is equally enthusiastic about creating contrasting sections in a structure based on texture and tempo.

To summarize the cognitive actions and compositional strategies of Neyrinck composing *Aphorisme IX*: writing music is the main activity in the CP. A toolbox comprising of a large set of compositional techniques and procedures provides him with conscious technical knowledge to compose, while his imagination and creative activity solely operate within the musical domain.

7.3.2.5.1 Phenomenon: cycle composition

In the interviews and emails Neyrinck clarified that *Aphorisme IX* is part of a cycle of compositions (*Aphorisme I-XIII*). He describes the *Aphorismes* cycle as follows:

> This is a study on “how do I write or how do I want to write for a piano?” And because I didn't see possibilities in writing a large work, I opted for the *Aphorismes*, in which different possibilities of resonances and layers of resonances are researched. (email 12 December 2012)

Donin (2012) has drawn attention to the compositional strategy of 'cycle development'. On the production of series of related works the author writes:

> Here, the cycle initiates a heightened consciousness of notions and techniques neither fully noticed nor mastered within the (first) piece where they emerged. These are then included in the composer's atelier as they are applied, over the course of the cycle, to successive pieces through replication, variation and designation, or even theorisation. (p. 21)

The 'replication' strategy – as part of the cycle phenomenon – is highly relevant for the CP of *Aphorisme IX*. If the scores of the *Aphorisme* cycle (I-VIII) are studied, various techniques from *Aphorisme IX* are found:

- all cycle parts (*Aphorisme I-VIII*) explore the phenomenon of piano resonance;
- a structure based on short sections with alternating slow and fast tempi, appears in *Aphorisme VI*;
- loud chords and fast gestures on the one hand, and soft notes within the piano resonance on the other, can be found in *Aphorisme III*;
- soft notes produced with extended techniques inside the piano, in the reverb of the piano resonance, are found in *II* and *VIII*;
- the lead blocks (on the keys) to produce resonance, are exploited in *Aphorisme III, V, VII* and *VIII*.

There is some variation in the application of the techniques because the instrumentation of *Aphorisme IX* is different from all the previous *Aphorismes* (piano solo). In an email (12 December 2012) Neyrinck writes that he likes to work with cycles or series of works because he finds it interesting to let a musical starting point clash with a specific instrumentation. In the case of *Aphorisme IX*, the challenge was to test some of the techniques and procedures from the *Aphorisme* cycle and see if they could be applied with these two extra instruments.

The *Aphorisme* cycle is not the only cycle that Neyrinck has composed. In 2011, the period immediately before the CP of *Aphorisme IX*, he composed thirteen works according to his own list of works. Eleven of thirteen compositions are part of series with names such as *Samsa, Gestalt,*

Aphorismes, *Mischung* or are described by the composer as 'derivatives' of other compositions. In the latter case he uses the term 'Echo' in the title of the works, for example *Echo der Gestalt II*. The composition of cycles is not just an occasional but a substantial and important part of his compositional activity in the period just before the CP of *Aphorisme IX*. Moreover, these cycles of compositions show how deep the connections are between Neyrinck's 'separate' CPs, how transparent the boundaries between the CPs are and how difficult it is to find the right time framework to study his CPs. Ideally, one would have a long time span of one year or more to study such intertwined processes. Expressed in the terminology of Delalande (2007), one would say that the 'singularity' of a work is not a prevailing force in this CP.

The creative strategy to compose cycles of works – and in this case to compose *Aphorisme IX* as a part of the *Aphorismes* cycle – sheds a new light on the CP of *Aphorisme IX* which was earlier on described as straightforward and linear and as dominated by the writing activity. I will now take a look at this CP from a broader time segment than the one used in this group study (the period between the commission and the first performance). The post-interview with Neyrinck took place after the first performance, in the middle of rehearsals for a second performance of the work by the Odysseia Ensemble and in the post-interview the composer says that he was dissatisfied with the effect of the piano resonance after the first rehearsal and performance of *Aphorisme IX*. Next, he talks about attempts at home and in the rehearsals (for the second performance) to solve this problem by playing the chords that trigger the resonance louder, by adding notes to these chords or by changing the number of silent keys. Although only a small amount of exploration is found in the actual CP of *Aphorisme IX* (i.e. the period between the commission and the first performance), the exploration continues after the first performance and these explorations are fully in line with the general approach of the whole *Aphorismes* cycle ("in which different possibilities of resonances and layers of resonances are researched" according to the composer). This leads to a revision of the score, albeit a minor one (the range and dynamics of the piano chords that trigger the resonance are changed). The exploration phase after the first performance is also unique in this study, except for Van Landeghem no similar instances were found with the other studied composers. Moreover, seen within the light of the whole cycle, the two aforementioned details (pizzicato secco and death stroke), described as 'new' by the composer, are not disconnected details anymore on a micro-structural level: they become part of a search on a macro level – the whole cycle – to create interesting resonances and textures within these piano resonances. Consequently, creative actions that at first sight seem 'trivial' details, become meaningful on an inter-opus level.

The intertwined CPs and the earlier mentioned cognitive toolbox of compositional techniques provides an explanation for the straightforward CP of *Aphorisme IX* with its focus on writing and its minimal presence of planning, exploration or revising. Because the composer relies heavily on previous creative work (in the *Aphorisme* cycle and in other works) and feels comfortable doing so, he replicates many known procedures and directs his (minimal) exploration to one focus: the resonance phenomenon. His 'retrospective' working method (the ongoing development of 'lines' or themes from previous compositions and/or experimentations) is not a fallback method caused by a blockade or obstacle in the genesis of a composition. It is his preferred way of working and in his correspondence he clearly expresses his attachment to writing cycles, series and derivations of past compositions.

Discussion

Although the composer certainly has a high awareness of the techniques and procedures that were used in the previous parts of the cycle (the cognitive toolbox), no signs of a theorisation of the previous cycle parts were found. Donin (2012) writes about the interaction between production and theorisation during the creative process.

> Once the cycle logic is triggered, the production of pieces and their associated discourse are simultaneously revived. The latter enhances the genesis of new pieces, articulating their contribution to the global design of the cycle-in-progress. Once described, the cycle's internal necessity acts directly upon the terms used by the composer to express their project for new, forthcoming pieces of the cycle. For example, once the concept of Grisey's *Les Espaces acoustiques* was defined, all of the cycle's subsequent pieces would be structured around a low E spectrum. Compared with its limited role in the first piece composed, it took on a unifying function. (p. 21)

This unifying element and the related theorisation seem to be absent if I look at the data on the CP of *Aphorisme IX* and the analysis of the scores of the whole *Aphorismes* cycle. Instead I find a loose collection of techniques and procedures – the toolbox – linked by a common fascination for resonance (the main theme of the cycle). Based on the analysis of the scores of the whole *Aphorismes* cycle,[18] I assume that through the composition of the consecutive parts of the cycle (and the explorations, rehearsals and performances in between?), Neyrinck gradually discovers more and more techniques and procedures to compose textures with piano resonances, e.g. from *Aphorisme III* onwards he starts using lead blocks to press down keys silently and during the writing of *Aphorisme IX* he finds a way to accentuate the end of a resonance with a pizzicato secco. The absence of theorisation might be related to the low interest in coherence. The issue of coherence is seen by Donin (2012 boek) as a crucial element when composing a cycle of works but Neyrinck does not mention this concern: he does not even mention the idea of having the whole *Aphorismes* cycle performed in one concert.

Donin and Féron (2012) also conducted a study on the CP of Gervasoni, writing a part of the cycle *Gramigna*. Although in the current study of Neyrinck, there is less information on the writing phase of the CP than in the study of Gervasoni, there are some similarities between Gervasoni's CP and Neyrinck's:

- both composers start writing without much pre-compositional work, and the sketch/draft of the first version contains a minimum of corrections and revisions
- both composers write their composition as a part of a cycle of works
- both reuse existing (personal) procedures and/or musical material.

The statement on reuse is not explicitly made by Donin and Féron, but the authors do describe three examples of reuse: firstly (p. 276), when talking about the procedure of incremental adjustment of parameters between consecutive events, they write: “much evidence indicates that the use of this type of procedure is characteristic of Gervasoni’s compositional style on a broader scale.” Secondly (p. 280), while composing Gervasoni suddenly – through free association – remembers a characteristic five-note pattern from a previous string quartet *Strada non presa* (2001) and uses it in the piano part. Thirdly (p. 282), in the following parts of the *Gramigna* cycle Gervasoni reuses materials from the first part of the cycle and from an ensemble piece *Prima Prato*

18 Only one composition (*Aphorisme IX*) from the *Aphorismes* cycle was followed in this study.

Presente (2009). It should be noted that in the case of Neyrinck, there is no reuse of musical material, only of techniques and procedures.

There are more differences between the two CPs though: in Neyrinck's there are no signs that *new* rules are generated during the writing process, while this is the case in Gervasoni's compositional process. Moreover, the structure of the composition of Gervasoni, is also created while writing: he starts a new section at the point of conflict between several of his generated local rules; Neyrinck created a minimal structure in advance (a short sequence of durations of sections). These differences might be related to the fact that the studied Gramigna part is the initial piece of a cycle, while the later pieces draw upon the ideas, gestures and playing techniques of the first piece; *Aphorisme IX* is the ninth piece in a series of works and – as Neyrinck states in the interview – he has reused and replicated many techniques from previous works.

7.3.2.6 Smetryns

Exploration is an essential and recurring activity in Smetryns' CP. In the long pre-writing phase the exploration is purely cerebral: the composer is literally *thinking* about the composition. Later, while writing and rewriting his new composition, exploration reappears again, in a more physical form: a searching activity on the piano to explore the sound of the clusters and the notation of a text idea (from another composition in development). In this exploration phase the only – minor – instance of a planning activity is found: the relations between the pitches and letters are systematically written down before notating the text idea.

Abstract exploration

What is unusual about the pre-writing, exploration process, is its operation on a very high level of musical abstraction. Apart from the dynamics for the new composition, the composer does not think about low level parameters or even motives or phrases. The two inspirational images – the visual image line-point-plane on the one hand and the different attitudes of the performer visualized in different notational methods – are both abstract, although the line-point-plane image is clearly more abstract because its visual origin has no immediate links with music.

How are problems solved in this exploration on a high level of musical abstraction during the initial phases of the CP? Smetryns arrives at the double idea 'point-line-plane' and 'three-notations', next he imagines different kinds of music now and then and strikes out music that does not correspond to his own taste and this double idea. In this exploration phase, constraints play an important role (see the analysis in Appendix 16). Smetryns gradually narrows down the solution space by imagining musics that fit with his inspirational images. He scans through global solutions (as in lateral thinking) and explores music styles. Problems are not solved one by one but are bundled into global problems for which simple, overall solutions need to be found. His creative thoughts process big chunks of music. When he abandons the polyrhythmic idea (because creating three contrasting tempi is considered problematic), he not only abandons the associated musics, he simultaneously swaps all rhythmic, beat-based music for music without a regular rhythm or beat.

In this exploration phase Smetryns searches for a global solution without lapsing into the complexity of (contradictory) details. The composer is not interested in creating a musical system

for his new composition. In the long, first phase of the CP, low-level parameters are not important for the composer and creative thinking with these parameters or systems based on them does not occur. There is a striking example of his reluctance to think and explore in technical musical terms (thus on a lower level of musical abstraction): while talking about the original task in the commission, he is convinced that all the participating composers would write more or less the same composition if they were to think about the task with a set of musical parameters.

> A: als alles zo extreem mogelijk anders moet zijn, euhm allez euhm ge hebt de parameters, de muzikale parameters en iedereen doet dat, zou iedereen ongeveer met hetzelfde stuk moeten afkomen, (pre-interview 00:23:12)

How does this 'abstract' exploration prepare the writing process? Initially the triangles in the line-point-plane image (see course of action in Appendix 16) are not positioned in the same way: the right corner does not always refer to the viola da gamba. Hence initially these triangles are three independent or loose ideas. Smetryns thinks how to connect these two images (and the third subordinate image of the three dynamics) with each other. Which visual object (line or point or plane) can be linked to which notation system, or dynamics? What are the implications of such a coupling? The idea emerges to let the piano play clusters as an interpretation of the 'plane' image. There is a certain hierarchy within this piano cluster idea, related to the coupling between the main ideas and the instruments. This is revealed in the description of the cluster idea that Smetryns gives in the post-interview (00:20:13): a plane that fills up the whole space and “in which the lines and points operate”. The plane – the piano cluster – creates the basic conditions for the other two objects. The metaphor that Smetryns uses is very similar to his inspirational source, Kandinsky. In his *Point and Line to Plane* the plane relates to the canvas upon which the painting is made (“Wassily Kandinsky - Wikipedia, the Free Encyclopedia” 2014):

> it [the plane] is composed of horizontal and vertical lines which delimit it and define it as an autonomous entity which supports the painting, communicating its affective tonality.

Writing

From the moment the composer starts to write the music (phase [3], see the course of action in Appendix 16), this hierarchy is translated in a *procedure*, a sequence of compositional actions in time. First the piano part is composed as a basic layer upon which the two other layers (instrument parts) can be built. Next the flute and finally the viola da gamba part is composed. To a greater or lesser extent, the three parts are revised after being composed. Information from the interviews clarifies that the two main ideas remain important in this phase as a criterion to evaluate the changes. In the corrections on the sketches one also observes the influence of the notation idea and examines how it leads to contradictions in the synchronization of the piano and flute part.[19] Consequently, the two inspirational ideas are present from the very beginning of the CP and they play an important role during the whole process.

19 The notation idea implied a 'relative time' notation for the piano, i.e. a timing which depended on the flute part, but after making some corrections in the cues and time indications, the composers arrives at a solution which includes exceptions to the 'relative time' notation.

Abstract ideas

The 'point-line-plane' idea remains unchanged; it is not really affected by the writing or exploration process. How can a multimodal, global inspirational idea stay productive and remain (almost) unchanged during the whole CP? In the CPs of De Bièvre, Van Landeghem and Nuyts the ideas are blurred by the compositional activities (De Bièvre), seriously changed through the interaction with other creative forces (the twelve-tone series in Van Landeghem's case) or even abandoned (visual ideas in Nuyts' CP). The main reason for the persistence of abstract ideas in Smetryns' case lies in his simple mapping between the visual and the musical domain, i.e. the plane is mapped on the piano clusters, the line on a chromatic descending or ascending melodic line and the points on staccato notes played by the gamba. The whole mapping may have been constructed unconsciously, because the composer only describes the separate mappings, one by one, at different moments in the interviews.

When Smetryns abandons changes to the flute part because they do not fit with his main ideas, he uses the adjectives 'simple' ('eenvoudig'), 'clear' ('duidelijk') and the (difficult to translate) description 'thing-like' ('zakelijk' in Dutch).

> A: euhm, zo effectief, bedoel dat, eigenlijk, omdat, mijn materiaal is eigenlijk, is eigenlijk eenvoudig é, kheb ook nog een versie proberen doen, waarbij dat het wat gemaniëreerder ging zijn, maar kheb dan besloten om dat niet te doen, om echt gewoon, omdat ik dacht dat dat duidelijker ging zijn. (pre-interview 00:04:56)

> A: ja, ik heb euh, maar zo de dingen die ik neergeschreven heb zijn zo driehoekskes met zo op elk punt een woord, ja, en dan is er nog een kleine, een poging om die fluitpartij melodieuzer te maken, maar kheb dat heel snel opgegeven omdat kzag och, ja, dat verdoezelt het basisconcept, ja zo van lijn punt, kwou dat zo wat zakelijk houden. (pre-interview 00:30:53)

The straightforward mapping and his description of the compositional ideas create a link with the composer's aesthetic preference for simplicity (or essential characteristics), and the main inspirational source: Kandinsky's book *Point and Line to Plane*. This theoretical work was written in 1926 while working at the Bauhaus. The paintings of Kandinsky in this period are a testimony to his fascination for simple, basic forms and colours. This is how Smetryns' compositional work is described on the website of the concert hall De Bijloke (“Thomas Smetryns - De Bijloke” 2014), again with adjectives like 'clear' and 'simple':

> De laatste jaren krijgen Smetryns’ werken steeds vaker vorm als grafische partituren. Hij begon in 2009 zelfs aan een opleiding grafiek, onder meer om zijn muzikale ideeën beter, scherper, mooier op papier te zetten. Vandaag balanceert die beeldende notatievorm tussen zelfstandig artistiek object en speelbare partituur. Innerlijke muziek, zegt de componist. In het partituurbeeld probeert hij de kern van de compositie zo helder en eenvoudig mogelijk weer te geven, onmiskenbaar, maar met de openheid naar een variabele invulling ervan.

There are also other links between the 'abstract' compositional activities in his CP on the one hand and his aesthetic views and compositional experience on the other. Smetryns has already a lot of experience in dealing with 'visual' matters while composing: many of his compositions are graphical scores and – as he explains in the interview – other works have been inspired by visual

sources.[20] The important role of the high level of abstraction in his compositional activities and his processing of big chunks of music probably builds upon his experience of composing with material from several genres and styles, such as big band music in *A=a=a=a=…* (2005), Darius Milhaud in *La Création d'un Monde* (2005), *Extremely slowed down 17th century Turkish melody with variations* (2007) and *Tannhauser environment* for 2 tubas. An additional benefit of the use of abstract, inspirational images while composing, is an overview of his composition in development, when he is working with these big chunks of music.

Summary
The cognitive and compositional activities in the CP of *Point and Line to Plane* are summarized as follows: the pre-writing phase operates at a high level of musical abstraction. During this exploration, the inspirational ideas are elaborated and this does not lead to a consistent system or a plan for the new composition, but to a higher awareness of the (hierarchic) relations between the ideas and an 'activity plan': a sequence of compositional actions to be performed during the writing phase. Problems are solved in this exploratory phase by processing big chunks of music and searching for simple, global solutions.

An abstract idea from outside the musical domain is productive and remains almost unchanged during the *whole* CP, writing and rewriting periods included. This observation corresponds with the composer's aesthetic preference for simple and conceptual music.

> Componeren kan heel veel betekenen voor Smetryns Smetryns. Wat hem fascineert, zijn de zovele mogelijke dimensies van muziek, de uiteenlopende rollen die weggelegd kunnen zijn voor musici en componisten, zowel doorheen de eeuwen als in de postmoderne wereld van vandaag. “Schrijf maar op”, zegt hij, “dat ik droom van manieren om een breed publiek aan te spreken met muziek die je conceptueel zou kunnen noemen.” (“Thomas Smetryns - De Bijloke” 2014)

7.3.2.7 Van Landeghem

The CP of Van Landeghem contains a rich and balanced collection of compositional activities: all four activities (planning, exploration, writing, rewriting) are present and function at different levels of musical abstraction. Planning consists of systematically ordering pitches (in twelve-tone series), exploration is found in the loose musical ideas (in music notation) on the paper sketches and rewriting emerges when the first draft (in phase [5], see the detailed course of action in Appendix 17) is being revised.

Creating systems, more specifically pitch systems, plays an important role in the Van Landeghem's act of composition. These systems are not just an ordered, intellectual construction, they are also very productive. Van Landeghem's creative imagination mainly functions through and thanks to this system-building (in the planning activity). This is detected in the sketches (see phase [3]): in fact four out of five loose ideas on the sketches are based on the twelve-tone series, while only one rhythmic idea refers to the germinal Carnatic idea) but also in the enthusiasm with which he talks about the potential of these systems in the interviews. In these interviews he states that the twelve-tone series of *Yantra* is a new one and that he considers it very successful. In the pre-

20 The composer has in fact written a previous work based on Kandinsky, called V*on Punkt und Linie zur Fläche* (2002)

interview he has several plans for new compositions based on the twelve-tone series.

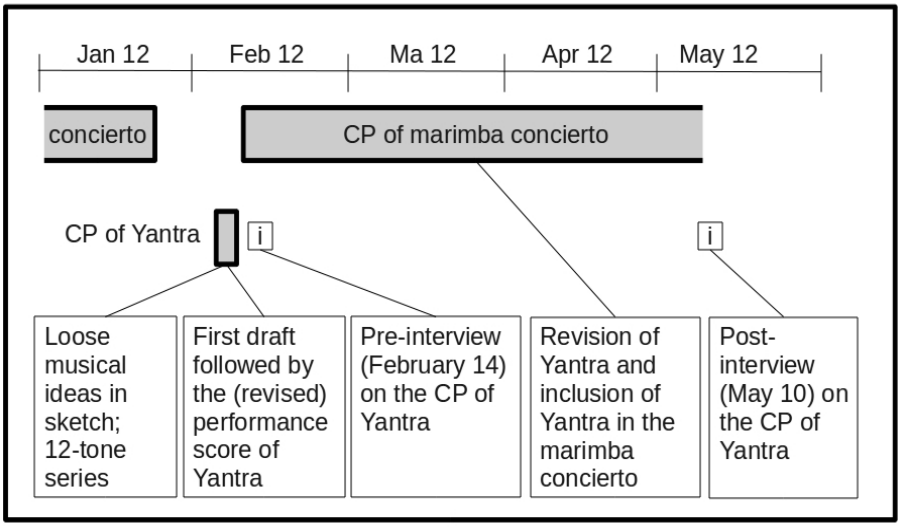
Van Landeghem succeeds in linking the systematization of low-level parameters with features at a higher level of musical abstraction and finally connecting all these levels with a metastory. In the interviews, his discourse on twelve-tone systems seamlessly segues into a story on simultaneous, stylistically different layers in music ('polysystematics') and this is related to an aesthetic vision and a personal philosophy (with key terms such as multiculturalism, Indian yoga, conflict and reconciliation etc.). Finally, this low-level pitch system creates links with other (existing and planned) compositions. Not only does the composer point out this inter-opus connection in the interviews but this connection is also clearly visible in the evolution of the initial *Yantra* ideas into the marimba concerto, into which parts of *Yantra* have been inserted and merged.

7.3.2.7.1 Phenomenon: progressive revision

In the creative process of *Yantra* and the marimba concierto, an interesting cognitive phenomenon toke place through which the composer became aware of the large potential of *Yantra* and its musical material. Closely related to this development, was a department from the original (Carnatic) polyrythmic idea for *Yantra* to a more harmonic revision and realization of *Yantra* as part of the marimba concierto. To observe this phenomenon a wider time frame (than the one used in this study, i.e. the duration between the commission and the first performance) is used. This phenomenon of 'progressive revisioning', is a special kind of the main rewriting activity.

To describe and explain this cognitive phenomenon I will first repeat some findings from the previous analysis of the course of action in the CP of *Yantra*. The following Illustration 22 also displays the chronology of the drafts and interviews.

Illustration 22: Timeline of the revision of Yantra by Van Landeghem



The first section of the first draft of Yantra is still fully in line with the original idea to create

rhythmically independent parts as in Carnatic music. This first section is also based on some loose musical sketches which were in their turn based on the twelve-tone series, specifically designed for this composition. In this series there is a preponderance of 'harmonic ' intervals (thirds, fourths and fifths). In the following two sections of this first draft a climax and coda appear (based on a G major triade followed by A major). In the last bar the bell chord suddenly appears (A minor chord on top of a A major chord in the bass). In the interviews the composer expressed his special fondness for this bell chord and he described (pre-interview 00:26:00) the end of the piece (with the A major chord and the related bell chord on A) as a 'moment of light' where Catholic bells and Hinduism come together.

I describe these two elements (the climax based on major triads and bell chord in the coda) as self-generated, i.e. they were generated during the writing process and not planned in advance. No 'hard' evidence exists to prove that they both were unplanned, i.e. there was no real-time interview or report during or immediately after phase [4]. But there are three serious indications that these two elements were generated during the writing process: firstly, all the preparatory activities (in phases [3]) relate to the first section of the draft, secondly, there is a note of surprise when the composer talks about writing the climax and the coda:

> dus als ik vanuit dit akkoord, hier heb ik achterstevoren gecomponeerd, ik zeg, kijk dit is een leuk samengaan, het la groot akkoord, dat is een leuk samengaan, daar kom ik op het einde op toe, dat wordt dan een soort koper (?) akkoord é, een la groot akkoord, dat wordt een beetje spectraal eigenlijk, (pre-interview 00:13:59)

Thirdly, I performed an analysis of the score (of the first draft) focusing on its pitch series and no relation was found between the pitch series or scales used (in the last bars) and the bell chord (more specifically, the pitch c in this chord). It would have been more 'logical' according to the pitch series to end the piece with the A major chord.

In the following draft of *Yantra* (the performance score, in phase [5], see the detailed course of action in Appendix 17) the influence of these two elements becomes clear while at the same time the original Carnatic polyrhythmic idea looses its dominating position. The climax has a longer anticipation in which the flute and the piano start sharing a common rhythm and the piano starts playing major triads at an earlier stage.

In fact the writing process (in stage [4]), and its own dynamic, has created results whose potential the composer gradually starts to realize. In the pre-interview the composer is very enthusiastic about the twelve-tone series that he developed for *Yantra*. He extensively describes the pitch systems (twelve-tone series, inversions, hexachords etc.) and how they are applied in *Yantra*. He also has new plans for *Yantra* and the twelve-tone series: he speaks about using *Yantra* in his current version of the marimba concierto (pre-interview 00:29:00) and thinks about adding six other trio pieces related to the Indian chakras (pre-interview 00:26:00). Consequently he would create a multi-movement trio of which *Yantra* would be a part. A few months later in the post-interview, - when he has already finished the marimba concierto with a rewritten *Yantra* section – he again states that *Yantra* and the twelve-tone series have a lot of potential and that he is considering making a piano trio or piano quartet based on this material (and on the gamba part as a kind of cantus firmus).

> A: ja, het zit volledig in de lijn van mijn denken en van mijn uitdagingen voor mezelf, en ik denk

> eraan van dat idee en ook dat materiaal verder te gebruiken in mijn werk, dit, ik krijg goesting om eraan te werken, verstaat ge, in mijn hoofd begint een kronkel te ontstaan van, dat kan ik doen met dat materiaal, (pre-interview 00:37:00)

> A: da 's weer een andere benadering, waarbij dat dus die cantus firmus, ik noem dat mijn cantus firmus, die kan een stuk blijven, die kan misschien troperen, waar dat vanalles mee gaat gebeuren, omdat ik het idee, door jouw vraag eigenlijk bijzonder interessant vind als uitgangspunt, maar het concept is mij interessant om nog een werk van te maken, omdat het seriële materiaal voor mij, ik voel me daar goed bij, ik voel me daar gelukkig mee, en dan moet je dat nog een tijdje aanhouden, totdat je weer uitgeblust zijt, (post-interview 00:18:49)

To further describe and explain this cognitive phenomenon, I will now examine the marimba concierto and more specifically the reuse of *Yantra* as a second part in this concierto (because in the other parts of this thesis only the previous versions of *Yantra* were studied). This part of the marimba concierto is titled *Divine Island* and additionally *Notturno-Lento Mysterioso-Choral*. It was written in the months after *Yantra* was composed, between the pre- and post-interview. Table 11 represents a comparative score analysis between this Notturno and the previous versions of *Yantra*. The most important changes in the Notturno are:

1. harmonies play a more important role
2. fifths and major/minor triads occur frequently throughout the whole part
3. motives and gestures from sections in *Yantra* now appear in the whole piece
4. the role of polyrhythms (and of polytonalities) is reduced

Versions	**First section**	**Second Section *(from F major chord)***	**Third Section (Coda) *(from G major chord)***
First draft of *Yantra*	polyrhythmic polyphony with 3 voices	polyrhythmic polyphony with 3 voices, harmonic layer (major triads) in left hand of piano	3 voices gradually disappear (moriendo), harmonic layer continuously present
Performance score of *Yantra*	polyrhythmic polyphony with 3 voices and appearance of harmonic layer (major triads) after 5 bars	(two extra bars added to duration) polyphony with 3 voices (but two in parallell), harmonic layer (major triads) in the left hand of the piano	second voice moriendo, harmonic layer
Notturno (in the marimba concierto)	a harmonic layer from the start, one continuous voice (the previous gamba part) and a sporadic second fast voice (bars 237, 240-243)	(one bar added) Polyphony with two voices, harmonic layer (major triads)	second voice moriendo, harmonic layer

Table 11: Comparative analysis of the versions of Yantra

In general more harmony and consistency in motives and material appears in the *Notturno*. For example, the composer also uses the bell chord (with G as ground) in the first section of *Yantra/Notturno* and in this case it fits into the local twelve-tone series.

Over a period of several months, the reflection or analysis by the composer of his own *Yantra* versions influences his vision and work on *Yantra* and the following marimba concierto (included the revision of *Yantra*). This kind of revision/rewriting of previous versions is not unusual: it can be interpreted as self-learning (Folkestad 2012). The composer becomes more aware of the 'affordance' of the previously written composition and its material. Through the reflection and rewriting the twelve-tone series grows from a system designed for one composition into a system that is used across several finished and unfinished compositions and is intended to be used in future, planned works. To avoid misunderstandings: the reflection does not lead to a new twelve-tone series in this case. Van Landeghem increasingly realised what the harmonic potential of his *Yantra* twelve-tone series was, how he could create modal and tonal harmonies based on the series, and finally he also realized that the bell chord fitted in the *Yantra* twelve-tone series. In the post-interview (00:05:28) he also recounts how this series started influencing the whole pitch organization of his marimba concierto, thus not only of the Notturno part. He states that “for the unity of this concierto it was a good series.”

The twelve-tone series and its functioning and application should not be understood in a strict, algorithmic sense. First, because Van Landeghem freely derives secondary rule systems (hexachords, tonal harmonies by combining every two or three pitches from a series) from the main twelve-tone series and permits himself to choose one of these systems based on preferences at that moment. Second, the accounts about his marimba concierto from the interviews reconfirm the link between low-level and higher level parameters of musical abstraction within an 'imaginative machine', a system which triggers the composer to imagine new music and new musical ideas. Thus, this system is primarily productive and not always systematic.

An amount of theorizing of own actions and its results is certainly part of this 'progressive revision' phenomenon, as noted by Donin (2012, 21) in relation to cycle composition. The discourse of the composer stresses the systematized nature of his actions, drafts and compositions. This contrasts with the short and vague character of the narrative on the genesis of the new, discovered elements. From his explanations one might get the impression that the pitch organisation in *Yantra* and the *Notturno* follows a strict logic. Especially in the case of *Yantra* this is not an accurate description. My score analysis of the pitch series found several bars (in *Yantra*) without a pitch system or a very 'loose' one (a transition between different pitch series). Thus his discourse has to be understood as an account of the *potential* of (and the enthusiasm for) the twelve-tone series. Together, the two *Yantra* drafts, the *Notturno* and other parts in the marimba concierto bear evidence of a wide range of possible combinations of the *Yantra* twelve-tone series. The final draft of *Yantra* is only a sub-collection of the possibilities. These possibilities were very present in his thoughts during the period in which the two interviews were taken and this provides an explanation for the high number of references to the twelve-tone system and the connected theorizations. In essence his theories are forward-looking: they aim at producing new music. They are not to be confused with retro-active rule systems, meant to explain and analyse past products. In parallel with the theorization, there is a trend towards more systematization if the scores of the

different versions are analysed. But one should take care of describing the first draft as unplanned because on the one hand, the twelve-tone series was already designed before this draft and on the other, this draft is also clearly influenced by his ideas about independent rhythmical lines as in Carnatic music. But the *Notturno* from the marimba concierto clearly uses motives and procedures (in combining twelve-tone and tonal pitch systems) in a more systematic way and becomes further removed from the Carnatic influences in the first draft. In this case the second half of the first draft functions as a resource pool from which these motives and procedures are drawn.

Discussion

There are several similarities between this 'progressive revision' phenomenon and the compositional strategy of 'cycle development' as described by Donin (2012):

> There are two remarkable phenomena worth mentioning with regard to this compositional strategy of 'cycle development' (mise en cycle). The first pertains to the emergence of categories and techniques: a cycle is often the result of compositional ideas stemming from a first piece that compel further elaboration. Here, the cycle initiates a heightened consciousness of notions and techniques neither fully noticed nor mastered within the (first) piece where they emerged. These are then included in the composer's atelier as they are applied, over the course of the cycle, to successive pieces through replication, variation and designation, or even theorisation. (p. 21)

If in the previous quote 'first piece' is replaced by 'first draft', and 'cycle' by the two compositions *Yantra* and the marimba concierto, an accurate description of the 'progressive revising' in the creative process of *Yantra* and the marimba concierto results. The (second half of the) first draft of *Yantra* initiates changes in the next drafts and the marimba concierto; simultaneously Van Landeghem becomes more conscious of the procedures and systems that he has used. Of course the difference is that *Yantra* and the marimba concierto do not constitute a *cycle* of works. According to Donin the issue of coherence is of crucial importance in the creation of cycle of compositions. What Van Landeghem did, was take the short composition *Yantra* and its twelve-tone procedures to create more coherence and unity in the marimba concierto. He describes this working method and the concern of coherence quite well in the interviews (pre-interview 00:30:26, post-interview 00:05:25 and 00:13:52), but he does not call the concierto or the combination of *Yantra* and the concierto a cycle of works. In the latter case the different instrumentation may be the obvious reason (the chance that the trio and the orchestral piece would be performed at the same concert are very small if one takes current concert practice in Belgium into account). There is a remarkable detail: at a specific moment he was thinking of a series of works that could be called a cycle. In the pre-interview (00:26:00) he expresses his plans to write a series of six pieces for the same trio instrumentation, all based on the procedures used in *Yantra* and all related to the Indian chakras. There was an intention to write a cycle of works but practical considerations – the marimba concierto and its instrumentation – made this impossible.

The 'progressive revising' phenomenon is summarized as a rewriting process that adds new elements – compared to the pre-compositional planning and exploration – to the composition. Through the rewriting and reflecting process, the composer becomes aware of and enthusiastic about the potential of this unplanned material and rewrites the previous draft. The enthusiasm for

the extra affordances of the material stretches across the boundaries of one composition and leads to the rewriting of a second composition (the marimba concierto) based on the insights gained. The discourse of the composer stresses the systematized nature of his drafts and compositions but should mainly be interpreted as an expression of the discovered potential of the new material.

7.3.2.8 Vermote

In the CP of Vermote composing *Skizze*, exploratory activities are prominently present, although they only appear in the long (more than three months) preparatory part of the CP [phase 1 to 4]. Compared to the other composers in this study, the explorations and musical ideas of Vermote are high in number and diverse in nature. In the following part of the CP, the act of writing the music dominates, although a small amount of rewriting takes place. During the writing process, the immediately preceding bars are (sometimes) revised (see course of action in Appendix 18, phase [5]).

Vermote's compositional activities and imagination function exclusively within the musical domain, with hardly any extra-musical descriptions or terms found in her interviews and sketches. All her ideas are musical ideas although they are notated in both text and music notation. Her imagination functions on different levels of musical abstraction: there are several ideas related to low-level parameters such as pitch (the spectral idea), while another group operates on a mid-level where phrases or configurations of simultaneous layers appear. Examples of more abstract ideas are the three characters for each instrument in the sketches but ideas about the structure or development of a composition are not present. Accordingly, several levels of musical abstraction are present but the highest level – which offers a general and global view of (her) music – is absent. This is of course in line with the absence of extra-musical ideas described above (see concepts in Appendix 18).

To understand the relation between the two main compositional activities – exploration and writing – in the case of *Skizze*, one needs to closely examine two observations that were made by the composer in the interviews. First, Vermote states that it is important for her to engage in the specific topic and context of the commission. This is not just a statement: this attitude can be detected in the first sketches which start almost like an exercise or examination, with clear statements about the task in the commission, questions and answers full of lists of parameters related to the task. As the sketch progresses from page one to (the end of) two, this investigation turns into a chain of exploratory and creative activities: she starts to imagine (music) examples as solutions for the task. In this way her creativity is triggered by the givens of the commission.

Secondly, the composer explains that she works very intuitively and impulsively. She has a lot of different ideas while composing (noticeable in the phases [1] to [4]), she puts other work aside when she has an idea or new insight, and she often forgets what she had been doing in the past. She is confident that many of the best ideas will appear again consciously or exert their unconscious influence once she starts writing. By comparing the sketches and the interviews, a remarkable example of this intuitive working method was found. While producing the first sketches in phase [1], she notates three characters (for every instrumental part) at the end of the sketch. Then it takes about 4 to 5 weeks before she actually starts composing/writing, and another 10 days before she finishes *Skizze*. The same day she is interviewed and she repeats twice (in response to different

questions) that these characters were only added at the very end of the CP, when the whole piece was written. She says that she was somewhat surprised to observe that every part in her composition had a different character.

> 't is eigenlijk meer de constatatie achterna, dat ik denk van tiens, dat is van karakter, da 's hier verschillend, ik heb vooral muziektechnisch het verschil gedaan, en dan achterna gezien, en ook individueel de stemmen doorgelezen, (pre-interview 00:12:35)

But the composer herself had already thought about the different characters that the instrument parts should have, and notated them on the sketch approximately one and a half months in advance!

The whole preparatory exploration phase ensures that she had internalized the main givens of the commission, so she could proceed to write intuitively and ensure that there is a link with the commission. Accordingly she found a way to reconcile the possible tension between the intuitive working mode, which might lead her to a totally different context and music than the one from the commission, and the goal to stay close to the commission. The internalization is the main result of the exploration phase, which does not result in a notated plan or system (such as Van Landeghem's twelve-tone series), the gradual elaboration of the main compositional idea (as in Smetryns' CP) or a collection of material and music fragments (as in Van Landeghem's CP). Her own mind – and the preparation of the right musical mind-set – is the main object of the exploration. Through the exploration of ideas related to the commission, Vermote becomes aware of:

1. the affordance of the material (in this case the task in the commission)
2. her personal taste and aesthetic preferences in relation to this task
3. her ability to solve problems contained in the commission.

The awareness of the affordances is detected by comparing the final score with the preparatory sketches. Several similarities can be found, e.g. the prevalence of fourth and fifth intervals in the gamba part, the sevenths in the flute part, the longer rhythmic values in the same part. But at the same time, some explorations in the sketches leave no traces on the final composition. For example, no similarities can be found (in the analysis of both the score and the interviews) between the 'anti-version' in stage [2] and *Skizze*. Some differences between the exploratory ideas and the final score are given a (short) explanation by the composer, others are not. An awareness of her aesthetic preferences in relation to the task is audible when she explains why she did not use the idea with a tonal melody in the gamba. She tells that the differences will become too big and doubts if the instruments will still fit together. The element of awareness of personal abilities was already described in the analysis of the constraints in her CP (see Appendix 18) and in statements on finding easy to apply technical, musical solutions.

Conclusion

Exploring followed by writing are the two dominant activities in Vermote's CP. Through the exploration she becomes aware of the musical affordances, aesthetic preferences and compositional abilities in relation to the commission. The exploration functions as a preparatory exercise for the writing process, through which she internalizes the main givens of the commission. In this way she reconciles an intuitive composition style, characterised by a rich and abundant imagination and creation of ideas, with the wish to stay close to the commission.

7.3.3 Member validation

In July 2014 – more than two years after the actual CPs – I sent the interpretations of the activities in the individual CPs to the eight composers to see if my interpretation was confirmed. One composer (Cammeren) chose not to read and comment the interpretation. Five composers (Neyrinck, Smetryns, Van Landeghem, Nuyts and Vermote) agreed and were enthusiastic about the text. Nuyts agreed with the focus on a crisis moment, and stressed that he needed such a moment to start composing.
Two composers had remarks. Broadly speaking, Brackx did agree with the interpretation but he stated that his short composition was a technical and philosophical task rather than an artistic work. He stressed that there was no link whatsoever between PolyStudy and his usual compositional work, which he describes as an expression leading to an aesthetic result.

De Bièvre finds the interpretation fascinating – especially the focus on algorithms – but he did not agree with the interpretation of the algorithmic process as 'objective', not tied to his individual preferences. He saw composing as determining a domain of aesthetic preferences. He stressed that he had *chosen* the Vertigo chord, based on his personal taste. He added that nowadays he is especially interested in the role of improvisation in the composition process.

7.3.4 Discussion of the main activities in the analysis

7.3.4.1 Graphic representations

Creating an overview of the four main activities and the level of musical abstraction in all the processes studied can function as a tool to discover both common and/or individual phenomena. Hence I have designed a visual representation that enabled me to have an overview of all studied CPs. The four main activities, their importance, and the sequential order in which they took place are represented, along with the level of musical abstraction. The activities in italic stand for the outside sequence activities, while the in sequence ones are notated normally. Together with the detailed analysis and interpretation of the activities in the individual CPs in the previous chapter, this visualization creates the background against which I will discuss further insights into these compositional activities.

Illustration 23: Overview of the main compositional activities in the group study

7.3.4.2 A configuration of compositional activities

In the overview of the main compositional activities in the eight studied CPs, one notices that the *configuration* of these activities is a characteristic and important element. Configuration stands for

- the selective presence of the four compositional activities: which activities are present and which not?
- the sequential order in which the selected activities take place in the CP: is there an outspoken sequential order between the main compositional activities? are there simultaneous, interwoven activities?
- the hierarchical or equal relationship between the activities: is there a dominating activity or not?

By examining one compositional activity within a configuration, one learns more about the nature of an activity within its context. Let us take 'writing' as an example. In chapter 7.3.1, I gave an abstract description of this definition as “an activity producing a detailed sequence of musical events for the new composition without having a detailed future sequence.” In the CPs of De Bièvre a configuration [exploration->planning->writing] is found while in the case of Cammeren there is a [writing->rewriting] configuration. In the latter CP the writing is almost an intuitive, exploratory activity that produces a temporarily version of the new composition upon which the composer can reflect. Because prewriting activities are almost non-existent (apart from the arrival of the inspirational idea), there are still many features and problems that the composer has to sort out (structure, potential of the sound material, instrumentation etc.). The writing provides an inspirational idea and a detailed sequence of music, and next the composer starts to shape the composition from this 'raw material'. De Bièvre, on the contrary, has already designed the structure, the function of the instruments, the pitch and duration systems and so on before he writes down the parts. When he is writing in this final stage, his writing takes place within a constructed framework. Expressed by a slightly exaggerated image: while in Cammeren's CP, writing delivers the material for the main rewriting process, writing is a postscript to the main planning activity in De Bièvre's CP.

7.3.4.2.1 Structural rewriting and the [writing->rewriting] configuration

Not only writing but also the other compositional activities can have a different content according to their place in the configuration. In the current study of eight composers, the rewriting activity appears in three forms:

1. structural rewriting: changing the structure (or form) of a composition by a recursive process of rewriting
2. revising: adapting local characteristics of the composition without fundamentally changing the structure (elaborating details, adding an instrument or a short section, local editing)
3. 'scaffolded rewriting': preceded by a 'simple' writing process (in which a sequence of a limited set of parameters is notated), the rewriting gradually adds more features and layers on top of the initial layer

The second form of rewriting appears most (in the CPs of Smetryns, Van Landeghem and Vermote) while the scaffolded rewriting only appears in Nuyts' CP. Nuyts first writes a layer based on two parameters: harmony (chords) and harmonic rhythm, next, the melodic patterns per instrument are

stacked on top of this first layer. This particular composition procedure is also clearly noticeable in the structural mapping visualisation (chapter 6.2.4). The 'scaffolded rewriting' bears some resemblance to the production of a compressed short score, known as the particella, found in sketch studies of composers such as Schubert and Wagner (Marston 2001).

Overall, in the eight CPs studied, structural rewriting does not appear a lot (once prominently in the CP of Cammeren and a second time in a very simple form in the last phase of the CP of Nuyts). But in the self-study by the jazz composer Newman (2008) another example of this structural rewriting is found. In the evolution of the form he describes (the 'compositional order' p. 157) and the accompanying table (p. 179), which summarizes the consecutive structural changes, this form of rewriting is clearly visible. What is interesting in Newman's CP is that a gradual transition between the main compositional activities is present. No kind of gradual transition between two main activities was found in the present group study. In general Newman's CP can be labelled as an [exploration->rewriting] configuration but the exploration gradually transforms into the rewriting activity as the sequence of musical events becomes more firm. This is how he describes the evolution of form in his CP:

> This particular analysis shows how the form started with little, one-section parts; as these pieces or parts grew in size and developed different sections, they were placed next to other parts. The overall shape went from a state of fluidity to firmness; like tectonic plates shifting on a fluid surface, these larger parts were readjusted over my compositional process until I arrived at the final shape of the piece. (p. 176)

In the beginning of the CP he explores several (loose) motives without having an idea of the form, next he starts having vague ideas about the form while moving and adjusting these short sections, described as a 'liquid' form. During the transition phase he also creates new motives, e.g. a 'downward spiralling sequence', without a clear idea about the formal role of this new motive:

> Not conceiving it as an interlude here in the sketch, I think of it as a separate part and do not really know where it goes—I put it after sketch part B (p. 177)

A few days later the form becomes more firm and from then on his activity can be labelled as structural rewriting and revising: he keeps on moving, cutting and pasting sections while elaborating and refining sections but compared to the previous phases he has a more fixed vision of the form of the composition in development.

The CP of Newman (2008) shows that a chronological order of the main activities does not mean that the activities are strictly separated; there can be gradual transitions between activities.

The configuration [writing->rewriting] only appears once in the current group study in the case of Cammeren. I believe that there are indications to state that the CP of the film composer studied by Collins (Collins 2005, 2007) also can be classified as having the same configuration. Likewise, Cammeren the film composer writes fast and intuitively, which reinforces the impression that the writing mainly delivers the material for the rewriting process. Collins (2005, 203-204) describes how the two major themes (for the composition) were composed within hours of each other on the first day, and the third theme was written before the studied CP and 'imported'. Collins also notes “the composer's reluctance to change, or possibly, abandon the two major themes”, which resembles the mystification of the writing process in Cammeren's case. Moreover, the 'structural rewriting' is highly present in the following phases of the CP of the film composer. Collins calls

this “the convolution of thematic placement” and this rewriting is also clearly present in his visualization, the structural mapping (Collins 2007, 252). The film composer spends much time on moving sections (themes), deriving other sections from existing material, and elaborating/adapting the instrumentation, phrasing, and other forms of small-scale editing work.

The similarity of the compositional activities between the CPs of Cammeren and Collins' film composer, brings up the question on how general – or configuration-specific – the model proposed by Collins is. In the analysis of Cammeren's process I emphasized the high amount of evaluations and the fact that the structure was transformed through the process of rewriting. Collins' model (see p. 15) emphasizes the recursivity of the problem-solving process and structure as one of the main problems to be solved. Collins' detailed and complicated model may be caused by the specific configuration which in Cammeren's case was characterized by the high number of problems to be solved in the rewriting phase. These problems arose because there were no pre-writing activities and the writing activity itself occurred so fast and intuitively.

There was another configuration of activities, the one dominated by the writing activity, which appeared only once in the group study. But in the analysis of Neyrinck's CP, the comparison was made with the CP of Gervasoni, as studied by Donin and Féron (2012). In both cases the writing activity dominates in a process that is part of a global CP of cycle compositions.

The previous comparisons of the structural rewriting and the 'unique' configurations within the current study, show that some of the results may be more general than expected in a study of eight composers.

To apply similar criteria to the analysis of the main activities, I designed an analysis framework, based upon the distinction between in sequence and outside sequence activities. The four activities – exploring, planning, writing and rewriting – do not appear in all the CPs of this group study but at least one of these activities is always present. Consequently, I could analyse all the CPs through the analysis framework designed. As a tool for studying a diverse range of CPs, the framework was successful. One might wonder how effective other categorizations would have been if applied as an analysis tool. Folkestad (1996) has made a distinction between horizontal and vertical music creation, based on a study of young people (see chapter 1 on p. 89). But this categorization neglects the outside sequence activities. Consequently, the exploring and planning activities, which are crucial in the Cps of Brackx, Nuyts, De Bièvre, Smetryns, Van Landeghem and Vermote, would be given less attention in an analysis based on these categories. The two 'directions' proposed by Donin (2012), consisting of synoptic planning and the primacy of heuristic ideation (again, see chapter 1), would have provided a valuable starting point to analyse the CPs of Brackx, Van Landeghem or Neyrinck but Vermote's and Cammeren's CP would be hard to fit into one of these two 'directions'. The pre-writing phases in Vermote's CP are characterised by exploration without any global concept or form being elaborated in advance (and this contradicts the synoptic planning 'direction'). But while the writing phase is important in her case to give the composition a tangible form, many essential (but fragmented) characteristics of the composition were already part of her explorations, thus it is not the writing process that gives the composition its main properties (which distinguished it from the 'primacy of heuristic ideation' direction). It is important to note that the previous two literature examples were categorizations which are results of studies, while the four activities in my framework are not the results – and thus not the main activities in CPs – but a

analysis tool, a lens through which activities in the CP can be studied.

7.3.4.3 Future questions

Three important questions arise out of the results of the configurations of compositional activities. Firstly, how flexible or steady is such a configuration? Does it change when a composer produces another (new) work? Secondly, which forces shape such a configuration? What are the major influences? Third, what is the relationship between the configuration of main compositional activities and the finer-grained activities at a micro-level?

These questions can only be answered in future studies. The last question was not answered in the current study because the amount of (real-time) data per CP is too small (compared to other studies)(see p. 70). I will add some remarks here which show an overall direction in which future answers, mainly to the second question, are to be found.

In the discussion on the influence of the task (p. 110), I have already written that there are clearly different reactions to 'new' elements in the CP, more specifically the task and the viola da gamba. In some cases these new elements become an important force in the CP, while in others they are merely marginal elements. Composers react differently to new elements and situations in a CP.

In the analyses and interpretations of the individual CPs, the aesthetic and artistic vision (and choices) of the composer played a role in some CPs. In the case of Smetryns and De Bièvre, I noticed a 'problem' (the very abstract exploration mode of Smetryns, the strange combination of analytical planning activities and – hidden – intuitive decisions with De Bièvre) and finally managed to create a link with artistic issues: the importance of concepts of simplicity (Smetryns) and the choice to create open scores (De Bièvre). In the case of Neyrinck there is also an artistic influence, although less visible at first sight: Neyrinck's preference to create cycles of compositions renders the time frame of the current group study almost meaningless. Compositional activities, like exploration, taking place outside the CP of one composition, only become meaningful in light of the whole cycle of compositions. These three examples indicate that individual, artistic choices have an impact on the configuration of compositional activities. Moreover, less individual, more 'social' artistic preferences seem to shape the configuration. Donin (2009, 198) talks about “the familiar forms of modernist precompositional material (matrices and graphs) as well as premodernist material (thematic development and motivic sketches)”.

Another important force in shaping the configuration of compositional activities may be personality and cognitive issues. In chapter 7.3.1 on my proposed analysis framework I wrote about the (anecdotal) examples in which composers express their dislike for certain activities. In this light, important questions are: which main compositional activities does the composer prefer or dislike?, which activities fit with the musical and creative aptitudes of a composer?

The configuration of the activities may have a dynamic of its own. This auto-generative function is visible in the interpretation of Nuyts' CP where a long, initial exploration phase resulted in a writing process, combined with planning activities, with a tighter set of constraints. (Again, it needs to be repeated that the composer deliberately designed a strict time frame for the whole CP.)

Finally, I believe that practical requirements and restrictions can influence the activities in the CP. Neyrinck expressed his desire to try out the viola da gamba instrument together with the

performer but in the end this did not happen. Perhaps a less tight agenda could have helped the composer to explore more in a CP.

Summarizing the previous paragraphs, in this group study and other studies of the CPMC there are initial indications of forces (such as individual artistic choices, the adherence to styles or groups of composers, personality and cognitive issues, auto-generative forces and practical considerations) that shape the main compositional activities and that should be taken in account when designing future long-term studies which focus on the main compositional activities.

8 Summary and results

The number of composers that is studied in this research is rather high in comparison to other empirical studies. Therefore I designed two visualizations (in chapter 6), of which one is an elaboration of a model proposed by Collins (2005; 2007). These are both dynamic forms of *synthesis*, representing a time line or chronology. They enable us to situate separate events, ideas and problems within the evolving CP. Both are based on the insight that elements like the timing or the development of the music are to a high degree factual and can be validated by the sources. Although of course, the intentions and interactions of the composer with the musical material are less factual, these visual syntheses formed a valuable tool to compare the eight CPs in this study. The structural mapping also proved important to apply the analysis framework, as this is based on the distinction between in and outside sequence activities. It is the development of this sequence of musical events that is visible in the structural mapping. The main difference with the structural mapping as proposed by Collins, is that many of the studied compositions are polyphonic. A version of such a composition simply cannot be represented by one line (or row of blocks) as in his figure (see Illustration 3). Consequently, the whole development in the CP cannot be represented vertically (on a time axis where the top stands for the beginning of the CP and the bottom the end), but has to be presented as a sequence of rectangles, each showing one phase. Indications on themes, as in Collins' mapping, were only useful in compositions with thematic material (such as in Cammeren's case) or a form built on repeated sections (as in Nuyts' case).

As the amount of sources and real-time data on the actual writing and rewriting process differs from one composer to another in this study, some visualizations are based on less data. The visualisation of the CP of Neyrinck is therefore not very useful. In line with my analysis of the main activities in the CP of De Bièvre, the writing process is less important and thus the structural mapping, based on the realization or notation of a composition, is also less informative. This contrasts with the structural mapping of Cammeren whose CP starts by *writing* and therefor the mapping represents the whole CP. The relevance of the structural mapping is directly related to the phase in the CP in which the writing first appears. The earlier this starts, the more informative this visualisation becomes. In general, it remains unclear whether these two visual syntheses can be applied to studies with a higher amount of (real-time) data of a CP. The compositions in this group study were short and their CPs were never longer that a few months (see chapter 4.4).

Studying the influence of research – in this case the task and the commission – on the artistic practice is crucial to naturalistic research. I proposed a method to study this influence which does not rely on a single data source. In this method (presented in chapter 7.1) the composer's discourse on different aspects of his compositional work is taken into account, next to the sketches and inspirational ideas from the CP. This method resulted in a well-balanced result that shows large individual differences between the composers and discloses the differences between influences exerted by the task and the explicit restrictions (instrumentation, duration, performers) in the commission. The influence of the task was most noticeable in the beginning of the CP, when the composers developed initial ideas. It should also be noted that there were two extreme cases where in one CP the task's influence was very dominant and in another almost non-existing. The explicit

restrictions resulted in three strategies adopted by the composers: some recognized an artistic challenge or affordance in these restrictions, some accepted them neutrally and for others they formed a problem, although a minor one that did not constitute an obstacle for their CP. In general, all composers were clearly influenced by either the task or the explicit restrictions. This is in line with recent research results from Fryberger (2013) that confirmed that in contemporary-classical music a commission is part of the CP and shapes this process.

A next result of the group study is the analysis framework, designed to apply similar criteria in the analysis of the main activities in the CP. This framework is built upon the distinction between in sequence and outside sequence activities and derives four activities – exploring, planning, writing and rewriting – from this distinction. Additionally, the level of musical abstraction of the ideas of a composer is also incorporated.
The analysis framework brings up a number of similarities and differences in the activities of the eight CPs. In general, the configurations, the selective presence and order of the four main activities, create the biggest differences between the studied CPs. These configurations disclose how the same compositional activity can have a different function and meaning. The rewriting activity appears in three forms, first as structural rewriting where the structure of a composition is recursively adapted, second as revising where local characteristics are adapted and third as 'scaffolded rewriting' where the complexity of a full score is gradually built up, layer upon layer, starting from a 'simple' writing process. Two configurations, which were unique in the group study, appear to be more general as similar configurations were found in other research (Newman 2008; Collins 2005, 2007). In the case of the [writing->rewriting] configuration – as recognized in the study of Collins – the relation between the main ingredients of Collins' model on music composition and the characteristics of the specific configuration of compositional activities was discussed.

Finally, two phenomena detected in individual CPs – the 'progressive revision' of Van Landeghem and the straightforward writing process of Neyrinck – confirm results on 'inter-opus' compositional activities, more specifically the composition of cycles. During the composition process, reflective theorising took place which influenced future actions and retrospective explanations about drafts and compositions (in the case of Van Landeghem). Neyrinck's process was an example of the reapplication of existing procedures, that were most likely generated in previous parts of the cycle. Moreover, in Neyrinck's case a compositional activity such as exploration, which seemed to be a detail within the CP of one cycle composition, turned out to be meaningful, only when examined within the framework of a whole cycle. This points at the importance of reflecting on the research framework as a researcher, studying the CPMC.

 PART IV: SELF-STUDY

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1 Review and research questions

The empirical and naturalistic studies of the CPMC focus on one or two CPs of *finished* compositions. But besides studies of the CPMC, there is literature that confirms that other compositional activities take place without a straightforward connection to finished composition. Therefore important questions emerge: which 'loose' compositional activities exist? What is their relationship with 'finished' compositions? Do these 'loose' activities influence the CPs of finished compositions? If so, which part (activities, inspirational idea, compositional technique etc.) of these CPs are affected?

The literature on these loose activities is diverse, fragmented and often anecdotal, and stems from academic research on the one hand (sketch studies, creativity research, artistic research, studies of electronic and computer music) to composers' writings and published interviews with composers on the other. In the following section I will give some examples of loose activities from these sources to illustrate the diversity of these activities.

In an article on the compositional process of Richard Strauss, Werbeck (2010). “Strauss’s Compositional Process.”) writes about the sketchbook in which ideas are notated.

> In his sketches Strauss did not restrict himself to themes for compositions he was working on at the moment. "Sometimes a theme comes to me," he said in an interview of 1902, "and later I discover the poetic vestment for it." In other words, sometimes he notated motives as a stockpile without knowing whether and when he might use them. Occasionally Strauss sought inspiration by way of such notations. In some sketchbooks he established lists of such themes. (p. 33)

Schubert and Sallis (2004) describe the two views of sketches within sketch studies. The first one is the traditional view:

> As a rule, they are understood to be unfinished, open and provisional: the first unsure attempts to notate ideas, the significance of which remains uncertain. As opposed to sketches in the visual arts, the content of musical sketches is normally projected towards a completed composition, even in those cases where the work is missing because it has not survived, was not completed or was never written down in the first place. (p. 5)

The authors go on to explain the second view:

> Contradicting this more traditional view is the position that all sketch material, no matter how preliminary, should be accorded an independent status, which is lost when this material is uncritically subsumed within the bounds of a work or work project. This position understands sketching as a relatively autonomous process, not necessarily limited to demands or contingencies outside of the process itself. (p. 5)

The traditional view is also noted by Thiebaut (2010, 44) in his review of studies of musical sketches in several disciplines. On the studies of Beethoven's (voluminous) sketches he remarks that the sketches are only studied for the role that they played with regards to the final piece.

Composer Eric Stokes talks about ideas for future compositions in the *Muse that Sings* (a book on the CPMC, based on 25 interviews with American composers)(McCutchan 1999):

> I don’t keep a lot of notebooks. I sometimes regret that I haven’t. But I sure have developed a

> memory notebook — I have lots of ideas for pieces that I haven't done yet. One piece I've had in mind for fifteen or twenty years is a setting of Walt Whitman's "Out of the Cradle Endlessly Rocking," a landmark American poem. I have so many notes for this potential piece interleaved in my copy of Leaves of Grass that the book looks like a cabbage in bloom. So in a sense I do have notebooks—collections of ideas partially worked out, here and there. (p. 6)

These sketchbooks or notebooks seem to be used frequently, which was also noted in the group study interviews in this dissertation: at least three composers (Nuyts, Neyrinck en Smetryns) reported their existence and use, while this was not explicitly asked for.

Apart from loose ideas and sketches, there are other independent compositional activities such as collections of software patches or programming scripts. The creation of a personal library of algorithms is a common practice in computer music. These 'knowledge collections', consisting of patches or scripts, are a compilation of materialized experience that is used for several compositions. These libraries indicate that some composers perform creative acts which are not always part of the CP of a specific composition. For example, the composition software libraries of Godfried-Willem Raes (Raes 2014) and Karlheinz Essl (Essl 2014) were partly developed within a research context. Another example of a composer creating such a personal collection of software patches is given by Ross Feller (2004, 184–185) in an article on Brian Ferneyhough.

In the anecdotal accounts of notebooks and articles on software libraries, the compositional processes are observed in the context of the finished composition. The activities related to these personal collections become part of the range of activities within the CP. But what if a large part of the activity needed to acquire and collect this knowledge takes place outside this context? Then an isolated activity may become part of a larger collection of activities that may have an important – but undetected – function in the compositional process. In the CPs of the group study there were several loose elements or sudden events that might be connected to long-term processes going on outside the duration of a CP:

- a sketch with spectral ideas suddenly appeared in Vermote's CP. She explained that this was related to one of her previous compositions which used spectral procedures
- Cammeren's CP began immediately with a fully-notated inspirational idea
- after the crisis in his CP, Nuyts used a chord progression technique and an algorithm (to generate the harmonic rhythm), without a lot of explanation
- inspirational ideas appear spontaneously, linked to personal preferences and concepts, in the CPs of De Bièvre, Smetryns and Van Landeghem

Current real-time, data-rich studies of the CPMC restrict their duration to the CP or a part of this process, but if influential processes occur over a longer time span and more independently of these finished processes, the ones studied may give an incomplete picture of the act of composition.

If these 'loose' compositional activities take place, how can real-time data be collected on them? To date, hardly any examples of a method exist that could be re-applied, to answer this question. The only practices that form a starting point are sketchbooks and journals. The collection of real-time data is necessary to avoid a retrospective analysis, especially of the personal knowledge collections such as theories. Based on the studies of Féron spectra (2011), and Tiffon and Sprenger-Ohana (2011), Donin (2012) writes that there is a striking interaction between production and theorisation during the creative process in the context of cycle compositions (previously quoted on p. 135). A discourse is developed by the composer which influences his

production of future (cycle) compositions. Donin warns that this theorisation also effects the retrospective analysis by the composer of his works.

> It therefore remains essential to keep in mind that theorisation makes up a sometimes massive and strategic part of the compositional process and needs to be taken into account when collecting and analysing data, as well as when considering the degree of critical distance to be maintained throughout every stage of research (especially vis-à-vis a composer's discourse in reference to his past work). (p. 21-22)

Both forward (productive) and backward (retrospective analysis) effects of this theorisation were also detected in Van Landeghem's CP in this group study. Consequently, in a self-study where I analyse my past creative processes in retrospect, it is absolutely necessary to obtain real-time information on these past processes to prevent my current compositional theories from shaping my view on previous, older CPs.

The production of a more complete picture of the compositional process, including activities that are more independent from the finished compositions, is the main research problem in this self-study. This corresponds to the call made by Marston (2001) at the end of his article on musical sketches, to study the role of sketches without defining the relevance of sketches in relation to the *finished work*.

The following research questions are central to the self-study:

- What are the main compositional processes in my artistic practice?
- Are there processes that operate independently of the production of finished compositions?
- How do the more independent processes relate to the other compositional processes and what is their function within the overall constellation of compositional practices?
- How can methods be developed to collect and analyse real-time data on more independent processes?

2 Design

In this self-study I will examine my own compositional practice in the period 2009-2013. The core period of my self-study only covers two years (2011-2013)[21], and it is during this period that I developed and used real-time and data-rich methods to collect data on my compositional processes. I study a rich pallet of compositional activities, including the ones that took place between, before and after the CPs of finished compositions and the ones that are to some degree independent from these CPs. However the general limitations of this dissertation, as explained on p. 6, will not change: rehearsals and performances are not included.

These are the preliminary, 'working definitions' of the studied processes:

- *loose ideas:* these are short ideas about possible new music creations and compositions that are often unrelated to the current composition that I was working on; in my case all loose ideas are notated in text (in shorthand)
- *finished processes:* these are the creative processes of compositions that I consider ready for performance,
- *unfinished processes:* these compositional ideas are more elaborated than loose ideas; explorations and experiments are also part of this activity and because of this elaboration, more data (sketches, files) are generated than in the case of the loose ideas (with only a short text); the difference with the CP of finished compositions is that this activity does not lead to what I believe to be a finished composition; these works were not completed or I as a composer did not consider them a composition to be performed in a public concert
- *theoretical processes:* these activities collect knowledge that is used while composing finished and unfinished works.

The current self-study is an exploratory research project. The first risk may be that being both researcher and research object, I only obtain biased results. Moreover, the self-study only examines the artistic practice of one individual, turning the generalisation of results into a difficult exercise. On the other hand, the focus of this study, obtaining a more complete picture of the compositional processes, is an under-researched topic, the body of knowledge and experience to design and perform this study, is small and spread over non-academic literature and sketch studies of (mainly historical) compositions. Therefore a more adventurous attempt to obtain new knowledge is advisable. This self-study aims to exploit the advantage of the privileged access to knowledge, as stated by artistic researchers in the 'General Introduction' of this dissertation (p. 2). As the 'more independent' compositional processes can not be clearly defined at the beginning of the self-study (see the following chapter 'Reflective pre-study'), the unification of researcher and composer in one person might be an advantage, because opportunities to find additional information are more easily available and privacy is not an issue. I hope to cope with the aforementioned risks, mainly by collecting real-time data on the compositional processes, which provide information on intentions and products while composing. I try to answer the main question “are there compositional activities that are independent from a (finished) composition?” *from the real-time view of the composer*.

21 The dates of this period were not applied strictly, because compositional processes do not exactly start or stop on the first or last day of a year.

Next, I can built upon research experiences in previous self-studies in music composition (Sloboda 1985; Newman 2008; J. Bennett 2012; Church 1996; Lalama 1998; Schroeder 1993) and recent empirical studies of the CP.

This self-study can be relevant because it aims to ensure that:

- future studies have a more complete picture of the creative activities of one composer, this can help to detect tacit or hidden compositional activities in other research, propose data collection methods and provide a framework to contextualize other studied CPs.
- artistic research benefits from a more complete picture of individual practice as compositional practice is a starting point to create a productive and performative relation between research and this practice; moreover, the self-study mainly gives a real-time description of the compositional processes, and not one based on retrospective experiences.

3 Reflective pre-study

As this self-study developed, new insights and reflections increasingly started to affect both the data collection and analysis stages of the research. I have gathered these research adaptations under the heading 'reflective pre-study' although it was not a planned part of this study, that chronologically preceded the actual self-study. This reflective pre-study is immediately related to the iterativity of the research (see p. 31), and more specifically the exploratory character of this self-study. In general three items dominated the pre-study: first, I gradually became aware that I was performing more compositional activities (outside the CP of a finished composition) than initially thought; second, I started to realize that I needed to reflect on the material circumstances and the traces of all these compositional activities to improve the real-time data collection methods in this self-study. Third, the results in the analysis (more specifically of the loose ideas) led to a further collection of data and a selective analysis of obtained data.

3.1 Loose ideas and theories as a compositional process

It took me quite some time after the self-study started, to realize that the creation of loose ideas is an integral part of my compositional activities. At the beginning of the self-study (November 2011) my aim was to examine several CPs of finished compositions, to compare these processes, their activities and problems, and to obtain an overview over a time span of two years. My view of compositional processes was formed by influential self-studies in music composition (Newman 2008; Church 1996; Lalama 1998) and arts (Leal 2003) on the one hand, and real-time, data rich studies of the CPMC of Collins (2005; 2007) and McAdams (2004). As described in the chapter 1 'Review and research questions' of this self-study, these studies focus on finished processes. Moreover, at the start of my self-study I was fully engaged in the composition of *Eigengang*. This focus on a composition perhaps made it more difficult to realize that now and then 'loose ideas' pop up. Reflection on my compositional practice, the experience of doing research with other composers (in the group study) and the consultation of literature from sketch studies, musicology and artistic research led me to realize that I was also 'composing' at other times and in other ways than the ones defined by a 'finished' composition. Although after a few months the loose ideas and unfinished processes became a 'study object' in the current self-study, it took me another year to realize that I also had a personal library of knowledge, collected in the past. Before this date I had regarded these theoretical activities as a field separate from my compositional activity, populated by views on more general musical topics.

3.2 Data collection – material conditions

The data-collection method in this self-study consists of a real-time, data rich approach. To collect data on the finished and unfinished processes I gather real-time traces of compositional activities and make verbal reports. Both techniques are explained in detail further on in the 'Procedure - Data

collection' chapter. As explained in the general review of methods in studies on the CP (p. 33), it is a challenge to follow this approach without blocking the flow and concentration while composing. To ensure that these techniques could be used in a simple and comfortable way, it seemed important to me that they were based upon my own experiences and practices. Therefore, I started to reflect on the material conditions of my personal composition environment. The following items were observed and examined:

- the tools and technology that I use while composing
- the physical actions I perform while composing
- the time and location (when do I compose? where do I compose?)
- the traces that my composition method had left (before I started this study)

Because the verbal reports (see further in chapter 4.1.1) are made by speaking into a recorder and I realized that I composed at different locations, I made an inventory of available audio recording technologies. These technologies were 'practiced' outside the creative process to ensure that they could be used swiftly in or immediately after the creative process. Accordingly, I wouldn't need to bother about the technical set-up and risk losing time (as Newman (2008) reported). Thanks to mobile technologies like phones, e-readers and netbooks there is always a recording device at hand wherever I am composing.

I also considered it important – as part of the real-time method – to have detailed information on the duration of composition sessions (see further in chapter 4.1.3). Based upon the reflections and observations above, I developed the following real-time data collection technique to gather this temporal information. I created a simple applet on my computer with start and stop buttons for all the compositions. By clicking on these buttons, a script automatically writes the start and end time tags and the name of the composition to one common log file. The buttons of this applet are always visible in the so-called 'panel bar' of my laptop. Consequently, it only takes one click to initialize the script, whatever software window is opened. For composition sessions without a laptop (e.g. the CP of *Eigengang*), I designed a second system to measure the composition time. It consisted of the photo camera application on my mobile phone and two pages with the title of the composition and the word 'start' or 'stop'. These pages were added to my folder of paper scores and sketches, since I realized that I always carry this with me when I am composing at different locations. The procedure to obtain the time information consists of taking the start or stop page from the folder and taking a picture of this page with my mobile phone. Consequently, in combination with the time stamp of the picture, the name of the composition, start and end time are available as data.

In the past I developed a practice to organize my data (paper sketches, scores, digital files) in a 'logical' way. The names of these data refer to an instrument, idea, music fragment, the (working) title of the composition or a version number. To enhance the traceability of these digital and paper files, I initially planned to base my data collection method upon this practice. But during the creative process the chronological order of themes, pages, files and ideas are reordered and the content is modified (e.g. by writing over older sketches). In the past, the cognitive load of a task such as giving a logical name to a sketch or computer file had often distracted me from composing. In fact, this problem is very similar to the one reported by Collins (2007), when he was writing about problematic methodological issues during the data collection:

> The composer had used a confusing variety of names throughout the verbal protocol for what were in fact identical themes, sections and so on. He had also on occasion omitted to name particular files

> or the entry of new events. (p. 246)

Collins uses a numerical system for the names of the main files, letters for the variations on the content of these files, and numbers again for different instrumentations or harmonizations, resulting in labels such as '1a2' or '1a3'. I realized that it is (almost) impossible to expect from a composer to give a 'logical' name to a file when he is composing, because it requires an overview of the past and future developments of the composition. The logic of the researcher is a retrospective logic. For example, if one looks at the dynamics and changing versions in Cammeren's CP in the group study, it is impossible to label a version or sketch as 'beginning' or 'melody-gamba', because the form and instrumentation change during the CP. The real-time attempt to 'logically' categorize the compositional products, was also found in the way loose ideas were collected and located in my practice. This happened in the period before 2011. The loose ideas were grouped under two main themes, with a separate file for each theme. Next, within these two files loose ideas were organized in sub-themes. Consequently, two problems often arose: first, as I wanted to quickly write down a loose, preliminary idea, I started wondering about the correct file or sub-theme for the idea; second, when I searched for past loose ideas, I didn't know which file or grouping to look in.

By reflecting upon the material conditions of my composition practice, using the insights of my group study and the existing literature on CPMC, I abandoned the idea of giving logical names to real-time data. I arrived at two simple solutions: I used absurd names or organized the data according to a simple, chronological order. The chronological order is applied in the data collection of loose ideas and the save-as files (of digital scores or recordings). Like a journal, the loose ideas only have a date, and the latest idea is always notated before an older idea (I add a title ad libitum). Every time a 'save-as' file is saved, a new number is given. In the very beginning, a name is given that is not changed anymore. For example, the score versions of *(fl)ASH* are called persolo-1, persolo-2, etc. (from percussion solo). The absurd, nonsensical names are given to paper sketches and drafts. These names have no relation to the current composition or music in general. The absurd names have the extra advantage that they can be used as simple referrals or pointers (to sketches) in my verbal accounts. While reporting on my compositional activities, I sometimes invented and wrote down an absurd name on a sketch and this didn't distract me in any way. In the first months of the self-study, before the 'absurd' solution, I often didn't have a name yet for the most recent sketches and this resulted in lengthy references in the verbal report such as:

> Die synchronisatiemethode, 'k heb die op papier uitgeschreven, die schetsen met blauw en dan met potlood die streepjes, die lijntjes das zo een tijdslijn van nul tot negen minuten met daar verschillende soorten lijntjes die de verschillende vijf stemmen technieken voorstellen. (24jan12-1)

Imagine having five sketches to refer to in a verbal report; without a name this becomes a cumbersome process with vague references.

The data collection techniques developed gradually, along with the process of reflection on the material and organizational context of my composition practice. This means that there were also transitional, preliminary techniques that were later on abandoned. For example, when I discovered the two files with loose data, organized by theme, I continued using them as a data collection method but added a backup system to enable tracking the chronological order afterwards. But this solution was discarded once I arrived at the simple solution of working with loose ideas in a chronological order in one file. Consequently, the final data collection techniques are not all

present from the beginning of the core period of the self-study (2011-2013).

The new data collection methods were evaluated for their obtrusiveness. In practice this turned out to be quite simple and intuitive: whenever I felt during my composition process that a data collection technique was annoying me or obstructing me from composing and obtaining the artistic quality I wanted, I stopped using it. I knew that later on, when a period of composition activity was finished, I could reflect on this intrusive technique. I could adapt it or find a new method.

The developed data collection techniques are partly based on my personal repertoire of compositional 'housekeeping' practices, such as ordering sketches and files, tidying them up or searching for other sketches with related ideas. On these 'housekeeping' practices Collins (2007) writes:

> Such activities (which may be construed by some as outside the domain of artistic, creative behaviour) took up a considerable period of time within the overall spectrum of the compositional period, (p. 249)

By starting from my own 'housekeeping' repertoire as a composer to develop my data collection methods, the workload while composing could be reduced. For example, thanks to the absurd names, the real-time organization and name-giving of files no longer disturb me while composing. These benefits proved a nice counterbalance to the additional work of producing the verbal accounts.

3.3 Prehistory of the loose ideas

In the second half of 2013, when the self-study had been running for about a year and a half, I started rereading the collected data on the loose ideas and noticed that these ideas are generated and evolve at a slower pace than the CP of finished composition. Moreover, the loose ideas seemed difficult to understand without taking the context into account and this context consisted mainly of previous ideas, unfinished and finished processes. Consequently, I needed a prehistory of the context to fully understand and analyse these loose ideas and their interaction with the other processes. This meant collecting data on my compositional processes in the years before the self-study started (2009-2011). These data could no longer be collected in real-time, but as I am both the researcher and composer in this self-study, I could search unhindered for old files on my (previous) computers and paper sketches in my personal belongings. Afterwards the collected data from the previous period 2009-2011 also proved valuable in analysing the role of the theoretical processes. Consequently, this self-study is divided into two periods: the core period, in which I collected real-time data, both factual and explanatory, and a prehistory, necessary to analyse the loose ideas and theoretical processes in depth.

While at the beginning of this self-study I aimed to reconstruct a full image of the compositional processes (which was still mainly oriented towards the finished processes), the pre-reflective study (on the material conditions) and the first insights from the results of the loose ideas, forced me to re-orientate and further select the data. The latter was caused by the observation that the real-time data on the unfinished processes (in the core period) were high in amount. Finally, I decided to focus on the function and characteristics of the loose ideas and the theorising on the one hand, because these processes are less studied outside the context of finished

compositions, and on the interactions between the loose ideas, theoretical and finished processes on the other. Consequently, this self-study deals less with the interaction or evolution in between consecutive finished processes and the function and role of the unfinished processes within the overall constellation of compositional processes.

3.4 Further outline of the self-study

To study the two more independent processes (loose ideas and theorizing) and their interaction with the finished processes, I first present the data collection method in the following chapter. In a first phase data on all the compositional processes (independent, finished and unfinished) were collected. Next, to find indications of interactions between the independent, theoretical and finished processes, several summaries were made of the finished processes and the theories. In chapter 5 'Procedure – analysis' summaries of the finished compositions and two theories are made. The summaries of three finished processes, ob which real-time data were collected, consist of the course of action and the main problems in these CPS. Next, in chapter 6 'Final analysis: relations between compositional processes' I answer the main questions on the nature and role of the more independent processes – the loose ideas and the theoretical processes –, and their interaction with the finished processes.

4 Procedure - data collection

As explained, the core period of this self-study is preceded by a prehistory. The latter period had past before the self-study begun, and so the data were collected post factum. In the following chapter on the data-collection method, I mainly describe the real-time methods of the core period, but at the end of each section, I briefly portray the main characteristics of the data from the preceding period 2009-2011 and their collection method.

4.1 Finished compositions

The self-study relies on two different data sources to study the genesis of finished compositions: verbal reports and traces of my compositional activities. This enables a multi-faceted analysis of this complex process. Apart from the real-time comments by the composer, it is also important to counterbalance the verbal reports with real-time traces of the composer's activities. This information sheds light on the development of the music and the musical products (sketches, scores,...) in the CP. The real-time data rich method was discussed extensively on p. 33 in the 'DESIGN AND METHOD' part of this dissertation.

4.1.1 Verbal reports

Verbal reports are the most important source of ideas, feelings, intentions and thoughts during my compositional work. These accounts lasted between two and fifteen minutes and were loosely based on the following questions:

1. What were my thoughts while composing? What was I doing while composing? What decisions did I make?
2. Why did I take these decisions?
3. Which evaluations and reflections were part of my composition work?
4. How did I imagine the future development of the composition?

These questions were not treated as a fixed set of questions which needed to be answered in every verbal report. Only question one was answered in almost all the verbal reports because I was always doing or thinking something while composing. Questions two, three and four were only treated when I thought they had been part of the composition session. I do not consider evaluating, reflection-on-action and imagining (the future of a composition) a part of *every* composition session and I did not want to force these activities to become part of the CP, by talking about these issues every time. In the 'DESIGN AND METHOD' part of this dissertation, in chapter 2.2.2, I have already described my decision not to stimulate reflection during the CP. This decision was discussed in relation to the self-study by Church (1996) .

In practice the decision to answer a question was taken rather intuitively. Before making the report I reviewed what I had done (by gathering all the files or sketches I had been working on and reading my bullet-point notes) and after starting to talk about question one, questions two, three

and four had to be naturally linked to this question. In retrospection it seems to me that the decision to tackle the questions three and four was rarely difficult to make. At that specific moment in time it was quite clear to me if evaluations and projections of the future had been part of the creative process. Sometimes I noticed that I was giving stereotypical answers to these questions and so I forced myself to think deeper about these questions. But from the moment I felt that the answers were 'artificial' and more a retrospective analysis than an account of my compositional processes, I stopped answering these questions.

The verbal reports were not concurrent: they were not think-aloud protocols generated while composing but immediately retrospective accounts. They were made as soon as possible after a meaningful block of composition work had been done. During the composition of *Eigengang*, between November 2011 and the end of March 2012, nineteen verbal reports were made with an average length of 585 words. In August 2012 I evaluated the verbal report method and observed that at the beginning of a creative process and in the end rush (before the deadline) I tended to write less verbal reports. After the evaluation, I paid extra attention at the beginning of a CP to create verbal reports and I started making 'bullet notes' on the actions and insights during busy composition periods. When I made a verbal report after such a busy (and longer) period, this list made it easier for me to remember what I had been doing in the previous composition period. These bullet notes are very similar to the 'journal de composition' written by the composer Leroux in the study by Donin ("Une Page Du Journal De Composition d'Apocalypsis" 2013).

All the verbal reports were transcribed verbatim. False starts, repetitions and other characteristics of spoken language were left unchanged. But after every meaningful segment (sentence or part of a sentence) and broken sentences, commas were added for readability. When a fragment was totally inaudible, '(niet)' was added. Finally, a question mark between brackets (?) was added if a word or part of a sentence was not clearly understood.

4.1.2 Traces of the CP

The traces of the CPs consist of:

- recordings: while composing I often make recordings of improvisations or experiments; because producing digital scores with different tempi per instrument or layer is difficult in notation software, I use an audio editor – mainly Audacity – as a kind of score; by recording the different instrument parts, I have an overview of the whole composition and the timing of the separate layers .At the same time I can re-record a fragment, if a section needs to be changed.
- digital scores: in my compositions there often is a separate digital file per instrument or layer (because of the different tempi per layer).
- other files: files for electronic sounds (often in the software environment Pure Data) or text files with remarks or information about a version, recording, rehearsal or another element of the compositional process;
- paper sketches, drafts, printouts: the printouts are printed files from the digital notation software that are overwritten or corrected by hand.

The real-time data collection method for the digital files was the 'save-as' technique (Folkestad):

every time I make an important or big change to a file I save it under a new name, i.e. the same name as the previous file but with the subsequent number. The regular creation of save-as files, more specifically in notation software and live electronics files, has been part of my compositional practice for more than ten years. I developed the method to avoid losing all the information in one file when software problems occur. By doing so I can return to a previous version when I revised or changed a composition.

The goal of the real-time method for the paper sketches is to ensure that the time information on the sketch is available: when was it created? When did I modify, overwrite or add remarks to the sketch? In the first phase of the self-study, during the composition of *Eigengang*, I gave this information orally in the verbal accounts and occasionally wrote a date on the sketch. Because I forgot to comment on certain sketches now and then, I wrote the date on the sketches in the period after *Eigengang* and I rewrote or added comments in a different colour and added the date in the same colour as the modifications or comments. This procedure was used in the composition process of *Centra* and *(fl)ASH*.

4.1.3 The duration of composition sessions in the CP

Information on the duration of composition sessions can not always be deduced from the real-time verbal reports and traces. These only contain time information on specific moments in the CP. A composition session of three days may result in one or ten traces (files, sketches, drafts,...) with a time tag. The duration of composition sessions is important to know when studying composition problems. A retrospective, product-oriented view on the creative process, in which ideas and events are considered important because they contain elements of the end product – the final composition –, can be avoided by this time information and the verbal reports. If, based on these time data, a problem appeared during a longer period in the CP, then it must have been important while composing.

On p. 163 I have already described the method I used to obtain a precise timing of my composition sessions, namely by using an applet – a small program – on my computer or the combination of a photograph and a (prepared) sheet of paper with the name of the composition. The applet produced a log file which looked like this:

```
----------------------------------

start centra (laptop aspire one)

Tue Jan 29 13:39:34 CET 2013

---------------------------------------

stop centra (laptop aspire one)

Tue Jan 29 15:28:52 CET 2013

---------------------------------------
```

The applet procedure also provided an easy solution for errors. When I forgot to click the button of the applet or had used the wrong button, I opened the log file from a shortcut on my desktop, and added a comment on the mistake. The comment always included the date and hour of the comment. In the following example I had already been composing for 40 minutes when I realized that I had forgotten to use the applet. I used the applet and added a comment ('opm' stands for 'opmerking' in Dutch, i.e. remark or comment):

---

start centra (laptop aspire one)

Wed Feb 6 14:21:33 CET 2013

opm woe 6feb 14:22, ben eigenlijk rond 13.40 opnieuw begonnen ipv 14:21

4.1.4 Data on the finished processes in the prehistory of the self-study

The traces that I retrieved of the two compositions *Threeway II* and *Chunks & Streams* are very similar to the previously described traces in chapter 4.1.2, although the paper sketches and printouts carry no date information. In both cases there are many successive versions of score files, and in *Threeway II* there are also audio editor files and paper sketches. The number of paper sketches is higher in the CP of *Chunks & Streams*, because all the rehearsals were based on (graphical and textual) open scores, notated on paper.

I found 114 digital score files, 116 audio editor files (recordings included) and live electronics files, 63 pages of papers sketches and edited printouts on the genesis of *Threeway II*. In general there are more traces on *Chunks & Streams*, most probably due to the longer duration of the composition. There are also recordings of the rehearsals with the performers (Zwerm quartet) of this piece.

The information that is not (or hardly) available on both processes is the exact data on the duration of the composition sessions. But in both cases there is a text file which gives a very short chronology of the genesis of the compositions and instructions on the location of the composition files. Information on intentions, reflections and meanings during both CPs is scarce (compared to the verbal reports in the core period of the self-study): first, there are a few remarks in text files, which functioned as memos to remember where I had stopped composing and how I would proceed; second, there are a few phrases in emails to organizers or performers in which I explain my intentions or the outline of the work-in-progress; finally, there are short introductory texts, made for the different performances of the compositions or my website.

4.2 Loose ideas and unfinished processes

4.2.1 Data collection for loose ideas

As explained in the reflective pre-study (see p. 163) it was only after one year in the self-study, from October 2012, that I designed an easy-to-use data collection procedure that enabled me to quickly write down my loose ideas and trace the date (of these notes) afterwards. The system that I used consisted of an applet called Tomboy (version 1.4.2.), a desktop note-taking application. This light-weight program is loaded when my computer boots and it can be used on top of any running program. When I have an idea, I click on the Tomboy applet, choose the right notebook (in this case called 'composition') and my notes are opened in less than a second. Next I add the date – through a keyboard shortcut that I designed in the applet – and start to write down my idea.

The total number of loose ideas in the period July 2008 to March 2014 is 70. A small number of loose ideas overlaps with sketches of unfinished compositions. An unfinished composition can start out as a loose idea, later on turn into an unfinished composition and be elaborated in a number of sketches and explorations. To avoid having the same data source in two categories (under 'loose ideas' and 'unfinished compositions') loose ideas that later on become part of the CP of an unfinished composition are categorised as an unfinished compositions (and not counted as a loose ideas). The whole list of loose ideas is found – unedited – in Appendix 36. Every loose idea is preceded by a number, these numbers are used throughout the further self-study when I refer to specific loose ideas.

The total amount of 70 is to be interpreted as an estimate of the number of loose ideas. In the analysis of the loose ideas (in chapter 6) I explain that the contents of the ideas are based upon variation and recombination of past ideas. Consequently, loose ideas (a.e. 52, 53, 60, 80, 91, 224, 243, 251) often consist of different variations on one idea and contain 'sub-themes', variations on one specific idea. In several cases it was therefore difficult to segment or split the loose ideas into different ideas to count them. The total amount of 70 is further used in this self-study for reasons of coherence and consistency.

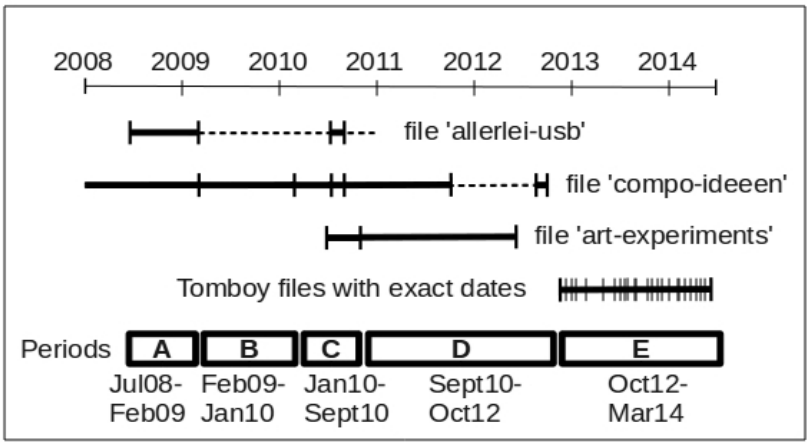
In general the 'loose ideas' are quite short: the average number of words in the loose ideas between November 2012 and March 2014 is 100 words for each loose ideas. The date indications and title were included in this calculation. Only the loose ideas from the core period of the self-study were used to calculate this average because the loose ideas from the period 2009-2011 are scattered over several files.

From the moment I designed and started using the data collection method (for the loose ideas) with the Tomboy applet, all the ideas have a time stamp. But the loose ideas from the preceding period 2009 – October 2012 posed timing problems. Three text files (called 'allerlei-usb', 'compo-ideeen', 'art-experiments') with loose ideas were found on my computer. A very small number of the ideas in these files had a date indication inserted in the text file but most did not. Different versions of the three files existed, however, thanks to backups on my current computer (with a time stamp in the name of the file), three other computers and two external hard disks. Consequently, I

had several versions of the files with a time tag. I also found printouts of the three files with a written (print) date added. To trace the sequential order and dates of the loose ideas in the files, the content of the versions of the same file were compared with each other (using online software available at http://www.diffchecker.com)

The end result of these comparisons is a document with the date and sequential order of the loose ideas, as seen on Illustration 24.

Illustration 24: Dates of the loose ideas files



As one can see on Illustration 24, the exact date of each loose idea (before October 2012) could not be traced, but the time period of groups of ideas (in a text file) was found.[22] For example: there are four loose ideas in the period between January 26th 2010 and August 9th 2010 that were written down in the file 'compo-ideeen'.

According to simultaneities in the time periods of these groups of ideas, I designed five time periods – with different durations! – that will be used in the further analysis of the loose ideas. The simultaneities (February 2009 and September 2010) in the versions of the three files are not a lucky coincidence. They are related to a switch to a new computer in February 2009, and a computer breakdown followed by another new computer in September to October 2010. Both events resulted in backups on different computers and hard disks that were not overwritten by following backup operations.

During the period September 2012 – March 2014 I also tried to collect real-time information on the goal, motivations and context of the loose ideas by making 'long term verbal reports'. As the verbal reports commented on the actions and intentions in my finished processes, these long term verbal reports tried to do the same for the loose ideas. Every six months I reread my loose ideas of the last half year and explained the goals and motivations for these ideas. But this proved to be very

22 It should be noted that a small number of loose ideas in the periods A,B,C and D has a more precise date, written in the idea itself.

difficult, many different ideas and motivations popped up, resulting in equally different 'long term verbal reports'. The reports were not useful for the further analysis of my compositional processes in this self-study.

4.2.2 Data collection for unfinished compositions

The data collection method for the unfinished compositions is very similar to the procedure for the CP of finished compositions. Therefore it is not repeated here in detail. The two most important features are:

- the production of immediately retrospective verbal accounts, which were recorded after a block of substantial compositional work and contain information on the activity and products (sketches, scores) in the CP on the one hand and on thoughts and reflections on the other
- the collection of traces (sketches, computer files etc.)

This data collection method started at the beginning of the self-study, and the first work on an unfinished composition took place in March 2012. I also collected information on unfinished compositions for the prehistory of this self-study. As these sources precede the period of the 'official' self-study, no verbal accounts were made during the work on these unfinished compositions.

The following Table 12 contains a list of the unfinished compositions from the period 2009-2013, their dates and the number of verbal reports for each unfinished process.

Unfinished processes	**Number of verbal reports**	**period**
Klavier4tet	0	January - February 2009
Tango-blues	0	23 – 25 May 2009
Solo-chords	0	5 January 2010 & 25 March 2010
Threeway1-rev	0	19 – 20 April 2010
Minitrio	6	March – May 2012
Eigengang2	3	April – May 2012
Samples	3	2012 November
Bass-live	1	2013 March
Same4	2	2013 May
Staccato	1	2013 September

Table 12: The unfinished processes

5 Procedure – analysis

In this research phase I produced overviews of the three compositional processes (finished compositions, theoretical processes and the creation of loose ideas). These overviews were made to detect the way the more independent processes (theoresing and loose ideas) interact with the finished compositions. In the case of the finished compositions, summaries of the main problems in the CP were added, because I hypothesized that the more independent processes supported the problem solving in these processes.

5.1 The creative processes of finished compositions

In the following paragraphs I describe how I arrived at the production of the summaries of three creative processes. These are the three compositions (*Eigengang*, *Centra* and *(fl)ASH*) in the core period of the self-study and real-time data and verbal reports were collected on these processes. In these cases a summary was made of the course of action and of the main problems in the CP.

The two phases – collection and triangulation – of the analysis of these data will be described but it was not always possible to perform these phases sequentially, one after the other. In practice, the two phases were part of a recursive process where the different steps informed each other.

Because the amount of data of all the finished processes is very large, I decided to write extra (but short) summaries of the creative processes of my other finished compositions. This was done to have an overview of all the compositional processes and detect relations and interactions between them.

5.1.1 Collection phase

In the 'collection' research phase, the following steps were performed:

1. (initial) coding of verbal reports
2. producing a global picture of the composition tools and its implications on the sources and traces (key moments and main media)
3. making a list of all sources with exact date information
4. collecting the exact time information about the composition time if possible
5. making a list of the most important external events
6. selecting the useful sources

The codes or themes in this initial round of coding were based on the initial verbal report questions and themes that emerged while reading and rereading the reports. The initial codes were 'actions', 'activity-planning', 'vision', 'insights-problems', 'explanations' and 'files'.

The code 'actions' contained the answers to the initial questions: What were my thoughts while composing? What was I doing while composing? When placed in the right chronological time order, these coded fragments formed a kind of logbook of what I had been doing and thinking and gave a more factual story of my creative process.

The 'activity-planning' code provided information on composition procedures and strategies that I was going to use in the near future and the composition section I was planning to work on.

> dan kwam ik tot de conclusie dat ik beter chronologisch werk, want ik ben nog niet echt aan dat middendeel geraakt, het idee is dat er toch nog dertig seconden of een minuut gaan overgaan voordat we in een soort van middendeel belanden, en toen dacht ik van, neen, dat is niet de methode om te werken, om nu al met een middendeel te beginnen, dan heb ik eventjes pauze genomen en dan daarna dacht ik opnieuw van, kga voortdoen waardat ik gestopt ben aan die pianopartij in de voormiddag en dan zo die overgang creëren naar het middendeel (Centra, 8aug12-2)

The 'vision' code had three subcodes: 'general', 'projection' and 'detail'. The 'general' subcode was used to tag fragments in the verbal reports that contained information about an image or idea of the whole composition. The 'projection' subcode referred to fragments in the verbal reports where I was talking about how future *sections* would sound and what the main focus or function of these sections was going to be. The 'detail' subcode gave information on the future development of specific instrumental parts or sound layers.

The 'insights-problems' code was used to tag fragments in the verbal reports in which I had an important new insight or became aware of a new problem.

I used the code 'explanations' for text segments where I was explaining why I was doing or thinking certain things while composing. In some cases these explanations are very short, while in others, a complex reasoning was giving with links to themes that are dealt with in the other codes.

Finally, a code called 'files' was created, which simply consisted of references in my verbal reports to paper sketches, recording files in Audacity or other files. This code was helpful in finding and checking the time information and chronology of the paper sketches and drafts.

While reading and coding the verbal reports, step two (producing a global picture of the composition tools and the sources) was performed simultaneously. In the verbal reports there were a small number of statements that gave information on the sources and traces of the CP. This was mostly related to the medium or tool that was used while composing. In some compositions I start by experimenting, performing and recording during the first period, while in other cases I mainly work with notations on paper. The verbal reports also functioned as a trigger to reflect upon the questions: which media and tools was I using while composing, and in which phase did this happen? Based upon statements in the verbal reports and my own memory, I reconstructed a first, raw sketch of the order of the main activities, sources and traces with some key moments (when new media were used). The reason why this sketch was created (and why step two happens so early on) in the analysis process, is the huge amount of data. This step gave us a rough indication of where useless sources could be found.

Step 3 consisted of searching through all the sources, indicating which ones had an exact time tag (year, day and possibly hour) and adding the ones with a clear time indication to a table. While going through these sources, I also made a first selection of the less important sources and omitted these. For example, there were large numbers of digital music notation files for each composition. Both the compositions *Eigengang* and *Centra* originally had more than 150 and 300 digital music notation files respectively. The useless sources resulted from a number of individual composition practices:

- making a digital music notation copy with less information than the original paper sketch to avoid too much notation work after the composition is finished
- producing a PDF copy of a digital music notation file to print a file
- creating a digital picture (a graphics file) as a copy of a digital music notation file, to enable the creation of a score with different simultaneous tempi in graphical software
- creating instrument parts of a score file
- saving the file with a new version number (the 'save as' data collection method as explained in the DESIGN AND METHOD part on p. 38)

Omitting all the copy files resulted in a huge reduction of the amount of digital music notation files.

From September 2012 on, I also started collecting data on the start and end time of composition sessions (see chapter 4.1.3 in this self-study). Step 4 consisted of collecting this information and placing the timing information in a second table. This meant that if information about a block of composition time was available, I could search the large amount of available sources in a more goal-oriented and informed way.

A short list of external events that cannot strictly be seen as composition activities but which might have influenced the creative process, was also made (step 5). Events such as meetings with performers or changes in the commission were part of this list. The date information of these events was mostly obtained by searching through my email correspondence and digital agenda.

5.1.2 Triangulation and timeline phase

Once the timing of the main sources was reconstructed, a timeline of the evolution of the composition was made (the progress timeline) and if possible a day-by-day logbook of the composition activities. A first, preliminary version of this progress timeline was made by using one source, e.g. the audio recordings or the digital scores. Knowing which source to use was the result of step two of the previous collection research phase. In this phase I reflected on the main media and tools in the creative process and reconstructed a raw sketch of the order of the main activities. Once a first version of the timeline was available, a process of triangulation started in which the different sources and their timing were compared to each other. At this point the large amount of different sources (for every block of composition time) proved to be an advantage. Although it took time to compare all the data, in the end most sources without a time indication could be dated quite accurately. This means that for the majority of these 'timeless' sketches, the exact date could be reconstructed. The other 'timeless' sketches were given a time indication (through triangulation) with an error range of two to five days. In a very small number of cases there was a contradiction between different sources. For example, in the first verbal report of Centra, I date the piano sketch to March but the audio file has a time stamp of the end of April. Because there were no indications that the time stamp of the audio file was wrong and the verbal report was created a few months later (at the beginning of June), I followed the information of the audio file.

5.1.3 Summaries of the course of action

The summaries of the courses of actions of the three finished processes on which real-time data were collected, are presented in the Appendices:

- Appendix 29 'Eigengang: course of action '
- Appendix 30 'Centra: course of action'
- Appendix 31 '(fl)ASH: course of action '.

The summaries of my other compositions – outside the core period of my self-study – were made by locating all the available information on these processes and next, reading through these data once. These summaries were not systematically reconstructed. These texts are also found in the Appendices:

- Appendix 27 'Threeway II: course of action '
- Appendix 28 'Chunks & Streams: course of action'
- Appendix 32 'Night Included: course of action'.

I did not make a summary of the course of action in *Points to make* because this composition was does not play a role in the further analysis of this self-study.

5.1.4 Summaries of the problems

Next I made summaries of the main problems that were detected in the CPs of the three finished compositions (on which real-time data were collected). Topics in the CP were defined as a problem when on the one hand they recurred regularly in both the explanatory sources – the verbal reports – and the traces, and they were described as difficult to solve in the verbal reports on the other. In these summaries I made a distinction between main problems, which arise more often and over a longer period (in the sources) than the other problems.
These summaries are also found in the Appendices:

- Appendix 33 'Summary of problems in the CP of Eigengang'
- Appendix 34 'Summary of problems in the CP of Centra'
- Appendix 35 'Summary of problems in the CP of (fl)ASH'

Table 13 gives an overview of the main and minor problems in the three finished processes.

Compositions	**Main problems**	**problems**
Eigengang	• Configuration of voices/layers • Structure	• Synchronization • Fast, muted voice
Centra	• Piano incoherent • Character of the whole composition • Structure & marimba voice	
(fl)ASH	• Effective short fragments • Structure	• Open score • Configuration of (performance) space

Table 13: The compositional problems in three finished processes

5.2 Theories

The personal compositional theories in this self-study are collections of knowledge on musical-technical issues. There are two such theories in my composition practice: one on the creation of simultaneous contrasts and another on the synchronisation of polytempo music. These two collections were developed and used over a long time span, across several compositions. These personal knowledge libraries are systematic, they try to categorize and order the knowledge that I acquired on synchronization and the creation of simultaneous contrasts, but at they same time they are incomplete and contain loose insights which couldn't be systematically categorized within this library.

In the following summaries I describe the following elements of the theories:

1. the main content of the theory, including loose insights that couldn't be systematized and the links with an aesthetic or musical concept
2. the chronology of the theory: when and how did the theory emerge and develop?
3. the references: the sources used to collect the knowledge and insights for the theory

There was a third theoretical process at work in my composition practice which consisted of a personal library of 'patches' – called Abunch – which were developed for the audio programming environment Pure Data. Because this library was developed and mainly used in the period 2007-2010 I choose not to include it in the theoretical processes of this self-study.

5.2.1 Simultaneous contrasts

5.2.1.1 Content of the contrast theory

The aim of my contrast theory is to create contrasting simultaneous layers in music. These contrasting layers should be perceivable. This theory is rather technical and it was made by consulting literature on music perception and cognition. It does not take extra-musical dimensions of polyphony into account. There is also one important parameter – space – which this theory does not contain. This was done for aesthetic reasons: when this theory was developed I was mainly interested in creating contrasting layers without using spatialization, as in my composition *Threeway II*.

The first part of my contrast theory can best be understood by looking at the Illustration 25, which was developed in 2010.

Illustration 25: Mind map of my contrast theory

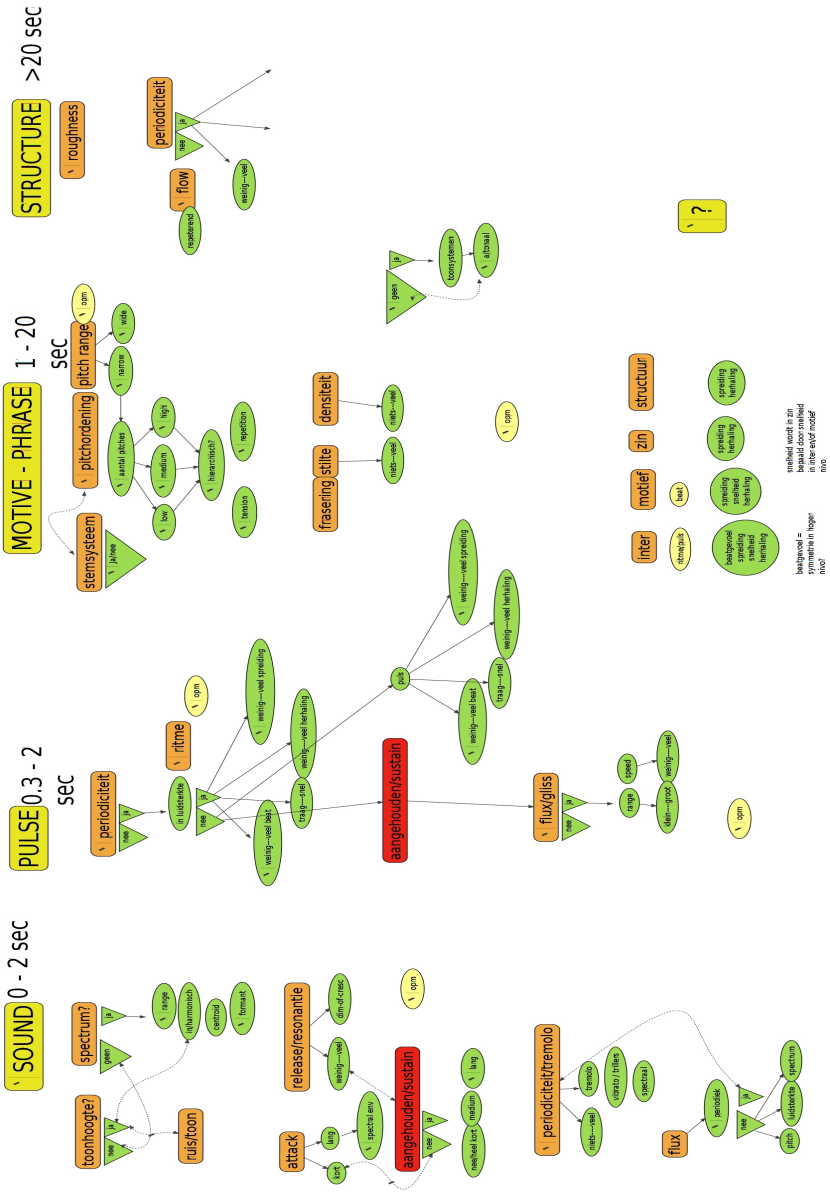


Illustration 25 was made with mind mapping software called VUE (Visual Understanding Environment). The figure is sketchy and was only intended for private use but it shows how I visualized my contrast theory. In my contrast theory the four main musical categories contain a range of musical features, these categories are based on the duration in which these features exist and are perceived. The four categories are 'sound' (zero to two seconds), 'pulse' (300 milliseconds to two seconds), 'motive/phrase' (one to twenty seconds) and structure (longer than 20 seconds). Within each category, there are several features. One of these is (the idiosyncratic term) 'flux', which stands for an 'unstable' feature, with continuous, gradual changes. For example, when applied to pitch, this is a vibrato or glissando, or applied to rhythm, this is a rhythm with alternating ritenuto and accelerando sections.

Next, I tried to detect and imagine the main contrasts of these musical features. For example, the main contrast in relation to the pitch feature (in the 'sound' category), is the one between pitched and non-pitched sound. Of course, it is often impossible to find a simple set of dualistic opposites. In the objects under the heading periodicity (in the category 'pulse'), one reads that I found four main contrasts for the 'rhythm' feature (i.e. periodicity in loudness): no (feeling of) beat versus beat, slow versus fast rhythm, non-repetitive versus very repetitive and evenly versus unevenly spread.

Hierarchical relations exist between musical features (crossing the boundaries of the four time categories), some features emerge when specific conditions are met in lower level features. For example, pitch systems (and the whole diversity in these pitch systems) depend on the presence and stability of pitch in the 'sound' category; a feeling of beat is not possible if a musical layer consists of a sustained, gradually changing sound. These hierarchical relations and emerging features made it impossible for me to systematise all possible contrasts in my contrast theory and therefor the theory remains incomplete.

What happens if I try to create several contrasts, for example in a quartet, based on the theory? The aim of my contrast theory is to create as much (simultaneous) contrasts as possible. Thus, two contrasts in a quartet, for example a duo versus a duo, is not what I aim for. I want to create a quartet where the music of player A not only contrasts with player B, but A should also be different from C and D from C. At this point, it is important to realize that the number of relations grows fast if the numbers of instruments increases. A duo has only one relation which can contrast, a trio three (2+1), a quartet six (3+2+1) and a quintet already ten (4+3+2+1)!

If I want to create a quartet with four contrasting voices, I have to take care that the sets of contrasts are evenly spread over the four instruments. If they are not evenly spread, I might end up with a set of two contrasting duos, or a trio versus a solo. Table 14 represents a set of nine contrasts (randomly chosen from my contrast theory), spread over the four parts of a quartet.

	Voice one	**Voice two**	**Voice three**	**Voice four**
1	no pitch ↔	↔ pitch		
2			sustained ↔	↔ 'plucked' sound
3	regular ↔		↔ irregular rhythm	
4		fast ↔		↔ slow tempo
5	inharmonic ↔			↔ harmonic timbre/spectrum
6		tremolo/ornaments ↔	↔ no tremolo/ornaments	
7	flux-pitch ↔			↔ stable pitch
8		short attack ↔	↔ long attack time	
9	high pitch range ↔		↔ middle pitch range	↔ low pitch range

Table 14: Random sets of contrasting features in a quartet

A table such as Table 14 may contain several difficult or impossible combinations in one voice (i.e. a column in the table), for example the combination of 'no pitch' (row 1) and an unstable, fluctuating pitch (row 7) in voice one. These impossibilities are related to the aforementioned hierarchical relations between features. In a next phase, I try to remove the impossible combinations and remain as much contrasts as possible between the six relations of the quartet. Now I can start composing the layers.

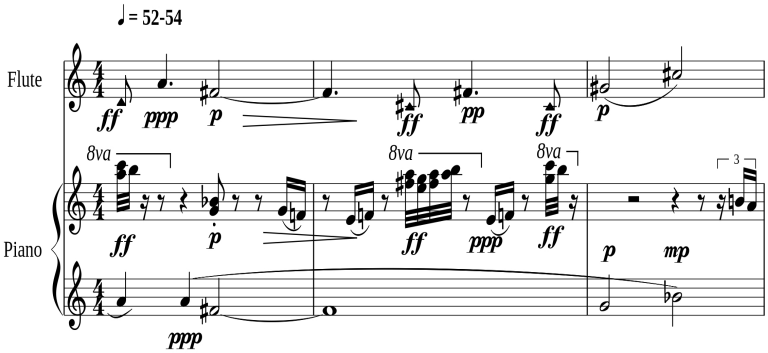
Apart from all the musical features within these four time categories, there are three special, global features, to create contrasting, linear polyphony. If sets of contrasting features from the four time categories (in the previous contrast theory) are transformed into simultaneous layers, these two requirements still have to be fulfilled (to a certain degree) *to perceive* two simultaneous, contrasting voices. At the same time, these two features are global, once a whole set of contrasting features is transformed into two or more layers, it is no longer possible (for me) to think in isolated features and parameters, at this point global features emerge.

The first one is identity. A layer with a clear identity is one which is coherent or consistent, has references to itself and is constructed with a large set of constraints. The clearer the identity of a layer is, the easier it is to create a contrast. My argument sounds similar to the requirements of a fugue theme (in counterpoint) which according to Belkin (2012) should be “concentrated, avoiding too many different motives, have a strong and memorable character,”.

The second global feature is a duo of two related features, i.e. transparency and (dynamic) balance. The latter means that the dynamics should be equally spread over the separate layers. The relation between two layers may be very contrasting but if one layer sounds very loud, and the other very soft, no simultaneous contrast is perceived. But balance is related to the amount of transparency of a voice, i.e. the amount of silence (or sudden drops in loudness) present in a layer. Transparency is inversely proportional to the difference in dynamics of the layers: if you want to obtain two simultaneous layers, one very loud, one very soft, then a lot of silence (rests) should be

added to the very loud layer. Thus, pushed to its extremes, the very loud layer will only consist of short fragments and a kind of pseudo-polyphony or compound melody is created. This is illustrated in the following fragment (from my unfinished composition Minitrio for flute, viola da gamba and piano) in which the fortissimo sections (with the flute playing jet whistles) are very short. It seems as if the pianissimo layer is continuously playing, but it is disrupted (sequentially) by the fortissimo sections.

Illustration 26: Fragment from unfinished composition Minitrio



A third global feature is related to the degree to which a layer is well-known for a listener. As a fugue starts by presenting the theme (often solo), the listener can memorize this theme and get to know it. This facilitates the recognition and perception of the theme later on when more voices are added. What is known is easier to perceive in a (polyphonic) whole. Therefore, if in a composition with four layers, there are enough solo or duo sections, a listener more easily discerns the separate layers in the simultaneous combinations.

5.2.1.2 Genesis of contrast theory and references

A first version of the theory takes shape in December 2009 and it mainly consists of a list of features, comments and questions to create simultaneous contrasts. In the second half of 2010 I develop the first version of Illustration 25 on p. 181 and I start to organize the features in categories and search for contrasts in all these features. From December 2010 on, I try to measure and quantize the contrasts between the features and create an overall algorithm. This attempt fails and the development of the theory stops in November 2011. It is in this last period, that I realize that the global feature 'identity' – initially called autocorrelation of a voice – also plays an important role in creating simultaneous contrasts.

The description in the previous paragraph of the contrast theory was based on the last version in November 2011.

My contrast theory was mainly developed by reading literature on the perception and cognition of

music. These are the short references of literature that I read:

- Bregman, A. S., and P. A. Ahad. 1996. “Demonstrations of Auditory Scene Analysis: The Perceptual Organization of Sound [CD and Booklet].”
- Cambouropoulos, Emilios. 2008. “Voice and Stream: Perceptual and Computational Modeling of Voice Separation.” *Music Perception* 26 (1).
- Crow, Robert Jamieson. “Konflikt Zwischen Hör- Und Strukturmodellen Als Quelle Der Kompositorischen Idee in Der Musik Der Moderne.” In *Zur Wahrnehmung Zeitgenössischer Musik*, ed. Elisabeth Schimana and Josef Gründler.
- Deutsch, Diana, ed. 2012. *The Psychology of Music, Third Edition*. 3rd ed. Academic Press.
- Hamamoto, Mayumi, Mauro Botelho, and Margaret P. Munger. 2010. “Non-musicians’ and Musicians’ Perception of Bitonality.” *Psychology of Music* 38 (4).
- Handel, Stephen. 1984. “Using Polyrhythms to Study Rhythm.” *Music Perception* 1 (4): 465–484.
- Leman, Marc. 2005. “Muziekpsychologie Cursus.” *(unpublished).*
- McAdams, Stephen, and Albert Bregman. 1979. “Hearing Musical Streams.” *Computer Music Journal* 3 (4).
- McAdams, Stephen, and Jean-Christophe Cunibile. 1992. “Perception of Timbral Analogies.” *Philosophical Transactions of the Royal Society*.
- McDermott, Josh H, and Andrew J Oxenham. 2008. “Music Perception, Pitch, and the Auditory System.” *Current Opinion in Neurobiology* 18 (4) (August).

5.2.2 Synchronization theory

5.2.2.1 Content

My synchronization theory contains a number of 'models', i.e. broad categories to synchronize music, often tied to a specific vision on aesthetics, music composition or performance. Mixtures of these models are possible and these mixtures often occur in compositions. In the following description I use the term 'timing flexibility' to describe how strict or free the timing may fluctuate between the layers of a composition.

Independent Model

In his model the timing flexibility is very high. The time differences between the layers accumulate and are (almost) never corrected during the whole composition. Consequently, at the end of the performance of a composition, the resulting time differences may be even described in minutes. The polyphonic constellation between the layers changes a lot from performance to performance. An example of this model is *Scottish Circus* (1990) of John Cage, in which the composer only gives general indications on the synchronization of the selected pieces of Scottish traditional music

that have to be performed simultaneously:

- the overall duration should be approximately thirty minutes
- each performer plays for approximately half the performance time, i.e. 15 minutes, and should take three breaks
- the timing should be measured instinctively, “using the body-clock's natural perception of time”.

Relative Model

The time differences between the layers accumulate and are corrected by cues, i.e. signals to re-synchronise the music. A timing buffer is necessary to absorb the possible time differences, because the timing of the *sender* (of the cue) may differ from performance to performance/rehearsal. Possible buffers are: repeated sections or a flexible durations of rests or sustained sounds. The latter buffers are often notated with a fermata sign. The buffer solution assumes that the receiver of the cue 'jumps' to the next section upon receiving the cue signal. In case of buffers with fermata, the receiver first stops and next, jumps to the next section. This model is called *relative* because the moment of the cues depends on the performance of previous events, sections or layers. This model is mostly linked to a timing flexibility which is bigger than in 'usual' strict classical music but smaller than the difference in the Independent Model. Thus, the layers have a free timing on the rhythmic (or the phrase) level, but the phrases (or sections) are synchronized. Consequently, the scale of time differences (between the layers) also changes the overall pitch and harmonic constellations. This model was used and elaborated by Witold Lutoslawski, for example in his *String quartet* (1964) or the *Jeux Vénitiens* (1961). This technique is often called “aleatory counterpoint” or “limited aleatorism”.

Absolute Model

In this model the time differences between the layers are corrected at *fixed* time points. The correction is based upon an external reference time which is the same for all players. Usually synchronization in this model is aided by technology (chronometer, audio track,...). The term 'fixed' indicates that the time points (at which the synchronization) occur, are not changed by the fluctuations in the timing of the performed parts. *Europera 5* (1991) of John Cage is an example of this model. The synchronization occurs by a visible digital clock, running on a video tape. Each instrument or voice plays different arias and the score provides the start times for all these arias. Cage provides one extra synchronization remark: make sure each aria will be finished soon enough to move on to the next. This remark demonstrates that in this model the synchronization points are fixed in advance, and the performers (of the 'layers') have to adapt the performance to these fixed points.

Unified Model

The time differences are *permanently corrected at regular time intervals*. This is the model in which different tempi are reduced to one common tempo – a time grid – . Thus the tempo of the

music of each part is rewritten and adapted to one overall tempo. In the scores of Elliott Carter several examples of this model are found. In the *String Quartet no.2*, at the start of the second movement Presto scherzando, the first violin plays triplets in a tempo of 175 beats per minute, the second violin plays in a tempo of 140 bpm but it is notated in the tempo of violin I as a quarter note tied to a sixteenth. In this case, the music is polymetric, which means that there is a mathematical relation between the tempi or rhythms. Carter developed a system of composing with (mathematically) related tempi (so-called 'metric modulation' (Weytjens, Delaere, and Van Hove 2007)). In fact, any tempo can be re-calculated to fit into another tempo. The result will be a score with complex rhythms and the performers will be expected to be good in performing difficult rhythms and syncopations.

Check Model

The time differences are first *checked* at cue points and if necessary they are corrected before the next check point. Thus, the correction only occurs *if needed* and it is smeared over a certain duration. This is different from the relative model, where the performers always do something at a cue point: there are buffers (pauses or repetitions) and jumps to the next section. In this model *continuous* layers can be combined simultaneously, they do not have to be divided into different sections as in the relative model. This model was designed for my composition *Threeway II*. The percussion part mainly consists of short fragments with long silences in between these fragments. The entry of the percussion fragments provide the check points, the other parts have an indicated check 'zone' (indicated by a XXXXXXX line in the score in Appendix 19). When they are playing in such a check zone and the percussion enters with a fragment, the timing is correct and nothing should change. If the entry occurs before the check zone, they should slow down, or extend the rests or sustained notes in the following section, until the next check point.

Performer's model

One way to solve the synchronization problem as a composer, is to leave this problem to the performers. In this vision the composer freely writes the desired music and the performers should find a way to synchronize the performance.

Additional insights

A synchronization signal can be internal, produced by the performers, or external, produced by an additional person or device. When the signal is external, it can be human – a conductor –, technological – a click track, chronometer, sound track, etc. – or environmental. An internal signal, thus produced by the performers, can be either implicit or explicit, i.e. it can be a signal inherent to the music production (implicit) or one which does not produce sound and which is made on top of the other gestures required to produce the music. The *String Quartet* (1964) of Witold Lutoslawski provides a rare example of such an implicit synchronization signal. On page 53-54 of the score there is an indication “repeat only in case of the viola and cello not having turned their pages over.” The music relies on a gesture that is part of the performance (the pages in the score are fixed) and they do not have to produce an 'extra' synchronization signal.

An example of an environmental synchronization signal is found in the composition *Ritmi: Mare → Porto → Città* (1977) of Albert Mayr (1993). In this work the signals from a lightning house are used to synchronize the performance of the musicians while they walk through a coast village.

The most important thing about an external synchronizator (like a clock or chronometer) is not that it runs regularly but that it is *shared* by all the performers. A clock is nothing but a historically grown, social convention, externalized in a piece of technology. One can use other events that evolve through time and that can be observed by the performers as a 'clock'. An actor, dancer or movie can function as a clock. The advantage – or disadvantage – is that the synchronization can not occur very strictly with such 'clocks'.

Usually a synchronization signal consists of one onset or a group of regular signal. An example of the former is a pointing signal with a hand to indicate that one group of instruments has to start playing the next section, an example of the latter are the usual gestures of a conductor, containing information on the tempo and meter. The Concert for piano and orchestra (1958) of John Cage provides another synchronization signal that is less used, the conductor makes a clock-like gesture which represents one system (of a music staff) for the performers. This signal is exceptional for two reasons, first it is continuous, thus it is impossible to synchronize strictly to this signal, second, the signal not only gives information on the moment of synchronization (to switch to a new system in the score) but it also contains real-time information on the 'time spent and left'. A performer has a rough estimation of the time that he has used already in one system and the time left to complete one. In this way it is similar to an hour-glass or a download time bar, which also gives an estimation of the time needed to complete an action.

5.2.2.2 Genesis of synchronization theory and references

A first version of the synchronization theory appears in December 2008 with a focus on finding technological solutions for synchronization problems. This version contains plans and ideas on the creation of live scores (with software) to visualize the synchronization and tactile metronomes. About one year later the same technological focus is still present. During 2010, the year in which *Threeway II* was composed, techniques and concepts such as the 'check points', external and internal synchronization, time buffers (in the Relative Model) appear. The focus of the theory is now on an interactive form of synchronization and ensemble playing, without an external synchronizator (conductor, metronome,...). In May and June 2012 a large number of scores are consulted and the theory, presented at a conference, appears as it was previously described.

The synchronization theory is mainly built upon the review of a large number of scores of 20th century music, containing indications on techniques to synchronize the performance of the composition. Based on these sources, the most well-developed synchronization systems are found in the scores of the composers Earle Brown and Witold Lutoslawski. An important source on polytempo music – to find scores that are worthwhile to study in light of its synchronization method – were the writings of John Greschak (2003).

The scores of compositions of the following composers were studied:

- John Arrigo-Nelson
- Luciano Berio

- Pierre Boulez
- Earle Brown
- John Cage
- Elliott Carter
- George Crumb
- György Ligeti
- Witold Lutoslawski
- Murray Schafer
- Karlheinz Stockhausen
- Christian Wolff
- Bernd Aloïs Zimmermann

5.3 Coding of the loose ideas and global analysis

In this phase of the analysis, the loose ideas were coded. Coding might not be the right term for this initial analysis of the loose ideas: a better term might be 'tagging' because the coding does not lead to a reduction of data (in the loose ideas) and more abstract categories or code families. The coding was restricted to one round because the separate loose ideas are written in shorthand and are short in length. The codes were created by rereading the collection of loose ideas several times. As these loose ideas were written spontaneously and not focused on a fixed set of questions, these codes were derived in full from the original texts (as in Grounded Theory). The codes represent themes that re-appear within this stream of ideas. This is the alphabetical list of codes:

- **action:** using movements, theatrical actions or videos as a score to obtain a less rigid, freer timing in performance
- **amplify**: use electric amplification as an extra 'extended' instrument; special placement of microphones
- **background:** creating a clear separation between music in the foreground and background
- **ballad**: creating a piece (for human voice) in which a narrative is told, with music purely as an accompaniment to a story, no meta-story, no philosophy or reflections, just a story about people acting and doing things; inspired by a centuries-old tradition in folk, ethnic and pop music
- **close**: performers playing physically close to each other with a tension between psychological, physical and musical distance
- **combi-performance**: a performer plays an additional, second instrument; also: a new voice/layer created by these additional, second instruments
- **curve**: using the amplitude data of one instrument to control the amplitude of another, very softly amplified instrument; also: musician performing music silently (on a digital instrument) while the amplitude data are used to control other instruments
- **depth**: creating depth in a performance space, mainly by acoustic/mechanical means
- **directional**: using directional instruments or trying to make (parts of) instruments more

directional
- **dyn-link:** linking dynamics with space, adapting the dynamics of the music by positioning the performers at different locations in the performance space
- **fragments**: using short fragments of different styles of music
- **heterophony**: many instruments playing small variations on the main melody
- **hyperpolyphony**: creating independent, contrasting layers that are perceivable in the music
- **LED**: a performance event with audience participation (by using LED lights)
- **live**: ideas that use live electronics
- **mix**: perceptually fusing different layers of music
- **moving**: moving performers or sound devices
- **mute**: muting instruments in many ways to create a soft, distant sound
- **openscore:** compositional idea with an open notation to stimulate the creativity of the performer
- **polychords**: creating layers with different tempi and style based on different chords and harmonies
- **recitativo**: 'nebenstimme' following the overall timing of the phrases of the main melody, but the accompanying voices play in different styles, scales and/or tempi
- **sequential**: creating sequential contrasts between fragments
- **special-timbre**: characteristic instruments or performance techniques with a specific timbre or other salient feature
- **trigger**: a detail in one voice triggers an entry or a sudden change in another instrument, also accentuate the start or end of a fragment by a short accent
- **unique**: this code was used for themes that occurred only once in the collection of loose ideas

As a part of the analysis, I also searched for methods of providing an overview of the compositional processes studied. The coding of the loose ideas provided a solution because the code family obtained could also be applied to the finished processes. The loose ideas and finished processes with codes provided an overview of the compositional processes (see further in chapter 6.3) and global relationships between processes could 'emerge' from this overview.

5.4 The content and categorization of the loose ideas

Before proceeding to the final analysis, the differences between loose ideas, finished and unfinished processes are discussed. The analysis is based on four categories (finished, unfinished, loose and theoretical processes), and therefore it is important to understand how this categorization evolved during the research. The separate category for theoretical processes was identified easily: because it is a text-based, systematic activity, it clearly differs from the other three processes. Consequently the theorising is not included in the following discussion of the categorization of the data.

The *content* of the loose ideas consists of two main categories:
- a musical idea in which the text describes musical features (tempo, pitch system, texture,

instrumentation,...)

- a set up of a performance, happening or event with no or a few general, vague descriptions of the music.

Very occasionally, there is a description of a meaning or extra-musical intention. Some ideas are very short and read more like a memory of a previous idea or a reflection on this idea. Within these two broad categories there are of course very different ideas, for example in the second category there is a technical idea 203 which discusses amplification as a means to create more dynamic levels and musical depth and idea 207, which is a vague idea about a conceptual event or happening. The loose ideas do not contain short musical ideas (melodies, chords, fragments etc.) *written in music notation*.[23]

In general all loose ideas are *creative*: they contain a productive idea for a future composition (no matter how indeterminate this future or composition may be). If loose ideas contain reflections or evaluations on previous compositions, they always add a creative proposal to solve previous problems. Most loose ideas bear no signs of any action involved, such as performance, improvisation, experimentation with a sound objects or live electronics.

The content of the data in the unfinished compositions is very similar to the finished processes. The main difference is the smaller amount of data (because the processes stop in an earlier phase). In contrast to the loose ideas, sketches in music notation are present in seven out of ten unfinished compositions. Moreover, compared to the same loose ideas, more physical activity is involved in the unfinished processes. If performing on an instrument, improvising, recording or trying out live electronics in software are seen as physical activity, then this activity was present in seven out of ten unfinished processes (see Table 15).

Unfinished processes	**Ideas in music notation**	**Physical activity involved**
Klavier4tet	yes	yes
Tango-blues	yes	yes
Solo-chords	yes	yes
Threeway1-rev	yes	yes
Minitrio	yes	yes
Eigengang2	yes	yes
Samples	yes	no
Bass-live	no	no
Same4	no	no
Staccato	no	yes

Table 15: Physical activity in unfinished processes

23 I found three loose pages with music fragments but I did not include them in the loose ideas studied because their date of origin is too vague: they carry no date inscription and I cannot remember how old they are (probably somewhere between two to seven years).

While searching for and collecting loose ideas and sketches, I also found data which belonged to the other processes, mainly the finished and unfinished compositions. For example, early sketches for *Centra* and *(fl)ASH* were found, pre-dating the actual CP by more than half a year. Because similarities in content (between a loose idea and the other processes) can also appear long before or after the CP of an (un)finished composition, the date of the idea was decisive in categorizing the idea. If a content-related idea was dated between the commission (or the first contacts with the commissioner about a work) and the performance of a composition, I transferred the idea to the data of the (finished) composition. In the unfinished processes there are no commissions but the dates of the activities within a unfinished composition are always clustered together, i.e. the traces appear within a well defined period, from a few days ('test-loops') to three months ('minitrio'). Therefore, if the date of a loose idea, with a similar content, fell within or just before or after such a period, the loose idea was considered part of the unfinished process.

6 Final analysis: relations between compositional processes

This final analysis answers the three main research questions in the self-study:

- What are the main compositional processes in my artistic practice?
- Are there processes that operate independently of the production of finished compositions?
- How do the separate processes interact with each other and what is the function of these processes?

In the first parts of the final analysis in this self-study, the focus is on the loose ideas. The 'direct links' in these ideas are references in the loose ideas to the finished, unfinished and theoretical processes. These links provide an important real-time source to examine the interaction of the compositional processes. While still concentrating on the loose ideas, I focus on the content of the loose ideas in chapter 6.3 and, based on the coding, the relations in content between the loose ideas and the other processes are researched. Next, to obtain more detailed information of the development and role of the loose ideas, I chronologically follow one thread of linked loose ideas through the finished processes and loose ideas (in chapter 6.5). Finally, the theoretical processes are put in the foreground and the function of the two theoretical processes is analysed (in chapter 6.6). This is done by extracting the information on problem-solving from the real-time data of the finished processes and relating it to the theories.

The unfinished processes do not play a major role in the analysis of the compositional processes. Because I already had lots of data about the other processes, I considered it beyond my abilities to analyse all the data from the unfinished processes. Moreover, I did read all the data from the unfinished processes, and my first impression was that they seemed to be rather similar to the finished processes. Hence, in the following analysis of this self-study there are no themes or insights that emerged purely from the unfinished processes.

6.1 Direct links in the loose ideas

When reading and rereading the loose ideas, I noticed that many ideas point towards each other and other creative activities. Because each individual loose idea tends to be short, it is difficult to analyse one idea in a meaningful way. But the references within the loose ideas provided an important starting point for the further analysis of the loose ideas and their relationship with the other creative processes. 'Direct links' are real-time statements in the content of a loose idea which refer to another loose idea or my other compositional processes. They appear in several forms, as:

1. an exact reference: the title of a previous finished or unfinished composition or idea
2. a reference indicating the content, date/time and/or other circumstantial information of another idea or process
3. a text copied from a previous idea in the current loose idea (in these cases a comment on the copied text is added as a new idea)
4. a reference to an action which is part of another compositional process

These are examples illustrating the previous appearances:

1. an exact reference: idea 93 refers to the unfinished composition tango-blues:

   resultaat: flarden van muziek & veel bijkomstige handelingen (muziek als residu, verzinkt, verdwijnt in bijgeluiden) zie ook ander probeersel 'tango-blues2.aup' in map My documents / My Music";

   idea 44 refers to the unfinished composition Klavier4tet:

   idee zoals in klavier4tet: zinsbouw is zoals in homofonie (bijna recitativo) maar begeleidende akkoorden zijn altijd onafhankelijke stemmen met de dynamiek van een begeleidende stem (en vormen samen een harmonie? - variant)

2. a reference indicating the content, date/time and/or other circumstantial information of another idea or process:
   idea 88 refers to an (educational) composition in the *Patchwork* cycle:

   zoals in stukje voor muziekschool met gong en klokkenspel;

   the title of idea 112 refers to the same *Patchwork* cycle (of live electronic works):

   trio kinderstuk met GM Midi

3. a text copied from a previous idea: idea 101, into which a text from idea 93 is pasted
4. a reference to an action which is part of another compositional process:
   idea 250 refers to the end score of *(fl)ASH* in which the music of the fragments is notated:

   ideetje dat ik vorige vrijdag had denk ik, toen ik aan de realisatie-score (met fragmenten) aan het werken was, meerbepaald aan Vieuxtemps-fragment

44 direct links were found within a total of 70 loose ideas. The direct links represent the *conscious* use of previous ideas or compositions for a new idea. They clarify that while notating the idea, I remembered the previous ideas to some degree. The presence of direct links does not mean that all the details of the referenced ideas were remembered and neither does it exclude the possibility that other ideas were being processed unconsciously. But the large number of direct links shows that the conscious reuse of previous knowledge happens regularly. In the anecdotal evidence on loose ideas (see 'Review and research questions' p. 158), these ideas suddenly pop up and a lack of information on the pre-history of these ideas might lead to the conclusion that largely unconscious processes are at work. The direct links indicate that the cognitive processing of loose ideas is not merely a blind process, based on subconscious, inspirational ideas or music.
The illustration 27 depicts all the direct links present in the loose ideas and through this figure it becomes clear that this collection of loose ideas does not so much consist of loose, static ideas as of ideas that originate from other ideas or compositions and/or develop into new ideas or an (un)finished composition.

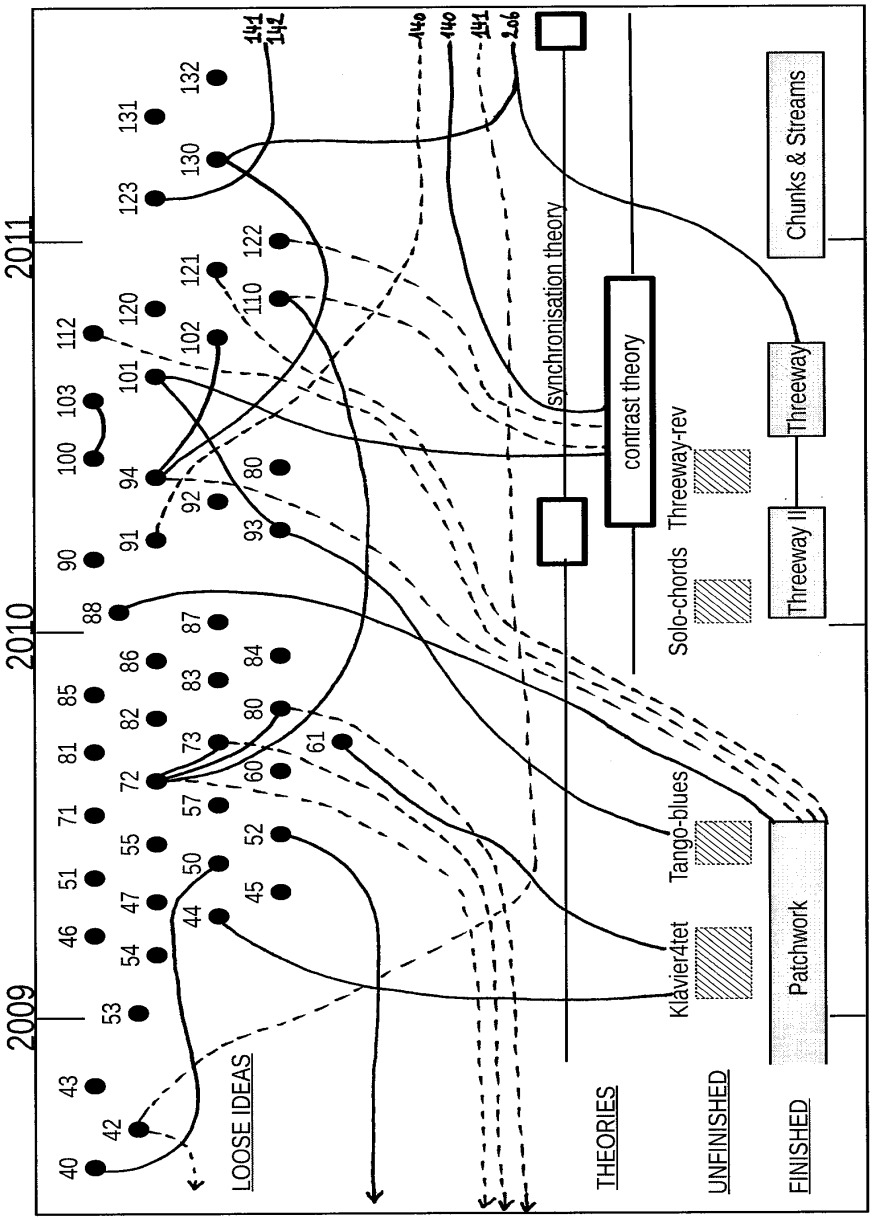
The direct links between loose ideas on the one hand and finished or unfinished compositions and theories on the other are very diverse. These are some examples, of direct links: the same numbering of ideas in these examples and Illustration 27 is used (as in Appendix 36):

- *(fl)ASH* → 232: loose idea 232 is a multi-media variation on the composition *(fl)ASH*; instead of only using short music fragments there would also be flashes of images
- 123 → 141 → 230: loose idea 123 contains the idea of adapting the dynamics of the music by positioning the performers at different locations in the performance space. Combined with

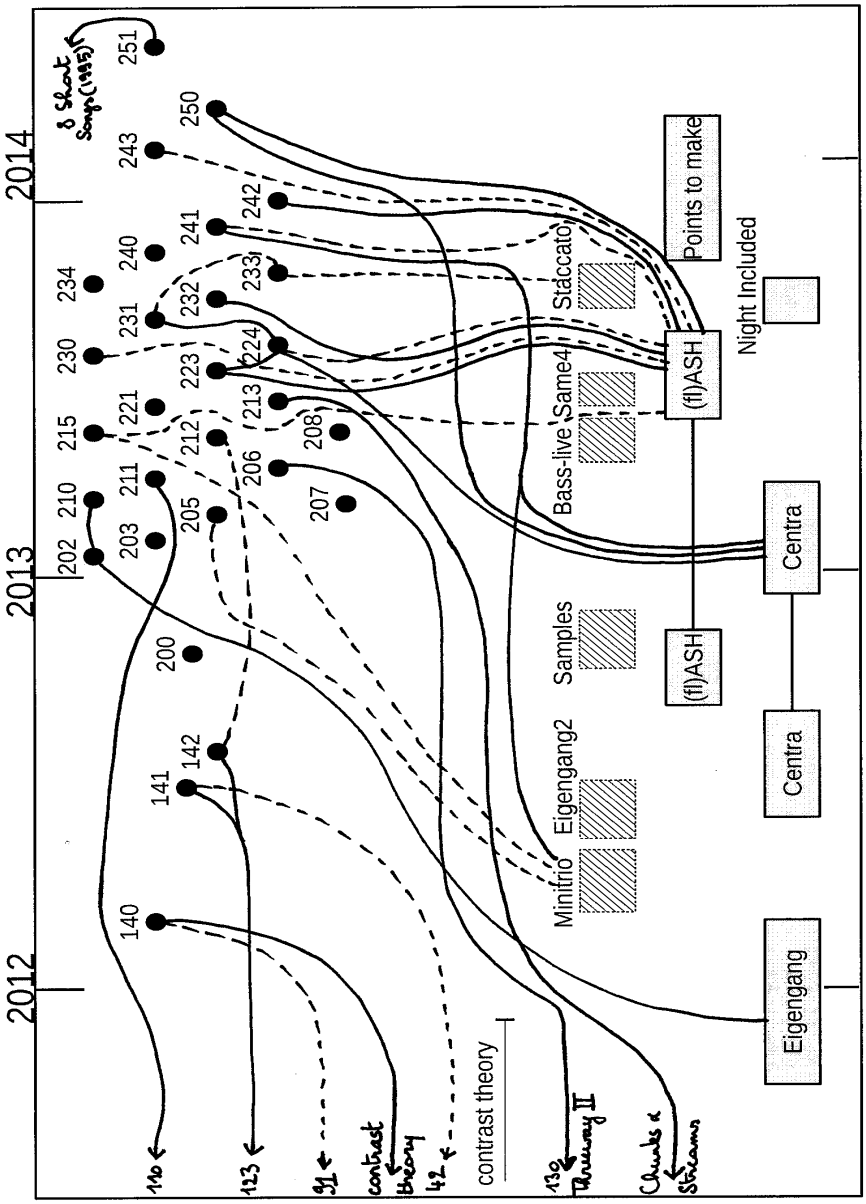
an additional idea to use two of each instrument, the spatialization could ideally produce any dynamic balance within a combination of instruments. For example, if a violin has to sound louder than a bagpipe, one could locate many violin players in the audience, to ensure that every listener hears a violin from less than a few metres away, and place the bagpipe player at a distance of 100 metres from the audience or in a closed room near the hall. In this way, one can create 'artificial' dynamics through spatialization rather than amplification; loose idea 141 consists of a combination of this 'dyn-link' idea with an older idea to create a voice/accompaniment composition where the story (in the text) prevails ('ballad' idea); loose idea 230 mixes this ballad idea with ideas from the *(fl)ASH* composition (which was almost completed at that point)

- minitrio→205, minitrio→215, minitrio→241: for the concert in the group study I wrote a short composition (called minitrio). After this short composition was finished, I kept having ideas about how to develop it into a longer composition; loose ideas 205, 215 and 241 all contain ideas on revising and 'completing' the short composition
- tango-blues → 93 → 101, contrast theory → 101: the unfinished composition tango-blues is a polyphonic experiment in combining different styles simultaneously. While experimenting, I noticed that the combination of simultaneous styles was more effective if the styles were in the background and the foreground consisted of a continuous layer of 'everyday' environmental sounds (a quick recording of my garden); idea 93 is about creating an composition with 'acting' performers: the actions and 'random' noises generated by the actions would form the foreground while the 'composed' music would only exist in the background, so the music would only be a residue, filtered by these actions; idea 101 adds a short comment to the previous idea, suggesting that the instrument parts and scores be based on features described in my contrast theory.

Illustration 27: Direct links in the loose ideas, referring to other compositional processes



The direct links are illustrated by lines between the loose ideas (black dots with the number of the loose ideas) and the other compositional processes (finished compositions, unfinished compositions and theories). The difference between normal and dotted lines is not content related, it only serves to clarify the direct links.



	Period A (Jul08-Feb09)	**B (Feb09-Jan10)**	**C (Jan10-Sept10)**	**D (Sept10-Oct12)**	**E (Oct12-March14)**
Duration of period in months	7	12	8	24	18
Total number of loose ideas in this period	5	22	9	10	24
Average number of ideas per month	0.71	1.83	1.13	0.42	1.33

Table 16: Average number of loose ideas per month

If the average number of loose ideas per month is calculated, one notices that it varies greatly during the period studied (July 2008 – March 2014). I do not have a good explanation for this but I think there may be a reason for the low number of ideas during the period D. During this period some of the loose ideas were noted in a file called 'art-experiments'. In the same period I continued using an older and more general file called 'compo-ideeen'. The file name 'art-experiments', indicates that I was collecting composition ideas related to my research, I believe I was making a selection of my loose ideas: I was only writing down ideas that could be useful for my research. More than the general 'compo-ideeen' file, the research-related file was an attempt to organize the ideas in themes and this proved to be difficult (see also chapter 3.2 p. 163).

The direct links are immediately connected to the *conscious* use of previous ideas or compositions, i.e. when writing a loose idea I remember a previous idea or composition. It is interesting to find out how long this memory lasts. To calculate the time interval between a loose idea and the process referred to, I used the data from period E because these loose ideas have a precise time stamp; the timing in periods A to D is less precise (see chapter 4.2.1 p. 172). There is an important difference between the finished processes and the loose ideas, if these are the processes to which an idea refers. A loose idea is an event with a short duration, so it is easy to calculate the time interval (in months) between two loose ideas. But some finished – and some unfinished – CPs have a duration of several months. To calculate the period between a loose idea and the finished process referred to, I defined the end date of finished or unfinished processes, based on the summaries of the CPs (see Appendix 28 to 31) and rounded it to the nearest beginning of a month. These are the end dates of the processes obtained, appearing in the direct links of loose ideas in period E:

- *Chunks & Streams*: May 1, 2011
- *Eigengang*: February 1, 2012
- minitrio, March 1, 2012
- *(fl)ASH*: February 1, 2014
- *Centra* March 1, 2013.

The previous calculation method is only applied to loose ideas that are produced *after* the CP they are referring to. For example, when I wrote down a loose idea in November 2012, while I was composing *Centra*, the time gap is zero (i.e. simultaneously produced). Another important remark concerns the time interval between two loose ideas that are linked to each other. In these cases I have used the direct link referring to the last appearance of a loose idea.[24]

The results show that most processes referred to, are less than two years old (21 out of 23)[25]. Once processes are older than two years, they suddenly start to disappear (as ideas or processes referred to) in the loose ideas. In general, the results also seem to indicate that more loose ideas are generated after a compositional process has stopped (16 ideas), compared to during the process itself (7), but an important proviso has to be added: simultaneous 'links' can only be made to finished processes (which extend over a long period) and consequently, only a part of the direct links can be part of this category.

The period between the loose ideas and the process referred to can be seen in Table 17 and can be summarized as:

- 0 year (simultaneous): 7 links
- <1year : 8 links
- 1-2years: 6 links
- 2-3 years: 1 links
- >3 years: 1 links

There is only one direct link which refers to an idea that is older than three years, in idea 250 (from March 2014) I refer to my composition *8 short songs* from 1995.

The imprecise dating of the loose ideas before the beginning of period E (October 2012) makes it impossible to check the age of the direct links with finer steps than two years. Moreover, some of the direct links of loose ideas in the periods B and C refer to old loose ideas of which I don't have time information. Therefore I limit my calculation of the age of references to the loose ideas of period E.

24 If I had not used this method, in some cases I would have to trace loose ideas referred to in the period before the start of the self-study.

25 There were 24 direct links in this period, but the time indication of the idea referred to in one link is too vague to include in the calculation.

Number of loose idea	**Refers to**	**Period (in years (y) and months (m))**
202	reference to problem in *Eigengang*, 1 Feb 2012	11m
205	Minitrio, April 2012	11m
206	DriewegII (Feb 2010)	2y11m
206	130 (May 2011)	1y10m
210	202	2m
210	*Eigengang*, 1 Feb 2012	1y1m
211	110 (Sept 2010)	1y6m
212	142 (5 Sept 2012)	6m
213	Zwerm (1 may 2011)	1y11m
215	Minitrio, march 2012	1y2m
215	*(fl)ASH*	0m
224	*Centra* (1 March 2013)	4m
230	*(fl)ASH*	0m
231	224	1m
232	*(fl)ASH*	0
241	Minitrio, March 2012	1y9m
241	*(fl)ASH*	0
241	*Centra* (1 March 2013)	9m
242	*(fl)ASH*	0
243	*(fl)ASH*	0
250	*(fl)ASH*	0
250	*Centra* (1 March 2013)	11m
251	8 short songs (1995)	19y

Table 17: Age of the direct links in the loose ideas

Another phenomenon, observed by looking at the numbers of direct links and ideas in the five periods, is the gradual and linear rise of the number of direct links per loose idea during the studied period (row 4 in Table 18).

	Period A (Jul08-Feb09)	**B (Feb09-Jan10)**	**C (Jan10-Sept10)**	**D (Sept10-Oct12)**	**E (Oct12-March14)**
Number of loose ideas in this period	5	22	9	10	24
Number of direct links	1	9	5	7	24
Number of direct links per loose idea	0.2	0.41	0.56	0.7	1

Table 18: Number of direct links per loose idea

There may be several reasons for this trend:

- the largest amount of data in this study was collected in the core period (November 2011 – January 2014). In this period there is a large amount of real-time data from the CPs of the finished compositions. Moreover, I did not collect the loose ideas before July 2008. Because references are always made to *past* processes, having more information may lead to recognizing more references.
- as explained, I succeeded in designing a comfortable and easy-to-use technique for collecting the loose ideas (with the software applet Tomboy) in October 2012. This collection method is a mixture of a research method and a composition activity. In practice, this also meant that in the last period (October 2012 – March 2014) I could easily find the (remembered) previous ideas in the chronological list of loose ideas.
- the whole research process in this dissertation has raised my awareness of my compositional processes. Through collecting all the data for the current self-study, I discovered lots of ideas and activities in my creative process. This could lead to a more frequent re-use of past ideas.

The first explanation is the most plausible because explanation two and three only explain the peak in the last period. The conclusion is that one needs to have a lot of information (data) of other compositional processes, preceding processes included, to detect the direct links in the loose ideas. Loose ideas appear to be very situated. They are local processes that are almost impossible to decipher unless enough contextual information is available. On page 193 I listed the ways direct links appear in the loose ideas. Appearances two to four in this list are references indicating the content, date and/or other circumstantial information. Copied texts and references refer to an action of another compositional process. In fact these three forms of reference are often very difficult to detect without knowledge of the object to which the idea refers. For example, a pasted text is only recognized if one has found the original text.

6.2 External inspirational sources

Apart from direct links to my own compositions or compositional activities, the loose ideas also contain a number of external references. These can be interpreted as providing information on the source of inspiration. In general these are references to external music and all kinds of cultural products and knowledge. By reading through the loose ideas I got the impression that there were a lot of these external references, especially compared to the verbal reports on the finished processes (i.e. the three compositions *Eigengang*, *Centra* and *(fl)ASH*). Finding the many direct references to (my own) inspirational sources, one can question if the same results are to be found for the external references.

The following *quantitative* comparison only gives an indication of the (external) inspirational sources and the differences between the loose ideas and the finished compositions. There are two categories of external references which were impossible to strictly define and thus were not counted: techniques and terms of nature. Although there were a number of examples of these two categories that clearly are understood as pointing at inspirational sources. But technical terms recur so often in the verbal reports that it was impossible to make a distinction between a technical term such as 'pitch detector' (in a remark on inspiration) and 'sampler' or 'pizzicato' (used in a description of my actions while composing). It is important to bear in mind that the verbal reports are many times longer than the loose ideas. In a word count, all collected loose ideas are less than one third of the verbal reports of just one composition, *Centra* (see Table 19). An external reference is defined as any occurrence of a (human) name, artistic style or period in the text; people (performers, conductors, organizers,...) directly involved in the production of (finished) composition are excluded.

A problem appeared while searching for these references (and coding them with the software Nvivo) in the finished processes. The compositions *Centra* and especially *(fl)ASH* use short music fragments (of external composers) in the composition. *(fl)ASH* is a collage and is almost entirely based upon existing compositions. Therefor the third column was added in Table 19, it represents the number of references to these fragments. These are references used while describing actions or evaluations in the CP. In a strict sense they correspond to the previous definition of external reference but a meaningful link with the notion of 'inspirational source' is very doubtable (just as the people directly involved). Therefore they were placed in a separate column. These are two examples of such references to fragments:

> dus kheb gemerkt dat dat fragmentje van die fluit, dat klassiek mozartachtig fragmentje en dan wat dan nog daarna komt van die strijkers, die mib reb daar en die sib sol b, dat dat eigenlijk wat te lang duurde (27jun12)

> hetzelfde met dat Debussy fragment, door dat akkoord en de ligging hoort ge eigenlijk al heel snel, die Debussy, dus eigenlijk hebde, kan dat nog korter (6jun13)

The following Table 19 contains the overview of the number of external references for the loose ideas and the three finished processes. A column with the number of words was added because this is very different between the loose ideas and finished compositions.

	External references	**References to fragments**	**Period**	**Number of words in data source**
Eigengang	1	0	October 2011 – October 2012	11108
Centra	1	3	April 2012 – July 2013	20747
(fl)ASH	7	5	August 2012 – April 2014	20033
Three finished compositions	9	8	October 2011 – April 2014	51888
Loose ideas	11	1	July 2008 – March 2014	6229

Table 19: External references in the loose ideas and three finished processes

The difference in the number of external references within the three finished processes is very big, especially if *Eigengang* is compared to *(fl)ASH*. This makes an overall comparison between finished processes and the loose ideas problematic. Looked at in periods, there is no big difference between a group of loose ideas and one finished process. Thus my first impression was not very correct. The only conclusion to be made is that according to the amount of information (i.e. the number of words in the data source, and the duration of the recordings of the verbal reports), the loose ideas are a much more *efficient* means to gather information on (external) inspirational sources.

Apart from the quantitative approach towards inspiration, the collection of these external references (in the loose ideas and finished processes) gives a very good picture of my inspirational sources. I believe it would be very difficult for me to give such an overview, for example by a retrospective reflection on inspirational sources. My inspirational sources consist of contemporary-classical music (with a special preference for Cage and Feldman), non-Western ethnic music, pop music (Pink Floyd, Tom Waits,...) and visual arts (graphic novels, Brueghel,...). To these should be added inspirational sources which were not included in the previous quantitative approach, i.e. specific techniques (pitch detectors, sine wave speech,...) and experiences of nature.

If all direct references (direct links to own works and external references) are taken into account, one can ask why these referred to – inspirational – sources are so prominently and openly present in the loose ideas. I think there are two possible explanations:

- the loose ideas are notated very soon after (or even during) the generation of these ideas, which makes it easier to remember the source
- the loose ideas are quick notes, notated very briefly, the only person that should understand them is myself. To obtain this brevity it is easier to refer to these inspirational sources (in one or a few words) than to write a longer description.

6.3 Content related links

In the paragraph 'Direct links in the loose ideas' (p. 193) the real-time, conscious relationships between the loose ideas and the other compositional processes were examined. The following part of the analysis focuses on the content of the loose ideas and the similarities in content with the other compositional processes. This retrospective analysis sheds light on similarities and differences within these loose ideas and the overall compositional processes, independent of my real-time awareness of these similarities and relationships.

First, I will describe the coding process of the loose ideas, followed by the coding of the other compositional processes. Next, three phenomena related to the loose ideas are presented, based on this coding process. These phenomena are new (or innovative ideas), persistent and 'really loose' ideas.

6.3.1 Content groups and overarching themes

Starting from a code family of 25 codes (see chapter 5.3) that emerged from the loose ideas, these ideas were coded. In the following Table 20 every row represents the number of times a code was used, one has to take into consideration that one idea can be coded with several codes. The columns represent the different periods in which the loose ideas were produced and they are based upon the dates of the sources (see chapter 5.3 p. 189). Table 21 presents a summary of all the codes in the loose ideas.

Codes	**Period A (Jul08-Feb09)**	**B (Feb09-Jan10)**	**C (Jan10-Sept10)**	**D (Sept10-Oct12)**	**E (Oct12-March14)**
action	0	0	3	0	0
amplify	1	1	0	0	3
background	0	1	1	1	2
ballad	1	0	0	1	1
close	0	1	0	0	0
combi-performance	0	2	0	1	3
curve	1	4	2	1	0
depth	1	0	1	1	3
directional	0	0	1	1	1
dyn-link	0	0	0	3	1
fragments	0	1	2	1	10
heterophony	0	1	0	0	1
hyperpolyphony	1	16	7	5	13
LED	0	3	1	0	1
live	1	7	0	2	0
mix	0	3	0	1	4
moving	2	0	1	1	1
mute	1	0	1	0	0
openscore	0	0	1	2	0
polychords	0	3	0	0	0
recitativo	0	1	0	0	0
sequential	0	0	0	1	2
special-timbre	1	1	0	1	0
trigger	0	0	0	2	3
unique	0	0	1	2	0

Table 20: Codes in the loose ideas

Codes	**Period A (Jul08-Feb09)**	**B (Feb09-Jan10)**	**C (Jan10-Sept10)**	**D (Sept10-Oct12)**	**E (Oct12-March14)**
Duration of period in months	7	12	8	24	18
Total number of loose ideas in this period	5	22	9	10	24
Total number of codes	10	45	22	27	49

Table 21: Summary of the codes in the loose ideas

The links in content are obvious when reading the loose ideas with the same codes. To illustrate the nature of the relationships within one code I will give an example. I have chosen the first (alphabetical) code that also contains loose ideas without a direct link (to ensure that I describe a different relationship than the direct links). In the following example, loose ideas 203 and 251 do not contain any direct link:

Code 'amplify': the first two ideas from this series, 37 (from the period 2008-09) and 61 (from the period 2009-10), propose amplifying the piano (with contact microphones) at different places on the instrument and sending the sound to different speakers (idea 37 uses this in the context of a kind of happening with cars driving around, idea 61 is about a follow-up piece for the unfinished keyboard composition 'klavier4tet'). The next three 'amplify' ideas are from the period November 2012 to January 2014, and the very last idea (251) deals with a similar amplification of a piano and a cello at different spots on the instruments to create a polyphonic instrument divided through space (with speakers). Idea 203 is about creating depth and simultaneous layers by using amplification as a special instrumental technique; in this way one could play with a wide range of dynamics and timbres by combining amplification and dynamics in different ways: performing very softly without amplification and with loud amplification, performing loud with and without amplification. Idea 243 is a bit different from the previous ones as it does not amplify an instrument but the actions on the stage. The idea discusses a performer who performs certain actions as quietly as possible although the whole stage would be heavily amplified (with contact microphones attached to the floor and other microphones hanging in the air).

In order to find relationships between the separate compositional processes, I applied the same codes to the finished processes. This was done by rereading the summaries (of the courses of action and the problems) of these CPS. The result is shown in Table 22. In general this table is to be interpreted cautiously: it is only a tool to provide an overview, compare and find possible relationships between the compositional processes in the current self-study. The differences in amount of data per process are huge. Compared to the loose ideas, there is extensive, real-time information about the finished compositions, and consequently the codes risk over-generalizing and neglecting details and sub-processes. Smaller topical problems and details of the finished processes cannot be found in this simple and straightforward content analysis based on coding.

Finished processes	**Period A (Jul08-Feb09)**	**B (Feb09-Jan10)**	**C (Jan10-Sept10)**	**D (Sept10-Oct12)**	**E (Oct12-March14)**
Threeway II			hyperpolyphony, special-timbre		
Chunks & Streams				amplify, hyperpolyphony, fragments, openscore, sequential, trigger	
Eigengang				close, hyperpolyphony, sequential, special-timbre	
Centra				depth, fragments, hyperpolyphony, sequential, trigger	depth, fragments, hyperpolyphony, sequential, trigger
(fl)ASH				depth, dyn-link, fragments, hyperpolyphony, moving, openscore, sequential, trigger	depth, dyn-link, fragments, hyperpolyphony, moving, openscore, sequential, trigger
Night Included					hyperpolyphony, openscore, dyn-link
Points to make					Combi-performance, heterophony,open score

Table 22: Codes in the finished processes

Although the most complete picture of the compositional themes is given by the *combination* of loose ideas, theories and unfinished and finished processes, Table 23 shows that the loose ideas as a separate group give a more complete and diverse image than the finished processes (certainly compared to a single CP of a finished composition). If the whole period studied is split into three periods of fairly similar duration (27 months (periods A,B,C), 24 months (period D) and 18 months (period E)), the content-related codes of the loose ideas and the finished processes can be compared in each period.

	Period A-B-C	**Period D**	**Period E**
codes only appearing in loose ideas	action, amplify, background, ballad, close, combi-performance, curve, depth, directional, fragments, heterophony, LED, live, mix, moving, mute, openscore, polychords, recitativo	background, ballad, combi-performance, curve, directional, live, mix	background, ballad, directional, LED, mix
Codes only appearing in the finished processes	(none)	close	openscore
Common codes	hyperpolyphony, special-timbre	depth, dyn-link, fragments, hyperpolyphony, moving, openscore, sequential, special-timbre, trigger	amplify, combi-performance, depth, dyn-link, fragments, heterophony, hyperpolyphony, moving, sequential, trigger

Table 23: Comparison of codes in loose ideas and finished processes

The themes that are active in the finished processes also appear in the loose ideas in the same period, but there are two exceptions: 'close' in period D and 'openscore' in E. The number of codes that are only present in the loose ideas (and not in the finished processes) is very large. In general the diversity of themes is larger in the loose ideas, whereas the finished processes only provide a selection of compositional themes. Of course the loose ideas only give a general outline of the themes that occupy me as a composer; the CP of a finished composition offers a much more detailed and refined view of the transformation of a theme into music.

6.3.2 New ideas

In the following paragraph I will examine the origin of new overarching themes. I will answer questions such as “where and when do new themes arise in the compositional processes?” and “do new themes arise within one group of compositional processes or is their no real difference in the degree of 'innovation' in each process?” 'New' or 'innovative' here is to be understood as ideas whose content is quite unique compared to the preceding ideas and processes. A second requirement is that they become productive in the future, i.e. later on they are developed within one or more of the other compositional processes. This last requirement is what distinguishes 'innovative' ideas from 'really loose' ideas.

To discover new themes, I first searched for loose ideas with a code (see Table 20) that arose for the first time in the whole period studied, i.e. a code that had not appeared in the previous periods. Because there is no detailed information about the period before A, none of the codes that

are present at the beginning of this self-study (period A), are taken into consideration in answering the questions on innovation. It is impossible to know whether these codes were new or not. Next, the date of the loose idea with the first appearance of the new code was checked and I looked at the other compositional processes to find processes with the same code that preceded this date. Consequently, 15 processes were found where a code first appeared. Then, I observed that three codes (Heterophony, LED, mix) could not be considered as new because based on my memory and a search through older data, I was sure that these themes already existed before the studied period. For example, heterophony played a role in older compositions such as *Sailing the seas of down below* (1995) and a file, older than 2009, with a loose idea very similar to the LED theme. Consequently, 12 processes with a new code remain (see Table 24). But there are two new themes ('sequential' and 'trigger') for which it is impossible to trace the process of where a new theme emerged first. This is due to the imprecise timing of the loose ideas before period E (see chapter 4.2.1 p. 172). In these two cases it is impossible to know if they originated in a loose ideas or a composition like *Chunks & Streams* in which these themes also appear.

It seems that all ten themes first appeared in a loose idea. But loose idea 44, where the 'recitativo' emerged, has a reference to an unfinished process – Klavier4tet – . The unfinished processes were not coded because of the high amount of data (see p. 193) but in the case of the 'recitativo' theme it seems clear that this theme emerged in an unfinished process. The same also applies for the 'background' theme which also fits with the unfinished composition Klavier4tet. In this work there is one principal voice with three accompanying voices in the background. These accompanying voices follow the phrases of the principal voices but they play soft in the background in their own tempo and pitch system. Consequently, it seems more precise to conclude that in eight out of ten themes (with a precise timing) the theme came into existence as a loose idea, two others appeared in an unfinished process. The timing of two emerging codes is not known exactly but it may be that these codes appeared in a finished process (*Chunks & Streams*). Finally, because the codes were originally derived from the loose ideas (see chapter 5.3 p.189), I reread the course of action of the three finished processes and the problems occurring in these processes to make sure that no codes were left undiscovered but no new codes were found.

Codes	**Process where the theme emerged**
action	Loose idea 93
background	(Loose idea 45) Unfinished process Klavier4tet
close	Loose idea 61
combi-performance	Loose idea 52
directional	Loose idea 91
dyn-link	Loose idea 123
fragments	Loose idea 81
openscore	Loose idea 100
polychords	Loose idea 46
recitativo	(Loose idea 44) Unfinished process Klavier4tet
sequential	Loose idea 122 or finished process Chunks & Streams
trigger	Loose idea 121 or finished process Chunks & Streams

Table 24: Codes in the loose ideas

These findings confirm the image of loose ideas as a breeding ground for new and original artistic ideas. The role of the CP of a finished composition in generating new ideas seems minor in the period of my creative processes studied. The theoretical processes seem to be absent in the creation of innovative ideas, but it is important to know that the documents about the theories were not intended to include creative ideas ('loose ideas'). If I would have had a musical idea while working on the theories, I would have noted this in the documents for the loose ideas. In fact, in one case, there is a direct link between an idea and the 'contrast theory', namely in idea 122 which may introduce the 'sequential' theme (see also p. 222).

Table 24 displays all the processes where new ideas emerged but it does not show the difference between new themes that emerge immediately and explicitly, and others that grow gradually out of a detail. The latter develop into an (autonomous) theme in the next loose idea or process where they appear. An example of a slowly emerging new theme is the 'fragments' theme. In the first two 'loose' ideas (81 and 93) with this theme, the short fragments (from stylistically different kinds of music) are only a detail in an idea about an algorithmic database architecture (81) or actions of performers (93) that constitute the foreground of the (imagined) composition. Idea 123, on the contrary, immediately introduces and focuses on the new theme ('dyn-link').

6.3.3 Persistent ideas

Within the loose ideas there are groups of content-related ideas that are more autonomous than most other loose ideas, in the sense that they never become part of a finished or unfinished process. These persistent ideas as I call them, are active over a specific period, some even for the whole period of July 2008- March 2014. These clusters of ideas – with codes that only appear in the loose

ideas – never reach the stage of a finished or unfinished composition. Nevertheless they are not static: they also change and are shaped by new loose ideas and finished compositions, and thus their autonomous state is certainly not absolute. The 'ballad' and 'LED' themes are the two main persistent ideas. The development and interaction of the first idea has already been described on p. 195. Other persistent ideas are the ones coded under 'curve' and 'polychords'.
The distinction between persistent and non-persistent ideas is not strict but gradual. The 'moving' theme, for example, never reaches the end stage of a finished composition. It exists as a cluster of loose ideas and is only part of the first months of the CP of (fl)ASH. In December 2012 the idea of moving or walking musicians in the CP of this composition is explicitly abandoned.

6.3.4 Really loose ideas

In previous sections I detected many interactions, based on references ('direct links') in the loose ideas or similarities in content, between the different loose ideas or between the loose ideas and the other processes. In the following paragraph I will answer the opposite question: are there ideas within the collection of 'loose' ideas that are 'really loose'? In other words, are there ideas that are unconnected to other ideas or compositions? The criteria for labelling an idea as 'really loose' is: first, the content is quite unique (compared to the other loose ideas) and second, the idea remains unfertile or unproductive, i.e. it is not developed or combined in other loose ideas or compositional processes later on. Consequently, on the one hand direct links between these ideas and other compositional acts are taken into consideration, and on the other hand, the (near) absence of content-related links – the codes – with other ideas is examined. Consequently, these loose ideas were tagged with the code 'unique' and at the same time there were no direct links to or from these loose ideas.

I found four ideas (out of 70) that can be labelled loose or unproductive. This is the list:

- 92
- 207
- 208
- 221

These four ideas were obtained by following the previously described criteria. It should be noted that the difference with persistent ideas is gradual. These are *groups* of ideas – not just one, as is the case with the 'really loose' ideas – without a clear content-related connection to the other compositional processes. For example, the cluster of persistent ideas around the code 'polychords' consists of three ideas related to each other but with no relationship, or a very loose one, to other ideas and processes. The four 'really loose' ideas represent the most extreme and clearest examples that are – at the time of writing – unique in content and do not refer to the other processes.

6.4 Cognitive mode of the loose ideas

If the operation mode of the interaction of ideas is examined, (re)combination, variation and elaboration are the dominant ways the ideas interact and evolve. These operation modes are clearly visible in the previous descriptions of chains of loose ideas with direct links in between them, on p.

194.
In chapter 5.4 on p. 190 I explained that the content of loose ideas can be classified in two main groups or fields, one consisting of musical ideas and the other more oriented towards a performance or happening. The combination of ideas from different fields is fairly straightforward. For example, the content of the ballad idea (42) is about the relationship between music and text, and the narrative or story that is expressed in this text. This idea is 'easily' combined with the 'dyn-link' loose idea (123), which focuses on the relation between dynamics and spatialization in music, into a new combination 141. In this idea a story is told by narrators that are seated among the audience.

Ideas within the same field are also combined: idea 250 combines the musical 'trigger' idea in the composition *(fl)ASH* with the piano ensemble configuration of *Centra*. Suddenly stopping (or fading out) one voice from an ensemble texture upon a cue from the percussion solo instrument is what the 'trigger' idea is about, and this is placed in the instrumentation configuration of *Centra*, a continuous piano solo layer set against an ensemble.

If one looks beyond the group of direct links at the content relations between the codes of the compositional processes, a special kind of operation, an antagonistic one, is discovered. An idea is imagined in a different, contrasting context, leading to a new idea or a new vision on this context. Contexts – in which ideas operate – are confronted with each other.

These are the examples of contrasting codes:

- mix v. hyperpolyphony: instead of creating *perceptually separate* streams/layers, one tries to fuse the layers/voices as much as possible
- heterophony v. hyperpolyphony: instead of creating *very different* layers, one creates one melodic line, but with multiple, simultaneous variations of this line
- recitativo v. hyperpolyphony: creating a mix of an accompanying and independent voice, for example by following the dynamics and timing (of the phrases) of the main voice on the one hand, and adding independent elements (a different timbre, pitch system, style etc.) on the other.
- sequential v. hyperpolyphony: instead of creating the largest possible *simultaneous* contrasts, one creates sequential contrasts

Put in simple terms, this antagonistic operation mode could be translated into a thought such as: “Now, what if I try the opposite idea?” or “Let's turn this idea upside down.” Opposite or contrast should not be understood in a dualistic sense, as if there were only one opposition or antonym for hyperpolyphony. Several oppositions are possible, and it is part of the creative task to find a opposition.

The antagonistic relation creates fields of affinity (groups of ideas) which still depend on main themes such as hyperpolyphony but at the same time contain a contradiction to this field. Several loose ideas combine different ideas from such fields of affinity, resulting in rather complex ideas. For example, ideas 45 and 54 discuss several simultaneous layers, in which a main layer can consist of sub-layers with fused, heterophonic or accompanied voices. This is an example to illustrate the combination of the 'mix', 'heterophony' and 'hyperpolyphony' codes. Most antagonistic relations are found in relation to the hyperpolyphony theme, although there are some other less outspoken and less contrasting examples: the 'background' and 'fragments' themes are not only placed in a musical context but also in an extra-musical one in ideas such as 200 and 241. It is

tempting to conclude that only the most powerful themes underlying the loose ideas produce these antagonistic operations and the resulting fields of affinity.

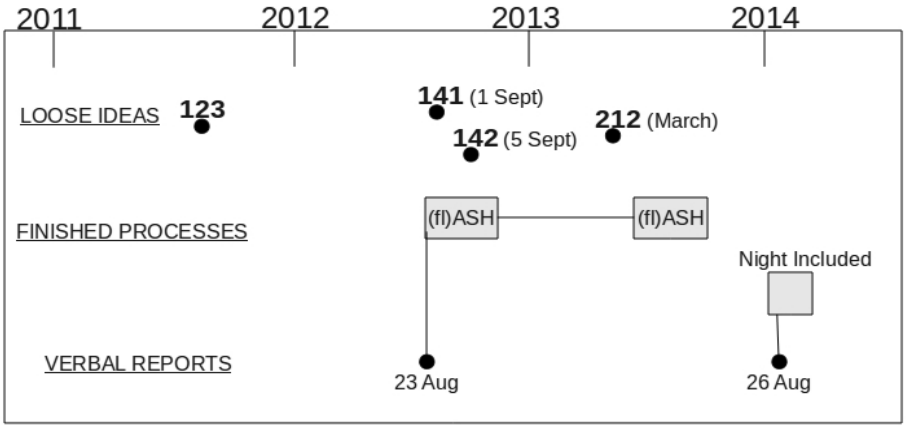
In general the cognitive mode of these loose ideas can be described as an associative, non-analytic, direct, spontaneous intuitive flow of ideas. In the 70 loose ideas I have found almost no products of planning, systematic or analytical activities (lists, plans, schemes etc.). There is only one idea, number 142, which contains a systematic elaboration of one musical parameter, spatialization in this case. The activities involved in generating these loose ideas are more focused on the imaginative production of new ideas (or new variations) instead of thinking analytically about previous ideas. Ideas are also written down without judging or evaluating them: criticism is put on hold. In the 70 loose ideas there is only one instance (idea 210) where I assess an idea and describe a problem related to it.

6.5 Relationships between the loose ideas and the finished processes

In this paragraph I want to dig deeper into the interaction between loose ideas and the CPs of finished compositions. In previous paragraphs, the general contours and characteristics of these relationships were sketched out but the questions on the nature of the development of loose ideas, or the function of these (developed) loose ideas in the finished processes remain. To answer this, the thread of a theme (code) will be followed from its origin, through the compositional processes, to its arrival in a finished process. To find such a theme, I have to take the lack of (real-time) data and the imprecise timing of some loose ideas into account (see p. 172): there are real-time data and verbal reports for the finished processes between November 2011 and December 2013; and from September 2012 on, there are exact time tags of the loose ideas. Some themes – which might be interesting to follow – pass through compositional processes for which the data are not complete, for example the 'sequential-contrast' code passes through the composition *Chunks & Streams*, during which real-time data and verbal reports were not yet systematically collected. Finally, I found two themes ('dyn-link' and 'combi-performance') that pass through a trajectory with all data available. I have chosen to describe and analyse the 'dyn-link' thread for two reasons: firstly, it is linked to one of the problems appearing in the CP of *(fl)ASH*, which allows me to examine possible links between problem-solving in the finished processes and the loose ideas; secondly, the direct links between the loose ideas are exactly the same as the content-related codes (of 'dyn-link'), i.e. the retrospective analysis of the content and the real-time experience of the relationships with previous loose ideas overlap completely.

To find threads of loose ideas that pass through a problem in a finished process, I used Table 13 as a preparatory analysis tool, i.e. this table contains an overview of the main problems in the three CPs (with real-time data). In the table I added possible (content-related) links between the problem in a cell of the table and the loose ideas and other compositional processes. The possible links were detected by rereading the summaries of the problems in the three finished processes.

Illustration 28: The timing of the 'dyn-link' thread



In the following section I follow the development of the 'dyn-link' theme, to analyse the function and role of the loose ideas in detail and, additionally, to ascertain the extent to which its evolution is dependent on or independent of the finished processes. The timing of the development of the 'dyn-link' theme is shown in Illustration 28.
The 'dyn-link' idea is about adapting the dynamics of the music by positioning the performers at different locations in the performance space. This is how it first appears (idea 123, between September 2010 and October 2011):

> ----------polyfonie & ruimte
>
> -hyperpolyfoon met verschillende stemmen/instrumenten & stijlen; bij het componeren niet letten op de luidsterkte van elke stem/stijl maar bij de uitvoering moet de afstand in de ruimte tussen de stemmen/instrumenten zodanig aangepast worden dat alle stemmen min of meer gelijk klinken voor het publiek
>
> -om de meest zachte en dus meest nabije geluiden luid genoeg voor iedereen in het publiek te doen klinken ofwel die instrumenten dubbelen of versterken met 2 of meer speakers rond & in het publiek

This idea stays dormant for one to two years and next, at the beginning of the CP of (fl)ASH, a problem related to the arrangement of the performance space occurs (see Appendix 35). One of the main ideas for this composition was to use short and loud fragments (of all kinds of music) and very soft, muted fragments with a longer duration. In the first verbal report (August 23rd 2012), the previous loose idea 123 pops up. In this report I say that this loose idea had been on my mind over the last month and I suggested adapting the dynamics of (fl)ASH by letting the performers move in

and out of the performance space. But in this report I also note that this might cause too much distraction and contrast with the meditative character of the composition. I hope to solve this problem by finding a good formulation in the foreword of the score. This would suggest that the performers should move according to the character of the composition.

While I continue to compose *(fl)ASH* in the following weeks, I write down a new loose idea (141). This one combines the idea of coupling the dynamics and spatialization ('dyn-link') with an older 'ballad' idea (see chapter 5.3 p. 189 for a short explanation of this 'ballad' code/idea). The idea to use a soft instrument (the human voice, speech) and to 'amplify' it by doubling the voices and locating them in the audience, creates a intimate atmosphere.

> 1sept12
>
> -idee : (variant op vroeger idee van violen verdelen ts publiek en link tussen dynamiek en spatialisering), ballade, sprekers/vertellers verdelen ts publiek, intiem, zij vertellen sociaal verhaal, muzikanten staan verder van publiek (1sept12)

A few days later, this idea is varied and in this new idea (142) I consider writing in the foreword of the score that there are four (imaginary) spaces or zones within the performance space and that each one is connected to specific instruments and dynamics.

> 5sept12
>
> -idee van vroeger stuk met link tussen dynamiek en spatialisering : in partituur werken met vb 4 ruimtes,
>
> ruimte 1: heel stil, tussen het publiek, instrumenten/stemmen mogen ad libitum gedubbeld worden,
>
> ruimte 2 : zoals de 'normale' afstand van een podium tot publiek
>
> ruimte 3: ver, zodat een het dynamische bereik van geen supeerluide instrumenten (viool, fluit,...) op zijn luidst toch nog stil is
>
> ruimte 4: zeer ver, zodat het dynamische bereik van heel luide instrumenten (piano, trompet, sommig slagwerk) op zijn luidst toch nog stil is

While notating the previous two loose ideas, I was still composing *(fl)ASH* (see the course of action in Appendix 31). Over a period of two weeks – between August 23rd and September 5th – the finished process and the loose ideas influence each other and the notion that the link between spatialisation and dynamics has implications for the mobility of the performance becomes part of both processes. According to the previous verbal report (August 26th 2012) and the loose idea (September 5th 2012) there seem to be two possible solutions: either move around and hence play at any dynamic level (i.e. at any location), or remain at the same location and therefore, a spatialization plan has to be made in advance to ensure that all instruments have the same dynamic level for the audience.

An important step towards solving the 'arrangement of the performance space' problem in the CP of *(fl)ASH* was made three months later, when I decided that the performers would not move around. From that moment on (December 2012), this CP no longer bore any traces of the 'dyn-link'

idea. In March 2013 another loose idea (related to 'dyn-link') appears, although it is very short and more a kind of notification that the idea is still on my mind. The only new element in this loose idea 212 is that the piano should play clusters, as one of the 'loud' instruments that is turned into a soft instrument (for the audience) by locating it far away.

At the end of August 2013 I start composing *Night Included*. The main inspirational idea in the first days of the CP was to create a open score composition based on a biological process, i.e. a circadian rhythm, the shift from night to day. After a few days this idea was combined with the 'dyn-link' idea according to the verbal report (verbal report of *Night Included*, August 26th 2013):

> en dan was ik ook aan het denken, dan weet ik niet goed niet meer of dat dat nu donderdag, vrijdag of zaterdag was, dan dacht ik ook gewoon om dat (niet) om dat idee in te lassen om de dynamiek afhankelijk te maken van de spatialisering, een idee dat ik heb al van vroeger, en dat ik eigenlijk een goed idee vind omdat dat zorgt voor muzikale afwisseling en dan ook voor die effecten vanuit de verte, die zacht klinken, dus dat komt er eigenlijk op neer dat als je een stem luid wilt spelen, dat die dan maar verderaf van het publiek moet gaan staan, dat was eigenlijk om nog meer muzikale variatie te brengen in dat idee, ik meen mij eigenlijk ook te herinneren dat ik dat ergens opgeschreven heb, ergens op een los papier, maar ik vind dat nergens terug, maar dat moet dat idee zijn van die spatialisering te koppelen aan de dynamiek (26aug13)

The circadian rhythm provides the time frame (or structure) for the text score, while the 'dyn-link' idea adds a spatialization (dynamics) effect to this. The two ideas are compatible with each other and the CP evolves without any major problems. A few days later, the need to add a extra-musical meaning to the piece emerges and a silent, muted action, performed during the composition, (as a reference to human suffering) enters the score. Again, the 'dyn-link' idea is worked out as a constellation of fixed positions (of the performers) and dynamics. In the first draft of the text score (August 26 2013) the only line about the 'dyn-link' idea in the score reads as:

> The louder a performer wants to perform his/her part, the further he/she should be removed from the audience.

When the next version of the score is made (on October 18th 2013) this is changed into:

> [2.] Adjust the balance and loudness of the parts by changing the location of the performers. The louder a performer wants to perform his/her part, the further he/she should be removed from the audience. A part with very soft sounds can be split between different performers (or different small speakers), placed in among the audience.
>
> [3.] Give every part a clear and simple identity. Give every part a distinct location.

The last phrase points to the elaboration of the 'dyn-link' idea into a *fixed* arrangement of locations and dynamics.

The fine-grained evolution of the 'dyn-link' idea – from loose idea, to idea within the CP of *(fl)ASH*, transformed into new loose ideas and finally appearing as a forceful idea in the CP of *Night Included* – shows how this loose idea interacts with the creative process of a finished composition. At the same time, new elements (the ballad idea) are added to the 'dyn-link' idea and the interaction with *(fl)ASH* brings up the question of movement, implied in the 'dyn-link' idea. Hence the encounter with a finished process does not lead to the end of the development of the

loose idea: it continues to evolve even after this interaction with *(fl)ASH*. This shows how a loose idea functions autonomously to a certain degree. The effect of the whole evolution of 'dyn-link' is a higher awareness of:

- the potential of this idea: it can be used in different instrumentations, combined with other (loose) ideas such as the 'ballad' idea or the open-score idea (see the references to a score in loose idea 142)
- the implications of this idea: when this idea is turned into a composition, a choice has to be made between movement or no movement of the performers
- the affinity for this idea

The exploration of the affinity for an idea is found in two sources, loose idea 141 and the verbal report on August 26th 2013. In the former, the word 'intimate' is used in the combination with the ballad idea. In the latter, two to three years after the idea first appeared (and after an abandoned inclusion in *(fl)ASH)*, I still believed that the 'dyn-link' theme is a good idea and I connected it to a 'lontano' effect *("voor die effecten vanuit de verte, die zacht klinken,")*. The verbal report does not explicitly say so, but this is an image that I am firmly attached to. On the same day of the verbal report, I connected this effect to the image of Brueghel's The Fall of Icarus (suffering happening in the background) while composing *Night Included*, an image that I had already used in an older composition *How it takes place*.

When the evolved loose idea 'dyn-link' arrived in the CP of *Night Included*, it was not a loose, undeveloped inspirational idea suddenly dropping into the genesis of a composition. It had already undergone an evolution, through which I as a composer had learned more about its potential and implications while my affinity for aspects of this idea had also become clearer. Although the evolution happened quite heuristically – through interaction with the other compositional processes – it did involve a learning process. This evolution is clearly not a preparation for the composition of *Night Included* or *(fl)ASH* because the 'dyn-link' idea came into existence before I had any idea about these two future compositions.

To detect the exact role of the evolving loose idea 'dyn-link', I will go back to the start of the CPs of *(fl)ASH* and *Night Included*. In both cases, a new composition is mainly built upon *the selection of existing ideas*, and not so much on the generation of new ideas. I have already described the three main ideas in the CP of *Night Included*:

1. an open score composition based on a biological process
2. the adaptation of the dynamics (and the dynamic balance) through the placement of the performers
3. adding a extra-musical meaning to the piece in the form of a silent, muted action

These ideas were already part of my collection of themes and loose ideas, although new accents and details have been added: idea 1 is directly related to the loose ideas coded under 'open-score', a new element has been added through the discovery of the circadian rhythms as a crucial element to create a time structure for the text score; idea 2 connects to the 'dyn-link' idea as already fully described; idea 3 is not immediately related to one of the loose ideas. In fact it is based upon an older composition *How it takes place* (2001, for ensemble Champ d'Action); Brueghel's painting The Fall of Icarus was an important inspirational source and in the older composition, 'silent actions' were performed by the musicians. In the first versions of *Night Included* the working title was *How it takes place II*. The same observations on the pre-existence and selection of ideas is to

be made at the beginning of the CP of *(fl)ASH*. In this case the main ideas were (based on the verbal report dated August 23rd 2012):

1. to create an open score that is to be elaborated and realized by the musicians
2. to use short, loud fragments of existing music with silences before and after these flashes; the percussion solo is the only instrument that plays continuously; a transparent part with dry sounds is performed on the percussive instruments
3. cut off these short fragments: they do not start or stop in a 'musical way' and they are triggered by the percussion sounds
4. also play very soft, longer fragments (on instruments or using simple devices such as mp3 players or mobile phones); the soft fragments come from different locations
5. adapt the dynamics (and the dynamic balance) through the placement of the performers

The connection with existing codes of loose ideas is clear (open-score, fragments, trigger, depth and 'dyn-link') and again there are some new additional elements within these ideas, for example the percussion solo or the continuous contrast between loud and very soft fragments.

At this stage, the function and role of the loose idea 'dyn-link' can be described. The 'dyn-link' thread *prepares the selection procedure* which is part of my current CPs. The evolution of the loose idea 'dyn-link' is an exploratory phase through which I as a composer learn about its potential, implications and relationship to my personal taste and preferences. By exploring this apart from the finished processes, I do not have to explore these aspects in the act of composing a new work. I have time and 'cognitive space' available to spend on other issues, for example the fusion and elaboration of the selected ideas. In the group study of this dissertation, Vermote's CP contains a similar exploration process through which she discovers affordances, aesthetic preferences and abilities *in relation to the commission*. Although the function of the exploration resembles that of the loose ideas in my compositional processes, the explorations in Vermote's case take place within the CP of a finished composition. The composer expresses the desire to stay close to the restrictions in the commission and the sketches show how her imagination is triggered and shaped by the task in this commission.

The contribution to the process of finding and solving problems in the finished processes is small. Once the selected ideas are combined, situated problems start to arise from the specific combinations and other specific restrictions. A loose idea may contain a hint for a solution (the elaboration into four spaces in loose idea 142) but it is uncertain whether this will be sustainable in the local context of a finished process. The fine-grained evolution of 'dyn-link' has also shown that at some points the exploration of a loose idea occurs in parallel or simultaneously with the cognitive processes going on in the finished processes. While working on *(fl)ASH*, I was simultaneously working out loose ideas.

6.6 Relationships between the theoretical processes and the other CPs

In the following paragraphs the role of the theoretical processes within my overall configuration of compositional processes will be examined. To examine this role, I (again) used Table 13 as a preparatory analysis tool. This table contains an overview of all the problems in the three main CPs of this self-study. I reread the summaries of the problems in these CPs, to detect whether there was a link between these problems and the loose ideas or theoretical processes. Because the amount of (real-time) data for the three finished compositions is very large, I focused on the *problems* in the CPs. Of all the problems in these three CPs, only three ('configuration of voices', 'fast muted voice' and 'piano incoherent') seem to relate to the content of the contrast theory, addressing the problem of designing a polyphonic texture with very contrasting voices. A closer look reveals that the two latter problems try to answer the question of how I could give a distinct *form or development* to one voice within a settled polyphonic constellation of voices. At both times in the CP (end of December-January 2012 for *Eigengang*, June-July 2012 in *Centra*), I had created an overall polyphonic texture, but the further development of one voice was problematic. The polyphonic texture had created a (large) number of constraints, and these made it difficult to find an acceptable solution for the remaining voice within these constraints. While my contrast theory holds information on setting up a polyphonic texture of contrasting voices, it only provides limited information on *developing* a voice and making it diverse and exciting enough. Consequently, the only problem in the finished CPs related to the contrast theory is the configuration of voices in *Eigengang*. This is the problem that I will examine in order to study the influence and role of these theoretical processes.

To study the synchronization theory, I have chosen the synchronization problem. This appears in the CP of *Eigengang*, as can be read in the description of provlems in this CP in Appendix 33. Moreover, as I was making the course of action of *(fl)ASH*. I noticed that the synchronisation theme popped up a few times in the second half of this CP. While analysing the development of both theories through these situated problems, I will check the insights obtained by taking into account the links between the theories and the related loose ideas. If a different kind of role were detected in this relation, this would at least force me to compare this role with the one between theoretical and finished processes.

A remark has to be made on the following analysis: most real-time data, especially the verbal reports, are available for the period 2011-2013 but the theoretical processes most heavily influenced the finished processes in the preceding period. Consequently, this is a study on the influence of theoretical processes after they have been developed. If necessary, the available data from the previous period 2009-2011 will be used.

6.6.1 The contrast theory at work in Eigengang

How does the contrast theory support the problem solving in the composition *Eigengang*? As one can read in the summary of the problem (and the course of action in Appendix 29) I am looking for a combination of voices/layers at the beginning of the CP in which every voice:

1. is performable
2. can be combined – at a technical/performance level – with the other voice, i.e. the 'fast glissando clusters' cannot be combined (in the same or close) pitch range with the sostenuto technique (using a stick or piece of rubber to create a sustained sound) because the sostenuto technique requires resonance and depressing the keys silently, but the dampers need to be on the strings to create the fast and short glissando clusters
3. contrasts with the other simultaneous voices
4. has enough potential to develop or be diverse enough over a longer period

The verbal report (November 18th 2011) in this early phase of the CP provides a detailed account of how practical problems continuously interfere with the search for contrasting voices and how I try to obtain requirement 3 (in the list above), partly by using my contrast theory. For example, I abandon a more practical solution because the bass and muted layer fuse too much. Although there are no direct references to my synchronization theory in this verbal report, the terminology I use is very similar to the one in my theory. In the following excerpt, it can be seen how I take the pitch range, fusion, and percussion sounds in account. Based on my contrast theory, I 'know' that if I want to find four or five contrasting voices on a piano, I need to look for a non-pitched, percussive sound (this forms a contrast with the other pitched voices):

> Dat was praktisch gezien de beste oplossing om dat ik daar in het midden-middenlaag register het meeste plaats heb om een doek onder de snaren te steken, dan euhm toen dat ik de verschillende drie stemmen samen begon te leggen, vond ik dat die middenlaag register, dus die gedempte noten dat dat niet samenging met die bas. Ik denk dat dat komt omdat die middenlaag, die gedempte noten dat die een soort lage resonantie geven een soort bijna lage ruis waardoor dat ge die bas een beetje troebel hoort en ik wil die heel helder hebben, dus ben ik maar teruggegaan naar de minder praktische versie waarbij dat het doek tussen de hamers en snaren zit in het allerhoogste register. Het probleem is als ik dat daar doe dan heb ik een minder grote ambitus range, omdat ik een beetje verder in het stuk zeker nog een soort slagwerkachtige geluiden wil die je alleen kan verkrijgen door rubber tussen de snaren te steken, om dat effect te verkrijgen moeten dat ook vrij hoge snaren zijn. (18nov11)

One of the other main contrasts in my theory is the distinction between a sustained sound/layer and 'plucked' decaying sounds with a short attack. Because the piano keys cannot control the sustain portion, decaying sounds are easy to produce and the challenge is to find sustained sounds on the piano.

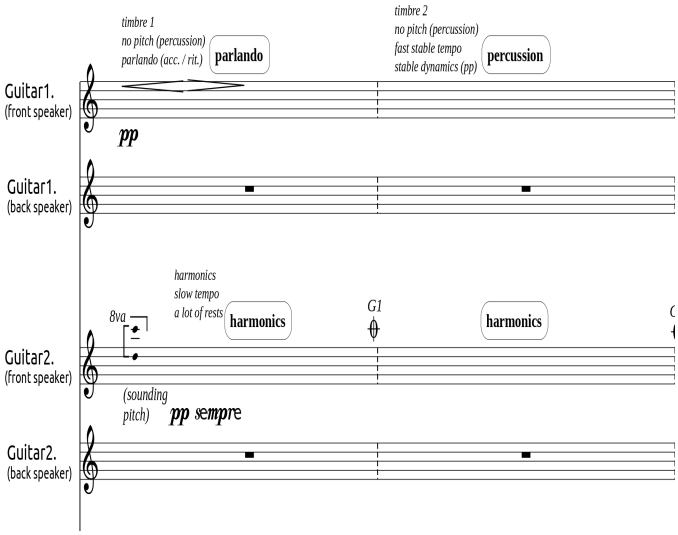
> En dan voorlopig heb ik nu een nieuwe testversie eerst geprobeerd waarbij dat ik eigenlijk wrijf over de snaren met een soort velcro, dat ge zo'n stem krijgt die eigenlijk meer sustenuto aangehouden is, dus dat maakt wel een groot verschil, dat zou de bas kunnen zijn (18nov11)

To meet the voice requirements 1 and 2 (in the previous list) I can rely on experience: I have experience in composing and exploring inside piano music (e.g. *Dubbelstuk, 2003-04*), I have a training as pianist, I had a grand piano at my disposal to experiment on and could explore inside piano techniques. Additionally, I consulted the Luk Vaes' thesis (Vaes 2009) to ensure that my solution (configuration) would be possible on several types of (inside) pianos. The requirement (number 4) to *develop* a voice is fulfilled by relying on a very general kind of compositional experience (composing a whole section or piece based on a limited set of characteristics) and exploration (I could explore the inside piano techniques by improvisation and look for several

musical possibilities based on the same technique). To make sure that there was enough contrast between the voices, I use my contrast theory, as said, exploration (by recording separate techniques and creating an 'artificial' ensemble in audio editor software) and some experience. The experience at that moment incorporated the experiences of composing *Threeway I, Threeway II, Chunks & Streams* and four unfinished compositions.

I will compare these insights to the traces of the contrast theory in the CP of *Chunks & Streams* (composed one year before *Eigengang*). In this case, the traces and direct references to the contrast theory are far more abundant than in *Eigengang*. The first digital file (created before the rehearsal in February 2011) contains a document called 'Model adapted to electrical guitars' and consists of a table with a selection of parameters and features from my contrast theory. Only those contrasting features are chosen that were applicable to an ensemble of four electric guitars. From the first (paper) version of the score (used for this rehearsal) to the final performance score, the guitar parts were heavily shaped by my contrast theory, as can be seen in the first two bars of the score of Chunks & Streams (Illustration 29). Every part contained key words which are described in detail when applied for the first time. For example, the key word 'percussion' in bar 2 (guitar 1 – front speaker) stands for the descriptions 'timbre 2', 'no pitch (percussion)', 'fast stable tempo', 'stable dynamics (pp)'. In every bar the performer can improvise along the indications given by the key words. Thus guitar player 1 improvises 'parlando' in bar 1 and 'percussion' in bar 2. The 'no pitch' and 'fast stable tempo' descriptions (of the key word 'percussion') largely depend on the previous document called 'Model adapted to electrical guitars'.

Illustration 29: Chunks & Streams: Guitar 1 and 2



The function of the 'contrast theory' in my compositional theory consists of leading my creativity in a prepared or defined direction, i.e. it supports me when trying to produce contrasting voices. This direction is important because problems in the CP of a finished composition are complex and

linked to other problems and issues. I have more experience and knowledge of exploratory opportunities to solve these situated problems, and so the risk is high that the goal of creating contrasting voices will become buried beneath other objectives. If I solve the production of contrasting voices solely within the dynamic CP, I risk sacrificing this objective. At the same time I know and feel (before and after the CP) that I want to create these contrasting voices. Thus the contrast theory is a systematic set of knowledge, produced outside a CP, to guide my creativity and stick to a highly preferred goal in the situated act of composition. The acquisition of experience, in interaction with the contrast theory, is not be overlooked. Even in the case of *Chunks & Streams*, this composition was preceded by one finished and four unfinished processes in which the production of contrasting layers was decisive.

My interpretation is confirmed by the direct links that exist between the loose ideas (101, 110, 122, 140) although a modification is added. Idea 101 pre-dates the *Chunks & Streams* composition by a few months and it very clearly contains the idea of linking a score to the contrast model. Idea 140 contains the same suggestion but this idea was written about one year after *Chunks & Streams* was finished. Idea 122 is rather similar but the reference to a score is vague or absent. Idea 122 is the first loose idea about the theme (code) 'sequential' (sequential contrasts):

> a monophonic work with sounds, sequentially after each other, always as different as possible, based on model/set of rules, minimalistic like a Feldman or Cage piece[26]

6.6.2 The synchronization theory in Eigengang and (fl)ASH

To study the role of the synchronization theory on the CPs, I started by analysing the available synchronization problems (see Table 13) in the CP of *Eigengang*. Before this composition was made, the synchronization theory evolved through interaction with the CP of *Threeway II*. The 'check points' were invented during the CP of *Threeway II* to ensure that I could compose long, continuous layers and give the performers of these parts enough freedom to play in their own tempo. Together with the use of the traditional cueing method, the check points provided me with an initial repertoire of techniques to synchronize music with (almost) no need for a external synchronizer (a conductor or technological device like a chronometer or click track). In the CPs of *Eigengang*, and also in *(fl)ASH*, respectively 4 months and 1.5 years after the theory stopped evolving, the synchronization problem returns, although it is no longer a major problem. In both cases, the concern for a synchronization solution for the performers appears in the second half of the CP. In a verbal report at the end of the CP of *Eigengang*, I explain this late concern with the synchronization. In this piece for three pianists playing on one piano, the performers are very close to each other and this makes synchronization easier because they hear and see the cue or check points.

> Iets waar ik ook druk mee bezig ben geweest goh ik denk de laatste week of de laatste twee weken, dat is eigenlijk de synchronisatie tussen de verschillende stemmen, 'k heb het nu pas eigenlijk vrij laat gedaan in het compositieproces, omdat ik mezelf een beetje de vrijheid had gegeven om mij

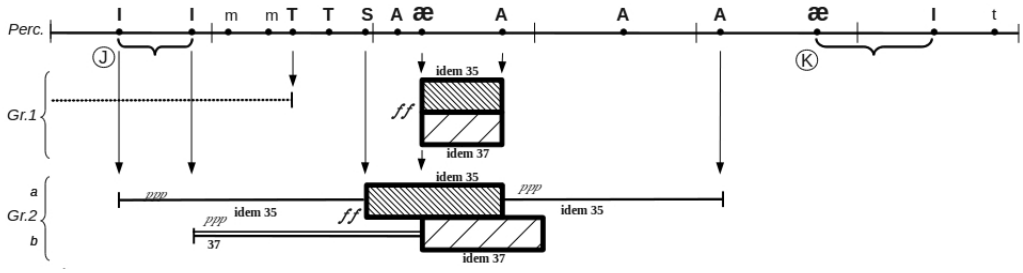
26 The term 'Model/set of rules' in the quotation is the term that I used while developing my contrast theory. In the current self-study I changed this term into 'theory' because I consider it a better term for this kind of systematic, cognitive constructions.

> daar niet te veel van aan te trekken tijdens het componeren zelf, de reden daarvan was omdat ik dacht, 't zijn toch drie pianisten die heel dicht bij elkaar gaan zitten, dus ik kan daar eigenlijk veel meer mee doen qua timing en synchronisatie dan muzikanten die ver uit elkaar zitten zoals het gewoon is, want dat is direct moeilijker, dus ik heb eigenlijk echt wel een experiment uitgeprobeerd en dan maar hopen, een synchronisatie methode zitten bedenken en dan maar hopen dat het werkt tijdens de repetitie. (24jan12-1)

Although the synchronization method in *Eigengang* enables time fluctuations of a few seconds between the voices, I realized at the end of the CP (and in the first rehearsal) that the cue and check points need to be very well placed to ensure that the structure does not suffer from the synchronization method (and the timing fluctuations). The structure is built upon alternations between restful and dense sections. A sudden silence in the wrong place (caused by the time fluctuations between the voices) disrupts the form of the composition. Moreover, in the rehearsals I noticed that there were too many cue and check points to enable a comfortable performance. Therefore I made some quick adjustments (simplifying the cues and placing them at the right points to maintain the form of the composition) in between the rehearsals and a more thorough revision in between the first and second rehearsal.

What traces of the synchronization theory are found in the CP of *(fl)ASH*? Synchronization of the composed music was not an main issue. But ten months after starting to compose this work, I added a new element to the score: soft fragments from the off-stage ensembles are 'amplified' by the on-stage ensemble upon a trigger by the percussion player. Such a new element is illustrated in the score excerpt in Illustration 30. Gr. 1 and Gr. 2 at the beginning of the score excerpt stand for Group 1 (on-stage ensemble) and Group 2 (off-stage ensemble).

Illustration 30: Excerpt of the score of (fl)ASH



After having added this new element, I made the first comment about the synchronization in my verbal reports (this new element is referred to as 'overlopen' in the following quotation):

> en nog iets anders die mij ook nog een keer te binnen schoot, is dat ik (kucht) zeker achteraf of hier en daar nog een keer op moet letten op de synchronisatie, want tot nu toe was die toch voor mij als componist vooraf redelijk gemakkelijk te regelen, min of meer volgt het altijd de percussie, de andere instrumenten, nu met die overlopen heb ik daar eigenlijk wel een klein beetje aan veranderd, dus ik moet daar wel een keer op letten of aan denken dat dat blijft, allez dat dat synchroniseerbaar blijft, (lawaai) (niet) een keer uitgeprobeerd daar op die open schets, dus ik denk wel dat het moet

lukken, maar dat extra nieuw element, die overlopen, zijn er wel bijgekomen, (11jun13-1)

Until this point I was certain that the different fragments and instrument parts could be synchronized, because all the instruments could 'follow' the percussion player and this had proven feasible during a try out (the 'open sketch' to which I refer in the previous quotation). Moreover, from the first version of *(fl)ASH* onwards, there had always been long blocks of silence between the fragments (with different tempi and styles), although this is not mentioned in the previous quotation. These silences make synchronization easier, since they act as buffers (see synchronization theory in chapter 5.2.2). In later verbal reports I hardly make any more references at all to the synchronization problem. While composing *(fl)ASH*, I never intended to have a lot of these sections with the 'new element' (switching between off-stage and on-stage ensemble in the same fragment). The final score has just four similar sections.[27] In the end, I was assured that the four alternating sections were a real synchronization challenge but that it was not impossible to perform them.

The function of the synchronization theory in my compositional processes is to provide support in *imagining performance problems and solutions*. It is not a general theory on synchronization in music, nor a system for performing polytempo music. While composing, this personal theory helps me to detect problems, evaluate their complexity, judge whether they can be solved before the deadline and provide a set of possible solutions. By relying on and trusting this theory, I can 'postpone' problems to a later stage of the CP and give myself time for other problems and fascinations. My synchronization theory also contains information on the link between aesthetic, musical issues and synchronization methods. Especially at the beginning of the CP of a finished composition, this knowledge functions as a general framework and a warning system: I have to make sure that the aesthetic choices for the new composition and the synchronization do not contradict each other, since otherwise I can expect to encounter big problems further on in the CP.

In this study the function of my synchronization theory was described in a specific period of time, in which the compositions *Eigengang* and *(fl)ASH* were made. The analytical thinking process (crystallized in a theory on synchronization) had already taken place before this period. In the case of the older compositions *Threeway I and II*, the search for a synchronization method was part of the CP.[28] The CP of *Threeway II* changed the orientation of the theory, away from technical solutions, to interactive solutions relying on the human performers. Just like the contrast theory, parts of the synchronization theory have been replaced by practical experience. Initially the theory – and related experiments – gave me the nerve to try out synchronization methods, but as I continue composing, the amount of experience with synchronization problems grows (in rehearsals, performances, experiments). I do not remember continuing to consult the document in which this synchronization theory is notated in 2013.[29]

While four loose ideas directly linked to the 'creative' contrast theory were found, there are no direct links in these ideas that point towards the synchronization theory. This underlines its role as

27 This number is only valid if the whole composition is performed. In fact, any section of *(fl)ASH* can be performed as a version, see the remarks at the beginning of the score in Appendix 23.

28 As written in the summary of *Threeway II* in Appendix 27, this piece was initially intended as 'a study on synchronization'.

29 When I reread the document in 2014, for the analysis in the current self-study, I remember experiencing it as something from the past.

a support to solve problems in the finished processes, particularly performance-related ones, and not to create musical ideas.

6.6.3 Summary: function of the two theories

In general the two systematic processes provide a framework for problem finding and solving during the CP,:the contrast theory enhances my creativity and leads it in a certain direction whereas the synchronization theory helps to foresee, evaluate and solve potential problems. The contrast theory has a more creative and productive role, leading to new musical ideas, as observed in the loose ideas. The synchronization has a more supportive role.

The influence of the theoretical processes on the finished CPs was studied in a phase where the theories had stopped developing. The theories gradually become less important and faded out of the CP, while practical experience, initially built on these systematic processes, started to play its role. The influence of both theories was greater and more explicit in the previous period. In Sloboda's 'diagram' of compositional resources and processes, the author (1985) distinguishes between processes used in the ongoing work of a composition in development and resources and processes that are stored in long-term memory. The latter consist of “long term knowledge which a composer has built up over the years and which can be applied to new compositional problems.” (p. 119) Sloboda labels the former processes as conscious and the latter unconscious, although a few paragraphs later he notes “that in a effective theory of composition, the conscious/unconscious distinction is irrelevant.” In the development of my two theories, based on real-time traces and reports, it is clear that at least in the beginning the long term knowledge is constructed deliberately and that experience gradually takes over part of the role of the theories as time evolves. Expressed in Sloboda's terms, I notice a very slow, gradual transformation from conscious knowledge, used within the “successive versions of a composition”, to more unconscious knowledge, stored in the long term memory.

At a certain point in time, the two theoretical processes stop evolving. Their influence on the loose ideas also disappears after a while. Why does this happen? I think there are two reasons: firstly, because the related problems in the finished CP are situated and local, they interact with other problems, concerns and restrictions in an unpredictable way. Hence, at a certain point adding more details to a theory or system does not result in more help or benefit while composing. Secondly, both theories are ultimately bound to artistic and aesthetic choices and these are not permanent. This is especially the case with the contrast theory. The production of contrasting, simultaneous layers is no longer the main concern in my most recent compositions from 2013 and 2014 (*((fl)ASH, Night Included, Points to make*).

7 Discussion

7.1 Discussion of the role of loose ideas

In my analysis I demonstrated how the loose ideas are short 'hyper-texts' with many references (direct links) to my other compositional processes. The processes referred to are seldom more than two years old. Moreover, the number of detected references grows as time passes, probably because more (real-time) information on the 'prehistory' of two years was gathered in the last year of the self-study (see p. 201). This points to a methodological problem with studying these loose ideas: knowledge of the current context (the other processes in the same period) and a prehistory of at least two years – in my case – is necessary to fully understand and analyse these loose ideas. In the review of the methods in research on the CPMC (p. 2.1), I have already described the problem of setting a time limitation for a study. Because ideas, fragments or techniques might have emerged long before a composition was made, it is difficult to design a meaningful (research) time frame. This problem was part of the discussion of the analysis of the CP of Neyrinck in the group study. Donin and Féron (2012) have made a similar remark while studying a composer (Gervasoni) who also produced cycles of compositions. It seems as if the time segmentation problem pops up in another guise when trying to study loose ideas. Initially I had analysed three longer CPs (*Eigengang, Centra, (fl)ASH*) at the beginning and in the middle of the core period of the self-study, but to analyse the interactions between the loose ideas and the other processes I had to concentrate on the finished process at the end of the core period (*Night Included*). In these cases I could follow the complete chain of loose ideas until they arrived in these finished processes (see 6.5). The role of the loose ideas would be hard to trace in a study with a time segmentation based on the CP of one finished composition (e.g. *Night Included*). The reference that I make in the verbal report of this composition on August 26th 2013 is rather vague. I seem to believe that I notated the idea on a loose sheet of paper while in fact it was written down in a computer text file. Therefore it would be difficult to detect the origin of the idea. Moreover, at that point there were no traces of the studied 'dyn-link' loose idea in the scores of the previous finished compositions: the idea only appeared at the beginning of the creative process of *(fl)ASH* and was later abandoned. Studied within this time framework, the 'dyn-link' idea would appear as a sudden flash of inspiration, just as the line-point-curve and Carnatic music ideas pop up in the CPs of Smetryns and Van Landeghem in the group study. Although finding a fitting time frame to study loose ideas is problematic, it is necessary to find other time frames than the ones conditioned by the process of one finished composition.

At the beginning of the current self-study I posed the question: to what degree are the loose ideas independent from the finished compositions?" This question elaborates upon the two views held on sketching, as explained by Schubert and Sallis (2004). In general my results reject the more traditional view (in sketch studies) that the loose ideas are projected towards a completed composition and only function within a finished process. My results are more in line with the second view which understands sketching "as a relatively autonomous process," not necessarily

limited to demands or contingencies related to the finished process itself. My analysis showed how loose ideas evolve, sometimes parallel to finished processes. In my compositional practice, loose ideas function as a mechanism to select or create 'good' ideas by exploring their potential, implications and links with my individual preferences. The persistent and 'really loose' ideas are the most clear examples of autonomous ideas. On the other hand, not all loose ideas are highly autonomous: some are offshoots of finished compositions – a kind of potential revisions – or are absorbed by a finished process very soon after their first appearance, for example after a few weeks the loose idea 240 becomes part of the CP of Points to make because the initial idea for this composition wasn't as productive as expected. Moreover, these loose ideas are not merely produced out of pleasure in creating music or playing around with musical ideas: there is always a vague intention to compose a work somewhere in the future. I still hope that even the most autonomous ideas, the persistent ideas – chains of loose ideas without a link to finished processes – will turn into a finished composition one day.

7.2 Discussion of the theoretical processes

In the analysis of the CP of the composer Gervasoni, Donin and Féron (2012) observe that the rule systems, chosen by the composer, are 'under-used'. The systems can not be detected by analysing the score but only by gathering detailed information from the composer through the 'situation simulation interviews'. The same observation on underused rule systems can also be made in Van Landeghem's CP in the group study. In the phenomenon of 'progressive revision' he initially designed a number of related 12-tone series and then became aware of the potential to create modal and tonal harmonies and pitch systems based on these 12-tone series. The whole range of rule sets cannot be found in one score, but is spread across the various drafts, scores, re-arrangements of the composition and the discourse of the composer. The same 'under-used' quality is also found in my two theoretical processes. Large parts of the theory are not applied in any composition: for example, some of the contrasting features in the contrast theory require specific instruments or electronic devices. Neither were used in my compositions in that period. Moreover, the development of the theories stops at a certain moment because adding more details to a theory or system does not result in more support while composing. Consequently, I could also categorize the two theoretical processes as 'unfinished' processes.

I described the function of the contrast theory in my compositional processes as mainly creative. This does not conflict with the highly structured form of the theory. The ordering of parameters and features triggers my musical imagination and this effect returned when I reread the contrast theory for the analysis in this self-study. When I look at the details of the Illustration 25, I ask myself: “is this combination possible? Can I imagine (polyphonic) music built on these features per layer? How can I create the largest possible contrast between two non pitched voices?” These are different questions than wondering whether this combination of features exists in the real world and have the envisaged effect (i.e. the generation of contrasts). Such questions are probably more relevant in a 'scientific' theory.

The creative functionality of my contrast theory is similar to the one observed in the CPs of De Bièvre and Van Landeghem, where rule systems trigger new ideas of the composer, but also to the

'matrix as an analogous space' theory of the architect, photographer and researcher Thierry Lagrange (2011). In his dissertation the author developed “a matrix in which words and images can be combined in apparent and unexpected ways.” This tool leads the author into an imaginary, analogous space where spatial elements and images are added and recombined. His imaginary space is designed along three dimensions or matrices, one with his architectural projects, another with words (representing some kind of knowledge) and a third with pictures from photographic work. As in my contrast theory, there is high amount of organization and structure in the content on the one hand, and on the other the creation of new ideas is the main goal. But in contrast to my theory, Lagrange has also developed a creative mechanism for his theory (not just a creative content). He reflected upon the presentation mode of his theory. Moreover, the results in his theory are more open and unexpected, whereas my contrast theory 'forces' my creativity in a certain direction, i.e. it tries to ensure that contrasting musical material is produced when I am composing.

The benefits for a composer of such a creative theory are akin to the ones of extra-musical inspiration as explained by Katz (2012). She writes:

> ...the outside-domain content might already hold significant meaning for the creator. Thus there may be benefits for a creator who draws on content that is removed from the home domain. For one, a creator might feel freer to take risks if he or she were not directed into a known stereotypical musical pathway. (p. 183)

The theories in my creative processes, the algorithms in De Bièvre's process (in the group study) and the matrix of Legrange lead the artist outside the known or stereotypical domain of productive results. The artist decides to subject his imagination to a theory or rule system, hoping that it will bring out these qualities in the creative results.

The creative function of my contrast theory raises the question of its validity and verification. I believe that in composition the validation of a theory occurs indirectly, through the finished composition. If in the end a composition 'works' for the composer, he/she will assume that the theory holds some truth. The effectiveness of a composition and the indirect validation of the theory is different according to the content of the theory. The contrast theory relates to music perception and the synchronization theory to music performance. When taking the previously 'underused' appearance of the theories into consideration, a potential risk is detected. Large parts of the theory have not been put into practice and consequently, it remains questionable to assume that the theory is correct because it was used in previous compositions. Remember that I had been narrowing down the contrast theory to a tool to generate scores and I was not really aware of this evolution.

A last remark has to be made on institutional and social influences on the development of compositional theories. Apart from the first germs of the two theories in 2007, these theories developed within an institutional context. This context consists of an educational and research environment. I believe that this environment provided an additional impetus to develop and systematize a theory. For example, parts of the theories were developed through conference lectures on my compositional work and research. The role of the context in supporting or discouraging the formation of theories in music composition is not be underestimated. Theorising is very sensitive to the context in which the composer lives. It was also part of Van Landeghem's CP in the group study. It is no coincidence that this composer has a professional background as a teacher of composition and (score) analysis. The relation between music theory and teaching is

found throughout Western music history (Palisca and Bent 2001). Theories do not only evolve around topics such as pitch, harmony or synchronization; the relation between society and the music composed can also be an object of theorization. In the book *Composer as intellectual: music and ideology in France 1914-1940* Fulcher (2005) describes the social role of composers between the two World Wars. Composers were expected to function as intellectuals and theorise aspects of their compositional practice within the context of political ideologies.

I may conclude that in processes of theory formation in music composition, there is a certain tension between the social or institutional 'demand' for theories, and their function within the creative process. In a way similar to the negotiation of a commission for a new work in contemporary music (Fryberger 2013), theoretical processes evolve in a space of negotiation between the composer and other stakeholders.

I will end this discussion of the theoretical processes with a different solution – in another 'environment' – of the compositional problem of synchronization (as in my synchronization theory). Irina Kirchberg (2013) describes how a music composer who writes music for the Olympic sports discipline synchronised swimming faces extra constraints because he has to make sure that the swimmers, often alternating between above and under water, move and swim together in a highly coordinated way. In this case, the trainer acts as an intermediary between the composer and the swimmers. He has the experience to estimate for the composer how difficult it will be for the swimmers to synchronize to the music. Rhythmic motives in the music are often changed or added on the basis of direct advice from the trainer. A composition in synchronised swimming often contains sections with different successive tempi. The composer aims to fit them together artistically in a single composition while at the same time ensuring that the tempo changes are feasible for the sportswomen. Therefore transitions between the sections are added, often with a 'hidden' rhythmical motive that foreshadows the new tempo, called an “appel”. Thus in this different environment of Olympic sports, close collaboration between the composer and trainer provides solutions for potential synchronization problems. This collaboration takes place within the specific aesthetic perspective of the composer J. M. Collet, who calls himself a “good craftsman”, working at the service of this team and trying to reconcile artistic and sporting goals.

7.3 A more complete picture of the compositional processes

A global view of the finished processes, theories and loose ideas during the core period of the self-study, reveals that the theories operate most independently from the finished processes, although the amount of interaction between the two was higher in the years before the core period. Moreover, the theories no longer evolve in this period. They still function though, and provide a framework to solve problems and direct creativity while composing a finished work. The loose ideas evolve continuously, although with a lower amount of autonomy than the theoretical processes. The evolution of the loose ideas is characterised by an associative and more intuitive mode of operation (recombination and variation), while the theories are deliberately constructed and depend upon analytic abilities. Expressed in the terms of my analysis framework of the group study, the loose ideas are outside sequence exploration while the theorising is a form of outside sequence planning.

But this contrast is not as clear-cut and continuous as it seems. Experience partly takes over the role of the theories as they stop developing. Both the loose ideas and theories provide support to the finished processes and underline that these cannot be understood as autonomous processes or as processes that only built upon previous (finished) processes. In my finished processes the loose ideas provide an explanation for the genesis and selection of inspirational ideas whereas the theoretical processes are frameworks of more general knowledge that support the solving of local and situated problems in the finished processes.

It must also be noted that both the loose ideas and the theoretical processes evolve over long time spans with large time gaps (of several months and more) between the further elaboration of a related loose idea or theory. In this way they provide new examples of long term creative cognition, next to the described long term phenomena in finished processes by Donin and Theureau (2007).

The division into four processes – of which one, the unfinished processes, were not studied in detail – is based upon the creative activities of one individual, myself. Therefore it remains unknown which broad categories could be used to examine another composer's overall creative processes. For example, other composers might spontaneously collect musical themes, interesting harmonies or notate philosophical ideas/reflections upon their work. In the group study I also mentioned Neyrinck's cognitive 'toolbox' which consisted of a large, but loose, set of compositional techniques and procedures. This toolbox is not as organized and structured as my two theories but on the other hand it is much more technical than my loose ideas. Probably one way to start studying the (evolution of these) collections of long term knowledge, is to let the composer reflect upon his practices, as I have done in the pre-study of this self-study. Such a reflective pre-study might then result in a first, perhaps vague, global image which can be used to design a collection method.

The study of the long-term knowledge becomes more complicated if one also takes into account, that a global picture of one composer's compositional processes was made during one specific period. Having a quick look at an old sketchbook from ten years ago, I notice that it has lots of rule sets and parts of algorithms notated in between the textual loose ideas, most likely related to the live electronic and algorithmic music in which I was involved in that period. Consequently, the clear separation between analytic, systematic processes (theories) and the more intuitive and associative loose ideas is temporarily. The configuration presented in this self-study of four processes and the relationships between them might also be dynamic and situated.

8 Summary and results

8.1 Methodological results

In this self-study I developed a personalized data collection method, adapted to the individual settings of my composition practice. This was done by reflecting upon the material conditions of my composition practice and creatively designing techniques that fit with individual habits and procedures (see p. 163). Additionally, the organizational work inherent to composing – the housekeeping practices, so to speak –, provided a fertile ground to develop these real-time data collection techniques. The benefit of building data collection techniques in close interaction with individual composition practices, is the relatively small amount of obstruction that I have felt when using these techniques in my composition practice. During the research period, I was able to compose several larger works and a number of shorter works (some unfinished) in a way that felt comfortable to me, with a result, according to my opinion, equally in quality to my past compositions.

The personalized data collection method resulted in a large amount of data (on the unfinished and finished compositions), spread out over time and providing information about different moments of the creative processes. Only before a deadline had to be met, in the last week of the creative process, and during one other busy period were the verbal accounts delayed and related to larger chunks of compositional activity. This happened in the first CP – of *Eigengang* – in which the data collection techniques were used. Moreover, the whole set of collected data is diverse and sheds light on the cognitive aspects (thoughts, decisions, evaluations etc.), the activities (performing, improvising, writing etc.) and on the products (sketches and different versions of the compositions) in my creative process. The collection of data on the duration of composition sessions also proved to be a help in the reconstruction of the course of action of a CP.

The goal of this self-study was to give a more complete picture of the compositional processes by studying the role and function of more independent processes. Initially it was not clear where and how the interaction between these processes and the finished processes would take place. The loose ideas were crucial in finding methods to study and understand these interactions. First, the direct links or references in the loose ideas provided an important analysis tool to study them in real-time. Second, the loose ideas provided a rich set of themes with which the other compositional processes could be coded and this overview allowed me to detect relations between the processes. A theme was chosen whose development fell within the study period during which a set of rich, real-time data were collected. This chronological thread of the theme 'dyn-link' was followed to study the interaction between loose ideas and finished processes in detail. Third, the loose ideas also appeared as a form of *contextual information*, full of references, which can only be understood if enough information on previous compositional processes has been gathered. Methodologically, this means that loose ideas can not be studied separately. *Historical* data on a *diverse* set of preceding compositional processes is necessary to interpret them. An attempt to develop a method

to collect more explanatory information on the loose ideas, was less successful (see chapter 4.2.1).

8.2 The loose ideas and a more complete picture of an individual composition practice

In general my results confirm the view of loose ideas as a relatively autonomous process. The ideas with an unique content that only appear once – the 'really loose' ideas – and the chains of loose ideas without a connection to the finished compositions – the persistent ideas – are the clearest examples of this autonomous status. At the same time there are many relations within loose ideas, and between loose ideas and other compositional processes. The loose ideas are not a scattered collection of singular ideas as there appears to be several (often overlapping) groups of related ideas and processes, as noted through the analysis of the (real-time) direct links and the (retrospective, content-related) coded themes. The processes to which the loose ideas refer are in general not older than two years. The loose ideas also appear as the most innovative process, most new themes in my compositional practice emerge out of loose ideas. Compared to the other compositional processes, the loose ideas also give the most complete and diverse image of the themes in my global compositional practice.

In the analysis the function of the loose ideas was described as a *selection procedure* of compositional ideas. The creation of loose ideas forms an exploratory phase through which their potential, implications and relationship to my personal preferences is discovered and elaborated outside the CP of a finished composition. The contribution of the loose ideas to problem finding and solving in the finished processes is small and this contrasts with the larger role of the theoretical processes. In general, the two studied theories provide a framework for problem-solving, although the contrast theory has a more creative and productive role compared to the supportive one of the synchronization theory. The two theories can be coined as individual, long term knowledge for music composition that initially is constructed deliberately, but is partly taken over by experience as time evolves. Both theories also stop developing at a certain moment.

A global view on all the compositional processes during the core period of the self-study, also reveals that the theories operated usually independently from the finished processes, even more than the relatively autonomous loose ideas. The evolution of the loose ideas is characterized by an associative and more intuitive cognitive mode. Ideas are simply varied and recombined with other ideas. In contrast, the theories are deliberately and analytically constructed by consulting knowledge from outside the individual composition practice.

PART V: REFLECTION

In this part I will reflect on the influences of the research activities in this dissertation on my composition practice and my vision of this practice. After an introduction, this chapter will continue with a short overview of the reflective literature on similar influences. A long review of reflective research in general was already given on p. 46 in the 'DESIGN AND METHOD' part. Next I present the reflections, followed by a conclusion.

1 Introduction

In the review of the literature on reflective research (on p. 46), I clarified my intention to distinguish the formal, systematic self-study from the reflective study in the current chapter. The self-study follows the description of the data collection and analysis methods and concentrates on a limited number of research questions. The reflections in this part are based on a less strict method and try to answer one broad question: how did the research influence my compositional practice? Because in artistic practice several dimensions and concepts play a role, the reflections develop in a more general and holistic way. The research is not restricted to the products of my research (i.e. this written dissertation) but encompasses the whole research process. There is a twofold reason for the broader scope in the current chapter: firstly, when reflecting upon influences exercised upon an aspect of my individual activities, it is often impossible to clearly pinpoint the origin and the target of an influence; secondly, in artistic practice abstract and complex – even contradictory – notions are used; these often form the object of discussion among artists. Reflecting upon this practice – at the level of the professional practitioners – almost inevitably includes the use of operative notions of this field of practice.

The current reflection concentrates on the influence of the research process on my composition practice and my vision (or experience) of this practice. The domain and topics of the two main parts of this dissertation – the group study and self-study – are closely related to ideas such as polyphony, and contexts – Flemish contemporary music – that shape my composition practice.

In general, the two main studies in this dissertation exercised the biggest influence on my practice, but other aspects – even details – of my research work also lingered in my mind and may have influenced, amongst othersthoughts about composition procedures or related aesthetic ideas. The Flemish composer and researcher Piet Swerts (2011) makes a similar observation in a paragraph about the literature study in his dissertation and states that details or small remarks in research literature are inspiring for his compositional practice:

> Binnen het kader van sommige artikels zelf kan dit soms van ondergeschikt belang lijken maar het kunnen juist bepaalde details, commentaren of bemerkingen zijn die bijzonder inspirerend werken op de creatieve geest tijdens het componeerproces. (p. 9)

Research activities that were not decisive for the production of this dissertation – for example preparatory material – have also had an influence on my composition practice. Not all these 'blank' research activities are described or elaborated in the previous chapters because they were not considered essential to answer the research questions in these studies. Some of these 'blank' research activities are:

- the rehearsals, performances, discussions and produced compositions within the study of eight composers
- the pilot study (of the group study) and its rehearsals, performances, discussions and produced compositions
- the experiments at the IPEM institute with polytempo performances
- the literature (books, articles) that was read

- the studied music (recordings and scores), for example to develop the theory on synchronization
- the unfinished processes in the self-study

During the research with eight composers and the self-study I have used memoing to archive the impact of my research on my composition practice. In the beginning these memos or annotations were written in between texts of the two main studies or on loose paper sketches. Inspired by the data collection method in my self-study, I started using a simple applet that can be used on top of any (running) software program in order to add a time tag to bits of text. This applet made annotations on ideas quick and easy. The biggest part of the following reflections are elaborations of such memos.

The relevance of the current reflection is situated in the domain of research on the CPMC, artistic research and my individual, compositional world. This reflection is important to other composers and researchers because:

- it extends the knowledge on the CPMC in a naturalistic setting as this knowledge is inevitably connected to knowing more about the influences of research on the studied practice (see p. 110 in the group study)
- the creation of a feedback loop between research and artistic practice that is aimed at in artistic research , requires an accurate picture of the influences of the research, in particular if it is partly built upon real-time information and experiences of the CP, and not only retrospective observations
- on an individual level the reflections are an extension of the self-study in which I finally answer the question: how did the research effect my personal composition practice? The reflection allows me to discover how far the impact of the research reaches. Through this personal narrative the reader can detect how research and artistic practices may or may not be linked to individual preferences in musical and other domains.

2 Literature on reflection and reflexivity in music composition

Before writing down the actual reflections in the next chapter, I focus on reflections of composers whose creative process has been the object of an academic research study and have written a reflection on this study.

Between October 2003 en spring 2006 the French composer Philippe Leroux participated in a research of Nicolas Donin, Jacques Theureau and Samuel Goldszmidt on the genesis of two compositions *Voi(rex)* and *Apocalypsis*. In 2003-2004 detailed information on the CP of this composition was gathered in long 'situation simulation interviews'. From 2004 to 2006 the genesis of *Apocalypsis* was monitored. During 20 months Leroux was interviewed every month and a half. Consequently, the composer experienced a long and intensive research period. In the article *Questions de faire* (2010) Leroux took stock of this project and stated that the research project helped him to gain more insight in his creative work. For him, the research proved to be a delicate help in reflecting on his composition activities enabling him to make implicit procedures and activities more explicit and to discover other – previously unknown – activities. Leroux describes how some research elements were directly used by him in subsequent compositions as conceptual material, techniques or images. In the article he also elaborates – even corrects – specific visions of the researchers on his compositional activity and dwells extensively on his preparatory activities while composing and the relation between this preparation and the act of *writing* music.

In the self-study of Newman (2008) the researcher and composer are one and the same person. Newman categorizes his 'observations' on his CP in four categories:

1. productive compositional methods that promote and prolong flow,
2. less productive or seemingly counterproductive methods,
3. issues of frustration
4. problem creation and solution.

These observations are closely linked to the focus and (real-time) data of his research, i.e. the flow experience or the evaluation of the data collection method. The observations fall within research of the CP. After these observations, Newman also evaluates and assesses the product of his CP, i.e. the composition. The influence of the research on his compositional activities is not dealt with explicitly and therefore it is difficult to distinguishthe conclusions or results of his study from his reflections.

Reynolds (Reynolds 2004b; Reynolds 2004a; Reynolds 2004b; McAdams and Battier 2005) mainly presents reflections on the listening experiment and to a small extent the process of rehearsal. Reflections on the study of McAdams (2004) that analyzed the CP of *The Angel of Death* of this American composer, are barely found in his articles on the research project. From Reynolds' articles it is clear that perception is crucial for composition, this might explain why he almost exclusively pays attention to this domain in his reflective article:

> It is crucial for me that the force of attractive ideas not lead me into a domain of behavior that is unrealistically remote from the realities of human perception and cognition. Thus I have become a lay reader about perception as it applies to music. (p. 352)

3 Research influences on my composition practice

The research activities for my dissertation led to a rethinking of my composition practice in several ways. In the following chapter I have grouped my reflections, based upon the elements (of my practice) that were influenced by these research activities.

3.1 Practical and technical elements

The research in my dissertation resulted in a number of practical changes which to outsiders might seem nothing more than details. These changes helped me to ease my compositional work and get rid of small but annoying problems. For example, by rereading my verbal reports on the genesis of *Centra*, I realized that a particular feature in the audio editor Audacity repeatedly created problems in my CPs of this and previous compositions. The problem is immediately linked to the use of this software to produce an overview score (this was explained on p. 110). The delete function in Audacity automatically moves all the following sound clips backwards. As my Audacity composition files are derivations of previous, older files, this caused accumulating time inaccuracies. In the midst of composing I do not like to spend time on these practical/technical matters and afterwards I immediately forget them. Once I remembered this problem thanks to the verbal reports, it took me less than an hour to solve it in Audacity (the manual explained that I needed the 'split delete' function).

Another practical example is the deadline before which the composition should be finished for the rehearsals and performance. While reconstructing the course of action of the CP of *Eigengang* for the self-study in this thesis, I realized that I underestimated the deadline – and the necessary work – by a week. Moreover, I realize that clear arrangements have to be made about the deadline because I often assume a date for the deadline based on the performance date of the composition. This was the case in the CP of *Centra*.

These are just two examples of more practical issues that I have become aware through studying my own composition process. There is no general value to these problems but at a individual level, a self-study can lead to a number of insights that have an impact on the compositional practice.

3.2 New musical ideas

Research activities can function as an inspirational source, although this inspiration occurs accidentally and unexpectedly. Elements which are details from the research point of view can suddenly trigger my musical imagination. For the group study and the preceding pilot-study (with six composers), I got the chance to interview the composers, follow their CP, attend the rehearsals and the performance of their short work. Moreover, the scores of their compositions were studied in detail. An example of an inspirational idea occurred during the rehearsal of Smetryns' composition. The composer suggested moving the piano backwards, further away from the

audience and this idea remained in my head for a while. In the past I had been imagining and experimenting with the spatialization of sound, by moving performers to the left, right or behind the audience. Direction was the main parameter of the spatialization I had in mind. But Smetryns' suggestion – especially in combination with the piano part, full of clusters – triggered and enriched my ideas about creating depth in space by acoustic means and considering distance as equally important as direction. In the self-study, several of my loose ideas appeared to be linked to this 'depth' theme. The ideas on acoustic depth were also actualized in my composition *Night Included* (2013) which is a text score piece.

In Sebastian Bradt's composition *Delta Rosarios* – produced for the pilot study – the composer combines a “Feldmanesque, interrupted stasis” in the piano part with a “would-be serialistic impression” in the flute and a rhythmic, “post-minimalistic” pattern in the bass (viola da gamba). I remember being intrigued by the problem of finding a second polyphonic voice that would form a balanced combination with a Feldmanesque sparse, meditative melody, characterized by many silences. 'Balanced' would mean that the Feldmanesque character of the melody would still be present. The decay of the Feldmanesque sounds, fading into silence, would still preserve its effect in the polyphonic texture. In retrospect, these concerns seem related to the creation (and character) of the piano part in my composition *Centra*, one year later.

A last inspirational example was already noted in the summary of the CP of *(fl)ASH* (see Appendix 31). A lecture at a conference about incomplete and unfinished compositions led me to add an extra dimension to my composition, by using fragments from such music. This choice may also have been inspired by my attempts a few months earlier to create a multi-media summary of the CP of *Centra*. This summary was conceived as a research project and it involved thinking about the musical re-use of sketches and recordings of my CP.

The previous examples show that the research activities creatively influenced my compositional work. It seems obvious that an environment – with many musical or music-related activities – produces an effect on the creative activities of a composer.

3.3 Increasing awareness of my own creative process

In general, the research activities for this dissertation have led to a higher awareness of my own creative process. As a result of these activities I have a rough image of the ideas, motivations, activities and context that shape my compositional work. I doubt whether I had this kind of overview in the past. One of the results of this awareness is my current conviction that composing is – essentially – rather easy. The main challenge is to make it not too complicated and restrict the number of themes and problems in one composition. While composing *Centra*, I decided to not use certain ideas in that composition but apply them in a later work, *(fl)ASH*. Based on my memory, I believe this was one of the first times I used this postponement of ideas and problems. This solution has the benefit of reducing the number of ideas in one composition while at the same time it comforts me. I am convinced that the discarded ideas are valuable but I also believe that they will not get lost because I will use them in a future work. This conscious delay is a psychological technique to trick yourself while composing.

A higher awareness also involves a better knowledge of the different activities that are going

on while composing. Knowing which compositional actions and options I have at my disposal is somehow a more comfortable situation. One of the previously shaded activities is 'activity planning', i.e. choosing a sequence of actions to continue composing in the near future. This activity planning was previously described in Smetryns' CP in the group study but I also found several examples in the verbal reports of my own CPs. It assumes that at most times in the CP, there is an array of possible actions to continue composing: one can consciously chose to plan, analyse, experiment, write, rewrite, etc. or to proceed with the production of a work. This activity planning is often logically related to the problems situated in the CP, but this need not be so. When attempting to find a way out of a complex or blocked composition problem, I can attempt to – almost randomly – plan a procedure to continue. Suppose I have written the first minute of the opening section of a new composition and cannot get any further. I could try to analyse what is going wrong, but I could also jump forward and start writing the middle section of the composition, next rewrite one important instrument part in the beginning section in the light of this middle section and finally re-evaluate the new situation. This activity planning is not derived from the musical problem or product, but based on my own personality and preferences for certain compositional activities. It is a strategy that might be productive, just as the logical analysis or planning might be at other moments in the CP. As long as I produce something and add more context to the existing ideas and problems, situated problems can be solved more easily. As the duration of the composed music grows, it also becomes easier to detect and analyse a problem. This awareness of activity planning has convinced me that the balance between personal and musical (problem related) choices is important when choosing to continue composing.

In the group study I analysed the main compositional activities of the eight composers, i.e. planning, exploring, writing and rewriting. Although I did not analyse all five CPs of my finished compositions between 2011 and the beginning of 2014 through this activities framework, I did read the data sources and noticed that in general the rewriting activity is the dominant one. Planning, exploring and writing are also present, but I tend to spend most time on rewriting. This corresponds to my preference for creating and imagining ideas on the one hand (as in the loose ideas and the exploration activity), and revising a written piece of music on the other. The group study has made me aware of the potential negative effects of this dominance of rewriting. For example, the fact that I can always imagine possible changes to an existing sequence of music, should not lead to overly long, time-consuming processes of revising, months after a composition was performed. Composers who do not like revising clarify that it is impossible to remember the real-time context of such a composition once this composition has been made. In the group study and the studied literature I learned that this view also contains valuable insights.

Through rereading the transcriptions of my verbal accounts and listening to recordings made during the creative process of *Eigengang*, I became aware that I was struggling with a 'personal workshop' problem. Depending on the specific demands and circumstances of a new composition, it is effective to arrange meetings with performers to try out ideas (as in *Centra* and *(fl)ASH*), use existing recordings/music in an audio editor program (as in *(fl)ASH*) or find (hire or buy) an instrument to experiment with. This personal workshop problem concerns finding the right working environment to realize a new composition. *Eigengang* is a work for three pianists playing inside the piano and using extended techniques and preparations on the piano strings. I do not have a grand piano at home, so I was experimenting on pianos at the School of Arts and the Orpheus

Institute. I wanted to write a polyphonic piece, which required these techniques to be more or less equally loud. On top of this, the extended techniques created a lot of practical constraints. At this stage of the creative process I experienced vagueness concerning the overall 'idea' of the composition and the sound materials with all their implications, mixed with uncertainty over finding a practical way to create this whole composition. Should I compose at home or somewhere else? Should I perform everything I composed, or just a few parts? These and similar questions created a feeling of unease and stress while I was composing. The workshop problem prevented me from composing fast. Through reflection on the data in this self-study, I have realized that this 'personal workshop' problem was also part of the creative processes of older compositions. In the compositions following *Eigengang* I have no longer experienced this kind of stress. I knew that somewhere in the first weeks of the CP I had to put the compositional problems aside for a moment and concentrate on the best workshop organization for this specific piece. The awareness that even in the midst of composing it can be a good idea to focus on something non-musical like this workshop organisation is new. Now I consider this workshop organization a 'part of the job' and no longer get nervous. I do not think there are general solutions for this workshop problem, since the solutions depend on the specificities of the new composition and an estimation of the amount of experimentation required to adhere to these specificities. I believe that this workshop problem only appears when unknown terrain is explored in a new composition.

Another part of my compositional practice of which I have become aware is the interference of extra-musical motivations. While reading through my verbal reports in the self-study, I noticed that I have doubts about the purely musical character of the composition in progress. At these moments of doubt I think: “I don't want to compose 'l'art pour l'art' music, which is 'aesthetically nice', or meta-music, which is referring to other music, musical practices or discussions within contemporary music. The current idea/composition is too musical.” Somehow I believe that contemporary classical and experimental music has been too self-involved (rather than involved with current developments in society) in the past decades. This self-criticism pops up while I am composing and forces my imagination in a new direction. I start to search for a social or political content in the music, text or actions of the performers on stage of my new composition. In the CP of the compositions in this thesis and the verbal reports of the unfinished ones, this change in my 'course of action' appears a few times, e.g. in fl(ASH) and *Night Included*. Through rereading my reports I have ambiguous thoughts about these social interruptions. In general I believe it is risky to try applying a new idea within a new composition that already has a distinct design and shape. For example, while composing *Eigengang*, the image of performers helping each other by playing the same inside piano technique unconsciously slipped into the CP. It was by analysing the data sources for the self-study that I realized that this idea contradicts the (hyper)polyphonic image of the piece, i.e. three performers, physically very near to each other, playing musically 'distant' layers. The image or idea upon which a composition is built, risks becoming more fuzzy or internally contradictory when new inspirational ideas appear in the midst of the composition process. But there was an exception: the idea of using historical, 'unfinished' music appeared when *(fl)ASH* was almost finished. This idea aligned well with the state of the new composition at that moment and it (hopefully) provided this work with a richer content. But this is the only instance that I found of a symbiosis between an idea, inspired by this search for a social content, and a developing composition. Consequently I am cautious about fundamentally changing a current

composition at these 'critical moments'. Additionally, I also realize that I have to write more works (or performances/events) which are inspired by extra-musical content from the outset.

3.4 Hybridization of research and artistic practice

In the self-study I have described how I developed an individualized data collection method through a reflective process (see p. 163). This collection method was partly based upon my housekeeping practice as a composer (managing and ordering sketches, files, recordings, etc.). The search for an individual data collection method created an overlap between these research methods and my way of composing. Especially the verbal reports, made after a block of composition work, have stimulated me to review my past work and my future plans more frequently than I used to before this study. I have the feeling that this research method enables me to store this information longer in my memory and helps me to recapture the often vague, germinal composition idea after a few days of non-composition work. The availability of various data and verbal accounts has advanced my composition method with respect to longer incubation phases. When I listen to my last draft after a few weeks or months of non-composition work, I can make a fresh review of my composition. This is a procedure from the past that I still apply. But now I have added a next step that consists of going through some of the past sketches, recordings and verbal reports. Likewise, this helps me to re-imagine the world of that specific composition, faster than in the past. The two benefits of the verbal reports – a more conscious memorization and an easier re-imagination of a work in progress – have led to the continuous use of these reports, although between March and September 2014 I did not compose any new works. There is one practical objection to the further application of these reports, which is that outside a research context it is difficult to assume that I would have time to transcribe the reports. Hopefully effective speech-to-text software for the Dutch language will appear in the future...

Another example of a hybrid practice practice is the applet used to notate loose ideas (see chapter 4.2.1 in the self-study). I consider this mixture of research method and composition practice an easy-to-use procedure that I will continue applying after the end of the self-study. Just like the verbal reports, the practice of notating ideas creates a higher awareness of these ideas. Moreover, the applet enables me to easily collect and find loose ideas.

3.5 Profound changes

Just like many other contemporary classical composers over the past fifty years, I was cautious about using tonal or modal elements in my music. In the pilot study of the group study I noticed that this constraint was present in many of the CPs of the studied composers. Observing this in other composers while knowing that I also have the same constraint, made me reflect upon this phenomenon, then doubt and finally abandon the constraint. I realized that such a stylistic 'prohibition' might prevent me from reaching my main compositional goal, i.e. to depict an inspirational image – of contrast and difference – as precisely and radically as possible in my music. The pilot study and the observed constraints might just have provided an extra trigger to change this attitude, because in the same period (spring 2011), I started using fragments of existing

music in my composition *Chunks & Streams* for Zwerm.

The group study also provoked a change in my attitude towards polyphony. In the first years that I became intrigued by what is called 'hyperpolyphony' (2007-2009). I described this phenomenon as a purely musical issue with strong links to the perception of music. But my inspirational ideas often focus on the performance of music: they are more multimodal, and an extra-musical, social dimension is often present. I also like to work with graphic scores or live electronic music, where a score is notated less strictly and creative input from the performer is necessary. The main ideas in the Smetryns' CP (line-point-curve and especially the different approaches for the performers) made me realize that the concept of polyphony can be applied to many domains outside the perception of music. It makes me wonder if it might not be more effective to start composing with concepts that are only slightly related to (musical) polyphony and open to more extra-musical dimensions. A work like *Roaratorio. An Irish Circus on 'Finnegans Wake'* (1979) by John Cage is a feast of polyphony but it originated from fascinations with chance operations and the richness of James Joyce's writings.

3.5.1 The structure problem

In the reflective article by Leroux (2010), the composer entitles one section 'Ce qui je souhaite approfondir'. Here he expresses his desire to find solutions for some of the composition problems disclosed. This title can also be applied to the following section which focuses on self-learning and finding solutions for problems that were opened up in the self-study. One problem which seems urgent and challenging to me, is finding an appropriate and more elaborated structure or form for my compositions. The analysis of the CP of *Eigengang*, *Centra* and *(fl)ASH* showed that this problem was prominently present while composing (see Table 13 on p. 179). Moreover, the structure of a composition is not prepared or considered in advance before I start composing a (finished) work. In the loose ideas, unfinished compositions and theoretical processes, the structure of a composition is not the object of my thoughts and activities. The awareness of the structure problem has grown gradually since mid-2013. While composing *(fl)ASH* and especially *Points to make* (composed between November 2013 and January 2014), I already started to notice (through transcribing and rereading verbal reports) that my previous ideas on structure were mainly 'negative'. I knew which structure I did not want. My search for a structure was mainly based on an emotional refusal of structural procedures of previous composition generations. I narrowed down the solution space by eliminating (through writing and revising) what I did not want. I believe that in my recent compositions I partly started to achieve this new sense of structure (the flow of time in a composition) and together with the higher consciousness about structure, I feel the urge to focus and experiment with structure and to continue this search in the future in a more conscious and elaborate way. For me the macro-structure of a composition is always connected to the flow of events on a smaller time scale (where phrases or motives appear). This produces a challenge to design an experiment on structure (already recognized but underestimated in my article Exposition...) In the past I thought about using improvisation or algorithmic composition to create structural experiments. The analysis of my CPs and the awareness that the writing activity is not crucial in my compositional activities, provide me a new direction to look for solutions. In the future I could use existing music (my own or other composers) and rewrite it to create structural

experiments. This is accordance with my personal composition method. For example, at the beginning of the CP, *Eigengang* was based upon an older (unfinished) composition *Klavier4tet* which I started to rewrite. But the end result – *Eigengang* – is in fact very different from *Klavier4tet*.

By contemplating the collection of loose ideas, my CPs and the produced compositions, I have become aware that in my recent compositions, there is not one structure that I prefer, but a group of very related structures. These are my current preferences:

1. static structure, for example as in the compositions from the 1950s of Morton Feldman, where there is no relationship, between the individual sound events;
2. independent simultaneous layers, as in soundscapes; the structure or form of each layer has no relationship with the structure of the other layers; I believe that the overall effect of this independent simultaneity is very similar to the previous static structure;
3. unexpectedness or (perceived) randomness at the micro-time level; this can be grouped into a static structure at a macro-time level but also into a simple structure (e.g. AB); in the latter case the main challenge is to suggest a simple structure within the flow of unexpected/random events;
4. a micro-time level in which some kind of system is continuously created and dismantled again, as in *Centra*;
5. a very diverse range of fragments at a micro-time level coupled with a simple, overall form that sustains this high amount of diversity.

3.5.2 Re-using the past

Because of the research on my compositional processes, I am more and more inclined to re-use previous loose ideas, sketches, unfinished compositions and insights from finished compositions. I feel challenged to consciously build upon my previous compositional activities. This orientation towards the past is something new for me and it is a rather unexpected twist of fate that my artistic research on the creative process has led me to this orientation. The self-study has made me aware of the large amount of time spent on the production of one composition. Consequently, it is more effective to re-apply some elements in other works. I also am aware that it is worth trying to realize an idea I have already applied in a new context because the situation and the restrictions will lead to a new realization of the old idea. Moreover, when ideas are applied for the first time in a composition, it is difficult to realize their full potential and to cope with this newness in a satisfying way. In the CP of *Chunks & Streams* several new ideas appeared – the use of fragments, sequential contrasts, sudden ruptures and open score – but my evaluation of this piece says that I did not find a convincing way to solve all these problems.

The orientation towards the past is also reinforced by a 'strange' reasoning I discovered. I noticed that in some verbal reports I explain the avoidance of certain actions by saying “I have already done this in a previous work.” Currently, I consider this reasoning as beside the point (and a relic of an unconscious modernistic reasoning): if a specific section or musical idea fits well with a composition in development, I should try to use it. What I have done in previous works is not the main issue.

A last issue that contributed to my current orientation towards the past, is the realization that in

the past I hardly ever re-used techniques. I don't have any systems – or I am not aware of any – that I apply across several compositions; I create new systems for every composition. In this way I am the opposite of Neyrinck in the group study. I do not remember technical procedures from past compositions or make any effort to consciously store this technical information in my memory. As noted in relation to the re-use of old ideas, I think it can be both more efficient and artistically enriching if I change this attitude and re-apply and modify existing techniques according to the context of a new composition.

All the previous remarks on how the research has influenced my orientation towards the past should be counterbalanced by the following explanation: this orientation may also be caused by my enthusiasm for the changes in my compositions over the past five years. I believe that after several years of trying, I have succeeded in obtaining a writing style that enables me to express precious images of diversity, simultaneity and simplicity. It is impossible for me to determine what cause and effect is in this triad of orientation towards the past, research and enthusiasm for my composition style.

3.5.3 Loose ideas

It was a strange experience to collect all my loose ideas (from July 2008 on) in September 2013. The whole collection was less confusing and fragmentary than expected and I was surprised that some loose ideas were already so old. In the past I never had seen an overview of my loose ideas over several years, which would have been almost impossible because these ideas were spread over different documents. Only very occasionally did I read groups of loose ideas (in the same document), and in these instances I think I was – narrow-mindedly – searching for a specific idea. One of the first things that struck me in the overview was the complexity of some of the older ideas (for example the loose idea 45). In a way these complex ideas were almost fantasies, too autonomous loose ideas, which I consider with hindsight as too difficult to realize musically. On the other hand, these fantastic ideas are maybe typical of a period (around 2009) in which I did not compose a lot and was searching for ways to realize my hyperpolyphonic ideas. In a later stage these 'fantasies' crystallized into simpler – and more realistic – ideas.

The analysis of the loose ideas in the self-study and the selection of ideas before I actually start composing a finished work corresponds with my experience. When I start to compose, I need to have an image, a collection of ideas that fit well together. This image needs to touch me: I have to be convinced that it is musically interesting and challenging on the one hand, and that it has a extra-musical dimension on the other. By the latter I refer to an atmosphere or feeling that the music or the performance set-up should evoke. The analysis – more specifically the direct links and the coded themes – shows that the inspirational ideas are entangled with each other. The challenge when starting a new composition is to prevent a whole web of ideas connected to the inspirational image from getting into the CP. This was something that I was half-aware of in the past but the self-study and the multiple connections between the loose ideas have provided me with an explanation of this problem or challenge.

A question came up when I collected all the loose ideas: why are some ideas elaborated into a (un)finished idea and why do others remain 'loose'? I did not deal with this question in the self-study because I did not have any real-time data sources to answer it. In this Reflection chapter I

will try to provide an answer, as it touches directly upon my compositional practice. I think there are two main factors to explain the elaboration: firstly, the external context and secondly, the weak content. The external context is not visible in the notated loose ideas but in the background it plays an important role to activate certain ideas. From the moment I sense (through contacts with performers or concert organizers) that a certain idea could be realized, I think more about an idea and consequently it starts to evolve. One should bear in mind that compositions are not only requested through commissions but are also performed by performers (known to the composer) without commissions (see p. 6). If I find out that I will have to play or co-organize a concert, my imagination starts playing around with some of the existing loose ideas. The second factor, the weak content of the loose ideas, relates to the music, the extra-musical dimension or the link between the two. Put simply, it means that I do not consider the idea good enough. I will give an example of a loose idea with weak content, where I am not convinced that the link between the musical and extra-musical dimension is interesting enough. The loose idea consists of a 'muted player', a performer, visible on stage, who is only playing music for him/herself, for example by wearing headphones and playing a digital keyboard. Other performers would process the music from this performer in different ways, but the original 'private' music of the performer is never heard 'in public'. I still like this image, it evokes visions of conflicts between the individual and the group, contemporary isolation through digital technologies (mobile phones, tablets, etc.) but it also reminds me of the political philosophy of Hannah Arendt. In her book *The Human Condition* (1958) she describes how people disclose their identity more to others than to themselves when they act in public. The trouble with the 'muted player' ideas is the music and its link with the performance set-up. I have had several ideas (such as the loose ideas 72 and 130) but none really convince me. Therefore I will wait until a better idea comes up one day and in the meantime this idea will not be not further elaborated.

3.5.4 Inaccurate memory

By rereading and listening to the data sources on my own compositional activities and analysing this information in the self-study, I have repeatedly become aware of the shortcomings and mistakes of my own memory. This has produced an effect of confusion on my memory, mainly in relation to dates and facts in the CP.

In general, I have become more cautious about *general* statements, made without checking them in a part of the data and traces of previous compositional activities. The compositional processes turned out to be more dynamic and diverse than one would declare – or wish – by solely relying on the memory. Lubart (1994) declared that composers tend to forget issues, especially during the incubation phase. Based on my experience in this dissertation, I find his statement, that incubation involves the “passive forgetting of superficial details” in the CP, as rather optimistic. Although there are a number of practical, and therefore generally less important, forgotten issues, there are also whole parts of the CP that slipped my mind, including important issues. When I was rereading the information on the genesis of *Centra* for the first time, I notated my memorized image of this CP in a short memo. It appeared that I mainly remembered the more 'frustrating' elements in the last weeks of the process, for example the mistake with the tempo of the marimba part, the change of the deadline and the troubles with the small timing errors in the Audacity

software. The whole period before the end of the process, including the problems and (real-time) insights, had become a grey zone in my memory.

The research practice of making memos also provided several examples of the shortcomings of my memory in memorizing the timing and sequence of ideas and activities in the CP. For example, I believed that from the start of the CP of *Centra*, I had had the intention to write two related compositions. But it was only after several months in the CP of *Centra* that I decided to use several compositional ideas in a second new composition, i.e. *(fl)ASH*.

Although in general I have become more cautious in solely relying on my memory, I also believe there is a positive and creative effect of my memory's inaccuracy and indeterminacy. This reflection is based upon the analysis of the loose ideas in the self-study. I think it is impossible to make a distinction between a variation of a loose idea and an inaccurately memorized idea. I continuously reconstruct previous loose ideas based on my memory. By realizing how loose ideas develop and the memory works, I can use the 'correct' image of an old loose idea – by reading the sources – if necessary, but at the same time I do not really mind that my memory makes up a new version of an older idea. To summarize, in explaining the creative process to other people, I have become more cautious about my own statements of this process, but for my individual act of composition, the awareness of my memory's failures seems to enrich and enlarge the possible sources for my creative activities.

3.6 Effects on my vision on composition practice

The research in this dissertation did not only influence actions and ideas in the act of composition: it also shaped my vision on composition practice. The research leaves its traces when I am thinking or talking about my own or others' composition practice. In the following two paragraphs I dwell upon two aspects of a discourse on composition practice, the retrospective experience and the theorizing.

3.6.1 The retrospective experience of the CP

When composers, myself included, talk or write about their CP or the genesis of a composition, the discourse is often very complex or even chaotic, diverse and fragmentary. It is also quite often impossible to grasp the link with their music. The retrospective experience is the experience when a composer looks back and talks about his/her compositional work in the past without relying on real-time data or a analysis of the compositional processes. The book by the writer McCutchan (1999) provides an excellent example of the complex nature of the retrospective experience. Researchers such as Nicholson (1997) which mainly rely on an interview as research method, examine this retrospective experience and not so much the CP itself.

The following observations are based on the group study and self-study in this dissertation and they picture a background against which composers' retrospective experiences and discourses of the compositional processes can be understood:

- A finished composition only gives a partial, unidimensional view of the themes that fascinate a composer during a certain period (see the self-study, chapter 6.3.1). Many other

themes may be alive in the imagination of a composer; they may even have been elaborated or explored in loose ideas and unfinished processes during the same period.

- A composer may be so enthusiastic about the potential of a recently discovered technique or idea that he/she plans to revise a previous work or make a new one based on the discovery. This was detected in the group study (the 'progressive revision' of Van Landeghem) but is also found in the Donin's study of Leroux (Donin 2009, 205) where the author writes about the excitement of the composer for the “idea of letters”. Moreover, this enthusiasm not only points towards future projects, it can flow backwards and influence the discourse of the composer on previous compositions. The same author (Donin 2012) explains how the composition of cycles includes an amount of theorization in which creative discoveries are used to explain procedures that are older than the discovery itself.
- Theorizing of parts of the compositional processes may be stimulated by the context in which the composer functions (see the discussion of the theoretical processes in the self-study on p. 227).
- In the self-study I described how some compositional processes or products remain active and stimulate the imagination (in the loose ideas) until they are about two years old. At that point they drop below a composer's creative horizon.
- Composers forget many thoughts, ideas and actions in the CPs (see the reflection on memory p. 247). Especially in contemporary classical music, composition is still mainly an individual activity without much verbalization or communication to other people. This closed nature does not enhance the storage of the compositional acts in the memory. Additionally, like everybody else, composers tend to forget more about activities that are further removed in time.
- Specific words have an individual trigger function in the CP, and not so much a meaning or content. This is something that struck me while rereading my own verbal reports in the self-study. The process of composing can take a long time and during this period it is important to be able to recall the main inspirational (multimodal) images. I have to be able to feel and hear these images even if I am in a different mood or have been engaged with different music just before a composition session. Therefore I start using certain terms or idiosyncratic descriptions while composing, such as the 'incoherent' piano part in *Centra*. As the CP is an individual process, it does not matter if the term is used correctly: it is the productive effect of the term on myself that is the most important. After using this term for months in the past, I can still easily recall – and almost taste – the underlying image when I use the phrase 'incoherent piano' again. I believe it is unavoidable that these terms shape the retrospective discourse of the composer on the completed composition.
- (Classical, acoustic) music composition differs from improvisation or painting because there is a time gap between the preparation of the music and the actual realization. At the moment of realization (rehearsals, performance) the composer may already be involved in another composition. Consequently, the retrospective experience may also be influenced by these simultaneous rehearsals or performances of older works.

3.6.2 Theorizing

The research in the group study and self-study has changed my view on the relationship between theorizing and composition. In the past I was sceptical about theories and concepts by composers because the desire to generalize seemed to obscure the link with the compositions and the compositional work. Moreover, I was convinced that philosophers or researchers had written more thoroughly about these general topics than composers. For example, the political ideas of Cage are interesting, but similar ideas are expressed more articulately and extensively in the writings of Ivan Illich, Lewis Mumford, Murray Bookchin or Colin Ward.

This critical attitude towards (abstract) theorization is also recognizable in parts of this dissertation, for example at the start of the group study when the interviews were taken. One of the main intentions of this dissertation was to create a situated picture of the compositional practice and to avoid that the narrative on my composition practice becoming an autonomous discourse, i.e. separated from this practice, or even a story that dominates this practice.

Through the research, the literature consulted and the discovery that in my own compositional practice theorizing takes place and even is productive (see the analysis of the theoretical processes in the self-study, chapter 6.6), I realized that theory-building is part of the composition 'game', and perhaps even indispensable in order to step outside the known, comfortable composition space and discover new horizons. This evolution and awareness has stimulated my curiosity to learn how composers' theories – in other, more conceptual domains than the objects of theorization in my CPs – evolve in real-time while composing.

4 Conclusion

The effects of my research on my composition practice-described in the previous reflections, can be summarized as follows:

1. Through the research I have become more aware of the wide range of activities, decisions and problems that shape my CPs. The detected problems range from practical issues, to compositional, musical problems (the structure of a new composition) and organizational matters (the 'personal workshop' problem). These insights broaden the space of conscious choices that can be made while composing and the obtained solutions create room to tackle new challenges.
2. The research has an inspirational, creative effect; it leads to new ideas that – together with other musical ideas – form a fertile ground for future compositions.
3. This higher awareness – through the research – changes the broad orientation of my compositional practice, I now recognize the potential of past (loose) ideas and processes from previous compositions. This again results in more attention for my individual, artistic 'history' as a foundation for future compositional work.
4. The research activities change the way in which I experience and verbalize my own and other composers' CP. Trying to understand phenomena like the role of retrospective experience or theorising in the compositional practice forms my general vision on composition.

The first two effects are also found in Leroux's article, summarized in the review on p. 238. In his case, the creative influence (no.2 in the list above) is more extensive and described in more detail. It consists of ideas from a previous CP, that are being used as material for the next composition. The higher awareness (no.1 in the list) is mainly elaborated through the focus on the two phases in his CP (the preparation and writing phase). Practical and 'organizational' matters attract less of Leroux' attention. Newman's self-study (2008) points towards a type of reflection which is not present in my list: an evaluation of the end product of the CP, the composition itself. This is in line with the delineation that I set myself in this dissertation. I pay (almost) no attention to rehearsals and performances. In general, Newman's observations (see review on p. 238) do not succeed in completely transcending the technical problems, related to (the data collection method of) his research. Problems in his composition practice, “issues of frustration” and “counterproductive” methods hold a prominent place in his observations.

Compared to these two literature examples, I think that the research in this dissertation has enabled me to reflect in a broad and profound way on my composition practice. This may be related to three methodological choices for my reflective study. These are:

- an overview of my compositional processes
- the notion of intersubjectivity
- a more systematic analysis in the self-study

The overview, created in the self-study, has given me a wide range of processes to reflect on. I was not only able to think about issues arising from the wide array of data sources on my composition practice and the analysis in the self-study, but I could also estimate their overall importance. I did

not only consider the nature of an emerging issue, but also its place within my practice as a whole. There is a tension within the notion '*reflective* study of a *situated* practice'. Not all emerging issues on which I reflected were relevant, even when relevance is restricted to the purely individual domain. Often problems are so local and dependent on the specific context, that a reflection on them adds no new insights for future action. By having an overview and noticing how (related) issues reappear in other CPs, issues become less local and more general. But on the other hand local information can be valuable. The workshop problem (see reflection on p. 241) was recognized as relevant and has led to future solutions, after being examined just once in a local context. Consequently, there is a tension between reflection and the situated object of reflection, but I do not have a definitive solution to resolve this.

Intersubjectivity (see 'DESIGN AND METHOD' p. 31) lead to the incorporation of a group study in my dissertation. As I limited myself to the most 'private' part of the compositional practice – the creative process – and excluded more social activities such as rehearsals or performances, the interactions with other composers and the insights that I gained from the group study, formed a background for my reflections. While contemplating specific processes, I often searched for similarities or differences between the eight CPs studied. I hope that in my reflections I have succeeded in providing (specialized) information on modes of reflection that can catch the attention of other composers and researchers.

The combination of the overview and the intersubjective method has also helped me to evaluate whether a higher level of consciousness was necessary in all cases. For example, Vermote's CP in the group study indicates the importance of intuition and deliberate 'exercises' to prepare for a less conscious working mode. The view of the wide array of actions, processes and thoughts in my CPs, led to the insight that it is impossible to turn all of them into conscious processes. Thus the appreciation of an intuitive working mode evolved gradually out of my research. The larger the overview, the more important it becomes to decide which processes and problems become the object of reflection. I think the insight into this selection procedure (in reflection) only appeared in the end of my research and consequently this aspect was mainly explored intuitively in an earlier phase.

The third methodological choice was the combination of my reflection with a more systematic analysis in the self-study. In a way I forced myself to think systematically about my practice, limiting myself to a number of questions and methods, and considering consistent analysis methods and answers. In advance, I expected and hoped this would mainly deliver results for general research on the CP but not for my knowledge about my own artistic practice. But in the end several reflections were omitted or seriously adapted because of the results of the self-study. Consequently, if real-time sources are available, some reflections can better be replaced or based upon an evidence-based analysis.

Initially, however, I intended to make a strict separation between the systematic self-study and the reflection part in my dissertation, as expressed in chapter 2.2.2 of the DESIGN AND METHOD part. But the recognition of theories as part of compositional practice blurred this distinction. The last part of the self-study, on the analysis of the theories, gradually fades into the reflection chapter of my dissertation. Perhaps because theories are a more autonomous compositional process and contain an interpretation of composition practice, the line between a systematic analysis and a reflection becomes very thin.

The theme of hyperpolyphony was woven through the research in this dissertation to ensure a close link between research and artistic practice. In the introduction to this dissertation I described it as a non-intentional experiment to see if and how the research would influence my composition practice. By looking at the results of similar research in which composers reflect upon their practice after being studied, I conclude that the reported influence was present in a wide range of aspects of my compositional practice. It must be added though that – obviously – many other elements of my artistic practice remain unchanged, for example my current inspirational themes and motivations do not seem very different from older ones.

 PART VI: CONCLUSION

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1 Conclusions

1.1 Dynamic configurations of composition activities

An essential part of this dissertation on the practice of music composition focused on decisions, actions and intentions during the act of composition. In the group study the main activities of eight composers producing a finished composition were examined, whereas the self-study made a broad picture of all the composition processes in my composition practice, including more independent ones such as creating loose ideas or theorising. The results disclose a configuration of four activities – exploring, planning, writing, rewriting – in the *finished* processes, embedded in a wider, *global* configuration of composition processes. In my practice this global configuration consists of finished and unfinished processes on the one hand, and the creation of loose ideas and theories (or knowledge collections) on the other. The 'inter-opus phenomena', detected in the CPs of Van Landeghem and Neyrinck in the group study, indicate that the separation between these the finished and global configurations can be fluid. The 'progressive revision' and 'cycle composition' phenomena transcend one (finished) composition and its CP. The reflective theorising influenced future actions and retrospective explanations about drafts and compositions (in the case of Van Landeghem). Neyrinck's process was an example of the reapplication of existing procedures, that were most likely generated in previous parts of the cycle.

In general, the configurations in the finished processes consist of the selective presence and order of the four main activities with large differences of these configurations in the studied CPs. Specific configurations can be tied to 'local' preferences, i.e. aesthetic or musical choices specific for a composition; in the CP of Vermote for example the task and commission played a crucial role; or these configurations can be more personal and artistic; the preference for 'abstract' and 'simple' aesthetics in the case of Smetryns provides an example of this. The finished configurations also disclose how the same compositional activity can have a different function and meaning. The rewriting activity for example appears in three forms: first as structural rewriting where the structure of a composition is recursively adapted, second as revising where local characteristics are adapted and third, as 'scaffolded rewriting' where the complexity of a full score is gradually built up, layer upon layer, starting from a 'simple' writing process. Two configurations, which were unique in the group study, appear to be more general as similar configurations were found in other research (Newman 2008; Collins 2005, 2007).

In the global configuration of my own composition practice the creation of loose ideas and theories was characterised by a function and development that evolved to a certain degree autonomously of the finished processes. The development of the theories and the creation of specific groups of loose ideas – the 'really loose' and the 'persistent' ideas – are the clearest examples of this autonomous status. The loose ideas are not a scattered collection of singular ideas but appear to be several (often overlapping) groups of related ideas and processes, as noted through the analysis of the (real-time) direct links and the (retrospective, content-related) coded themes.

The processes to which the loose ideas refer are in general not older than two years and turn out to be the most innovative process, whereby most new themes in my compositional practice emerge out of loose ideas. Compared to the other compositional processes, the loose ideas also give the most complete and diverse image of the themes in my global compositional practice.

In the analysis the function of the loose ideas was described as a *selection procedure* of compositional ideas. The creation of loose ideas forms an exploratory phase through which their potential, implications and relationship to my personal preferences is discovered and elaborated outside the CP of a finished composition. The contribution of the loose ideas to problem finding and solving in the finished processes is small and this contrasts with the larger role of the theoretical processes. In general, the two studied theories provide a framework for problem-solving, although the contrast theory has a more creative and productive role compared to the supportive one of the synchronization theory. The two theories can be coined as individual, long term knowledge for music composition that initially is constructed deliberately, but is partly taken over by experience as time evolves. Both theories also stop developing at a certain moment.

In this dissertation I examined a number of specific problems and topics closely. I dealt with the development of the musical idea to connect dynamics and spatialisation (see p. 213) and the problem to anticipate and solve synchronisation problems in my self-study (see p. 219). In the group study the problem of form (in the CP of Cammeren, see p. 120) and the role of a crisis moment (in the CP of Nuyts, see p. 129) were analysed. All these cases were examined as dynamic and situated phenomena, developing within a sequence or chronology of activities and processes. Previous and simultaneous activities shape other processes and together these chain of events form the global or finished configurations.

1.2 The real world of contemporary classical music composition

Besides the study of the CP itself, the influence that research exerts on the CP needs to be taken into account. In my review (on p. 29) I demonstrated how in studies of the CPMC, the notion of the naturalistic setting is not fully elaborated yet and many different interpretations exist. In the group study I studied the influence that the task and commission had on the CP and concluded that all eight composers were either influenced by the task, the commission or both. In the 'REFLECTION' part of this dissertation, I looked at the influence of all the research activities in this dissertation on my own composition practice and noticed how the influence was present in several domains of my practice.

A method to study this influence without relying on a single data source was proposed in the group study (presented in chapter 7.1). This method takes the composer's discourse on different aspects of his compositional work into account, next to the sketches and inspirational ideas from the CP. This method gives a well-balanced result that shows large individual differences between the composers and discloses the differences between influences exerted by the task and the explicit restrictions (instrumentation, duration, performers) of the commission. The influence of the task was most noticeable in the beginning of the CP, when the composers developed initial ideas. The explicit restrictions resulted in three strategies adopted by the composers: some recognized an artistic challenge or affordance in these restrictions, some accepted them neutrally and for others

they formed a problem, although a minor one that did not constitute an obstacle to their CP.

In my reflections, I discovered effects of the research in this dissertation in several domains of my practice: a higher awareness of activities, problems, practical issues and organizational matters appeared, and in a following phase this higher awareness changed the broad orientation of my compositional practice, in which the potential of past ideas and processes started to play a bigger role. The research also lead to new creative and inspirational ideas that were used in compositions and finally, the experience and verbalisation of my own and others' CP changed. More attention for the retrospective experience and the theoretical activities were the two main expressions of this change of experience.

The investigation of the influence of research on the CP, results in a vision of the CP in the 'real world' as a *flexible* process where composers partly adapt themselves to the requirements of the commission. My research corrects the description of the CP as autonomous and the commissioner's role as neutral. In the self-study I also drew attention to the external influence on the most autonomous activity in my composition practice, the development of theories. Consequently, the two parts of compositional practice that are most sensitive to external influences are the commission and the theoretical processes.

Finally, the assumption of the CP – in its naturalistic setting – as a flexible process points towards a need to discuss the naturalistic setting in studies of, on or in composition practice. In a vision of composition as a neutral, autonomous activity, the question “Is the usual way of composing influenced by the research?” is important; but in a flexible vision of composition, the question becomes: How much do we want to influence the practice by the research? An even more pertinent question – especially in artistic research – arises: can the research influence diminish the artistic content of the CP? The case of Brackx in the group study shows how the research framework can drive the composer to abandon his personal, artistic preferences.

1.3 Methods

This dissertation also aimed at solving methodological problems in the study of the CP and reflective studies. In my review of the analysis methods in empirical research on the CPMC (see p. 41) I noticed how a synthesis phase plays an important – but partly hidden – role in many studies of the CP. This synthesis is brought to the forefront in the group study in which a high number of composers is studied, compared to other empirical studies. I designed two visualizations (in the chapter 'Themes' of the group study), of which one is an elaboration of a model proposed by Collins (2005; 2007). These are both multimodal and dynamic forms of *synthesis*, representing a time line or chronology. They enable to situate separate events, ideas and problems within the evolving CP and thus present an overview of the CP. Both are based on the insight that elements like the timing or the development of the music are to a high degree factual and can be validated by the sources. Although of course, the intentions and interactions of the composer with the musical material are less factual, these visual syntheses formed a valuable tool to compare the eight CPs in the group study. The structural mapping also proved important to apply the analysis framework, as this is based on the distinction between in and outside sequence activities. This analysis framework, was designed to apply similar criteria in the analysis of the main activities in the CP. It consists of

four activities – exploring, planning, writing and rewriting – , derived from the distinction between in and outside sequence activities. Additionally, the level of musical abstraction of the ideas of a composer is also incorporated.

Another methodological problem for which a first solution was designed, is the development of a method to study and analyse the more independent processes in composition practice. In the self-study it was initially not clear where and how the interaction between these processes and the finished processes would take place. The loose ideas were crucial in finding methods to study and understand these interactions. First, the direct links or references in the loose ideas provided an important analysis tool to study them in real-time. Second, the loose ideas provided a rich set of themes with which the other compositional processes could be coded and this overview allowed me to detect relations between the processes. Third, the loose ideas also appeared as a form of *contextual information*, full of references, which can only be understood if enough information on previous compositional processes has been gathered. Methodologically, this means that the 'hypersituated' loose ideas cannot be studied separately. *Historical* data on a *diverse* set of preceding compositional processes is necessary to interpret them.

Finally, this dissertation also aimed at the further development of a method to study the own compositional practice, building upon previous self-studies of Newman (2008) and Church (1996). In the self-study I did not start from a Technological Research Instrument as Newman (2008) did but I developed a *personalized* data collection method, adapted to the individual settings of my composition practice. This was done by reflecting upon the *material* conditions of my composition practice and creatively designing techniques that fit with individual habits and procedures (see p. 163). Additionally, the organizational work inherent to composing – the housekeeping practices –, provided a fertile ground to develop these real-time data collection techniques. The benefit of building data collection techniques in close interaction with individual composition practices, is the relatively small amount of obstruction that I have felt when using these techniques in my composition practice. During the research period, I was able to compose several larger works and a number of shorter works (some unfinished) in a way that felt comfortable to me, with a result, according to my opinion, equal in quality to my past compositions. The personalized data collection method also resulted in a large amount of data (on the unfinished and finished compositions), spread out over time and providing information about different moments of the creative processes. On the one hand, the reflection on my practice was based on an overview, produced by a systematic analysis of these collected data. On the other hand, the inclusion of a study of eight composers enhanced my awareness of the similarities and differences with other composers, active in the same field of contemporary classical music and dealing with similar polyphonic problems. These methodological choices – overview, analysis and intersubjectivity – enabled me to reflect in a broad and profound way on my composition practice.

2 Suggestions for future research

The results of my group study point to the large differences in the configuration of the main compositional activities during a CP. But the compositions and the CPs in the group study were short compared to processes studied in recent empirical studies (McAdams 2004; Collins 2007; Donin 2012). It remains to be seen if these configurations – with a similar range of variety in these configurations – can be found in studies of longer and more complex CPs. Thanks to progress made in the collection of detailed information of the CPMC, in the past fifteen years empirical research has focused on the more *fine grained* processes and phenomena. However, my group study concerns the *main* compositional activities in a CP. Consequently, questions arise such as: what is the relation between a specific configuration and the ongoing fine grained processes? Are there similarities between the elaboration of inspirational ideas in CPs with the same configuration? Are there specific actions and cognitive abilities (such as imagination) that are linked to one global configuration of main activities?

The stability of a configuration of activities is also an intriguing topic which can deliver information on how individual composers and groups of composers evolve. One wonders if a composer whose CP is characterised by the [writing->rewriting] configuration might change this strategy from composition to composition. Long-term studies researching several CPs of the same composer – or composers belonging to the same school or aesthetic approach – can perhaps provide answers to these questions.

The results of my self-study showed how more independent processes, the creation of loose ideas and theories, play a role in the compositional practice. I also designed methods to study and analyse these processes. It is still not clear however if similar, more independent processes occur in the practice of other composers. Perhaps these composers have very different methods to develop, store and use knowledge collections, relevant for their artistic practice. Further research could show how general or specific the overall picture of my CPs is. Without doubt, this future research will include reflection by the composers creating greater awareness of their individual, more independent compositional processes.

In the past, research has restricted the study period to the duration of the CP, or a part of this process. Long-term studies might be one way to gain more information on individual, more 'independent' strategies. But a more creative use of the study period, one which is no longer related to a CP, might free the researcher and the composer from thinking in terms of finished compositions. For example, why not study all compositional activities and ideas during one week, at regular, pre-defined dates (once every six months) or even at random intervals? This could provide valuable information when juxtaposed with analyses of CPs.

In my discussion on the influence of the commission in the group study I concluded that the CP should be considered as flexible and influenced by a commission and its context. In the discussion of the theoretical activities in the self-study, I also pointed at the (institutional and social) influence on the formation and orientation of such theoretical activities. Both observations are good reasons to give a pivotal role to reflection in artistic research, where artistic practice is (meant to be) *changed* by the artist-researcher, for example through experimentation. I consider the

following questions in such research as important: “Is the composer aware that he is exploring something new, or adapting existing, individual compositional processes, or continuing his/her composition practice in the usual way?” In this dissertation the methods to collect (real-time) data and reflect on my compositional processes are extensive. They were designed and used during several years and they consumed a lot of time. The challenge now is to design a reduced set of reflective practices for research in music composition in the future, that are less extensive but at the same time are evidence-based and create an overview of an individual composer's activities. The development of such a set of reflective practices could become part of the developing research discipline of experimental, artistic research in music composition.

In one of the reflections (on p. 247) I described the confusing effect that the collection of real-time data had on my memory and experience of past compositional activities. This makes it difficult to have any anchor point to compare the changed experiences of the CP with previous ones, before real-time data were collected. Therefore in future reflective studies on music composition an initial 'state-of-the-experience' could be made. The eleven themes of Nicholson (see chapter 2.4 in the 'INTRODUCTION' part) provide a good starting point for a list of topics that could be tackled in an open, wide ranging interview. The themes deal with the *experience* of composition and are very broad, thus on the one hand the interview will contain many sections that will prove not relevant for the future of the reflective study, but, on the other hand, the open character should ensure that the unexpected insights and new directions that might occur in the following artistic practice studied, can be linked to past experiences.

Future artistic research could benefit from the more complete picture that I have given of an individual compositional practice. The performative link with practice in artistic research could pay less attention to the traditional end product – the finished composition – and more to the independent practices which are also an indispensable part of (my) composition practice. The loose ideas – and its productive potential – bring up intriguing questions: can the cognitive operations (recombination, variation, association,...) be applied systematically to all these inspirational ideas?, can these ideas form a basis for collaborative compositional practices?, can they be developed into a kind of 'ephemeral, fragmentary' artistic end products, based on the tradition of open scores and text based scores? The theoretical activities were also described as indispensable parts of (my) composition practice and were characterised as incomplete, collections of knowledge (libraries), whose development is finite and whose function is to support the compositional creativity. Moreover, these libraries operate and develop within an aesthetic and musical domain. A vision of composition theory emerges as a collection of flexible, concise and situated knowledge collections on a range of topics related to the artistic practice. This leads to new questions on how to develop theoretical processes within artistic research: how to develop presentation modes of these theories that underline and enhance the creative potential? How can these emergent theoretical processes (and the 'incomplete' collections of theories) become more searchable, as they aim to be used in practice?

* * *

In the introduction to this dissertation I described the “privileged access” of the artist to his/her own CP as a thorny issue. Looking back and writing about what was going on while composing requires an awareness of the dynamic and situated character of composition and its methodological consequences. Verbalizing the act of composition – as in research or education – without reflection is impossible. Even when writing about future composition projects, it is important to bear in mind, that the productive and forward looking parts of the composition practice – such as the creation of loose ideas or the 'activity planning' in the finished processes – are not separate activities, detached from a past; they are situated within configurations of activities on the level of the finished composition and the global level of composition practice. By giving rich, broad and situated pictures of composition practice and proposing methods to study and reflect on this practice, I hope this dissertation has contributed to the further development of research and reflection in music composition.

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APPENDICES

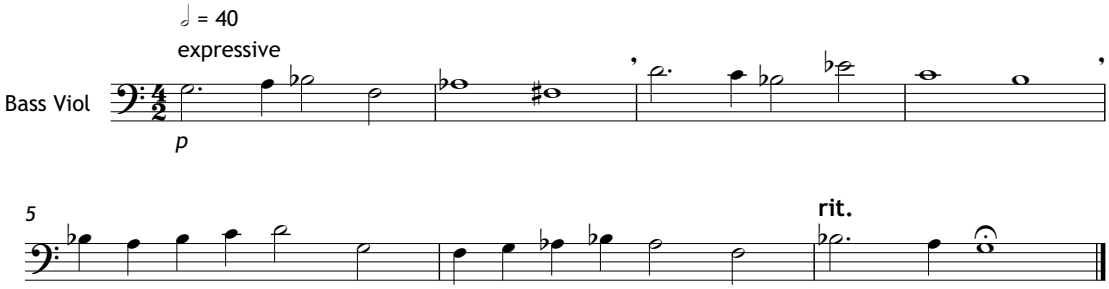
1 Joachim Brackx: score of the short composition in the group study

PolyStudy

voice 1

Joachim Brackx

all voices approximately start together, however, no synchronisation between the voices is allowed, each voice plays its part independently from other voices

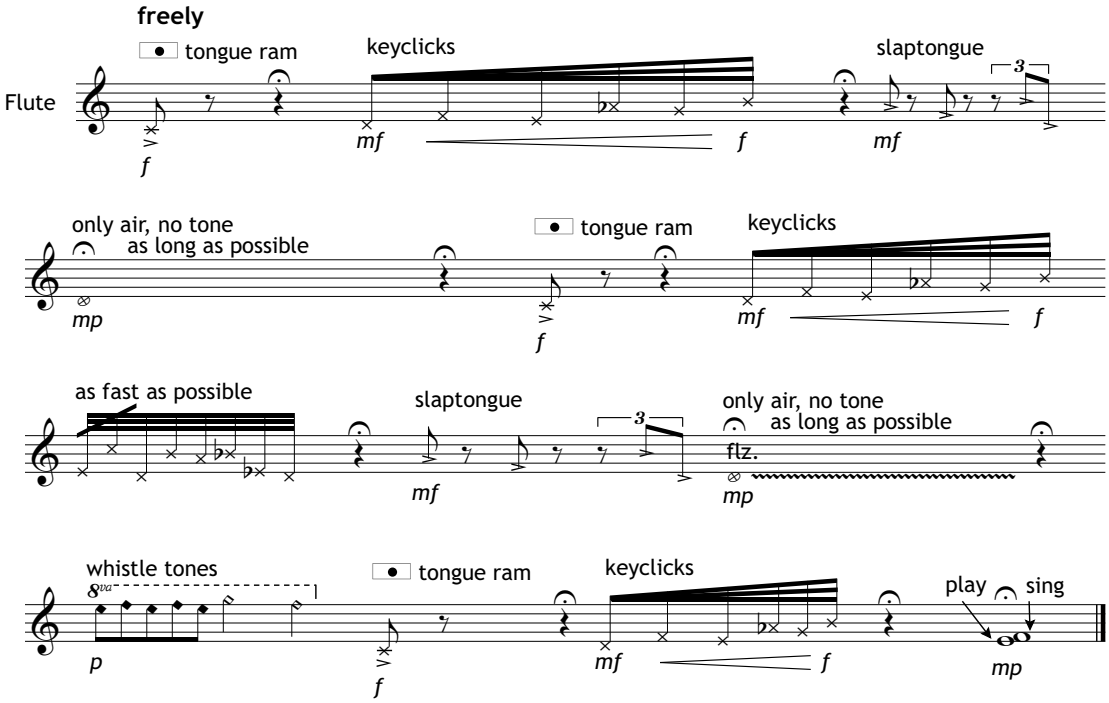


PolyStudy

voice 2

Joachim Brackx

all voices approximately start together, however, no synchronisation between the voices is allowed, each voice plays its part independently from other voices

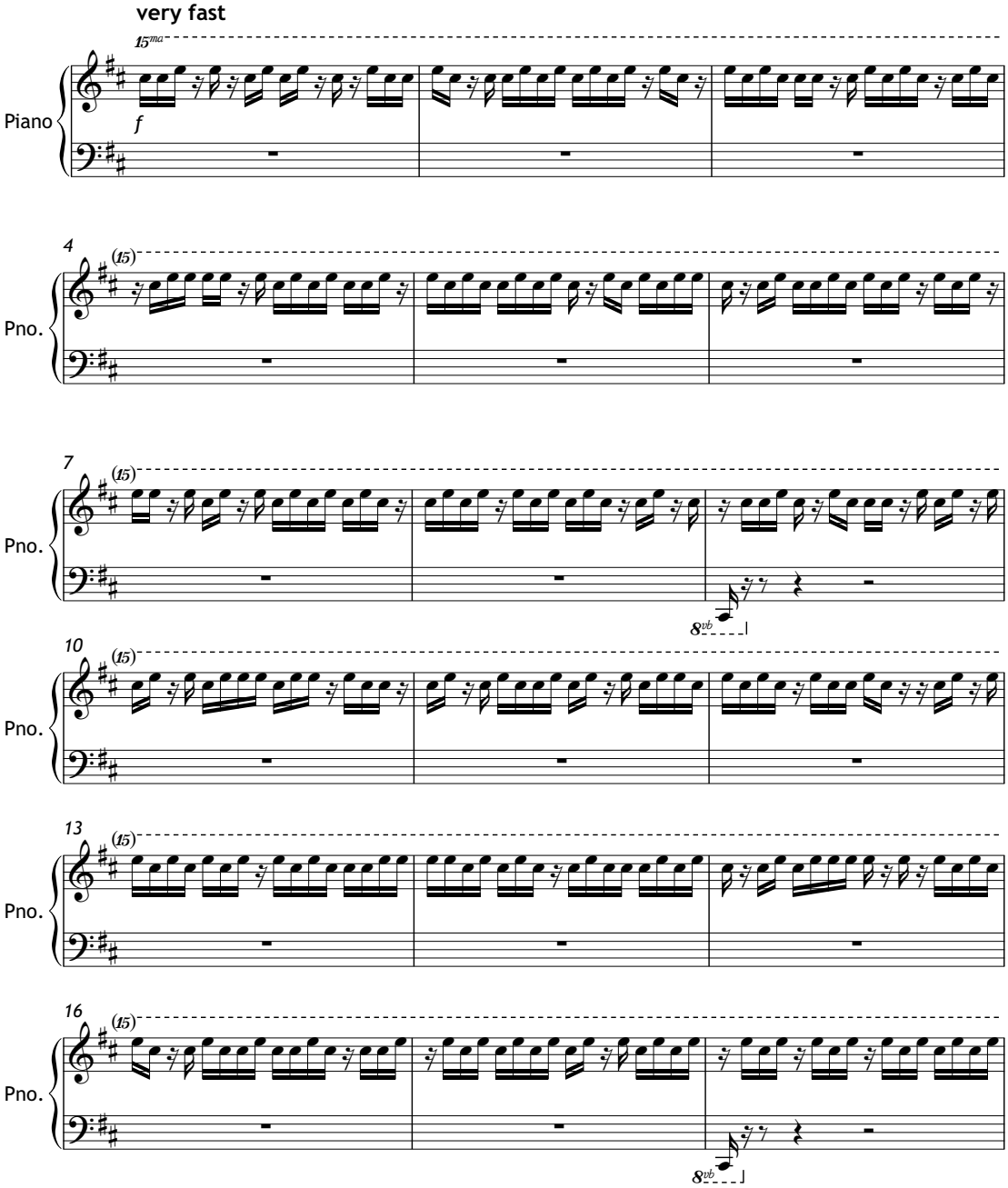


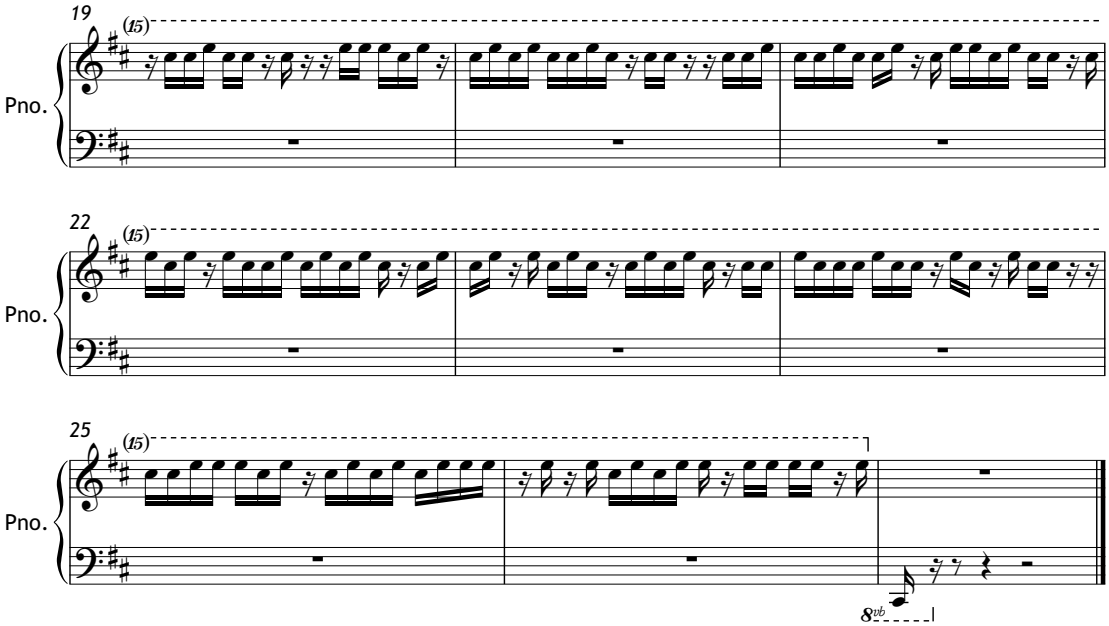
PolyStudy

voice 3

Joachim Brackx

all voices approximately start together, however, no synchronisation between the voices is allowed, each voice plays its part independently from other voices



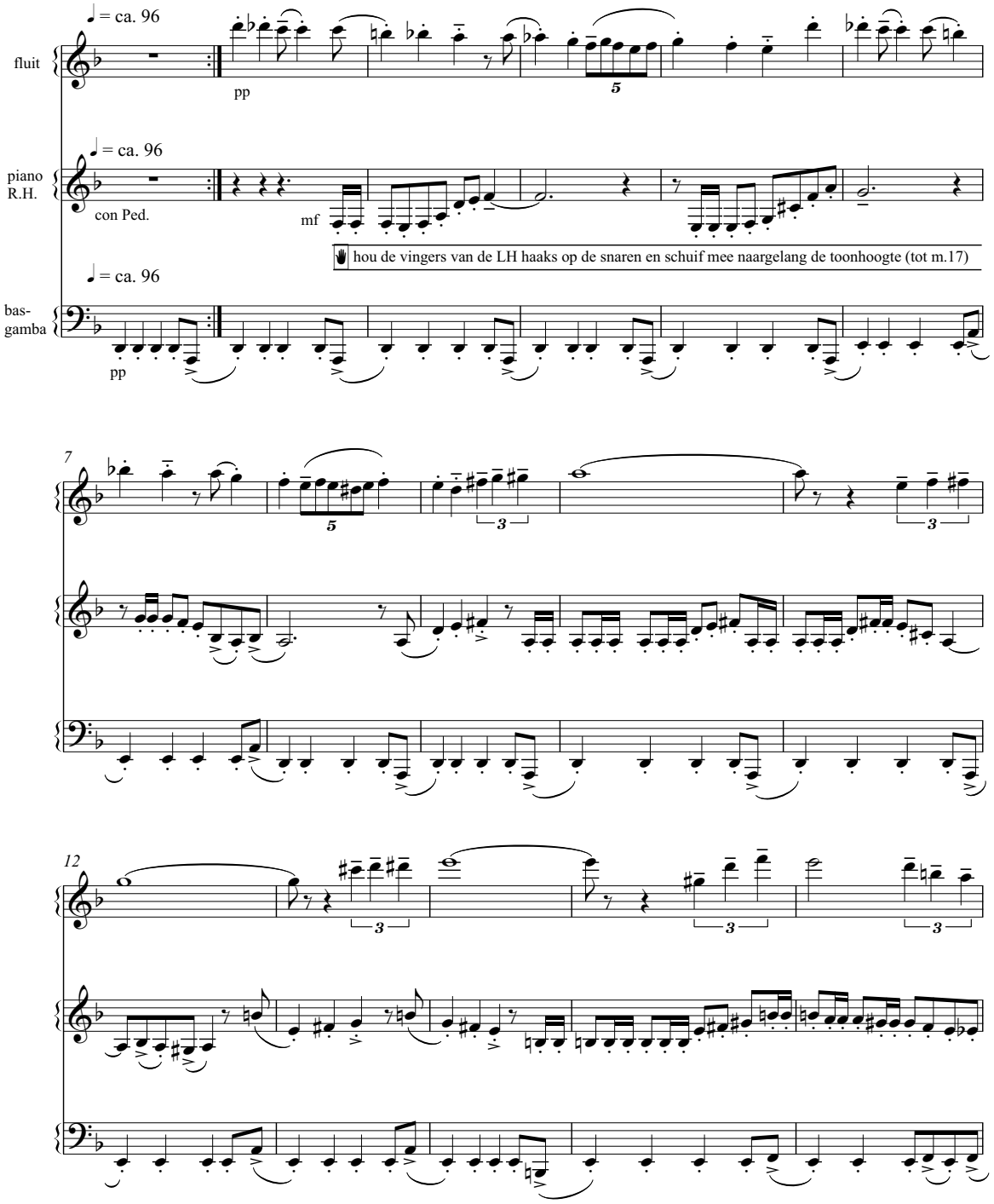

19
(15)
Pno.
22
(15)
Pno.
25
(15)
Pno.
8vb

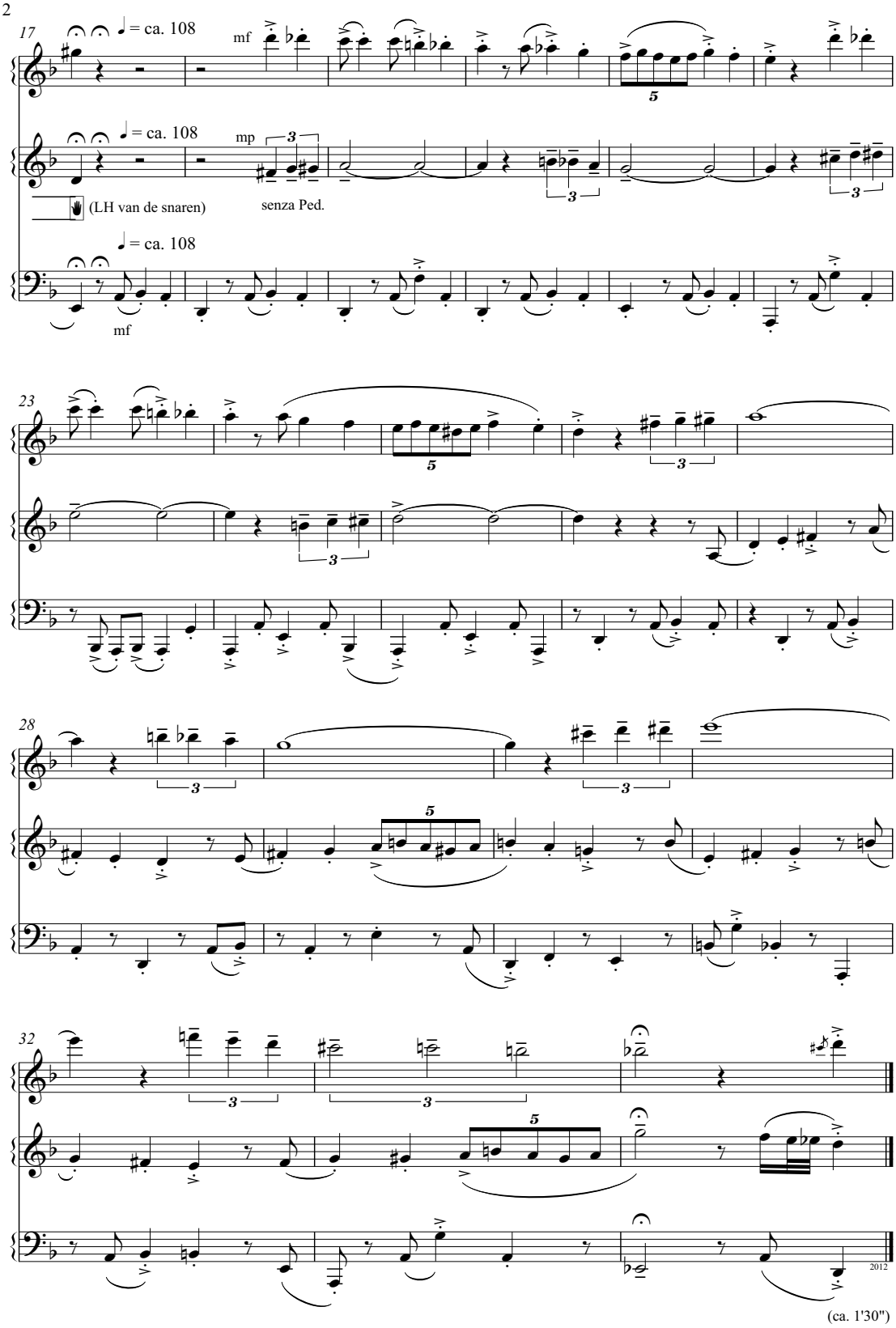
Joachim Brackx: score of the short composition in the group study

2 Marc Cammeren: score of the short composition in the group study

Aria ubriaca

a titolo di esperimento





(ca. 1'30")

Aria Ubriaca

Marc Cammeren: score of the short composition in the group study

3 Guy De Bièvre: score of the short composition in the group study

SCHILLINGER 91

Guy De Bièvre (2012)

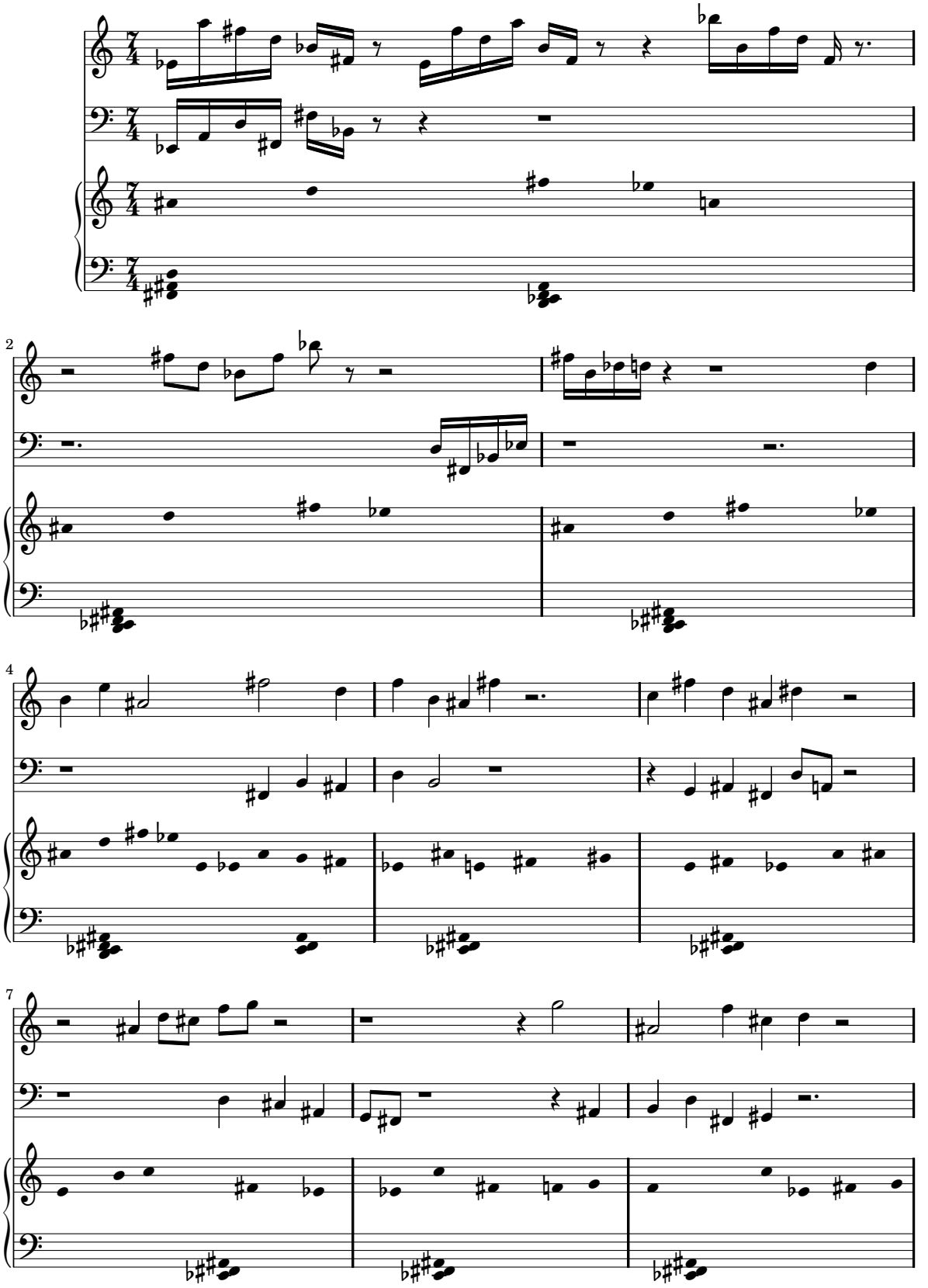
tempo: ideaal MM. 60, maar mag trager indien het problemen stelt (zo snel mogelijk dus)
wijzigingstekens gelden de hele maat voor de lijn waarop ze voorkomen.
dynamiek: vrij
uitvoerders zijn vrij te octaveren (niet noodzakelijk het hele stuk)

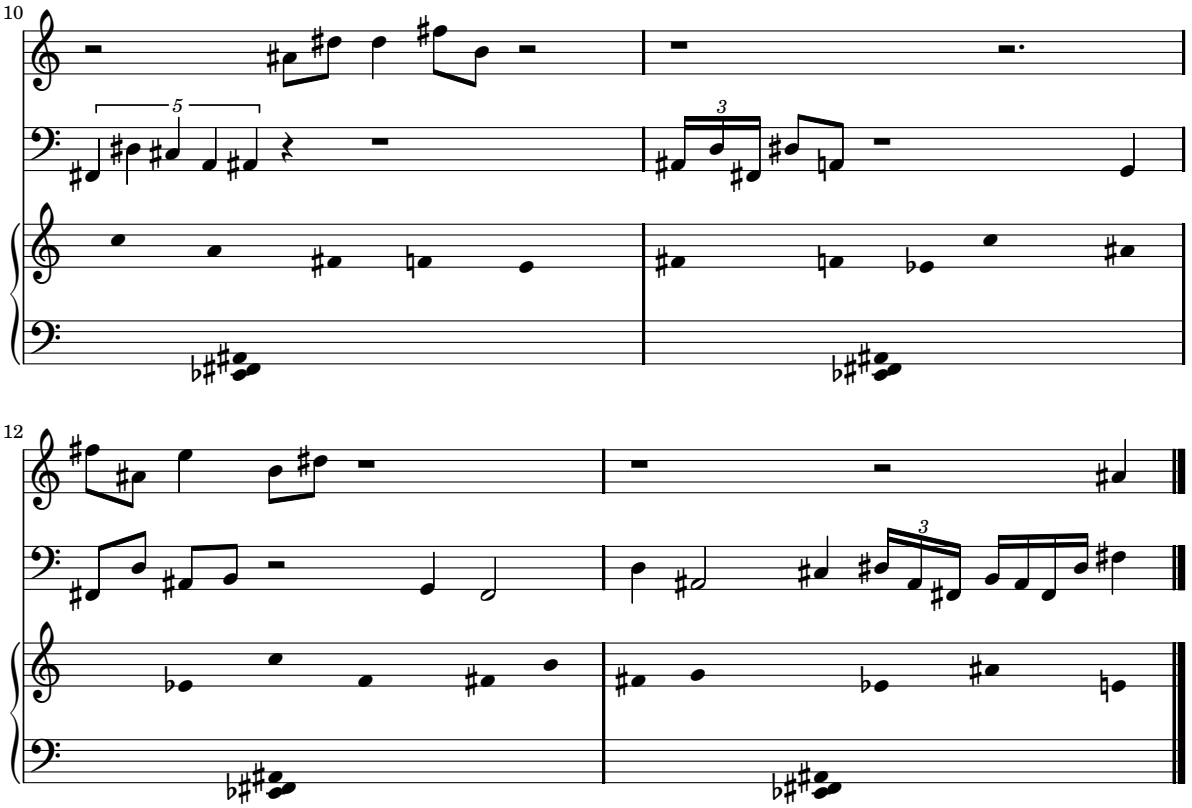
De notatie is niet getransponeerd.

Pianopartij: vrij te interpeteren (de lengte en de exacte plaats van de noten en de akkoorden (zolang de volgorde gerespecteerd wordt)). De pianist hoeft zich ritmisch niet te schikken naar de fluit en de gamba (maar mag).

Schillinger 91

Guy De Bievre




10
5
3
12
3

4 Frank Nuyts: score of the short composition in the group study

dedicated to Joris Blanckaert & Annemieke Elst

Divérance

for trio

Frank Nuyts (2011)
www.hardscore.be
www.franknuyts.be

Divérance

is scored for flute, viola da gamba (tenor viol, GCFADG tuning) and piano.

this piece is commissioned by

Hans Roels

for his doctoral project

'Extreme polyphony'

for University College Ghent

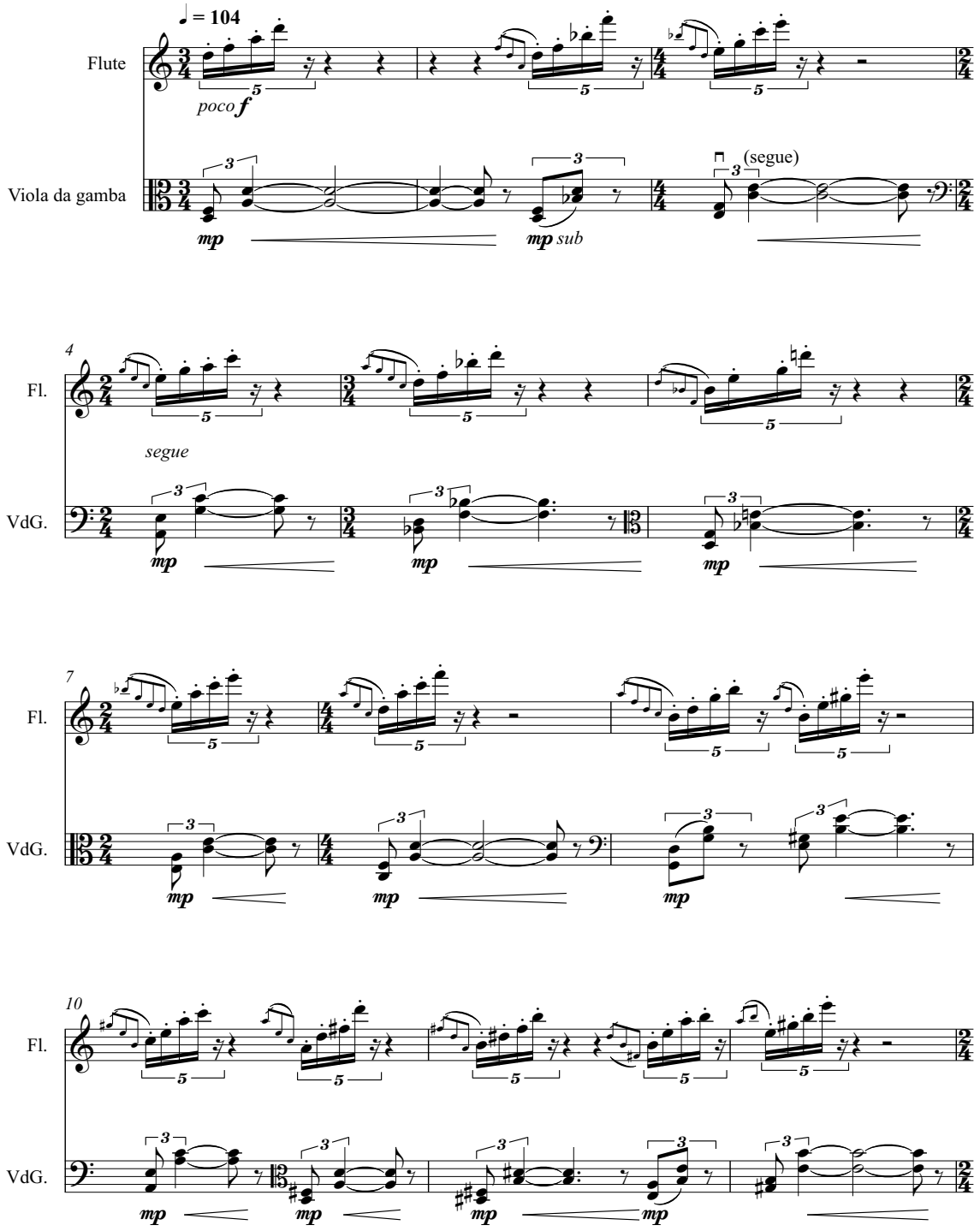
approx. dur.:

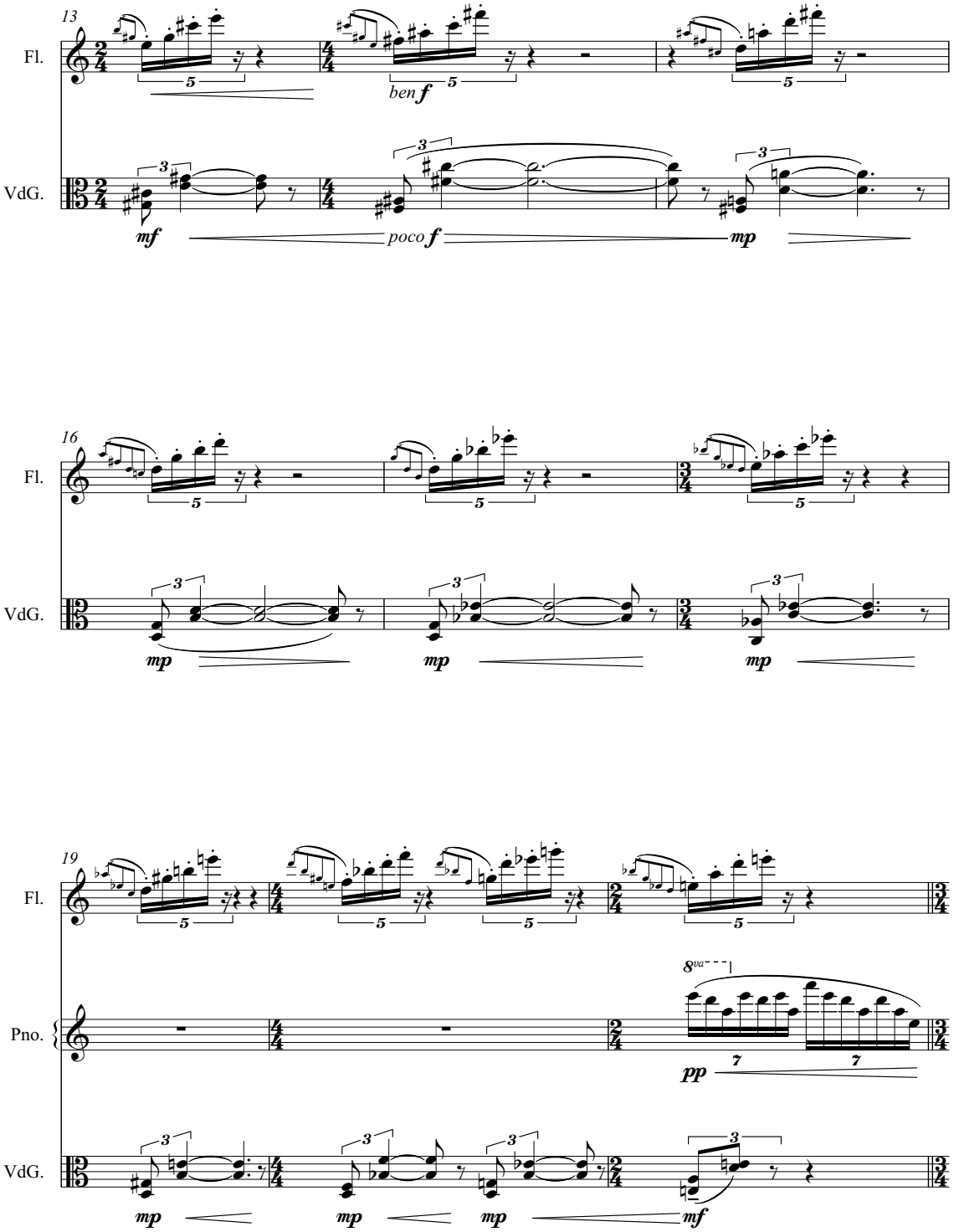
Trio principale: 40"
total duration: ± 2'15"

Divérance

1. Prelude

Frank Nuyts (2011)




13
Fl.
VdG.
ben f
mf
poco f
mp
16
Fl.
VdG.
mp
mp
mp
19
Fl.
Pno.
VdG.
8va
pp
mp
mp
mp
mf

22

Fl.

poco *f* ma leggiero

Pno.

mp *pp*

(tremolo)

mp con Ped

mp sub *pp*

mp sub *pp*

segue

VdG.

mp

mp sub

mp

26

Fl.

Pno.

VdG.

mp

mp

mp

29

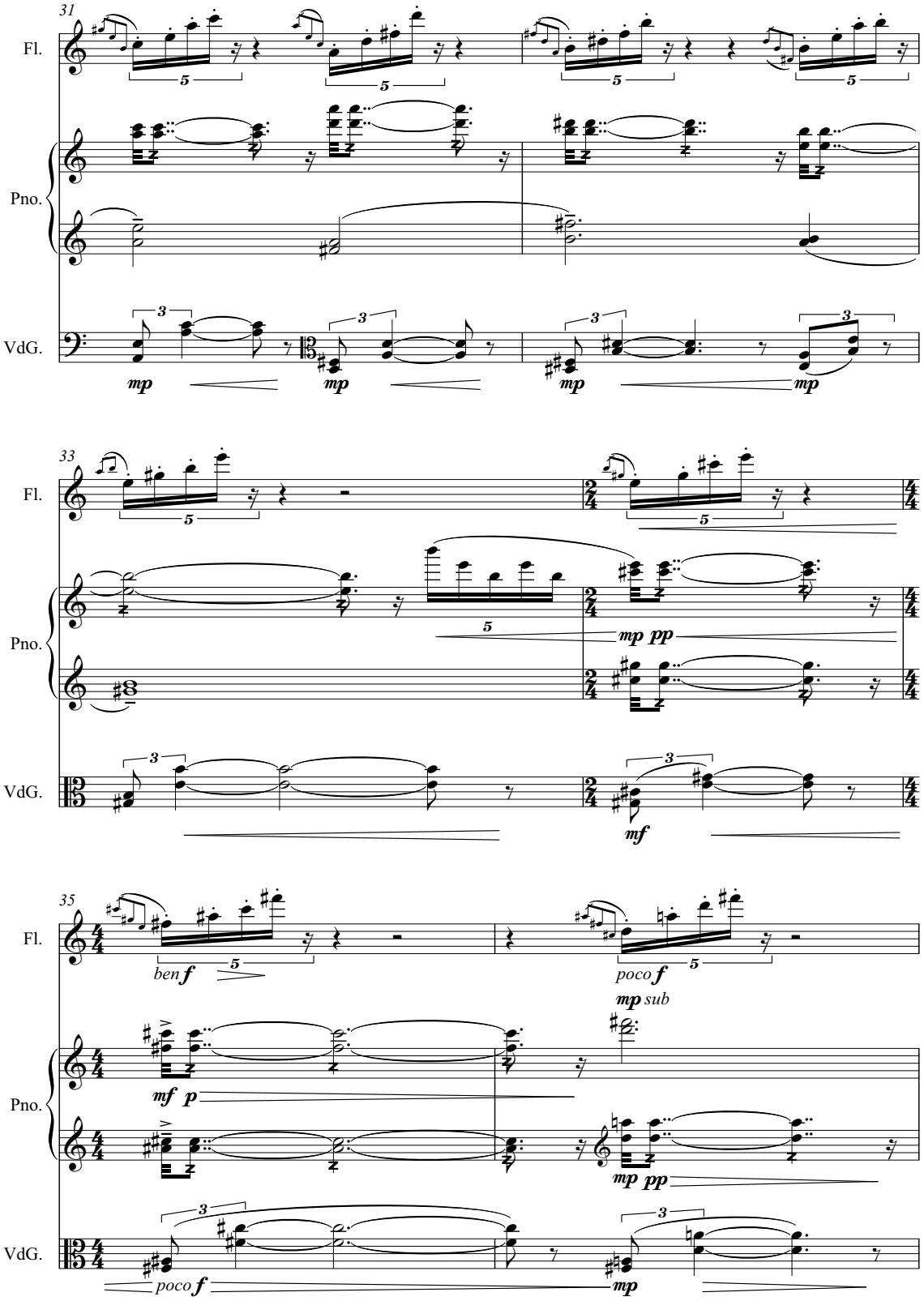
Fl.

Pno.

VdG.

mp

mp


31
Fl.
Pno.
VdG.
mp
33
mp pp
mf
35
ben f
poco f
mp sub
mf p
mp pp
poco f
mp

37

Fl.

Pno.

VdG.

mp *pp*

mp sub

mp sub

pp

mp

mp

39

Fl.

Pno.

VdG.

pp

mp sub

mp sub

pp

mp

mp

41

Fl.

Pno.

VdG.

to continue

pp

mp

mp sub

mp sub

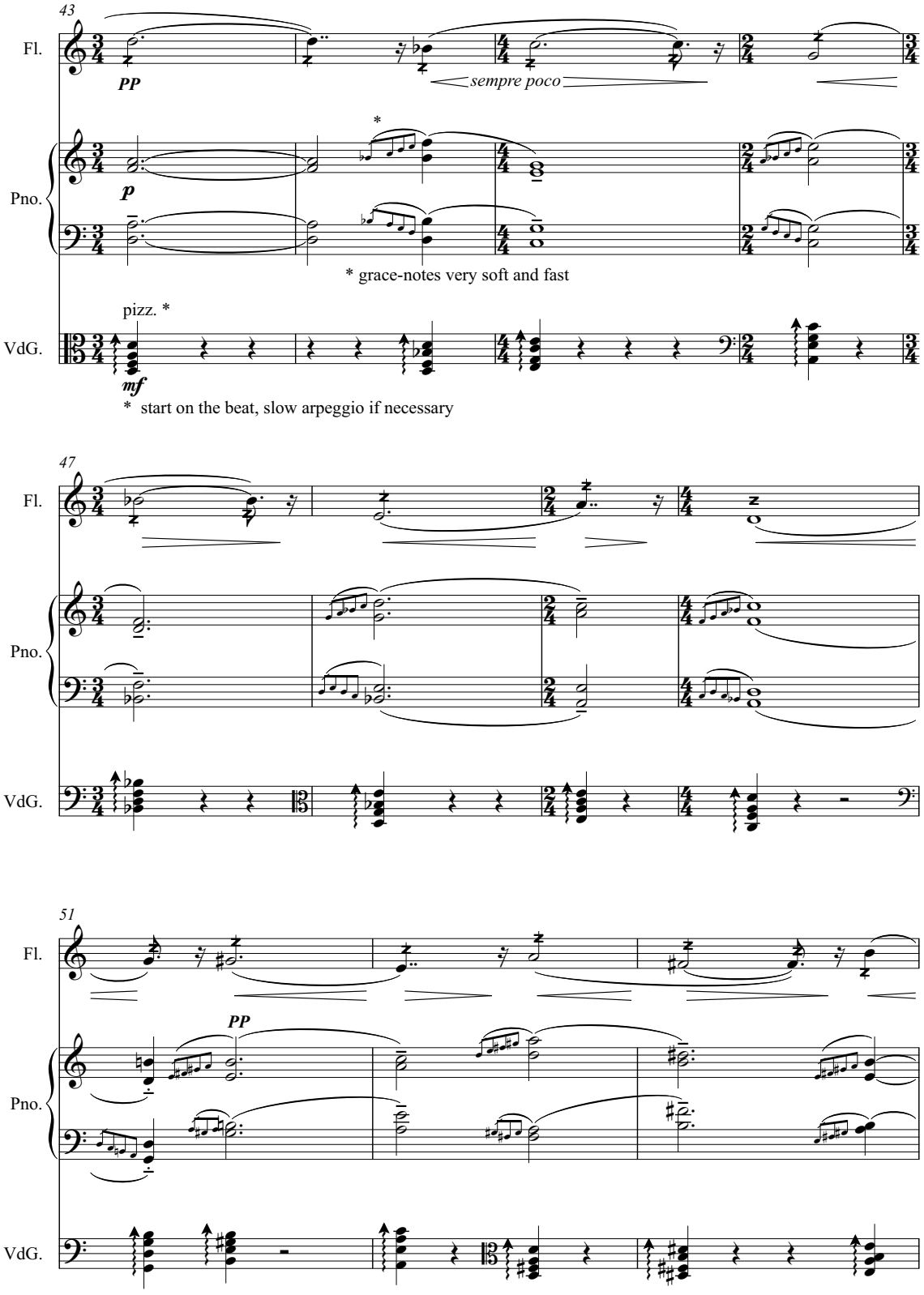
pp

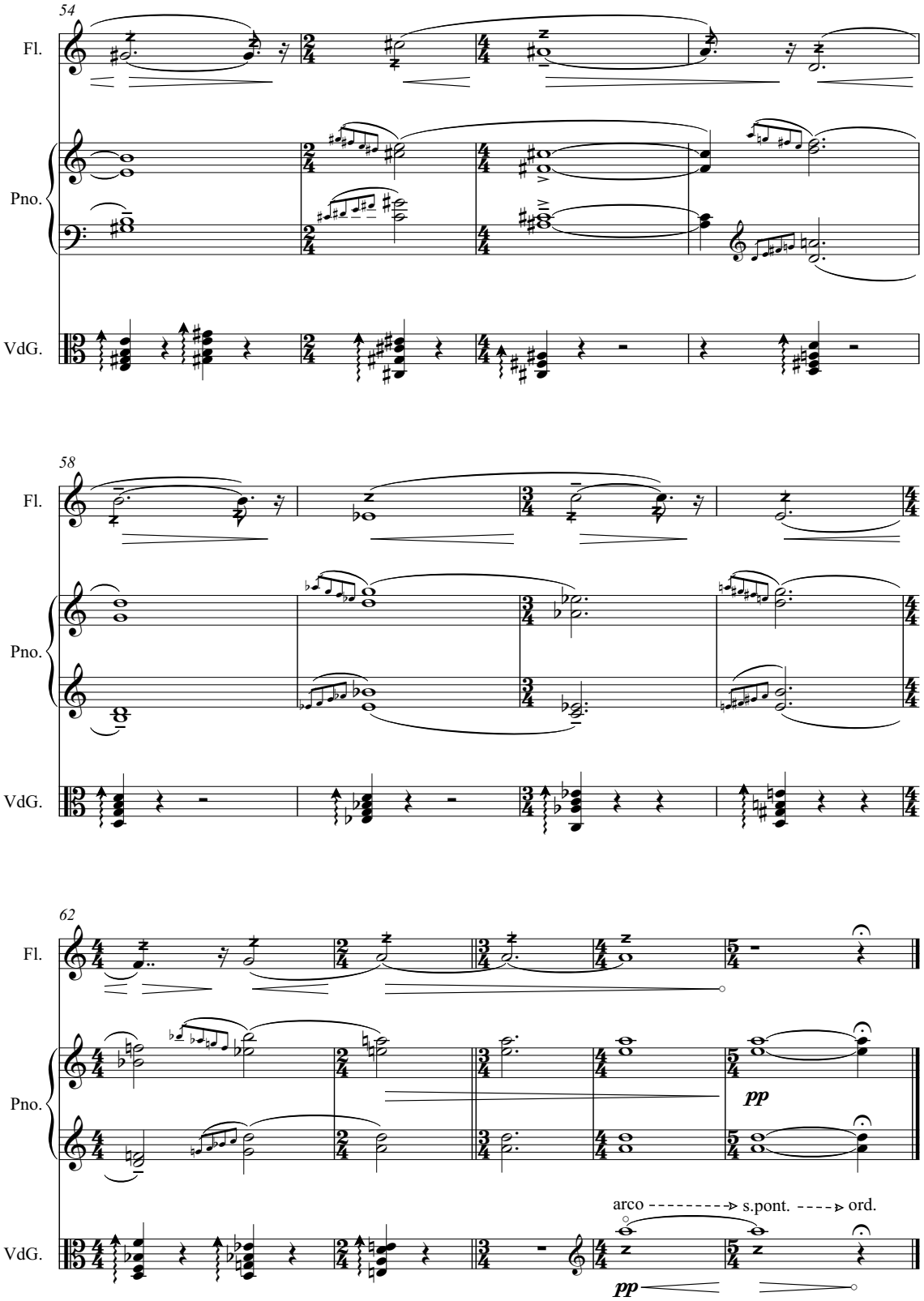
mp

mp

mf

3. Postlude


43
Fl.
PP
sempre poco
Pno.
p
*
* grace-notes very soft and fast
VdG.
pizz. *
mf
* start on the beat, slow arpeggio if necessary
47
Fl.
Pno.
VdG.
51
Fl.
PP
Pno.
VdG.


54
Fl.
Pno.
VdG.
58
Fl.
Pno.
VdG.
62
Fl.
Pno.
pp
VdG.
arco
s.pont.
ord.
pp

5 Frederik Neyrinck: score of the short composition in the group study

Aphorismes IX

for

Flute, Viola da Gamba & Piano

Frederik Neyrinck

Notatie - Notation

Algemeen - General remarks

Dynamieken - Dynamics
Dynamieken zijn steeds absoluut genoteerd. Dat betekent bijvoorbeeld dat ***pp*** bij fluit en piano even luid zijn als klinkend resultaat.
Dynamics are always notated absolutely. For example, it means that ***pp*** by flute is as loud as ***pp*** by piano.

Crescendo uit stilte - Decrescendo tot stilte
Crescendo from silence - Decrescendo to silence

Geleidelijke overgang - Gradual transition

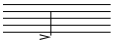
Geleidelijke overgang, de stippellijn geeft aan dat de overgang eventueel al vroeger kan starten
Gradual transition, the dotted line shows that the transition can start eventually earlier

Dwarsfluit - Flute

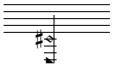
Gewone klank - Normal sound

Combinatie van toonhooge en toegevoegde lucht -Combination of pitch and added breath

Enkel lucht, maar speel de genoteerde "pitch" *(intonated air)* - Only breath, but "play" the notated pitch. *(intonated air)*



Pizzicato (tong) - Tongue Pizzicato



Tongue Ram (klinkt een grote septiem lager)
Tongue Ram (sounds a major 7th lower as the fingering)

Viola da Gamba

Gebruikte afkortingen - Used abbreviations:

MST: molto sul tasto
ST: sul tasto
PST: poco sul tasto
ORD: ordinario
SP: sul ponticello
MSP: molto sul ponticello

(I) (II) : nummer van de te bespelen snaar (I is bovenste snaar, VI is onderste snaar)
- number of the string which has to be played (I is the upper string, VI is the bottom string)

Ricochet: Het aantal herhalingen en de snelheid ervan zijn vrij te bepalen, maar het geheel mag de totale duur van de notengroep niet overschrijden.
Ricochet: The number and speed of unforced bounces are free, but are not to exceed the total duration of the note group.

flautando: De boog beweegt zich sneller en lichter over de snaar. Flautando is hier gelijk aan lichte boogdruk.
Wanneer er dan terug gewone boogdruk gevraagd wordt, staat er steeds "norm. bow press." genoteerd.
flautando: The bow moves faster and lighter. Flautando is used as "less bow pressure".
When thereafter a normal bow pressure is asked, there is always notated "norm. bow press."

col legno battuto: Sla de snaren met het houten gedeelte van de boog aan (niet strijken).
col legno battuto: Strike the strings with the wooden frame of the bow (not bowing).

col legno tratto: strijk de snaren met het houten gedeelte van de boog.
col legno tratto: bow on the strings with the wooden frame of the bow.

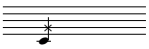
1/2 legno - 1/2 crini: strijk de snaren zowel met het houten gedeelte van de boog als met de haren van de boog.
1/2 legno - 1/2 crini: bow on the strings with the wooden frame of the bow and the normal hair of the bow.

+ Pizzicato met de linkerhand - Left hand pizzicato

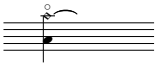
Piano

Indien mogelijk de piano volledig open en de pupiter ver in de piano. Zo kan normaal gezien alles al zittend gespeeld worden.
When possible, the piano totally open and the pupitre far in the piano. So it is possible to play everything while sitting.

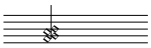
Pedalen: P. (rechterpedaal) - Una Corda of U.C. (linkerpedaal) - Sost. Ped. of S.P. (middenpedaal)
Pedals: P. (right pedal) - Una Corda or U.C. (left pedal) - Sost.Ped. or S.P. (middle pedal)



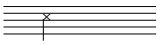
Pizzicato (in de snaren) - maat 6 "death stroke": speel pizzicato en demp onmiddellijk met dezelfde vinger.
Pizzicato (on the strings) - bar 6 "death stroke": play pizzicato and mute immediately with the same finger.



Octaafharmoniek. Een hand raakt lichtjes de snaar op de plaats van de octaafharmoniek.
De andere hand speelt de noot.
Octave harmonic. One hand touches slightly the string at the place of the octave harmonic.
The other hand plays the note. Bring out the octave harmonic.



Noten stil indrukken.
Press the notes silently.



Demp de snaren af. De snaren worden stevig afgedempt (achter de hamers).
Muting the strings. The strings are muted very strongly (after the dampers).

De geblokkeerde toetsen

Kleine "loodblokjes" zijn de makkelijkste manier om de toetsen te blokkeren. Je kan dergelijke blokjes maken uit bladlood.
Eventueel kan je ook de vorm wat aanpassen voor de zwarte toetsen.
Uiteraard is het niet noodzakelijk om deze loodblokjes te gebruiken en kan je een eigen systeem uitwerken om de toetsen te blokkeren.
L.B. (Lead Blocks) geeft aan wanneer er dergelijke geblokkeerde toetsen zijn.

About the fixed notes

The easiest way to fix this notes is using little pieces of lead. You can make this pieces of lead by using sheet lead.
You can eventually also change a bit the form of the pieces for the black keys)
Of course, it is not strictly necessary to use this little pieces of lead and you can choose your personal option for fixing the tones.
L.B. (Lead Blocks) shows when there are such fixed notes.

Aphorisme IX

for flute, viola da gamba and piano

Frederik Neyrinck (2012)

Flute

Viola da Gamba

Piano

♩ = ca. 128

♩ = ca. 40

ORD

MST

SP
ricochet
col legno

pizz.

depress silently in advance

fix silently with lead blocks in advance

Lead Blocks

Sost.Ped.

4

T.R.

T.P.

(intonated air)

(V)

arco (II-I)
col legno batt.

(II-I)
MST
flaut.

ORD
non flaut.

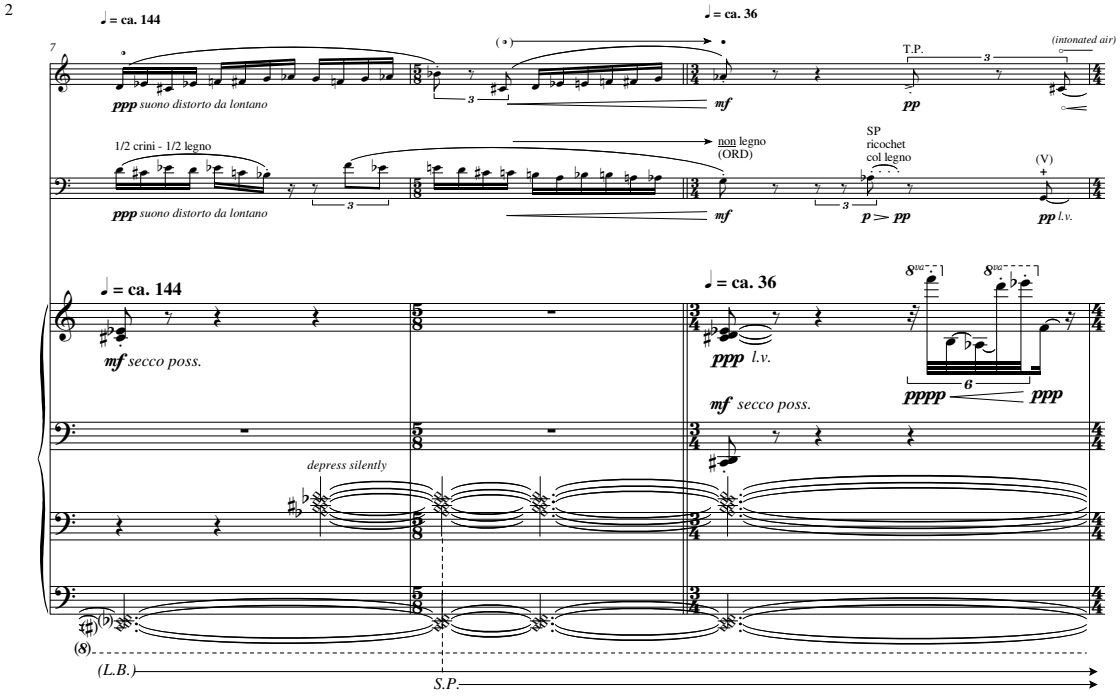
pizz.

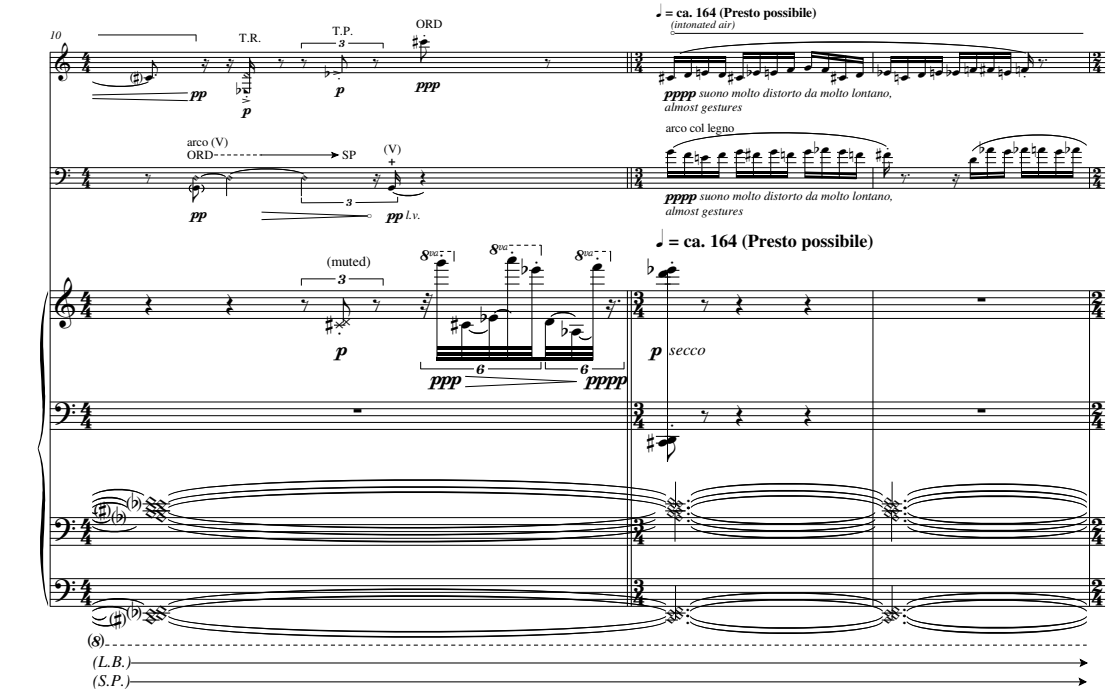
p secco

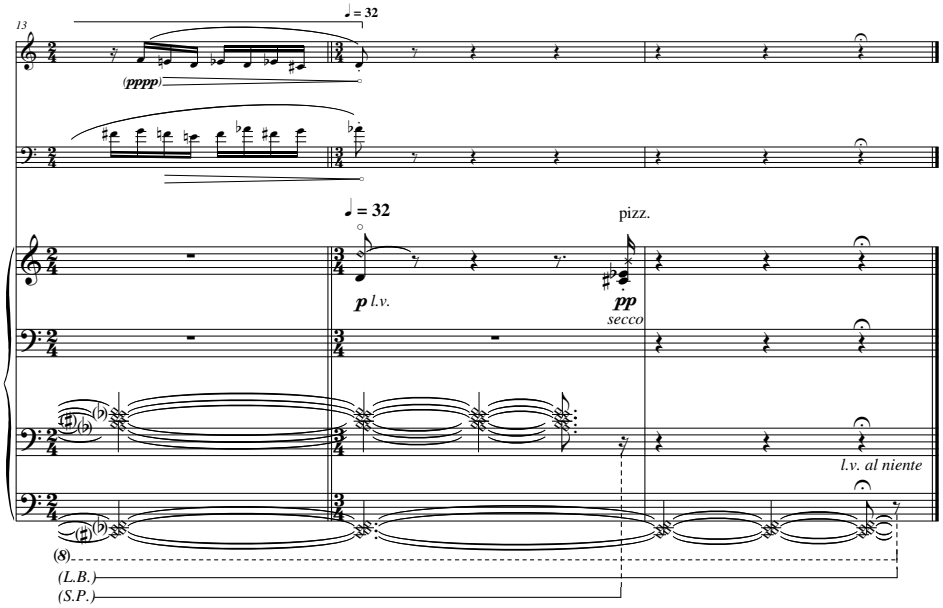
pizz.
"death stroke"

(L.B.)

(S.P.)


♩ = ca. 144
♩ = ca. 36
7
ppp suono distorto da lontano
mf
T.P.
pp
(intonated air)
1/2 crini - 1/2 legno
non legno
(ORD)
SP
ricochet
col legno
p > pp
(V)
pp l.v.
mf secco poss.
ppp l.v.
pppp
ppp
depress silently
(8)
(L.B.)
S.P.


10
T.R.
T.P.
ORD
pp
p
ppp
♩ = ca. 164 (Presto possibile)
(intonated air)
pppp suono molto distorto da molto lontano, almost gestures
arco (V)
ORD
SP
(V)
pp l.v.
arco col legno
pppp suono molto distorto da molto lontano, almost gestures
(muted)
ppp
pppp
p secco
(8)
(L.B.)
(S.P.)


13
♩ = 32
(pppp)
♩ = 32
p l.v.
pizz.
pp
secco
l.v. al niente
(8)
(L.B.)
(S.P.)

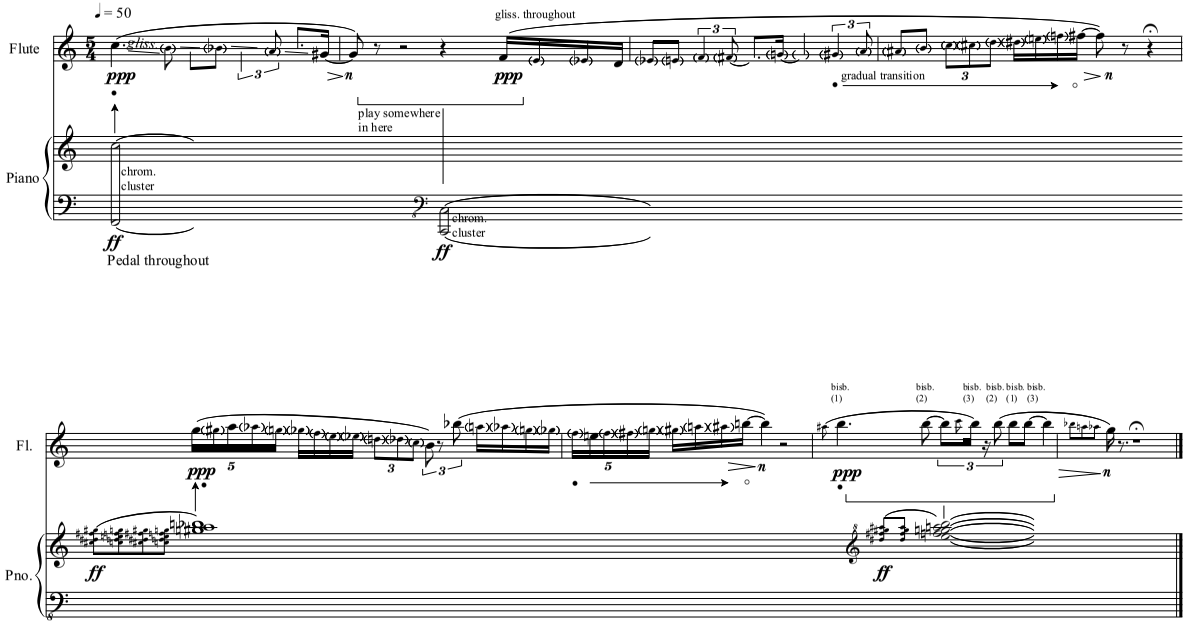
6 Thomas Smetryns: score of the short composition in the group study

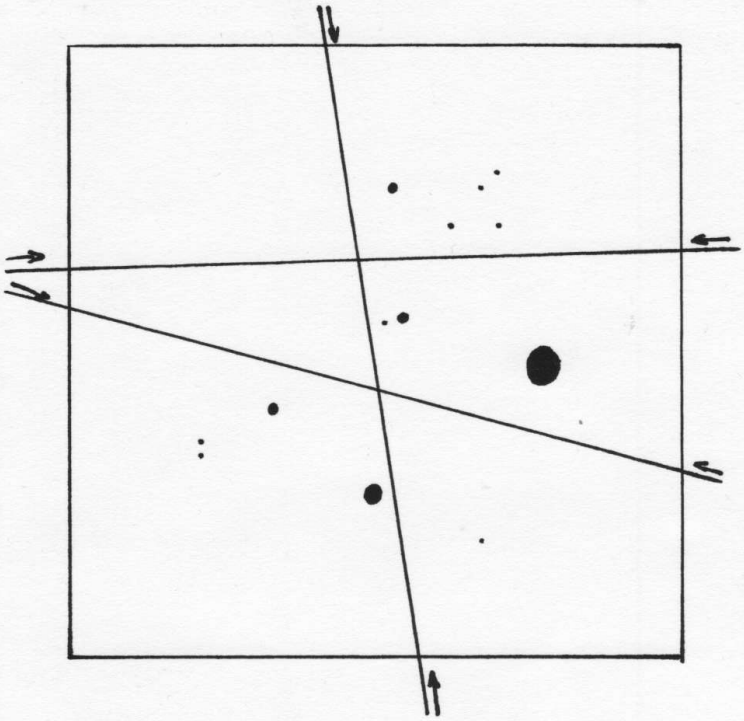
Point and Line to Plane

For flute, piano and viola da gamba

- For viola da gamba part: see graphic score -

Thomas Smetryns





Point and Line to Plane

Viola da gamba party

Volg 1 van de 3 lijnen in een vrijte kieren richting. De lijn geeft de duur van het stuk aan (ca. 1 min.) en is een centrale ~~noot~~ toonhoogte (zelf te bepalen).
De ponten verhouden zich tot de lijn als toonhoogte. De grootte van de ponten bepalen de dynamiek.
Alle ponten dienen gespeeld te worden. De lijn niet...

7 Jan Van Landeghem: score of the short composition in the group study

YANTRA

Jan Van Landeghem

Adagio

Flute

Viola da gamba (7 strings)

flattement sul D

mf

Piano

ppp

Ped.

flattements & vibrato ad libitum

Vdg . bassa

Pno.

pp

p

pp

Ped.

5

Fl.

9:8

p

Vdg . bassa

3

Pno.

mp

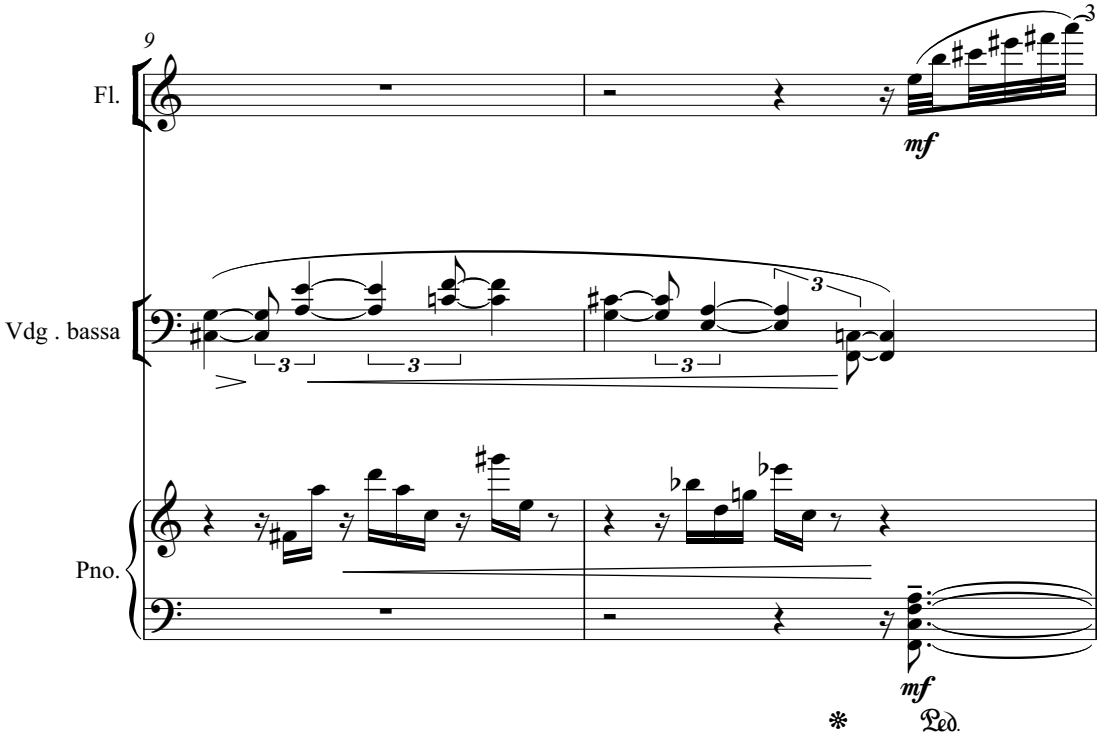
Ped.

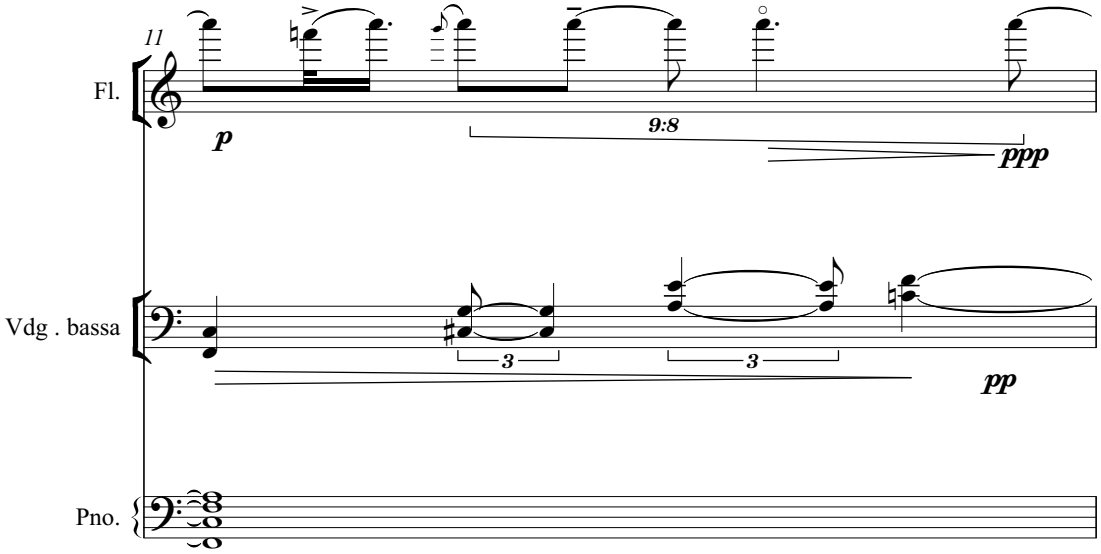
7

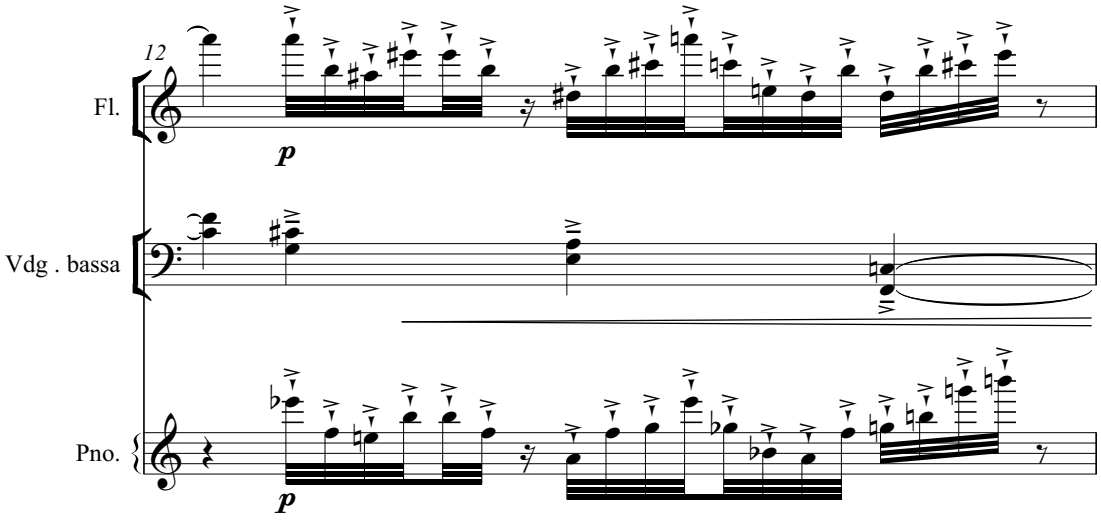
Fl.

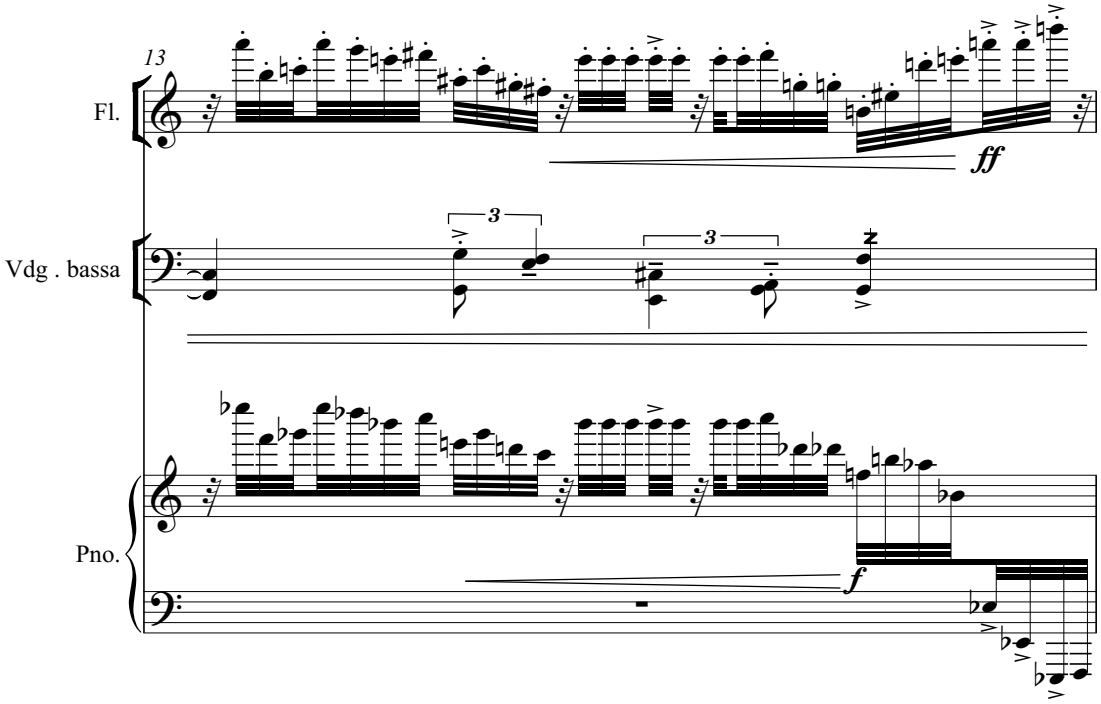
Vdg . bassa

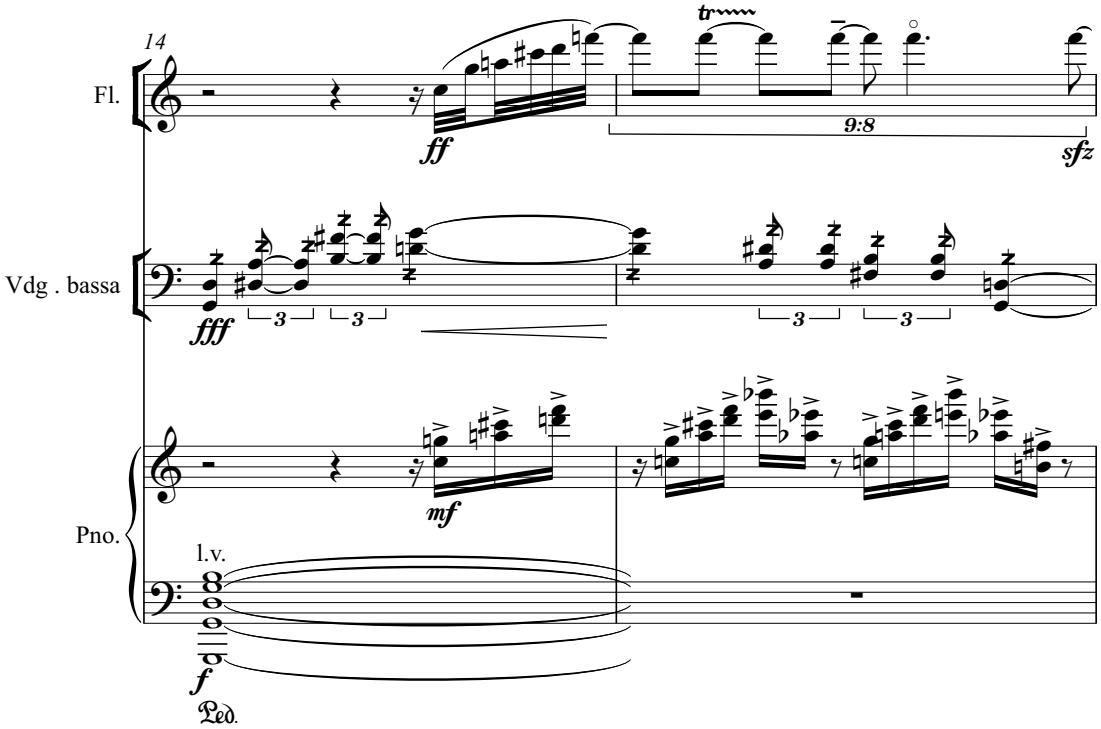
Pno.

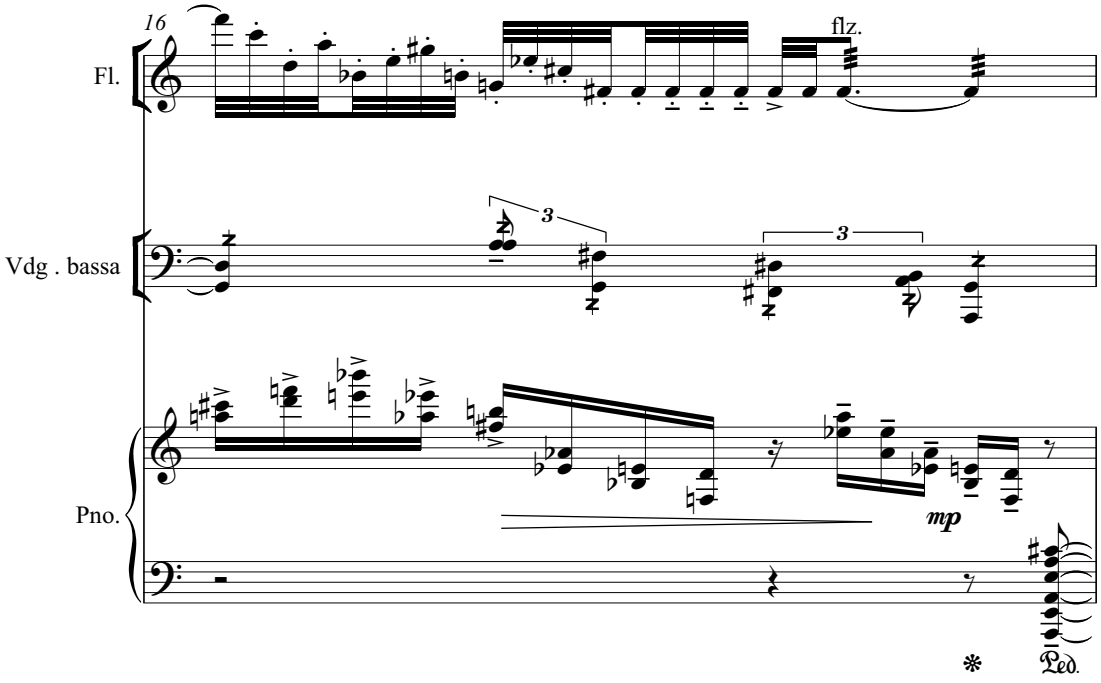

9
Fl.
mf
Vdg . bassa
Pno.
mf
Ped.

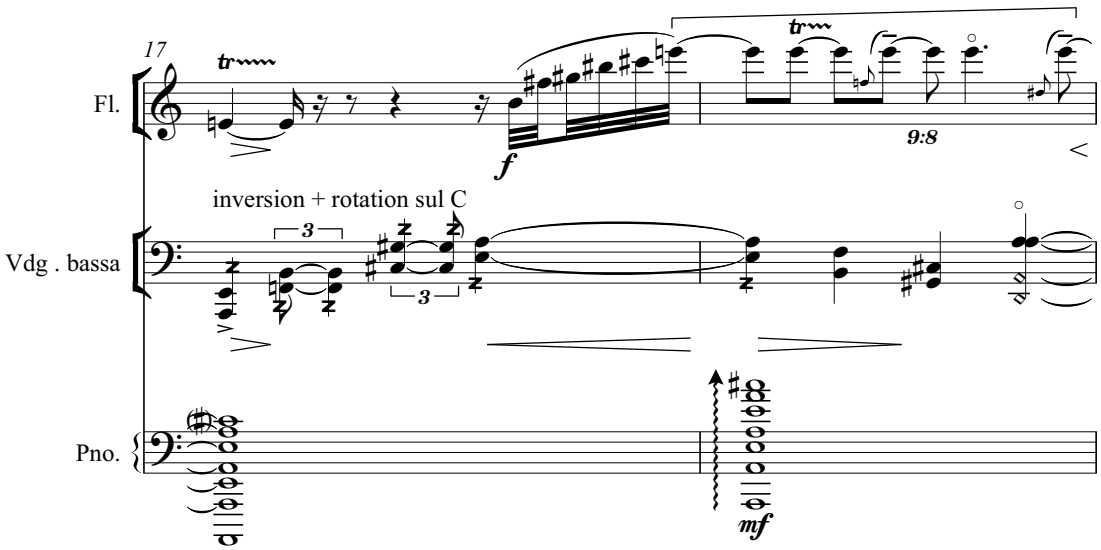

11
Fl.
p
9:8
ppp
Vdg . bassa
pp
Pno.

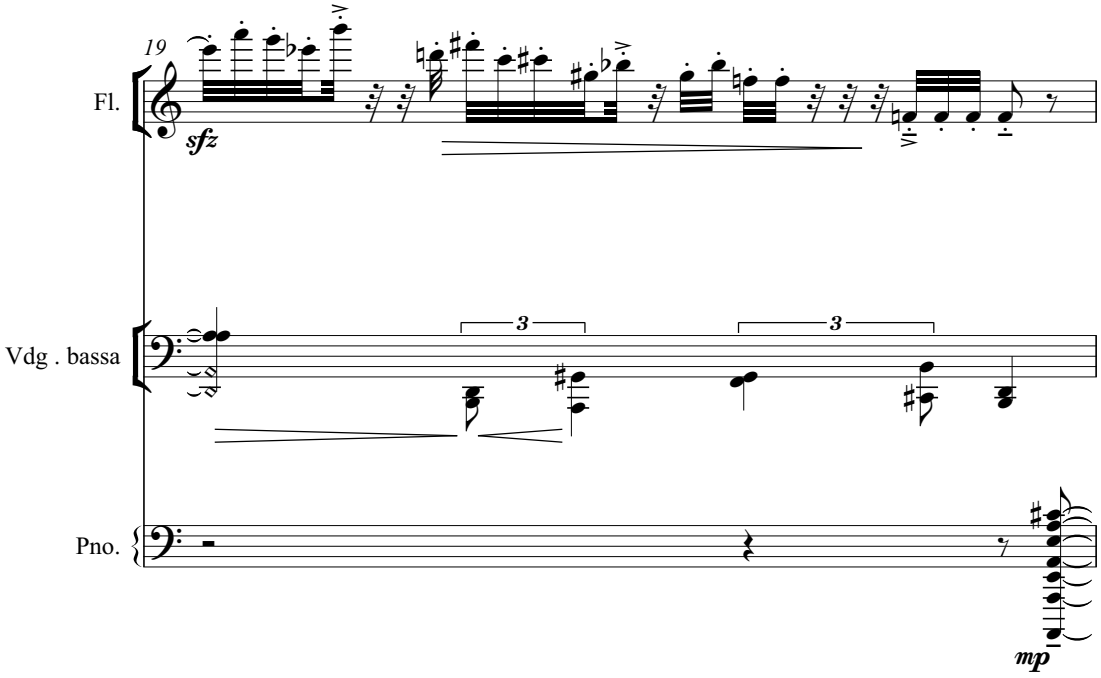

12
Fl.
p
Vdg . bassa
Pno.
p


13
Fl.
ff
Vdg . bassa
3
3
Pno.
f


14
Fl.
ff
tr
9:8
sfz
Vdg . bassa
fff
3
3
3
3
Pno.
mf
l.v.
f
Ped.


16
Fl.
flz.
Vdg . bassa
3
3
Pno.
mp
Ped.


17
Fl.
Vdg . bassa
Pno.
inversion + rotation sul C
f
mf


19
Fl.
Vdg . bassa
Pno.
sfz
mp

20

Fl.

whistle tones

Vdg . bassa

gliss. arm sul VI & VII

Pno.

mp

5:4

l.v.

l.v.

21

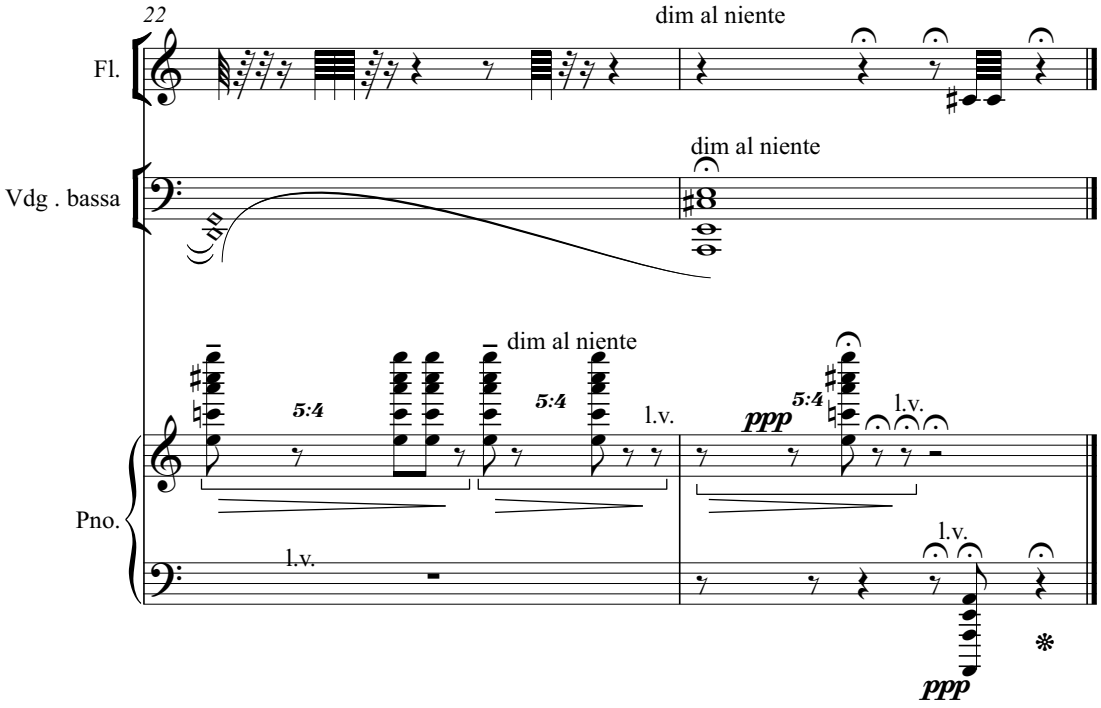
Fl.

Vdg . bassa

gliss. arm

Pno.

l.v.


22
Fl.
dim al niente
Vdg . bassa
dim al niente
Pno.
5:4
dim al niente
5:4
l.v.
ppp
5:4
l.v.
l.v.
l.v.
ppp

Jan Van Landeghem: score of the short composition in the group study

8 Petra Vermote: score of the short composition in the group study

♩=100

brillante

Flute

mf *f* *mf* *f*

sempre dolce

Bass viol

mf *mf* *mf*

♩=100

ironico

Piano

f *ff* *mf* *mf* *f*

4

mp *mf* v *mf* ord. *f* *mf*

mp *mf* *mf*

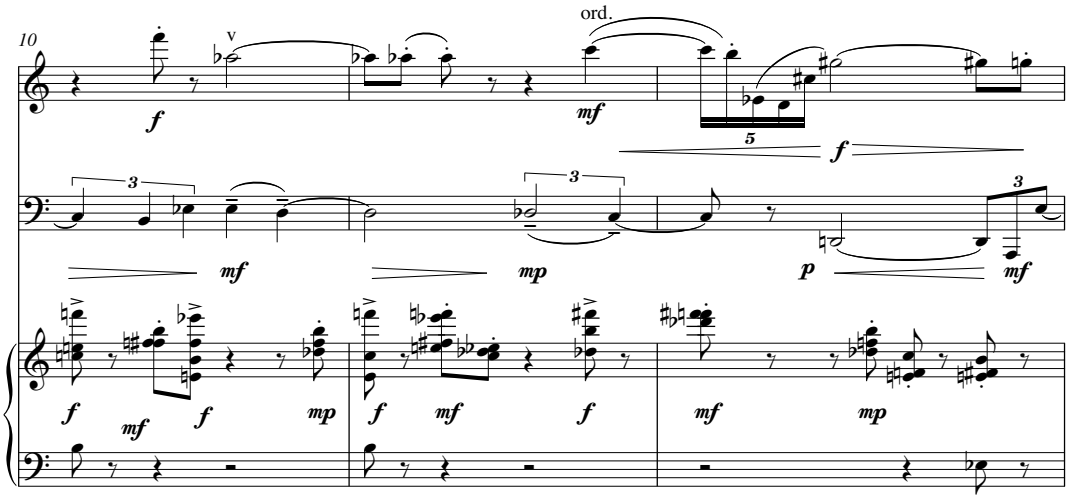
mf *f* *mf* *f*

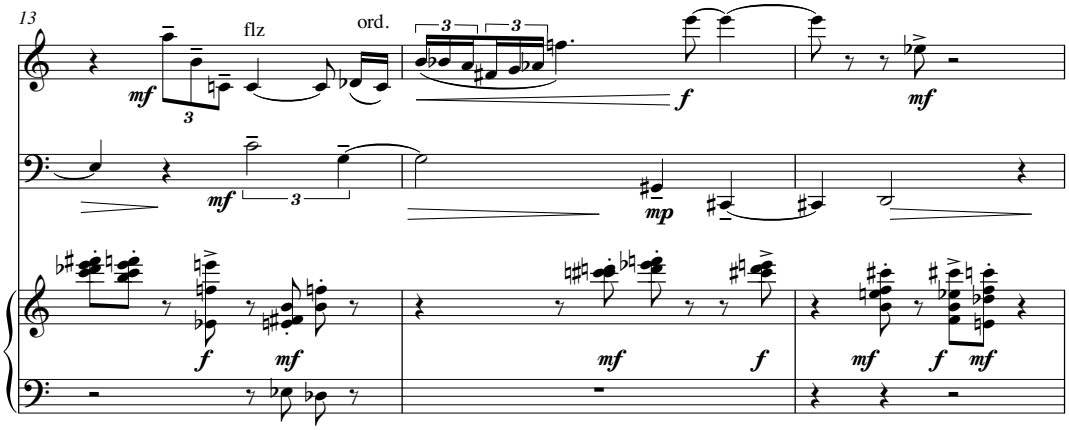
7

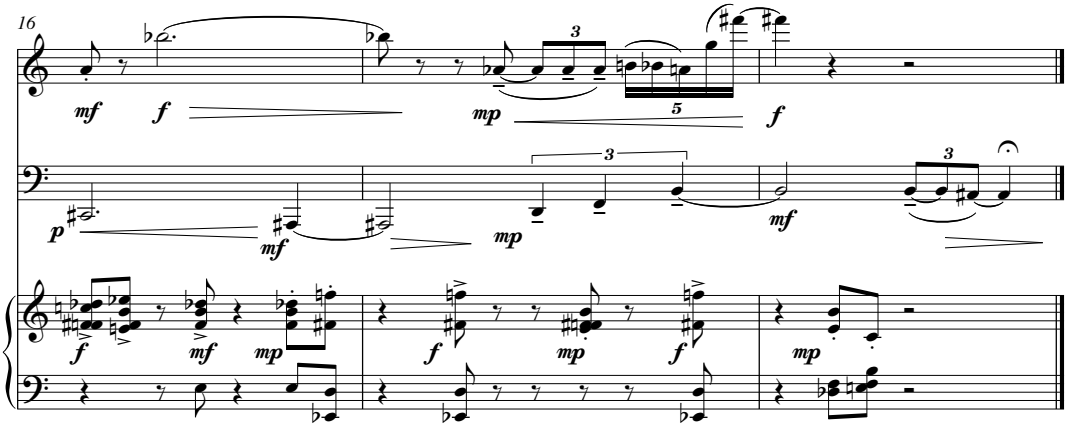
mf v *f* *mf* *f* tr *mp*

mp *mp* *mf* *f*

mf *f* *ff* *mf* *f*


10
v
ord.
f
mf
f
mf
mp
p
mf
f
mf
f
mf
f
mf
mp


13
flz
ord.
mf
f
mf
mp
f
mf
mf
f
mf
f
mf


16
mf
f
mp
f
p
mf
mp
mf
f
mf
mp
f
mp
f
mp

9 Interview questions of the group study

1. How old are you?
2. How many years have you been active as a composer?
3. How many years have you been active as a composer since the first public performance of one of your compositions?
4. How many years have you been active as a composer since you first received an official commission?
5. What kind of music education did you get? And how many years did it last?

6. When did you start working on this short composition?
7. When was this short composition finished?
8. Try to express in working hours or days how much time you spent on this short composition.

9. How did you ensure that there was a difference between the three voices?
10. Why did you not pay much attention to (…) in your short composition?
    This question was personalized and based upon a first analysis of the score of the new composition. For example, in the interview with the composer De Bièvre the two questions (based on this question) were:
    Why did you not pay much attention to the contrast between pitched and non-pitched sounds in your short composition and, for example, use sounds without pitch?
    Why did you not pay much attention to the phrasing of each part in your short composition?
11. What do the three voices in your short composition have in common?
12. Was creating a difference between the voices the main aim of the short composition or did you have other aims at an artistic, aesthetic or technical level?
13. To what degree does this commission correspond to your previous compositions?
14. What decisions did you take while composing?
15. Can you try to reconstruct your line of thought while composing?
16. Did you try out ideas in an audio software program or with performers?
17. Which tools do you use while composing?
18. Could you describe your material set-up while composing?
19. In which part of the composition process did you start to use the computer?
20. How do you decide whether the result of your compositional process is successful?
21. Did you ask yourself the previous question at the end of the creative process?
22. Did you produce one version or many versions while composing?
23. How do you decide if the second part of the task was successfully implemented? The second part of the task was: the three voices should be clearly perceptible, i.e. they should not overrule each other.
24. Can you give a general impression of how you experienced this commission?
25. Could you explain how easy or difficult this commission was for you?

10 Samples of interviews in the group study

10.1 Sample from the pre-interview with Vermote

V: wel kijk, das de volgende vraag, in hoeverre sluit deze opdracht aan bij uw eigen composities? 00:21:39-3

A: Niet bij de laatste tijd, toch niet bij Tubi Di Canto, euhm 00:21:48-9

V: das uw vorig stuk? 00:21:54-1

A: ja, das nu juist, die Souterliedekens, die zijn redelijk, hoe moet ik het zeggen, kga niet zeggen tonaal, maar toch een heel ander dinges, euhm, tgeen daarvoor, tgitaar, ja misschien bij het gitaarkwartet en bij dat werk voor cello, piano en tenor, waar dat toch een beetje dingen in zit misschien wel ergens, maar puur qua karakter enzo, kheb kik daar ook niet bij, kga niet zeggen bij stilgestaan, das intuïtief, maar bij het laatste niet, dat niet, zeker niet, maar dat is denk ik ook weer een ander beginpunt, ik denk dat, hoe moet ik het zeggen, dat ik op een bepaald punt beland ben waar dit misschien nog op het einde zit en Tubi Di Canto weer een andere richting uitgaat, misschien is dat toeval, maar ik denk allez, moesten de noten naast mekaar liggen, dat er misschien mensen niet meer gaan herkennen en dat er zijn die eruit gaan vallen (?), kdenk dat wel, kweet het niet, das moeilijk, 00:22:55-2

V: vrij algemeen, als ge het vergelijkt met de dingen dat ge doet de laatste jaren, 00:22:59-1

A: Tis zeker niet, tstaat er zeker niet in contradictie tegenover, zeker niet, neenee, absoluut niet, neenee, dat kunde niet (br), dat heeft ook te maken met het feit dat ik het absoluut niet alleen als een oefening of een technische oefening gezien heb, maar dat dat toch binnen uw(br), want ik denk vooral de fluitpartij, euhm, is een beetje zo, kheb al veel dingen voor fluit geschreven, tis een heel wendbaar instrument natuurlijk, voor dat allez, ja, tzijn toch bepaalde werken van mij die trekken hebben van, het begin van (niet) dacht ik ineens zo hier die, kdacht tiens, allez onbewust er wel inzitten, tstaat er zeker niet diametraal tegenover, absoluut niet, 00:23:41-9

V: en dan misschien, de vraag is eigenlijk welke beslissingen hebde genomen tijdens het componeren of anders verwoord, kunt ge proberen om uw gedachtengang tijdens het componeren te reconstrueren? 00:23:46-5

A: goh, vooral eigenlijk, het individueel schrijven, het per stem schrijven, en dan denken van iedere keer toch met dat contrast bezig zijn, dat is iets dat er constant door mijn hoofd gegaan is,

dat is vooral contrast, iedere keer zo van, die drie moeten echt individueel evolueren, maar toch matchen in zekere zin, dat eh, allez ja, dat is constant allez, de hele tijd, veel meer dan enige vraag over tessituur, tenige dat ik moest checken was die gamba natuurlijk, zelfs dat, normaal ben ik veel gefocuster op een nieuw instrument en ga ik allemaal gaan zoeken wat, en nu net niet, das heel raar, enfin net niet, kheb hem wel gecheckt natuurlijk en gecontroleerd, maar euhm, omdat de neiging groot was in het begin met die gamba, om die gamba een grote solorol te geven, omdat het iets is dat ik niet ken en dan denkt ge, maar dat is de bedoeling niet, (lacht) tis wel inderdaad de gedachtegang ging van hot naar her ook ze, dat is constant ja, soms al ge componeert is dat conflictueus, enfin conflictueus, euh dingen die, tis juist daaruit dat de fantasie dikwijls euh (br) 00:25:23-5

V: en zijn der, kunde u nog ideeën of dingen herinneren dat ge wou doen, maar die ge dan uiteindelijk niet gedaan hebt of misschien veranderd hebt? 00:25:30-9

A: Ewel, dus de hele extremen, dus het echt, kga niet zeggen het mishandelen van het instrument, dat niet, maar het compleet niet op het instrument schrijven, dat heb ik laten varen, 00:25:37-0

V: wat was dat dan juist? 00:25:41-6

A: ewel, heel laag een hele tijd voor die fluit en dan heel hoog voor de gamba, maar echt anti, hoe moet ik het zeggen, idiomatische dingen zo, niet echt serieus, of het instrument totaal anders gebruiken dan waarvoor het eigenlijk gebouwd is bij wijze van spreken, dat was ook een idee en dat heb ik laten varen, 00:26:04-2

V: en waarom hebde dat laten varen? 00:26:03-2

A: omdat ik niet genoeg, ja misschien niet genoeg inspiratie, maar niet genoeg verschillen had, nog altijd, terwijl dat was voor mij op dat moment iets te verticaal denken en allez, voor contrapuntische dingen moet ge echt zo denken, het moet verschillend evolueren, niet verschillend zijn alleen, maar ook verschillend evolueren 00:26:26-0

10.2 Sample from the pre-interview with De Bièvre

A: khad dat in de instructie duidelijk moeten zeggen, want kheb dat niet gespecificeerd, dat vind ik, das dus een beetje het idee 00:13:12-0

V: als het dus -sorry, om er eventjes verder op in te gaan- als die pianist nu kiest om die partij bijvoorbeeld meer echt als begeleiding speelt -heel stil en die noten gewoon lang en zacht-, dan is dat ook goed of niet? 00:13:30-0

A: ja, tis da, ik wil niet te veel forceren, ik vind dat een beetje gevaarlijk als ge (br), ik hoop altijd dat de pianist voldoende creativiteit heeft om daarmee om te springen, om zich te onderscheiden van de twee anderen, maar khad dat inderdaad misschien wa meer moeten specificeren in die instructies. 00:14:06-7

V: wel dus die, om terug te komen op die vraag 'hoe dat ge technisch gedaan hebt, die verschillen tussen die stemmen' hebt ge da eigenlijk gedaan door die toonhoogte organisatie of harmonisch 00:14:08-0

A: ja, maar die is minder

V: en door de timing

A: ja, door de gaten die erin komen en die er niet in komen, piano zou zich kunnen onderscheiden in de zin dat de piano eigenlijk wel continu bezig is, dus de piano heeft alleen gaten als de pianist ze maakt 00:14:15-1

V: dus die mag noten herhalen 00:14:22-2

A: eh neen neen, die moeten alleen geplaatst worden die, de pianist kan voor mijn part de andere twee straal negeren en gewoon doen alsof het een solo pianostuk is euhm 00:14:45-4

V: tis goed, tis duidelijk, dan nog een vraag die er nog op voort gaat, tis maar een detailvraagske eigenlijk om te weten te komen waarom dat ge sommige dingen dan niet doet eigenlijk, maar theeft al direct te maken met wat dat ge gezegd hebt, als ik nu kijk naar de partituur dan zou ik bijvoorbeeld kunnen vragen 'waarom heb je geen verschil gemaakt in toonhoogte-ruisverhouding?', je had bijvoorbeeld één stem iets kunnen laten doen dat geen toonhoogte heeft en dan hebde onmiddelijk een verschil tussen die andere stemmen 00:15:23-4

A: dat is eigenlijk iets dat ik probeer te mijden, das iets dat ik graag doe maar dat is iets dat ik probeer te mijden als ik de muzikanten niet persoonlijk ken, allez das zo, ik wil niet zeggen dat het geen goede en creatieve muzikanten zijn, ik ken ze gewoon niet en dan probeer ik niet veel verder te gaan dan wat ik hier, voor de piano, ook omdat ik uit ervaring weet dat niet alle muzikanten daarmee blij zijn of daar op hun gemak mee zijn, dus ik heb geprobeerd, tis eigenlijk meer genoteerd dan mijn muziek gebruikelijk is, dus tis zo'n beetje een toegeving aan gewoon geen niet te veel risico te nemen met de uitvoerders, dat was inderdaad een mogelijkheid allez, ik kan twee dozijn mogelijkheden bedenken om in een ideale wereld, ik vond het ook voor mezelf een beetje interessant om het zo te doen, zo'n beetje een uitdaging, ik denk niet zonder uw opdracht dat ik ooit zo'n stuk geschreven zou hebben, dus het is gewoon een beetje functioneel gewoon allez niet, ik wil nu niet zeggen tis geen stuk waar ik achter sta, twas een uitdaging om eens iets te proberen ook é 00:16:54-2

V: dan eigenlijk nog eens juist dezelfde vraag maar dan gewoon iets anders, wat dat ge nog niet gedaan hebt, ge had bijvoorbeeld ook kunnen maken dat ge een verschil had in het karakter van de

stem in de frasering 00:17:12-1

A: dat laat ik aan de uitvoerders, dat laat ik meestal aan de uitvoerders, tmag helemaal legato gespeeld worden, tmag helemaal staccato gespeeld worden, de gamba mag pizzicato spelen, wat mij betreft, de pianist kan heel veel pedalen gebruiken of helemaal geen pedaal 00:17:31-2

V: dus dat ligt eigenlijk aan die, dan kiesde er voor, neen kga het anders uitleggen, euh sowieso hebde een voorliefde -om het zo te zeggen- in uw andere werken en dingen dat ge doet om de uitvoerder veel beslissings- of veel uitvoeringsbeslissingen te geven en dus in dit geval zegt ge gewoon 'liever zeker dat de uitvoerder zelf gaat beslissen' 00:17:58-0

A: (br) ze mogen ook octaveren, het hele stuk door of bepaalde passages, dus dus de fluit zou voor mijn part piccolo kunnen spelen en euh dat is allemaal mogelijk, thangt er ook een beetje vanaf hoe (br), wel ja, kzou dat in de instructies kunnen speciferen, dat de muzikanten zo heterogeen mogelijk overkomen euhm, maar ik denk dat ik dat niet gedaan heb, omdat ik mezelf dan een beetje gemakkelijk af maak van de opdracht (lacht), das ja, dat zou ik kunnen vragen, ik word graag verrast door muzikanten dat eerder dan te veel te pushen, ik heb ook graag dat de muzikanten vrijheden nemen met wat ik hen vraag 00:19:07-8

V: de volgende vraag sluit eigenlijk aan bij wat je daarjuist zei van dat functionele, de vraag is eigenlijk van het verschil tussen de stemmen, was dat uw hoofddoel bij het componeren van dat werk of was dat of had ergens ook de bedoeling om der een stuk van te maken waarvan ge zei, daar ben ik esthetisch of artistiek van tevreden of hebt ge het helemaal opgevat als een open experiment waarbij dat ge iets doet 00:19:36-2

A: ja en neen, ik heb het 00:19:41-4

V: dus zo een beetje de twee samen 00:19:42-3

A: ik heb het opgevat als een experiment maar tmoest wel iets zijn waar dat ik mij in thuis kan vinden, waar dat ik mezelf in kan herkennen, daar is niets in waarvan ik zeg 'dat zou ik nooit gedaan hebben', het was een specifieke opdracht, euh dus ik heb mij daarin daaraan toegepast, maar tis wel iets dat ik euhm, ik kan mij inbeelden dat ik zelf op een dag op zo'n idee zou zijn gekomen om zo'n stuk te schrijven, tis niet allez, tis niet iets waarvan ik zou zeggen 'jammaar dat stuk, dat was een experiment voor Hans' of zoiets, neenee, tis daarom dat ik ook niet, dat ik er niet voor gegaan ben om echt gewoon 100% voor uw vraag dat verschil tussen die drie, kzou er minder werk aan gehad hebben denk ik, maar dat vond ik minder interessant, dus tmoest nog altijd voor mij ook interessant zijn want anders zou ik het gewoon niet kunnen doen 00:20:49-0

10.3 Sample from the post-interview with Neyrinck

V: en hebde da, kunde u dat nog herinneren, die versie dat ge hier hebt, dus die drie pagina's, hebt ge dat allemaal op dezelfde dag gedaan? Of is dat chronologisch ook?
00:16:13-8

A: kdenk niet dat ik dat op dezelfde dag gedaan heb, dat zou mij wel verwonderen, neenee, kga dat niet op dezelfde dag gedaan hebben. Kheb ook, maar kheb dat niet teruggevonden, kheb dat wel 00:16:23-3

V: je had een soort schetsen ervoor 00:16:29-8

A: blaadjes, maar tis, schetsen, allez tstaat daar niet veel op, tzijn echt zo krabbelkes é. Euhm, allez das wel de enige partituur. Nu kdenk dat, reken misschien een dag of twee drie. 00:16:57-4

V: ge hebt het opgestuurd rond 29 of ja 00:17:01-3

A: tegen dat het dan in Sibelius zit. 00:17:08-6

V: en die, wacht hoor, ergens geschreven op die kladjes. Die kladjes waren van vroeger, waren die van veel vroeger? Ik dacht dat je de vorige keer gezegd hebt dat je na, dat je pas begonnen zijt in de kerstvakantie of nadat dat andere stuk af was. 00:17:47-6

A:ja, goh, veel vroeger, dat weet ik niet meer, maar als, wat ik meestal doe, als ik een nieuw stuk moet schrijven, dan als ik iets rap denk dan schrijf ik daar rap iets van op en dan doe ik verder met de dingen waar dat ik dan mee bezig ben. Dat kan gerust zijn dat dat in de kerstvakantie was, omdat ik in de kerstvakantie heb ik dat ander stuk in Sibelius gestoken hebben, want dat was een stuk van twaalf minuten, dat was vrij lang. Euhm, dus ik ga dat dan ertussen waarschijnlijk wel, maar om daar nu een datum op te plakken. 00:18:26-8

V: als je het je niet meer herinnert. 00:18:24-7

A: Allez, kweet het niet, kga nu iets zeggen, maar kweet dat eigenlijk echt niet, tenzij dat ik iets opgeschreven zou hebben in mijn agenda, maar ik schrijf dat eigenlijk niet op. (bladert) Neen, tstaat hier niet op. Neen 00:19:15-9

V: en heb je helemaal in het begin, toen dat ge, dat was eind november, toen dat je mij een mail gestuurd had dat ge dien opdracht zag zitten. Daarna hebde mij dan nog een mailke gestuurd, daar schreef je in, “is het de bedoeling dat de piano ook als een eenstemmig instrument gebruikt wordt vraagteken met andere woorden zonder akkoorden.” Kunde daar nog iets van herinneren, waarom dat ge dat juist gevraagd heb, wat dat de achtergrond was? Wat dat je aan het denken was?
00:19:40-3

A: omdat je inderdaad met die stemmen zat, dat ik eerst dacht misschien willen jullie iets waar dat er gewoon echt puur drie stemmen, drie lijnen als het ware zich gaan meten ten opzichte van

elkaar. Dat was mij niet helemaal, allez dat was de vraag eigenlijk. Niet dat het niet duidelijk was, maar dat was gewoon hetgeen dat ik mij afvroeg van wat dat er, van wat dat er kon en van wat er niet kon. Uiteindelijk is het nu ook wel, als je het stuk bekijkt, dan is het niet echt, eigenlijk zijn dat, dat zijn eigenlijk meer zaken om die resonantie in gang te steken die akkoorden en de rest zijn eigenlijk, die stemmen zijn dan veeleer. 00:20:31-7

11 Brackx: analysed basic themes

11.1 Course of action

Detailed description:

[1] Brackx repeatedly states that after receiving the commission, he often thinks about the commission and the task. He wonders a lot about the content of the task: why ask this specific question? What is the background of this question and what is the aim of the research in which I am taking part? In his mind he also starts ordering the sound parameters that influence the difference between the voices.

[2] In the beginning of February 2012 he notates a list of features that should ensure that the instrument parts will be as different as possible. The main -but not very detailed idea- is that every voice should have its own discourse and should represent its own world.

[3] Next, he has the idea to write a lyric melody for the viola da gamba and composes this part, then writes down the flute part based on non-pitched and semi-pitched sounds. He ends by making the rhythmic piano part based on two pitches. Before or during the composition of these three parts Brackx also briefly writes down a pitch scale for the piano and gamba part and a list of notation methods (for the extended techniques in the flute).

11.2 New elements

Brackx describes the experience to compose within a research project as new. The fact that someone asks him to think about a specific problem that is not really part of his composition world is unusual.

> ik vind het ook wel leuk om zo'n dingen te doen, het laat mij ook op een heel andere manier functioneren als componist, normaal schrijf ik gewoon wat ik wil schrijven, waar ik mee bezig ben, en als iemand anders heel concreet vraagt om over iets na te denken, waar je anders misschien niet mee bezig bent, dan is dat wel leuk, tis in elk geval boeiend, ik ben ook heel benieuwd naar de andere versies (pre-interview 00:22:58)

The viola da gamba is not a new instrument for Brackx. In 2010 he had already produced a work for the old-music ensemble Scorpio Collectief, which included a viola da gamba.

11.3 Constraints

In general most constraints in the CP of *PolyStudy* are defined by the task in the commission, there

are almost no signs of personal preferences or aesthetic ideas that limit his choice of musical materials. Thus most constraints can simply be derived from the list of techniques and procedures that he used. Two constraints though are unique:

- the composer avoids that the combination of the three autonomous instrument parts would sound too much like 'traditional, contemporary classical' music, therefor he is pleased that the gamba melody is in another style (lyric and tonal)
- on purpose none of the voices shows a development because development means that there are intermediary states (to evolve from point A to B) where the differences between the voices will be smaller. Moreover, the composition didn't have too be long, thus he avoided a development.

One extra constraint was more practical: the use of different graphical notation systems was abandoned because of (unspecified) problems in the music notation software.
In general there is no evolution in the constraints during the CP because they stick so close to the task in the commission.

11.4 Concepts

In general there is a lot of overlap between the 'Work', 'Procedures and Techniques' and 'Polyphony' concepts of Brackx.

General
Almost no information in the data is found about the music preferences or philosophical, social or aesthetic views concerning his own music. There is only one statement, saying that the main issue in his recent work is polyphony (see the concept 'polyphony').

Procedures and Techniques
Brackx stresses at three moments in the interview that he in the beginning of the CP he thinks a lot about a piece and elaborates it mentally. In an abstract way he tries to find an idea and works out the implications. Once this is clear, he starts to write down the music. In the case of *PolyStudy* he has worked out an opinion on how the three voices could be as different as possible. He has found an idea which he coins as 'the combination of three worlds'. Next he starts notating the instrument parts, one by one. The gamba comes first, then the flute and finally the piano part.
On a compositional technical level Brackx took care that the differences between the voices are as large as possible. This is done by ensuring that

- the voices have a different tempo
- there is a minimum of pitch range overlap between the voices
- the dynamics of each voice are different
- the pitch sets of the piano and gamba don't contain any common pitches.

Polyphony
For Brackx creating polyphony and 'the largest possible difference between voices' are two different issues. In *PolyStudy* he tried to achieve this largest possible difference but in his other

compositional work he is more interested in polyphony. In fact, he sees polyphony as the opposite of this 'largest possible difference' phenomenon. Polyphony to Brackx means that the voices are very similar to each other. Together they create a homogeneous texture but the use of different tempi per voice and phase shifting result in fascinating phenomena.
In polyhony the voices refer to each other, they use similar musical material, they can even imitate each other. A listener can hear how this material moves through these voice. Brackx is intrigued by appearing and disappearing voices in a homogeneous texture and the listening strategies of the audience that shift their attention from one voice to another.

Work
'The largest possible difference' means there are no references between the voices, let alone imitations. In fact, no musical parameter should be the same in the three voices according to the composer. In *PolyStudy* every voice has its own musical discourse: the gamba plays a melody, the flute noise-like sounds and the piano percussive rhythms. The composition is produced by simultaneously performing three autonomous and stylistically different pieces. Preferably the three voices would also have had a distinct notation (but the composer adds that this generated problems in his notation software). In the post-interview, after the performance, he even adds that

- the performers should avoid to start and end at exactly the same moment
- the listener needs to really focus to hear the flute (producing noise-like sounds) and that this difference in necessary effort adds to the overall difference between the voices.

12 Cammeren: analysed basic themes

12.1 Course of action

Detailed description:

[1] Until mid-January 2012 Cammeren has been composing short compositions for piano solo, based on popular melodies and exploiting a wide range of extended techniques. In the early morning of January the 27th Cammeren suddenly gets inspired and writes down the first version of *Aria Ubriaca*. It is a short version of 16 bars. Three motives are clearly based upon the Habanera aria (scene 5, Act I) from the opera Carmen of Bizet: the (chromatic descending) melody from the beginning of the aria (theme 1, 'chromatic' theme), the bass line (with the habanera rhythm)(theme 2, 'habanera' theme) and the melody in D major from the middle section (theme 3, 'D major' theme). In the first version of *Aria Ubriaca* there is also an additional counter melody in D major (theme 4, 'cantabile' theme), played by the piano and the flute. Immediately from the start, this version has many rhythmic syncopations and strange twists which accumulate in the last five bars. In the afternoon of January the 27th he reworks this version: the most important changes are:

- the addition of a new end. This end -with a fermata followed by a very short end (one chord)- looks very similar to the gesture at the end of the Habanera aria in Carmen
- the gamba part is reworked (pitches and rhythms are changed): every 4 to 5 quarter notes the low pitch D re-appears; this D functions as a kind of bourdon

Other changes are:

- a more detailed notation of accents, staccatos and playing techniques for the gamba (pizzicato, arco,...) is given
- the first phrase of the flute is moved one quarter note further (thus it enters on the first beat)
- in the second half there are less syncopations in the piano part

[2] A few days later Cammeren revises the previous version again. There are no big changes, these are the most important ones:

- the counter melody becomes more chromatic
- the piano part is thickened: thirds and sixths are added
- the accents are re-organized: some are omitted and new ones are added

[3] One week later Cammeren realizes that the original commission asked for a *minimum* of 40 seconds of ensemble music and that he has more time to finish the piece. He turns the previous version into a much longer version (which now consists of 47 bars in stead of 16) with a faster tempo (108 BPM for a quarter note in stead of 96). *Aria Ubriaca* now has a structure of three main parts (A – A' - A+coda) with a section of 12 bars in the middle and a short coda at the end (without a fermata). The middle section (A') acts as a kind of (short) development, in which the chromatic

theme re-appears. The two main parts at the beginning and the end are very similar but not identical, these are the most important differences: in the end part (A) the 'chromatic' theme and the 'cantabile' theme start simultaneously (in stead of a half note apart) and in the same part the bass (gamba) plays the whole first phrase (bar 29-36) on the beat, without syncopations. There are also some changes between the first 16 bars and the previous version: the thirds and sixths in the piano part are omitted again and there are rhythmic and melodic changes in the gamba part.

[4] There is a next version from February 9th with some small revisions, mainly in the gamba part. There are more sixth and seventh intervals in the 'habanera' theme (as in the original bass of the Habanera aria of Bizet). Two days later, the pre-interview with Cammeren takes place and it becomes clear that his composition isn't finished yet. He explains that he is considering to change the piece to obtain a more gradual transition from the 'undistorted' to the 'distorted' sections.

[5] Cammeren has new musical ideas: another popular melody (with a galop rhythm) from the Willem Tell Ouverture of Rossini (theme 5, 'Rossini' theme) and a tango like bass motive (theme 6, 'tango' theme) would contrast nicely with the existing themes. He revises the previous version and the most important changes in the new version are:

- it is shorter (34 bars in stead of 47)
- the tempo of the first part is slower (96 BPM for a quarter note in stead of 108)
- the new Rossini theme (theme 5) is used in the first half of the piece, in the piano part
- the 'tango' theme in the gamba (on the beat, with less syncopations) appears in the first half of the piece (theme 6)
- at the end the 'fermata' coda (with a sudden stop) appears again

On a structural level there is now a two-part structure. The second part is very similar to the third part of the previous version. Finally, this version is sent to the author on February 24th and it is used for the performance at the end of March.

12.2 New elements

The composer states in a general way that every composition is an experiment for him, and that he likes to make this short composition because it challenges him to exceed his own limits.

Cammeren was not acquainted with the viola da gamba. At the beginning of the CP he intended to search for information on this instrument but finally he only used the information file provided by the researcher. While composing he chose the score of D major because this fitted well with the open strings of the viola da gamba. After the performance he is still in doubt about the potential loudness of a viola da gamba. According to him this instrument sounded to soft in the performance but he cannot judge if this relates to the writing (in the composition) or to the specific performance.

12.3 Constraints

There is no big evolution of the constraints in the CP of *Aria Ubriaca*, the main outline of the

composition is settled at the beginning of the CP. The main constraints remain the same from the first version to the final score. These main constraints are:

- to limit oneself to popular tonal melodies,
- especially the Habanera aria of Bizet
- to use syncopations and other 'distortions'.

These main constraints are immediately fixed from the first version on (phase [1], see the previous course of action), the composer just 'accepts' them intuitively, he did not search for them or explore alternatives. Thus the main constraints are settled unconsciously at the beginning of the CP.

In the following parts of the CP the composer gradually restricts the use of themes and syncopations for structural and narrative reasons. He wants to build up a story (see further 'concepts') and a musical structure and therefor some sections and/or instrument parts are based on specific themes or the absence or presence of syncopations (and other 'distortions'). For example, from phase [1] to [2] (previously Cammeren gave a longer duration to the composition) there is an evolution to the exclusive use of syncopations in the gamba part and to base this part on one simple motive (theme 2, 'habanera' theme, see course of action).

This evolution to use constraints for structural reasons continues until the last phase [5] but at the same the main constraints are loosened a bit. The two main constraints remain the same but popular melodies from outside the Habanera aria of Bizet enter the solution space (the 'Rossini' and 'tango' theme appear in phase [5]).

Summarizing the evolution of the constraints in the CP of *Aria Ubriaca*:
the main limitations are settled immediately at the beginning; next, there is a smaller, gradual evolution to restrict the sound material for structural reasons and finally, at the end of the CP, the main constraints are (a bit) less severe.

12.4 Concepts

Concepts – general

Effects of estrangement are precious to Cammeren, he likes to place 'simple elements' in a strange context (dislocation). Closely related to this is another technique: the use of time shifting (like syncopations) to distort the rhythm. According to the composer, the first impression of music with these effects on the listener is that it sounds simple, pleasant or funny but his music has a double meaning. Cammeren links the time shifting and distortion effects to several extra-musical meanings and individual feelings:

- things are not always what they seem or what you expect, people need to take some extra effort to understand phenomena
- it is not always easy to be an individual among other people, one has to function within a school or society, walk in a row, but some people don't function well within this imposed order
- he does not feel at home in his own (country-side) city and work-place

He further explains that he has always felt at home in the music of Ligeti and minimalist

composers. In the case of Ligeti he refers both to the use of similar (rhythmic) shifting techniques and the description by Ligeti (in interviews) of his own music.

Procedures

Cammeren explains that he likes to work during the night and that the inspiration often arrives during these nightly sessions in 'one block', this is how the main ideas for a new piece are born. He does not have several ideas to start off a new composition, this first inspiration just happens. Next he starts notating these ideas, and re-arranging sections, parts and melodies.

> A: anders gaat dat wel gebeuren, ik stond buiten en dat kwam, die drie stemmen kwamen daar en dienen decalage van dienen dinges, dat was daar, alhoewel, en dan natuurlijk, ge begint dan direct te noteren, tis teerste wat dat je noteert, is je begint dan (zingt), dus direct dan aan de computer, direct beginnen schrijven é en dan hup en herhalen, en dan hup, ik zet dat in melodie, tjak (zingt), en dan zeggen ahnee, kga dat een beetje vroeger zetten of een beetje later, allez, tis gewoon een kwestie van wanneer komt die dan binnen of euh of ja, en nu moet ik dat niet allemaal tegelijkertijd of hoe moet ik dat inzetten of euh, (pre-interview 00:31:01)

Cammeren often works with long 'incubation' times during which he puts a composition aside, in the case of the short piano pieces (which preceded the CP) this duration could be several months during which he got remarks and opinions from the performer. Once he starts to work with an older version again, he is able to look at this composition from a distance and take important decisions.

> dat ligt daar, tis constant weer met zulke dingen verbeteren op aanmerkingen van Luk, nog een keer veranderen dat is dat en kheb nog iets gevonden, sur le pont d'avignon ahja, dat ook, en hup en zo en zo en zo en die techniek en dat en ook een beetje spelen en é, dat ligt dan vol met titels van liedjes, die gewoon bij mij opkomen dat ik zelfs, ja Mieke hoe noemt dat weer of hoe begint dat weer dat liedje? Ik ken dat al zo lang, gewoon de titels opgeschreven dat komt bij mij op (zingt), hoe begint dat weer? zo van é, plots is dat daar é en ik schrijf direct op zo, dus maar dat is ook zo gegaan, ik ging naar buiten en hop, hij was er, dan komt dat plots binnen, dat is wel dankbaar eigenlijk en ja, wellicht is dat, ik geloof der wel in, dat dat onderbewust wel, dat dat al bezig is hoor. (00:43:14-0 pre-interview)

During the creative process his imagination works in an associative way. Popular melodies pop up in his mind and he does not care to search for the original version or score. In the following fragment of the interview, this associative mode (and the importance of an incubation phase) is quite clear:

> A: ja, ge leest het weer en plots krijg je iets of je ziet iets in euh, allez ja, waarom niet, ik hoor dan een trein, waarom dat niet laten beginnen gelijk nen trein? Die op gang komt ofzo, lijk euh, waar dat ik anders niet, allez, hoe moet ik dat zeggen? Kweet het niet, je ziet misschien door het bos, door de bomen het bos niet, omdat je zodanig ook allez, je zit natuurlijk ook, je bent technisch bezig, je bent in details aan het werken of je bent het aan het afwerken ofzo en en vormelijk bekijken en dan na een tijd, herneemt ge dat en dan ge zijt met zoveel andere dingen ook nog bezig, en dan is dat weer zo van jaja, juist, dat en ge begint eraan en ge ziet direct van ahjaja, waarom niet hier of op het einde, ahja waarom niet vertragen en volledig tot stilstand komen zo van, das gelijk

> nen trein en dat komt in de tekst voor van mijn liedje of weet ik veel (pre-interview 00:58:15)

And although he does not make any plan or system in advance, it is also clear from the previous example (and other fragments in the two interviews), that he pays a lot of attention to the structure and form of a composition.
The structure needs to be finely balanced, it should match with musical phrases and at the same time be proportionally balanced on a macro-time level.

Finally, on a more technical level, he explains that he has payed attention to the pitch ranges of the three parts. On purpose he plays with fusion -when the ranges overlap- and separation -when gaps appear between the ranges-.

Polyphony

Both in the general descriptions of versions of *Aria Ubriaca* and in evaluations and explanations of changes (to some of these versions), several elements of classic polyphony play an important role. Cammeren considers it as crucial that all the voices get a chance to play something important and that there is imitation, interaction, and dialogue among these voices.

But at the same time he has never focused solely on the difference between the voices, there is no 'isolated' discourse about polyphony, the polyphonic elements appear as a part of his extra-musical story on the (mis)communication between the three voices. This does not exclude that he sometimes gives a rather technical explanation of some polyphonic elements, e.g. the pitch range of each instrument (and especially the separation or overlap in the pitch range) is deliberately used to create a perceptual fusion or separation of simultaneous layers. But even in these more technical descriptions, fragments of the emotional story are present. For example, as he talks about the separation of these pitch ranges, he describes the instruments as being 'safe on an island'. His musical/technical discourse is always part of a more general and personal story about the 'theatrical' characters and events in his composition and the meaning and emotion attached to these elements.

One additional problem related to polyphony is given special attention by the composer. The piano may sound too loud in an ensemble -it can become a nuisance for the other instruments- and therefor he has given it a monophonic treatment.

Work

Aria Ubriaca appears almost as a theater script in the descriptions given by the composer. The voices (instruments) are seen as human characters that communicate or -more precisely- try to communicate with each other. As there are many drafts before the final version (see the previous course of action), the development of the 'stories' (script board) varies according to a specific version but a 'general' theme reappears in the descriptions given by the composer: the separate voices play in ensemble but 'mistakes' (distortions) happen and they try to keep on playing, in some cases successful, in others they continue in a crippled way.

> eigenlijk dat komt nu veel te vroeg eigenlijk, dat is een veel beter begin, want het is nog allemaal mooi regelmatig en hier zijn ze wat verstoord en ow, wat is dat met jou hier, wat zijt gij hier aan het doen, zo van stop, kom, dat trekt hier op niet veel allez (zingt), de piano doet dat dan é en dat is

> mijn partij, gij moet uw dinges zingen daar, zo van, er zit altijd azo nen een een conversatie ertussen, maar ze houden zich zo van en er gebeuren fouten eigenlijk, zelfs zogenaamde fouten in de interactie, er speelt zich een verhaal af in mijn hoofd, er speelt een verhaal af é. (pre-interview 00:15:29)

Within the context of this story with different characters, he also uses the terms 'sober' and 'drunken' (ubriaca in the title means drunken).

> A: ewel omdat ik hier, zit ik eigenlijk met, zit ge volledig met het begin, maar eigenlijk , 't is direct al bezig en het is direct al dronken, maar ge begint sober (lacht), ge begint sobrio, je begint dus zonder dronken te zijn eh en dat vind ik dan leuker om op te bouwen, ook voor mezelf ook en daar had, plots gebeurt daar dat geleidelijk aan, geleidelijk aan, maar in het begin is het ook al distorted é, der is hier ook al, wat is dat hier?, 't is bijna Prokovjefjaans hier (zingt), euh anee, tis azo van grazioso en zo van, we gaan hier een heel aangenaam stukje krijgen azo van é en plots gebeurt er iets, azo van, é allez kom, (pre-interview 00:34:05)

Cammeren likes to play a game with the listener. Expectations are not fulfilled and stereotypes don't behave or appear as they 'should' do. As an example of the latter, the composer dwells extensively about why a legato, cantabile melody (in half notes) ('cantabile' theme) is played on purpose by the piano, an instrument which is not very well suited to play (long notes) legato. This game with expectations and stereotypes explains why he likes to use popular melodies in his work but he does not give any explanation for the specific choice of the Habanera aria of Bizet. He is more interested in the phenomenon of melodies suddenly popping up in our mind and in the fact that he can expect that the audience will know or at least (vaguely) recognize the melody. The exact source (and its context) of a popular melody is less interesting to him.

Finally, Cammeren explains that the syncopations and distortions in *Aria Ubriaca* have a bitter undertone, “we are not in tune,” “people can't always cope with the modern rat race” are examples of the emotional content that he gives to the music of *Aria Ubriaca*.

13 De Bièvre: analysed basic themes

13.1 Course of action

Detailed description:
[1] Quite soon after receiving the email with the composition commission, De Bièvre starts to think about the task in the commission, imagines some possible solutions for this task and concludes that literal solutions wouldn't be interesting and would sound too 'forced'.

[2] Next he finds the chord from the film composer Bernard Herrmann (for the film *Vertigo* of Hitchcock). This chord was probably laying around because he had used it in his music courses for students of the visual arts. Then he makes a visual sketch with three circles based on this chord. Every instrument uses one triad from this chord, starts from a common zone, travels an individual trajectory and finally returns to this common zone, e.g. the gamba starts from the Vertigo chord (the three triads) in the center of the circles, then moves to a zone with two triads, then arrives in a zone with only one triad (F# augmented triad) and finally goes through a zone with an harmonic overlap with the piano part. The duration of the route and zones is calculated from the circumference of the circle, the total circumference equals 91 quarter notes.

[3] a) The next idea is found in a number sketch in which the flute and viola da gamba have an opposite development based on a number series of the music theoretician Schillinger. The total duration still equals 91 quarter notes. The onset times of a fragment in the flute part are derived from the simple algorithm 1+2+3+4+5+..+13 = 91, the duration of every fragment is determined randomly (I cannot detect any algorithm and the composer states in the interview that he has used a random generator at a certain moment in the creative process). Thus the flute part develops from dense to sparse. The gamba has the inversed development, from sparse to dense, i.e. 13+12+11+10+8+...+1=91. Thus a kind of cross-fade between the flute and gamba is obtained. Then the piano is given a part with its own meter (in groups of 13, as in the meter 13/4), but later on De Bièvre rejects this polymetrical idea because this would make it unnecessarily complicated. He decides to give the piano a part with more rhythmical freedom. While the flute and gamba part have a rhythmically notated part, the pianist can choose to create his/her own rhythms.
b) He designs three collections of pitch sets (or pitch scales), each consisting of five pitches, for every instrument part. The pitch set for the piano starts from the pitch Eb, the gamba from F# and the flute from A#. These pitches are the ground notes of the triads (derived from the Vertigo chord) of each instrument. On the next sketch, number combinations (series) are written, representing all possible orders of the pitches played in a pitch set with the restriction that every pitch only appears once in a series. Then he randomly selects – with the help of a random generator – 13 of these series for every instrument part.

[4] Finally, he writes the parts of the flute and gamba and next the piano part on a paper draft. The onset time and duration are derived from the number sketch described in 3a), the order of the pitches per fragment from the pitch set sketch and the number sketch described in 3b). A problem arises because the rules on the onset times, the durations and order of the 5 pitches per fragment conflict. This is resolved by changing the duration or repeating a pitch from a pitch set. In the piano part the left hand unexpectedly produces a bourdon chord (Eb minor triad), almost from the beginning to the end, although this bourdon does not always correspond to the planned pitch sets. In the draft indications of uncertainty about the timing of the piano right hand part can be found. First, the initial change of a pitch set appears in the middle of bar 4 but from then on the pitch set changes correspond with the bars. Second, lines are drawn (as a kind of bars) over the existing 7/4 bars, they represent a (fictional) meter of 12,25/4. But in the end the music for the piano right hand part (except for the initial bars) fits in the meter of 7/4. Finally, these two drafts are transferred to a digital copy with six small changes (mostly related to rhythmical mistakes in the paper draft).

13.2 New elements

De Bièvre did not know the viola da gamba, he did not use this instrument in a composition until he composed *Schillinger 91*. He has also searched for extra information on the gamba. He recounts how he had thought to write double stops for the gamba but later on rejected this idea because he didn't have any experience with the gamba and he didn't want to 'fool around with it'.
He did not know the performers in advance and therefor he has written out more details than he usually does when he makes 'open scores'. Through experience he has learned that some performers do not like the call for creativity in open scores and thus, if he does not know the performers, he doesn't take too much risk.

13.3 Constraints

At the very beginning of the CP De Bièvre decides that writing three autonomous solo compositions – a literal solution for the task in the commission- would yield uninteresting results. Thanks to the commission he has the opportunity to write for a trio, thus he make an *ensemble* piece.
He does not know the musicians that will perform his new, short composition, he has never collaborated with them. He excludes some options, especially writing a very free or open score. Within his view on open scores some musical parameters -like phrasing and dynamics- are not his responsibility but the performer's. Consequently, he does not spend time on thinking about these parameters while composing.
Generally De Bièvre has an individual set of constraints that seem to be fixed quite soon in the CP. There is no sign in the interviews or sketches that he steps outside his personal repertoire of composition procedures and preferences.

13.4 Concepts

General

For De Bièvre the input and voice of the performer are crucial. Composing is creating an invitation to make music, creating a musical situation (the score) that enhances the creativity of the performers. He does not want to be the one and only author of the music that he makes and thus he tries to balance his ideas -realized in a composition- with the ideas (on his composition) that emerge in the rehearsal and performance of his composition. The fact that a composition sounds really different in every performance is what he likes and he tries to create this surprise effect caused by the performers and the environment influencing his composition.

> ik word graag verrast door muzikanten, dat eerder dan te veel te pushen, ik heb ook graag dat de muzikanten vrijheden nemen met wat ik hen vraag" (pre-interview 00:19:07)

Through experience he knows that not all performers appreciate this call for creativity and therefor he sometimes creates more 'conventional music scores' in which more elements of the composition are worked out and notated.

Procedures and techniques

He prefers to find music or material and not to select or construct it, e.g. selecting one chord out of collection of chords is cumbersome for him. But at the same he realizes that he needs to have material to compose a new work.
De Bièvre also states that he writes the parts of the instruments linearly, one after the other "as the polyphonists", he never works in a 'vertical' (= harmonical) way.
The main activity during the CP is thinking according to the composer, followed by a few days of notating the piece:

> "een stuk schrijven voor mij is vier vijfden erover nadenken en dan een paar dagen echt de dingen op papier zetten." (pre-interview 00:28:00)

This statement is quite problematic because

- by comparing the sketches and other parts of the interview it becomes clear that 'thinking' also comprises visualizing these ideas or writing short text notes
- the meaning of "putting things on paper" in the last phrase is vague; according to a further description in the pre-interview (00:30:00) this 'putting things on paper' could probably be interpreted as the activities starting from phase [3b]
- the statement should not be understood as: during the 'thinking process' the whole composition is worked out; according to the interview (pre-interview 00:31:27) he meets unexpected problems or has insights that he did not foresee during the "putting things on paper" phase.

Finally, the composer states (post-interview 00:16:48) that he almost never revises a finished score.

Polyphony

Creating the largest possible difference between voices and related polyphonic issues do not interest De Bièvre a lot in his composition practice. According to him it is easy to perceive three instruments in a trio ensemble and creating great differences between these layers risks to end up in three solo compositions which he finds not interesting. Moreover, as a composer and performer it is an artistic challenge to blend the different sonorities of instruments. He sees a trio, or any group of musicians ,in the first place as an ensemble of performers that are playing together.

Work

De Bièvre describes his composition *Schillinger 91* as a work in which the instruments take an independent route based on rhythmic density and pitch although the flute and viola da gamba have more in common with each other than with the piano. The pianist has a more open score than the other two players. Because he hadn't collaborated with these performers before, he plays it safe and -in comparison with some of his other compositions- he notates more parameters in the score.

14 Nuyts: analysed basic themes

14.1 Course of action

Detailed description:

[1] On Friday October 28th Nuyts starts to work on his new composition for this research study. He doesn't want to spend more than one or two days on this composition because he needs to continue working on a large composition for mezzo-soprano and strings after the weekend. His initial ideas are based upon creating three different sound layers with different tempi and using contrasts in timbre, style and dynamics. Therefore he makes a list of possible extended techniques for the three instruments.
Next he thinks about the way contrasts between characters are created in cartoons, graphic novels and paintings, for example in 'Gil Jourdan' of Maurice Tillieux. The role of the 'faire-valoir' (the side-kick) character also enters his mind. He writes down titles of police series (Police (Pialat/Maigret), Détective (Godard), Catch me if you can (Spielberg)), plays back the different tunes of these series simultaneously and observes that he doesn't hear different layers but a fusion of all these tunes. He also considers combining these tunes with extended techniques in the three instruments of the commission. During this phase he also listens to baroque music with gamba and watches parts of the movie *Tous les matins du monde* (director: Alain Corneau).

[2] It is already 17.00 in the afternoon and Nuyts is becoming stressed because of the lack of progression. He rejects all the previous ideas (with extended techniques, different tempi and analogies from visual arts) and has a new idea about which he becomes very enthusiastic: the three performers will play music based on the same chords; in general the similarities will be maximal, but there will be minimal differences between the instruments; in the pre-interview (nine days later) he describes this as “how can I create the greatest difference within the smallest number of means/material?” (pre-interview 00:05:29)

[3] Nuyts explores and notates an harmonic chord sequence (with an harmonic rhythm), based on third and fifth progressions and on two alternating ranges (high-low). The rhythm for both the high and low range is based on a numerical series. The overall duration of the chord scheme is almost the same as the duration of one of the three parts in the future final score of *Divérance* (the chord has five quarter notes more on a total of 75).

[4] Nuyts produces a new version of this harmonic rhythm chord scheme. The chord scheme is less strict although the third and fifth progressions still dominate. The division in two ranges is omitted. The harmonic rhythm is almost the same and this is the numerical series (still based upon the two ranges)(every number stands for the duration of one quarter note):

5 4 3 2 1 2 3 4 5 4 3 2 1
1 2 3 4 3 2 1 2 3 4 3 2 1

[5] Next he tries out different melodic and bass patterns based on these chords. For technical-instrumental reasons these figures were probably made for the piano right hand and left hand. They do not appear in the final version. Probably then he has a new insight, concerning the melodic figures for the instruments: they will stay close to the characteristics of each instrument: the piano can play chords (with 3 or more pitches simultaneously), the flute can only play one pitch at the time, thus it will play broken chords, the gamba can play two notes together, thus it will play a chord of four notes in two steps (two simultaneous pitches followed by two other ones).

[6] On saturday afternoon October the 29th he notates the final version of Divérance (based on the previous harmonic scheme, the harmonic rhythm and the melodic figures). First he writes down the middle section (Trio Principal), next he composes the first and last section, which are both based on the same harmonic scheme and rhythm.

14.2 New elements

Nuyts states that the viola da gamba was unknown for him as a composer, he was not used to writing for this instrument and during the CP he also listened to gamba music (Marin de Marais) to get himself acquainted with this instrument.

Nuyts also knew two of the three performers quite well but he doesn't mention that this made a difference while composing.

In the interviews he talks enthusiastically about one discovery that he made: the use of two alternating numerical systems to control the duration of chords (see previous course of action) results in music that bears similarities with baroque music, especially when the viola da gamba participates in these chords.

14.3 Constraints

The first phase of the CP of Divérance is characterized by a gradual widening of the constraints. Nuyts starts from ideas with extended techniques and different simultaneous tempi, next includes ideas from the visual arts and film music from police series and films. He tries to unite all these influences in one, workable idea.

Suddenly there is a sharp limitation of the solution space. Nuyts realizes that the ideas in this first phase do not correspond with his personality, with his musical preferences and with the individual musical language that he has developed in the past. He becomes convinced that he has to turn the commission task upside down and find a personal answer to the questions in this commission. Moreover, he believes that analogies between music and visual arts are not productive.

From this moment of crisis onwards, his choices of musical material are based on the musical idea of the 'minimal maximum of difference' (see concepts/work). He creates a strict (almost like an

exercise) progression of chords in phase [3] with tight constraints: the durations are based on a numerical series, the chord progressions are based on thirds or fifths and the the chords alternate between a low and high register (as if there are two chord layers). In a next phase the number of possible chord progressions is raised again and treated more freely but later on in the CP (phase [5]) the melodic material is further restricted: every instrument part will be based on one gesture and take place within a defined pitch range. This limitation is explained by the composer as a consequence of the elaboration of his 'minimal maximum of difference' idea. In the last phase of the CP he widens the field of possibilities again (when he is writing the Prélude and Postlude after having finished the middle section *Trio Principal* of *Divérance*). In the Postlude the patterns and pitch range of the parts are transformed (compared to the middle section) but they operate within this idiom during the whole Postlude.

To summarize, the CP of *Divérance* starts with a gradual widening of the field of possibilities, suddenly disrupted by a crisis and a sharp narrowing of the field, followed by additional small fluctuations between less and more freedom (in the treatment of musical material) in the last phases of the CP.

14.4 Concepts

In general there is a strong link between the discourse of Nuyts on his work *Divérance* and on polyphony, i.e. when he talks about one of these two topics, he often jumps to the other and vice versa.

General

Simplicity and limitations in material are seen as desired characteristics in his music. He wants to avoid sending an overload of musical information to the listener and he tries to focus on essential characteristics while composing. A simple piece of music can hide a complex, multifaceted question. A good performer needs to detect, imagine and play the music behind the easy-looking score. Moreover Nuyts is also fascinated by *short* compositions. To express oneself in a very condensed way, in a minimum of time, is for him a creative challenge.

Nuyts also likes the twilight zone between tonal and atonal music. It is still possible to find new procedures and techniques within tonality and at the same time use some known procedures from tonal music without using it as a cliché or deconstructing it. Listeners do not only hear music in an abstract way according to Nuyts, they also hear references to music history, to a complex web of meanings attached to styles and genres. In his works he exploits this associative listening mode. Finally, he also expresses his fondness for switching (fast or slow) between different styles or themes in one composition.

Procedures and techniques

Nuyts likes to compose by taking the given material (from a commission or question for a work) as an important musical starting point. Especially the instrumentation is crucial in the production of a

new work, he wants to write music that fits well with the characteristics and history of the instrument. The appearance of an instrument that was new to him -the viola da gamba- and that has a history of its own, was considered as crucial in finding solutions in the CP of *Divérance*.

Chord sequences based on thirds and fifths occur in previous works, according to the composer, often in an upward or downward movement and these sequences have a very strong inner dynamics, they push the music forward.

Nuyts states that he does not use general systems like twelve tone series, the inner logic of a new composition is more important, i.e. the material for a new composition has to disclose rules and constraints in the CP. While he was composing *Divérance*, he was confronted with the question 'what is unique to this trio, to these instruments', and a composer should follow this inner logic without bothering too much about the consequences. In the case of *Divérance* he applied the unique features of the three instruments: the piano plays chords (with more than 3 or 4 pitches), the gamba plays chords with maximum two notes and gradual dynamics on these sustained chords), the flute plays pitches one by one, in broken chord patterns.

Polyphony

In general Nuyts states that most of his compositions are homophonic, but in some works he has created more polyphonic music. To create simultaneous contrasts it is important that every instrument can display its own identity in a common environment. The characteristics of each instrument are formed by its history and the collection of techniques, gestures and compositions that were designed for this instrument. Thus there is a 'sound world' of a flute, and another of a piano.
Treating an instrument in an idiomatic way and combining it simultaneously with other instruments in a common sound world (where they actually can perform together), is a kind of polyphony for Nuyts and the meaning of this kind of polyphony stands in opposition to the idea to create the greatest possible difference between the voices in the commission. In general there are similarities between the polyphony of Nuyts and classical polyphony where melodic differences (in the voices) exist within an homogeneous texture and a common harmonic framework. In Nuyts' case the differences exist more in the micro-timing of patterns and rhythms than in melodies. One could also see a link with minimalistic and repetitive music -e.g. of Steve Reich- where time shifting techniques take place within an homogeneous texture and a common harmonic framework.
Apart from creating simultaneous differences over a short time span, Nuyts considers it also important to produce differences over a longer time span and therefor it is necessary to repeat patterns and sections in one composition.

Work

According to the composer *Divérance* is all about the creation of a 'minimal maximum of difference', i.e. the instruments have a lot of musical material in common (tempo, harmony, harmonic rhythm) but they create small differences within this common world. The differences exist mainly in the micro-timing, i.e. every instrument plays a chord based pattern but the timing of these patterns is slightly different. These small fluctuations in timing exist on top of the flow of the harmonic rhythm which -although not regular- creates a sense of playing on and off the beat. At

this point there are similarities with performance practices of pre-classical music and swing music where performers do not play exactly together and create small but important deviations from the common tempo. The second field of difference is the 'release' of these patterns, the pattern of each instrument ends or continues differently. Thus, the composer explains, the three instruments at the same time play the same, and not the same.

The viola da gamba provides another important clue to understand this composition: it has a repertoire of compositions and techniques that fit this instrument well. Through the use of chromatic (triad) chords and the motion of the harmonic rhythm associations with a lamento and sarabande are created, and these are part of the history of the gamba.

Both ideas are combined in the title of the composition: *Divérance* , French for a gentlemanlike bow, sounds similar to 'différence'.

15 Neyrinck: analysed basic themes

15.1 Course of action

Detailed description

[1] The mapping of the compositional process is quite straightforward in the case of Neyrinck composing *Aphorisme IX*. Until the beginning of January Neyrinck was working on another composition and he says that before this date he didn't think about the new composition *Aphorisme IX*. Then he had an idea to compose a lamento because a close relative had died. There are no sketches of this first idea but the composer says that he played around with this idea on the piano.

[2] Approximately two weeks later comes a next version, written down in a paper draft with almost no corrections. The original lamento idea had one slow tempo, this draft has alternating fast and slow sections. The composer explains this change by describing the lamento idea as a bit too sentimental, and adds that a composition structure built on two alternating tempi would work better than relying on one. Asking explicitly in the interviews for more details about the lamento idea and for other ideas or versions delivered no additional information. Ten days later, he makes a digital copy of the previous one, transcribed into notation software.

[3] The next two versions were made three months later, after the first performance and because a second performance was planned. Again they contain no fundamental changes but refinements, according to the scores and to what the composer says in the post-interview and in emails. The viola da gamba is substituted for the cello but the part itself is left almost unchanged. To improve the resonating quality of the piano, some chords are thickened, transposed an octave higher or their dynamic level is adjusted.

15.2 New elements

Neyrinck refers to two (technical-instrumental) details in the piano as being new: first, a pizzicato secco on the strings of the piano, thus playing a short pizzicato on the strings and second, a 'death stroke' (also on the strings of the piano), in the score the composer describes this as “play pizzicato and mute immediately with the same finger.” Both new techniques are used while the lower keys of the piano are pressed and a resonance (of previous notes and chords) is sounding.

Neyrinck had not written for the viola da gamba before, he did know this instrument well and he searched for extra information. Initially he wanted to contact the gamba player to get acquainted with the instrument but this meeting never took place.

15.3 Constraints

In the CP of *Aphorisme IX* there is not much evolution in the constraints and limitations that the composer has set out for himself. Very fast in the CP -after he abandons the lamento idea- he (unconsciously) limits his activity field to known terrain, to the field that he knows and has experience with. From that moment on he no longer steps outside this field, partly because he does not wish to do so for artistic reasons and partly because he doesn't feel experienced enough to use other artistic procedures and goals.

15.4 Concepts

General

Neyrinck does not talk extensively about global concepts or ideas on his music. He does give a list of themes that recur throughout his works or that fascinate him: he is attracted by the brevity of a composition, he is fascinated by piano resonances and by creating several layers of these resonances on top of each other; as a composer and pianist he struggles with the question of how to write (something original) for the piano because this instrument has such a large history and repertoire; and, finally, he considers the relation between different sections of composition as very important.

Procedures and techniques

Neyrinck talks and explains a whole number of techniques and procedures, this is an overview:

- the use of tempo contrasts and tempo relations between sections to structure a composition; often there is an evolution that the sections with a slow tempo gradually become even more slower, while the faster sections grow faster
- the use of instrumentation to shape the different sections in a composition, a different instrumentation also creates a different density for each section according to the composer
- the creation of a sound texture in which the instruments blend together and the creation of small differences within this overall texture by individual sound events
- the technique to create resonances (sympathetic strings) on the piano by holding down certain keys, including a special technique to use a small (malleable) lead block to hold down specific keys
- the specific way of composing for the flute, and the cello (used for the gamba)
- the pitch organization (melodic and harmonic): chords and parallel melodic lines based on seconds, augmented fourths, an sevenths
- the composition procedure to establish a time scheme (with sections) at the beginning of the creative process
- the procedure to think about the instrumentation and overall texture for every section, next fixate 'points' (in the score) in advance where there will be common chords or changes in the texture and instrumentation, and next fill in (notate) the space in between these points;

> when he has fixated these points, he looks forward and backwards from every point: how the music should arrive at and evoluate from that point

What is striking in the explanations of the composer, is that almost all these techniques are situated within his oeuvre, often these links are rather general like:

> ik moet zeggen, het idee is iets wat ik in andere stukken ook al gebruikt heb, van die tempo's, die contrasten in die tempo's en de verhoudingen van snelle tempo's en trage tempo's en het werken met een versnelling in de snelle tempo's en een vertraging in de trage tempo's waardoor dat je een soort van boog, waardoor je een soort van extremer effect krijgt, dat is iets dat ik ook al in andere stukken heb gebruikt eh dus eh, ja (pre-interview 00:09:20)

But at least eight times he makes a technical or procedural link between the current, short composition and a specific older composition:

> ahja, de gegevens gelijk bijvoorbeeld: de manier van tempowerken, de manier van een soort van generaalklank te gaan creëren, in de trage gedeeltes in het stuk dat ik voor Nadar geschreven heb voor Transit, dat einde is iets heel gelijkaardigs, natuurlijk met een ensemble, maar heel gelijkaardig, die tempo ideeën van die snelle tempo's en die trage tempo's die uit elkaar gaan, zit ook in het werk dat ik voor I Solisti del Vento geschreven heb -Gestalt 1 is dat-, dat zijn allemaal dingen die aanwezig zijn, het idee van die Aforismes en die miniaturen zit in die pianostukken met die loodblokjes en met die resonantie lagen ehum, dat zijn eigenlijk allemaal elementen die aanwezig zijn, (pre-interview 00:26:17)

Polyphony

Neyrinck likes to create one overarching, imaginary instrument from the different instruments that are used in a composition, blending the timbres into one sound is crucial. Within this 'total sound', instruments can create different sound, whether this is considered as polyphony or not is less important. To the question “Do you sometimes work with separate lines?” he answers: “I don't think I would do these kind of things.”

Work

The discourse of Neyrinck on *Aphorisme IX* resembles a musical analysis of this work. He explains that there is one overall sound (or meta instrument) based on piano resonances and the structure is built on alternating sections with a fast and slow tempo, each having a predefined duration. In the slow sections he tries to obtain a distorted sound, consisting of noise-like sounds with less pitch, within the reverb or resonance of a piano chord. In the faster sections the viola da gamba and flute parts are grouped together. The piano can be seen as having two layers, i.e. the resonances (mainly used in the slow sections) and the 'usual' piano sound, produced by playing on the piano keys or inside the piano (used in both the slow and fast sections).

16 Smetryns: analysed basic themes

16.1 Course of action

Detailed description:
[1] Smetryns received the commission to write a short composition on the 27th of October 2011. In the period from November 2011 to the middle of January 2012 he was also composing a work for the Ictus Ensemble titled 'A portrait of Harry'. In the pre-interview Smetryns says that a few weeks after the initial email he had the *Point and Line to Plane* idea, inspired by the book of Kandinsky that he had read years ago. He did not reread this book but he just remembered it. The idea/image consisted of one instrument representing the 'point', a second one the 'line' and a third the plane. Simultaneous with this idea he thought about making a different notation system for every instrument, a strict notation (conventional music notation), a free, graphical notation and a relative notation. The timing in the last notational method depends on the other instruments, e.g. it has synchronization cues starting from a fragment in another part. Possibly the idea (and sketch) with three different dynamics originates from the same period.

[2] During the next months he sporadically thinks about this image now and then. He has some new ideas but they are all rejected e.g. he imagines giving every part a different musical style but this may result in an grotesque and unpleasant work according to the composer.

[3] Between the 2nd and 19th of February Smetryns starts to compose the new work by making a sketch which is an overview of his past ideas (see phase [1]). There is also a triangle with three contrasting dynamic systems on this sketch: very soft – very loud – different alternating extreme dynamics. Next he starts writing the piano part based on clusters (he performs the piano part on a piano and checks the timing with a chronometer in his mobile phone). Next he notates a first draft of the flute part, the soft chromatic lines in this part follow the curve of the decaying piano sounds. But then he considers making the flute part more sophisticated. He tries out a melody based on a literal conversion of letters to pitches, uses a text from an other composition in development *Text Piece #1*, and possibly thinks about the polystylistic idea again (see [2]). In the end he rejects these new ideas because they obscure the line-point-plane idea and refines the existing flute part with crescendos, diminuendos and bisbigliandos. Then he makes the graphical score for the gamba player, he describes it as a kind of imitation of a *Variations* of John Cage piece. Finally, he creates a digital copy of the piano and flute parts (with minor adjustements in the flute part, e.g. transposing an octave higher in one fragment and using a ppp dynamic in stead of pp throughout the flute part). He also produces a neat paper copy of the graphical score for the viola da gamba with one important change: the lines can now be read starting from both sides of the line

16.2 New elements

The combination of a graphical score and a fully notated, 'usual' music score is new for Smetryns. It is the first time that he has realized this in a composition and this is important to him. He likes to give the performers a lot of responsibility and creativity by making graphical or open scores but he has learned that some musicians and ensembles do not like this.
He knew the performers in advance and mentions that the gamba part -the visual score- was really written for the gamba player, with whom he has collaborated often in the past.
As expected, the gamba was not a new instrument for him, he has written music for it in the past.

16.3 Constraints

During the first two phases (see the previous course of action) of the CP of *Point and Line to Plane*, a gradual restriction of the solution space takes place. Smetryns imagines musics to realize his *Point and Line to Plane* idea and through this process he starts to realize which kind of music doesn't fit with this idea and which music he doesn't like. For example the solution with different, simultaneous musical styles leads to the conclusion by the composer that he has aesthetic objections against this solution, won't use styles outside of contemporary-classical music and that the parts won't be based on a clear, regular rhythm.
In the next phase [3] the constraints are linked to a more detailed elaboration of the main idea. The composer rejects or accepts new ideas based on this main idea. But the use of constraints is not strict in this phase, the composer allows new ideas or adaptations of existing ones to enter his mind, especially while composing the flute part.

Thus, the general tendency in the CP of *Point and Line to Plane* is one towards more restriction of the musical material, but this trend is not straightforward, fluctuations in the treatment of constraints take place during which the composer steps outside the solution space.

16.4 Concepts

General

Smetryns doesn't say much about concepts or ideas that are important for his music and that transcend his short composition Point. Giving enough freedom to the performer is something that is important for him. This means that the performer can shape the form and development of his part in the score. But Smetryns received as much appreciation as critique on this attitude. Therefor, in recent years, he has also started producing fully notated scores.

Procedures and techniques

The procedures from phase [3] of the CP are described in detail by the composer. He states that the work was built up from the piano part that was tried out on the piano. He realized that the resonance time is different for high and low clusters, thus he created a sequence of clusters that ensured that during the whole duration of the

piece the piano would be resonating. He also wanted to use the whole pitch range of the piano because of the analogy with the plane (form the main idea). He measured the duration of the clusters with a chronometer and this timing was used in the next step to create the flute part (the 'line' from the main idea). He tested the decay time of the clusters and estimated when the dynamic would be soft enough for the flute part to appear out of this resonance. He made the flute lines match with the sequence of clusters. Then he created the graphical score for gamba part. Thus, in general, he concludes, Point and Line to Plane was constructed upon the clusters in the piano part.

> eigenlijk heb ik dat stukje opgebouwd vanuit de piano, vanuit die vlakken, kheb die clusters gezocht en euhm gewoon gezorgd dat er zolang mogelijk zoveel mogelijk klank uit die piano komt, met die lage clusters en dan die hoge en dan heb ik daar de fluitpartij eigenlijk, vanuit die cluster heb ik dan die fluitpartij gemaakt omdat die daar op aansluit, die haakt daar dan zo ergens op in, en dan daarna de viola da gambapartij. (pre-interview 00:32:00)

Finally, he spent quiet a lot of time on making a digital copy of the piano and flute parts.
There is not much information on procedures or techniques in the first two phases of the CP. He has spent time on 'thinking' about the piece, this is the only information that he gives.

Polyphony

It is clear that differences between the voices and the related polyphony are not central issues in Smetryns his artistic interests. The concept of polyphony, consisting of independent, simultaneously contrasting musical layers -explained in this way by the interviewer/researcher-, is considered too analytical and technical by him. He does pay attention to the different approaches of every performer towards the composition and the score on the one hand, and the relations between the performers on the other. In a less musical-technical sense this could also be seen as a kind of polyphony.

Short composition

There is some overlap between Smetryns' general concepts about his music and his discourse on his composition Point. Giving enough freedom to the performer is an influential idea for the genesis of this short composition. The viola da gamba performer can shape the form and development of his part in the score. He also created three different approaches towards the music parts by transforming these approaches into different notation systems for the three instruments: a strict notation (fully notated as usual in classical music), a free, graphical notation and a 'relative' notation, an instrumental part whose timing depends on another part.
Next, the visual idea of three basic forms -line, point and plane- are important to understand this short composition. These basic forms are not translated literally from visual arts to music, they function as a source of inspiration for the whole composition: the piano creates a 'plane' by filling up the whole pitch range with clusters, the flute produces soft chromatic lines in the shadow of this plane while the gamba plays short, separate notes. The piano and flute function as a duo within this trio because their timing depends upon each other. Finally, the composer has also tried to create contrasts on a dynamic level between the three instrument parts: the piano clusters are (very) loud, the flute is pianissimo (in the decaying piano sound) and the gamba switches loud and soft sound events.

17 Van Landeghem: analysed basic themes

17.1 Course of action

Detailed description:
[1] Jan received the commission to write a short composition on the 23rd of November 2011. In the period from November 2011 to February 2012 he was also composing a marimba concierto. He remembered trying out a first sketch after he had received this question, but the sketch got lost (and from the interviews it is not 100% sure if this sketch really existed, sometimes this sketch is confused with the one described in the next phase [2]). From the beginning on he was thinking about creating layers that are rhythmically independent as in Carnatic music.

[2] Just before the Christmas holidays he makes another sketch and during these holidays he now and then thinks about it. This sketch also got lost. He remembers that the gamba was playing harmonics while the piano had a very low, rumbling part. He rejected this sketch/idea as being unproductive.

[3] On the 6th of February 2012 he starts to work again on his short composition. By this time he has finished the first two parts of his marimba concierto. In a digital music notation file he writes down the prime series (twelve original, transposed versions of the tone row) and its twelve inversions, retrogrades and retrograde-inversions. In another digital music notation file he writes down five short musical ideas/fragments. The first idea consists of two hexachords derived from the twelve tone series, the following four ideas are similarly based on the pitch material from this series. The last idea is different because it is mainly a rhythmical idea (with only one pitch). It has three different rhythmical patterns on top of each other and the pattern names (from Indian music) are notated by the composer.

[4] Now the first draft of the composition *Yantra* (at that moment still titled 'Mantra') is produced. Some of the five ideas are present in this version in a slightly modified way. The composer indicates that he started composing by writing the (pattern for) the gamba first. The opening section uses this gamba pattern together with ideas from the exploratory sketch (described in [3]). From bar 19 on new elements start appearing, i.a. triads in the left hand of the piano and the combination of whistle tones in the flute and glissandi on the harmonics in the gamba. Together with an A major triad this last element forms the climax of the piece, followed by a very short coda.

[5] On the 7th of February 2012 Van Landeghem writes the final draft by revising the previous draft. Compared to this first draft (described in [3]) the gamba part is almost unchanged, in the beginning two triads are added to the piano (left hand) part, two bars in the middle section are changed more profoundly and the coda at the end (with the combination of whistle tones in the flute and glissandi on the harmonics in the gamba) is extended from one to three bars. In general

the modifications create a more balanced structure of an initial 'steady-state', followed by a gradual crescendo, growing to a climax and a decrescendo in a coda.
When this short composition *Yantra* is finished, he continues working on the marimba concierto, he composes a third part and next uses an arranged and orchestrated version of *Yantra* (now entitled *Notturno*) as a middle section of this concierto. He also adds parts and procedures from *Yantra/Notturno* at other sections in the marimba concierto as a unifying element.

17.2 New elements

The viola da gamba was a new instrument for Van Landeghem as a composer. He expects that the balance between the gamba and other two instruments will be difficult to realize. While composing he has decided to give the gamba 'double stops', he describes this as a kind of 'natural amplification' to ensure that the gamba will sound loud enough. When he wrote the first draft of Yantra (phase [4] in the reconstruction of his course of action), he purposively started by writing the gamba part because this “was his biggest problem child.” He also made sure that the gamba played in a separate pitch range to ease the perception of this part. Together with a gamba player (the gamba teacher in the same conservatory where Van Landeghem teaches) he tried out the gamba part, particularly the double stops.
According to Van Landeghem it is the first time that he reuses an existing composition of his own in another composition (he is referring to the use of *Yantra* in the marimba concierto). In the past he had already re-applied existing ideas and systems in other works but never whole sections of music.

17.3 Constraints

In the interviews with Van Landeghem it becomes clear that the composer has a set of musical preferences to which he is strongly attached. At different moments in the interviews he describes 'bruitism' and 'working with noisy sounds' as 'a different world' or as being 'against his individual nature'.

Because one -and possibly two- sketches are missing in phase [1] and [2] and the description of these sketches is basic in the interviews, it is impossible to describe the evolution of the musical constraints in these phases with certainty. But if his strong statements on his musical preferences are combined with the explanation of the rejection of these first sketches, this becomes a plausible evolution of the constraints in these phases: from the beginning on he starts to work within his musical preferences, thus immediately major constraints are set, next he excludes spectral music -of which he also seems particularly fond according to the interviews- because by making the sketches he realizes that a spectral music sketch can't lead to a *polyphonic* work.

In the following phases [3] and [4] of the CP more restrictions are added: the use of 12tone series and Carnatic rhythms. In the last phase of the CP some of the rule systems (e.g. the carnatic rhythms) are treated more freely, partly for structural reasons (he wants to create a development leading to a climax followed by a coda) and partly because he becomes enthusiastic about the further possibilities of the 12tone series.

17.4 Concepts

General

Van Landeghem often talks about 'polysystematics': he uses different pitch, harmonic and rhythmic systems and combines them in one composition. The fundamental system upon which these different systems are based ensures that there are enough common elements between these different systems. For example, he starts from a 12tone series, derives a hexachord and a modal pitch system from this series. In the combination of these systems the balance between differences and similarities is not only important but it is also dynamic, each system can transform in the course of a composition and thus clashes or conciliations between systems occur. The different systems are often associated with different music styles.
Van Landeghem is also very interested in non-western philosophies and cultures, especially South-Indian culture, yoga and carnatic music and he gives extensive information on these issues in the interviews. This is how he describes his composition philosophy: “What can't be united in ideologies, I try to unite in the arts, a kind of multiculturalism.”
The performability of the music is also important for Van Landeghem. The parts for the musicians must be technically challenging and fit the instrument well. The ensemble music should be fun to play.

Procedures and techniques

1. Van Landeghem often talks about 'polysystematics': he uses different pitch, harmonic and rhythmic systems and combines them in one composition. The fundamental system upon which these different systems are based, is based on 12tone series and it ensures that there are enough common elements between these different systems. Next he starts from a specific 12tone series, derives a hexachord and a modal pitch system from this series.
Separate instrument parts or layers are based upon different pitch systems (although these systems are derived from the fundamental 12tone row).
2. In his drafts there is an indication that he plans the timing of the pitch series in advance. In the first draft the composer notates remarks about the construction material in certain bars, e.g. 'hexachord' in bar 12 (first draft) when he uses a pitch system in the piano based on the first hexachord of the 12tone row. In the gamba part 'inversion + rotation sul C' is copypasted four times in the second half of the piece but this does not correspond to the actual pitch series. Thus, this probably indicates that before he started to compose or while he was composing the first bars of the gamba part, he planned to use a new permutation of the 12tone row at the indicated bars.
3. Van Landeghem clearly says that he started composing by writing the gamba part, thus he didn't compose vertically by writing the three parts simultaneously.
4. Twice he refers to composing 'backwards'. In his second example, it is clear that this does not automatically mean than he composes a future point in advance and next composes music from scratch until that point. The second example is about bar 12-13 in the second draft (phase [5]), these bars are very different in the first draft, thus he knew from the first draft where to arrive (a major G triad, functioning as a climax) and reworked the existing version of these bars into a new

one. Thus, in this case, composing 'backwards' is a kind of revising or rewriting activity of a previous version.

Polyphony

Van Landeghem uses a specialised language when talking about polyphony and related issues. According to him it is important to ensure that every instrument is perceivable in polyphony, transparency is crucial and it ensures that all partners can be equally important. Polyphony is also about separating voices as in the first part of his composition *Yantra*, in the end of this composition -the coda with the bell chord- he mixes the instruments and thus states that this isn't polyphony. He call it micropolyphony but explains that this term includes the notion of mixing voices. If one would for example write a piano note as an attack for a sustained note of the gamba and the flute would add an harmonic, the idea of autonomous voices is missing and Van Landeghem would call this a 'colourpolyphony' or 'attackpolyphony'.

Work

Van Landeghem describes his composition *Yantra* as having different melodic, harmonic and rhythmic systems in the beginning. Gradually the number of commonalities grows and in the end these systems are united in a 'bell' chord, a coda which resembles spectral music. He dwells extensively on the details of these systems and on the links and interactions between the various systems. He also refers to Indian philosophy and states that *Yantra* is a visual representation of a mantra in yoga. Occasionally he also describes the instruments as characters or personages and the systems as languages. Finally, in the composition *Yantra* he ensured that every player can show and develop the characteristics of the instrument and the performance practice peculiar to this instrument. He sees this as potential self-realisation of the performers.

18 Vermote: analysed basic themes

18.1 Course of action

Detailed description:

[1] Vermote writes down the main task of the commission (“the three voices should be as different as possible”) plus a list of the practical requirements on a paper sketch. In the Christmas period she starts to explore ideas related to the task. She writes two pages with short text notes and one drawing, there is no music notation.
The first page contains more 'general' questions (such as “how to create differences between voices?”) and ideas (a.e. specific pitch intervals per voice). Although the second page has ideas that are more detailed and elaborated per instrument, e.g. flute seventh intervals, piano clusters,..., it remains a rather loose collection of ideas. At the end of the second page, there is a short note about constructing 'three characters':

- flute: movement
- gamba: lyrical
- piano: sharp and ironical

[2] A few days later she makes the first music sketch (a digital music notation file which got lost afterwards). She describes this sketch as an 'anti-version': the flute was playing in the low pitch range, the gamba in the high range. The main idea in this sketch was to treat the instruments in an unconventional way, opposed to their construction.

[3] Next she thinks about using spectral analysis and a derived pitch scale to construct clusters, she notates the idea briefly on a sketch. She also has an idea to combine a tonal melody in the gamba (with a lamento character) with the other two instruments but she doubts whether a tonal melody can be perceived simultaneously with two other atonal layers.

[4] At the end of January 2012 she thinks about combining a 'brilliant' flute with a piano playing percussive, non-pitched sounds. The idea was triggered by a concert that she attended but it is rejected later on.

[5] Around the first of February she starts to compose *Skizze* in the notation software Sibelius, many ideas of the sketches from the previous phases (partly) re-appear. In general she writes *Skizze* sequentially from start to end without much signs of revisions. There are two backup files of the final version but these are mainly incomplete versions of the final version. The digital sketch 1 has exactly 18 bars -just as the final version- although the large part is filled with rests. This sketch contains very few indications about dynamics and phrasing while in digital sketch 2 and the final score these indications are notated fully.

From the digital sketches 1 and 2 it is clear that she writes linearly (instrument per instrument) in sections, i.e. the gamba has only three bars in the digital sketch 1 while the two other instruments continue for another 3 bars; in digital sketch 2 the gamba is filled in and at the end of this version it continues alone for 3 bars. In the final score there are three small changes exactly at the point where she had stopped writing the gamba part in the digital sketch 2 (indicated by the red rectangle in the figure). Finally, she recognizes that the three parts have a distinct character and she decides to write three different character descriptions on the score (brillante, sempre dolce, ironico).

18.2 New elements

For Vermote it was the first time that she notated her music sketches immediately on the computer (using music notation software) in stead of on paper. She explains that a previous composition with live electronics may be the reason for this change. She had been using the computer very intensively for one of her previous compositions *Tubi di Canto*.

Vermote did not know the gamba before she started composing Skizze. She has searched for recordings of the gamba during the CP and while composing she concentrated and tried to imagine how it would sound, especially in the lowest regions.

18.3 Constraints

From phase [1] to [4] in the CP of *Skizze*, the field of possibilities in which Vermote explores her ideas for the future composition, remains very open. In phase [1] the constraints are open and they grow a bit tighter while writing down her first (text) sketch: there is an evolution from page 1 to page 2 in this sketch to a more focused set of musical parameters. After phase [1] the constraints become wider again and parts without pitch are included. The reasons why she rejects certain ideas are partly based upon her vision on polyphony and the task (see further, concepts/polyphony) and partly upon difficult, unsolvable problems these ideas brought up. For example, it seemed impossible for her to create some kind of development in the instrument parts of the 'anti-version' (phase [2]) or another example: she couldn't find a convincing role for the gamba in the 'brilliant flute' idea (phase [3]) where there is a dual contrast between the flute and the piano.
In phase [5] suddenly there is a narrow scope of solutions. Every part has a limited number of intervals and motives that are used throughout the whole composition.

18.4 Concepts

Concepts – general

In general Vermote her discourse about music is technical and down-to-earth. No emotional, aesthetic or philosophical narrative about her music is found in the interviews and emails. She describes herself as a composer that is mainly working with abstract, musical material.

> dat is dan misschien puur muzikaal technisch, maar bij mij is dat toch altijd een grote inspiratiebron en een uitdaging, want eigenlijk heb ik geen buitenmuzikale inspiratiebron, niet bewust, je hebt mensen die als ze droevig zijn, gaan schrijven, ik heb dat niet, bij mij is dat puur abstract, dat is natuurlijk is dat emotioneel aanwezig, maar ik vind het gevaarlijk als je daar bewust mee begint om te springen, bij mij is de grootste inspiratiebron, puur muzikaal technische, de klankmatige, de procesmatige, de klankmatige, die spectraal, allez het puur fenomeen van klank en dat ge daar dingen kunt uithalen en isoleren en dan nog met Audiosculpt, sculpt dat ge nog kunt zien wat ge doet en dan lijntjes kunt in snijden, ik vind dat fantastisch, dus de pure materie, laat ons zeggen, de ambacht, al die etherische zever, die is er misschien ergens wel onbewust, da's niet altijd zever, maar als ik, ik denk dat als ge daar mee begint, dan kunt ge beter schlagers gaan schrijven (pre-interview 00:58:04)

She stresses the importance of feelings like fun and joy, when she is composing or exploring sound material.

She likes to compose by taking the given material (from a commission or question for a work) as the musical starting point. Especially the instrumentation is crucial in the production of a new work. The appearance of an instrument that was new to her -the viola da gamba- was considered an interesting challenge by her while composing *Skizze*.

Vermote explains that there are two musical features that fascinate her enormously while composing: timbre and simultaneous layers ('lines') of sound.

Procedures and techniques

Vermote explains that she composed *Skizze* in a linear way: she wrote a few bars for one instrument, next she filled in the same bars for the following instrument. On the one hand, she was often thinking about creating contrast between the voices and on the other, she was attracted to anything musical (in an instrument part) that caught her musical attention, while composing in this linear way. No instrument part was systematically the first in this procedure but she does think that the gamba part was often the last to be filled in because this instrument was new to her.
Vermote also states that she works very cerebrally by using her imagination in stead of tools or instruments.

> A: ik ben een vreselijk inwendig mens

> V: mentaal?

> A: ja, ja, dus 't is ook een gewoonte, Jan Rispens zei altijd dat hem dat aan het begin was opgevallen, 'k zeg ja, dat is mijn manier van werken, dat, dus 'k weet niet, met studeren met gitaar is het juist hetzelfde, eerst aan de bureau gaan zitten en dan vingerzetting kijken en gewoon leren, hoe klinkt dat, partituren lezen in het vliegtuig liever dan een boek zelfs, da 's een gewoonte, (pre-interview 00:36:31)

Next, at several moments in the interviews she expresses her fondness of exploring and playing with sound:

> ik ben in die zin, 'k ga niet zeggen een klein kind, maar ik speel daar graag mee en dat is ook denk ik het allerbelangrijkste als je schrijft, je blijft ook met dat ze, dat je denkt van en dan zo weer iets anders proberen, 'k vind dat plezant, en op den duur is het nooit af als ge een keer niet beslist,

> (lacht) (pre-interview 00:42:09)

In general she describes her working (music composition) habits as very intuitive and scattered (in time). If she suddenly has a musical idea, she starts exploring it. Thus it often happens -according to her own words- that later on she has forgotten what she has already done or that she can't remember all the details of her ideas and sketches.

While composing *Skizze*, she started changing her working method: it was the first time that she used the software Sibelius to notate musical sketches, i.e. sketches with music notation which in the past she had written on paper.

Polyphony

Vermote her discourse on polyphony has a lot in common with the 'classical' theory on polyphony: balance, phrasing, accents, rests, alternating onsets (entries) of voices, development of pitch range and dynamics play a important role in creating music in which separate lines can be perceived. She also stresses the importance of an independent evolution or development for every line: by giving a certain style and character to one layer and by continuing in this style for a period, the separate lines become audible.

Work

In the data no autonomous narrative on *Skizze* was found. In fact this narrative overlaps totally with the discourse of Vermote on polyphony and the creation of contrasts between the voices on the one hand, and her descriptions of the applied procedures ad techniques in the CP of *Skizze* on the other. There are moments in the interview when she treats her short composition and the creation of three different layers/voices almost as synonyms:

> dat heeft er weinig mee te maken, maar gewoon puur met het werk zelf, met pure, hoe moet ik het zeggen, differentiatie van de drie stemmen, (pre-interview 00:16:16)

19 Threeway II : score

Threeway II

(2010)

for four instruments

Hans Roels

Instrumentation

Part A

-Any instrument with a short attack and a decay of maximum half a second (or the possibility to stop the sustained tone, for example by lifting the key on a piano or by muting a string on a string instrument)

-Range: MIDI pitch 60 to 91 (2,5 octaves)

Example: marimba, synthesizer, piano, harpsichord...

Part B

-Software synthesizer (provided by the composer as a patch for the open source program Pure Data) and a (keyboard) controller (minimum 5 octaves)

Part C

-Any instrument that has a long attack time and that can play slow glissandi in the pitch range of MIDI pitch 36 to 65 (2,5 octaves). Overall the dynamic should be soft (compared to the other three instruments).

Examples: cello, bass trombone (with mute), software synthesizer,…

Part D

-3 objects that can be hit by the fingers, knuckles or a soft percussion stick and that can produce a dull sound without a defined pitch and without pronounced high frequencies. The 3 objects should sound different. In the score these objects are indicated as '3 objects'.

Examples: table, chair, hard cover book, wooden block,…

-Any instrument with a short attack time and capable of playing softly in the pitch range of MIDI pitch 30 to 34. One can choose to use the piano from part A (as part A doesn't need the low range). In the score this instrument is indicated as 'bass instrument'.

Examples: bass guitar, piano (muted), cello (pizzicato) or guitar with retuned string,...

Any instrument can be amplified to obtain a correct balance.

Synchronization

Each part is played in a independent tempo or timing. Therefor there is no overall score.

Player D uses a chronometer, time indications (at the start of a new episode) are notated in the score of this part. The other 3 players adjust their timing to the entries (of an episode) of part D.

Notations in the score of part A,B and C

XXXXXXXXXXX = 'check point'
The percussion player starts to play a new episode. This entry should take place within the time zone of the notes notated under the XXXXXX. If not, speed up or slow down a bit until the next check point.

...XXX... ='cue point'
Start playing after a number of seconds (indicated in the score) from an entry of the percussion part (player D).

Individual remarks

Part B

A MIDI controller with minimum 4 octaves plus 1 extra high C is needed to play this part.

This part is not notated as it sounds but as it should be played (on a keyboard). Every pitch on the keyboard corresponds to a quarter tone. Midi pitch 96 is the central pitch. The first notated pitch is D and thus should sound as MIDI pitch 97 (2 quarter tones higher than 96).

Part C

This score consists entirely of glissandi. First the starting pitch is given on a normal 5-bar stave. Then the glissando curve is drawn between 3 lines with a maximum range of 4 semitones above and under the middle line (=starting pitch). The 3 lines also indicate the duration of the glissando with a small rest included at the end (indicated by a comma).
All the glissandi on page 1 are played sequentially after each other (while taking care of the 'check points' *see synchronization*), at the end of this block of glissandi there is a large rest (indicated at the bottom of the page). Page 2 consists of a block 6 glissandi played after each other.

Threeway II (instrument A)

Hans Roels

Staccato sempre.
Play with a lot of ritenuti and accelerandi.
Parlando sempre.

instr. A

(10") (11") (12")

p p p f

A

XXXXXXXXXXX

A.

(8") (17")

pp p p

B

XXXXXXXXXXX

A.

(10") (9") (10")

mf p mf sempre

C

XXXXXXXXXXXXX

A.

(9") (10") (8")

p p mf pp

A.

(13") (8") (ca. 17")

mf p

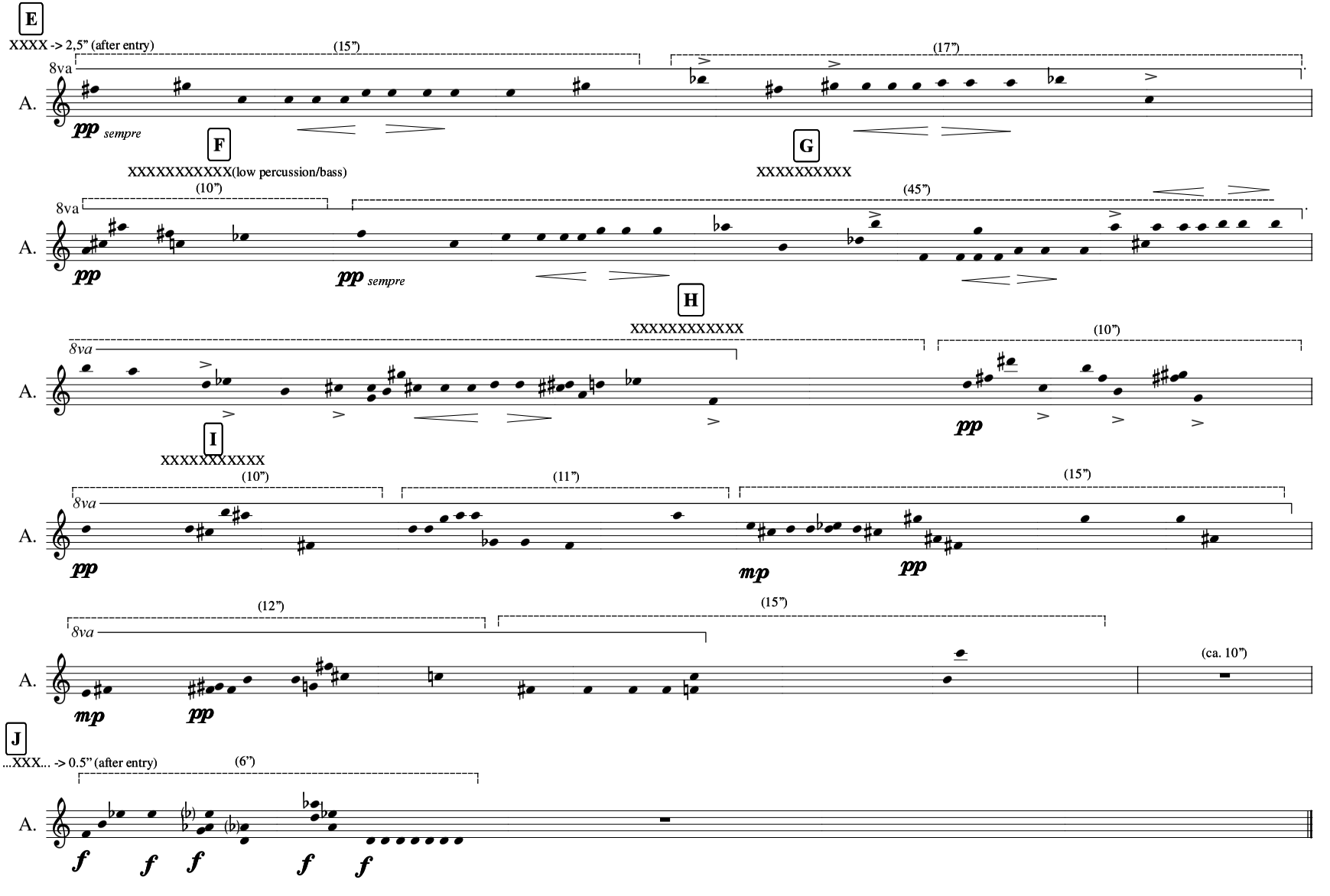
D

....XXX... -> 2" (after perc. entry)

A.

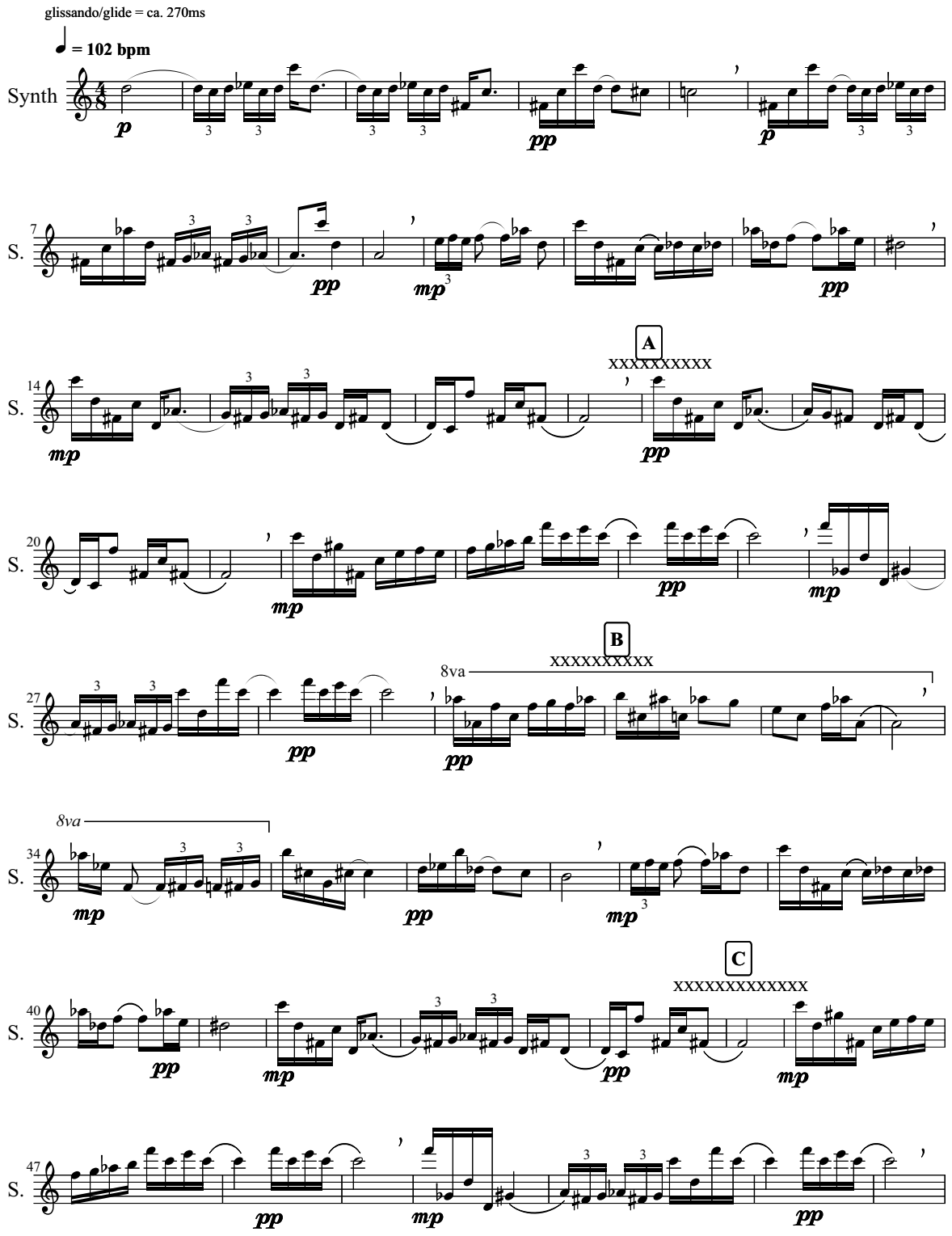
(7") (10") (7") (ca. 5 ")

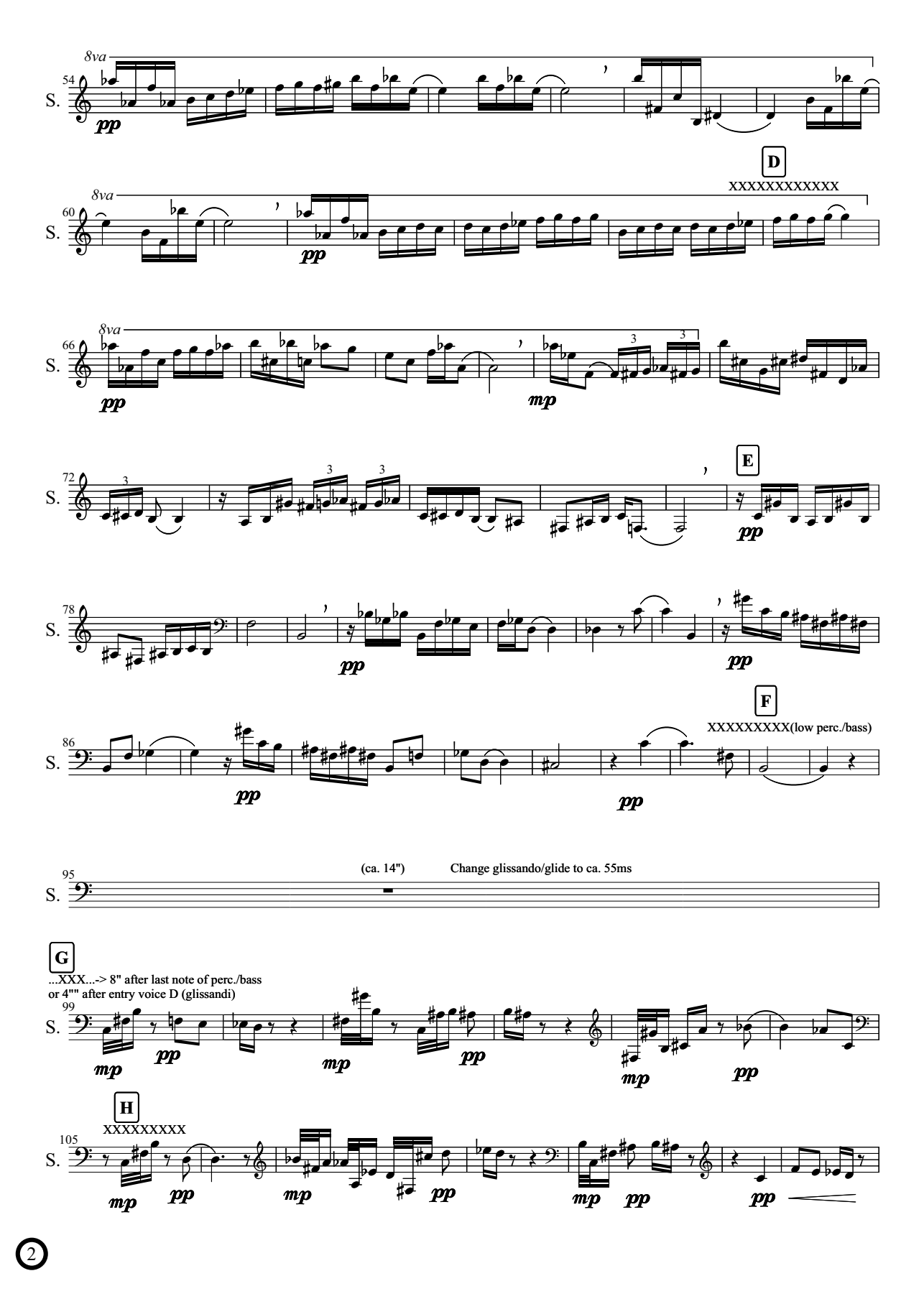
f pp f p f f f f pp

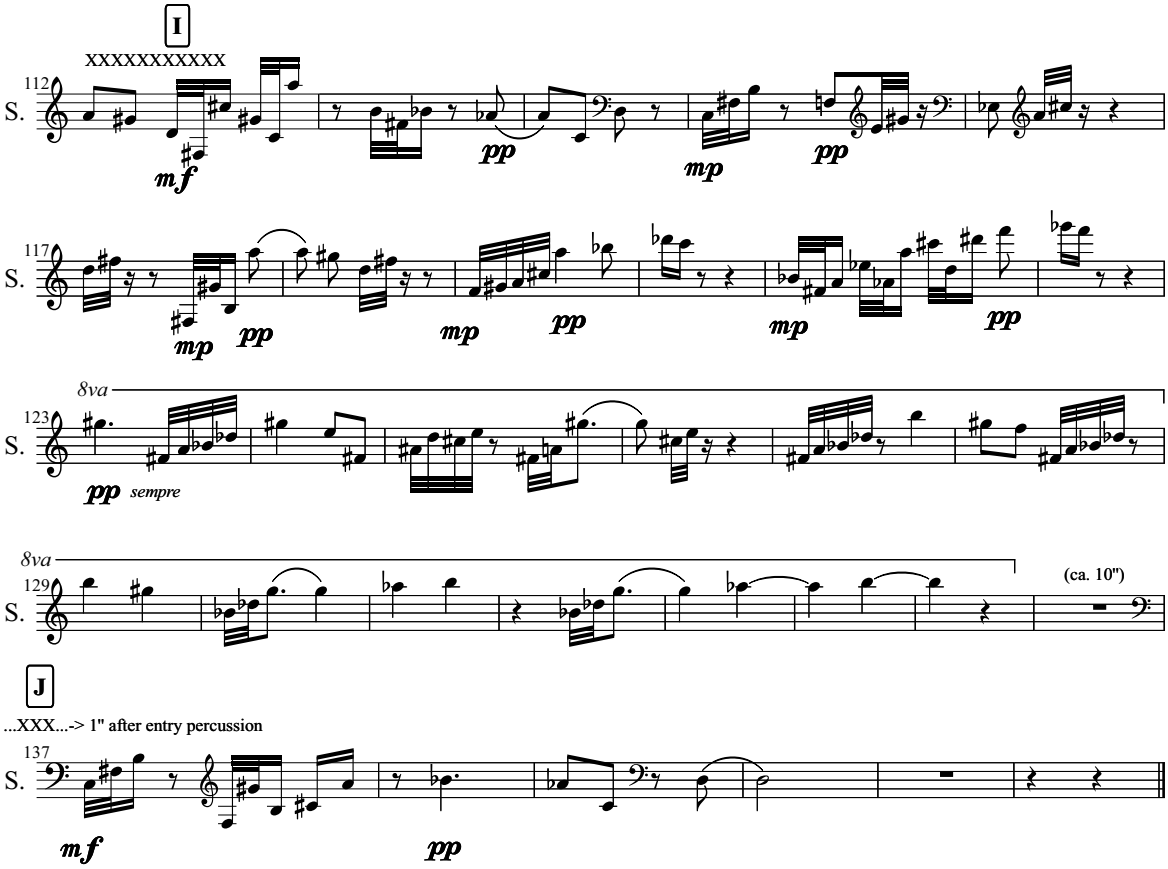

E
XXXX -> 2,5" (after entry)
(15")
(17")
8va
A.
pp sempre
F
XXXXXXXXXXX(low percussion/bass)
G
XXXXXXXXXX
(10")
(45")
8va
A.
pp
pp sempre
H
XXXXXXXXXXXX
(10")
8va
A.
pp
I
XXXXXXXXXXX
(10")
(11")
(15")
8va
A.
pp
mp
pp
(12")
(15")
8va
A.
mp
pp
(ca. 10")
J
...XXX... -> 0.5" (after entry)
(6")
A.
f
f
f
f
f

Threeway II (instrument B)

Hans Roels



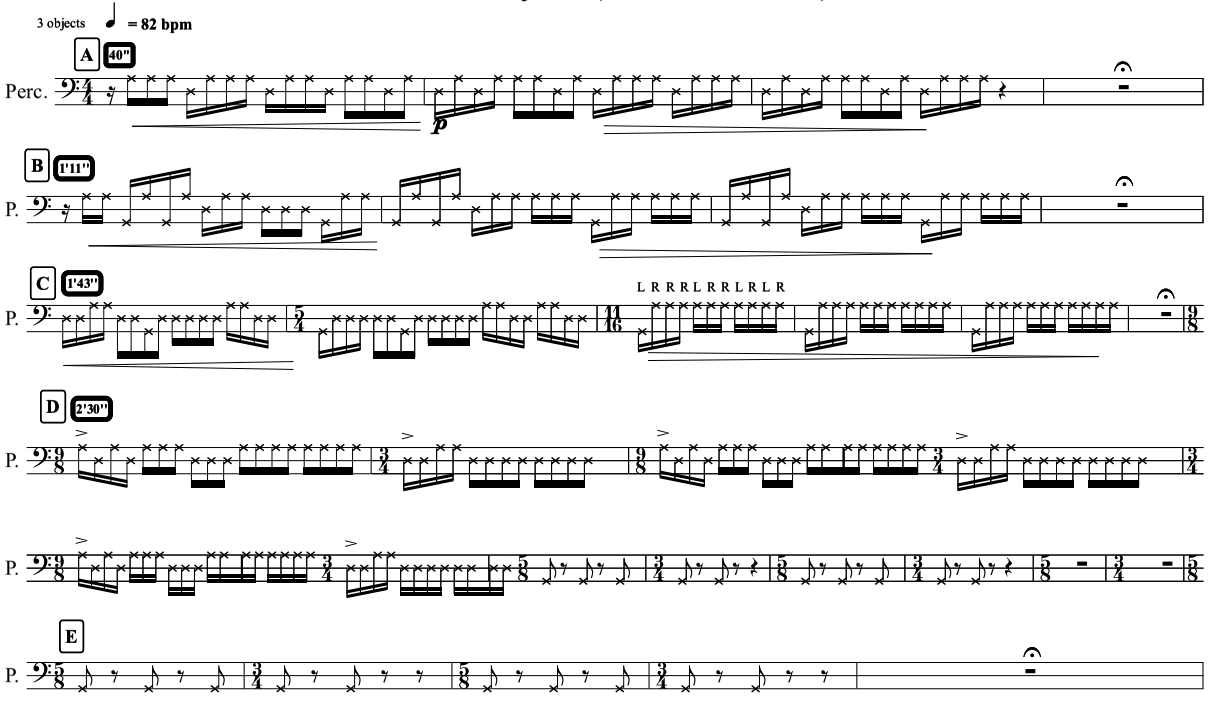

54
S.
8va
pp
D
XXXXXXXXXXXX
60
66
mp
72
E
78
86
F
XXXXXXXXX(low perc./bass)
95
(ca. 14")
Change glissando/glide to ca. 55ms
G
...XXX...-> 8" after last note of perc./bass
or 4"" after entry voice D (glissandi)
99
H
XXXXXXXXX
105

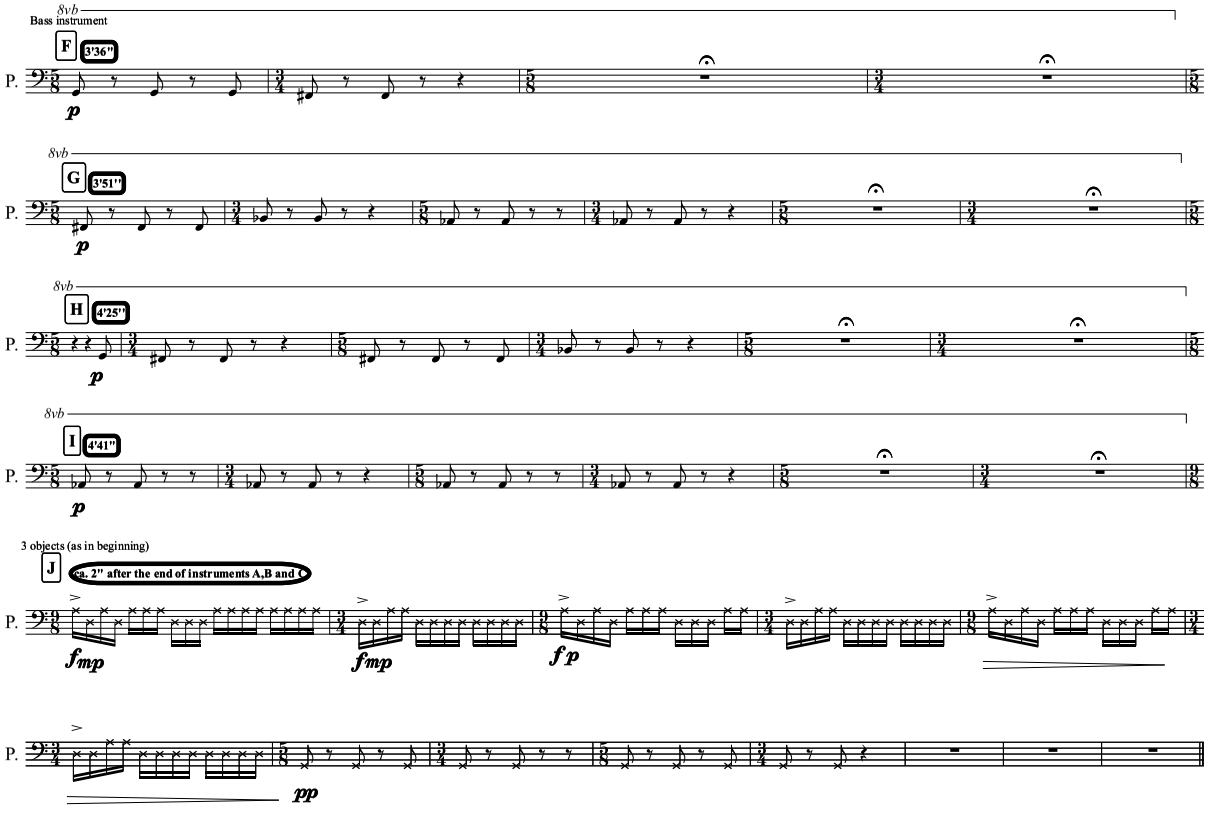

I
XXXXXXXXXXX
112
S.
mf
pp
mp
pp
117
S.
mp
pp
mp
pp
mp
pp
8va
123
S.
pp
sempre
8va
129
S.
(ca. 10")

J
...XXX...-> 1" after entry percussion
137
S.
mf
pp

Threeway II (instrument D)

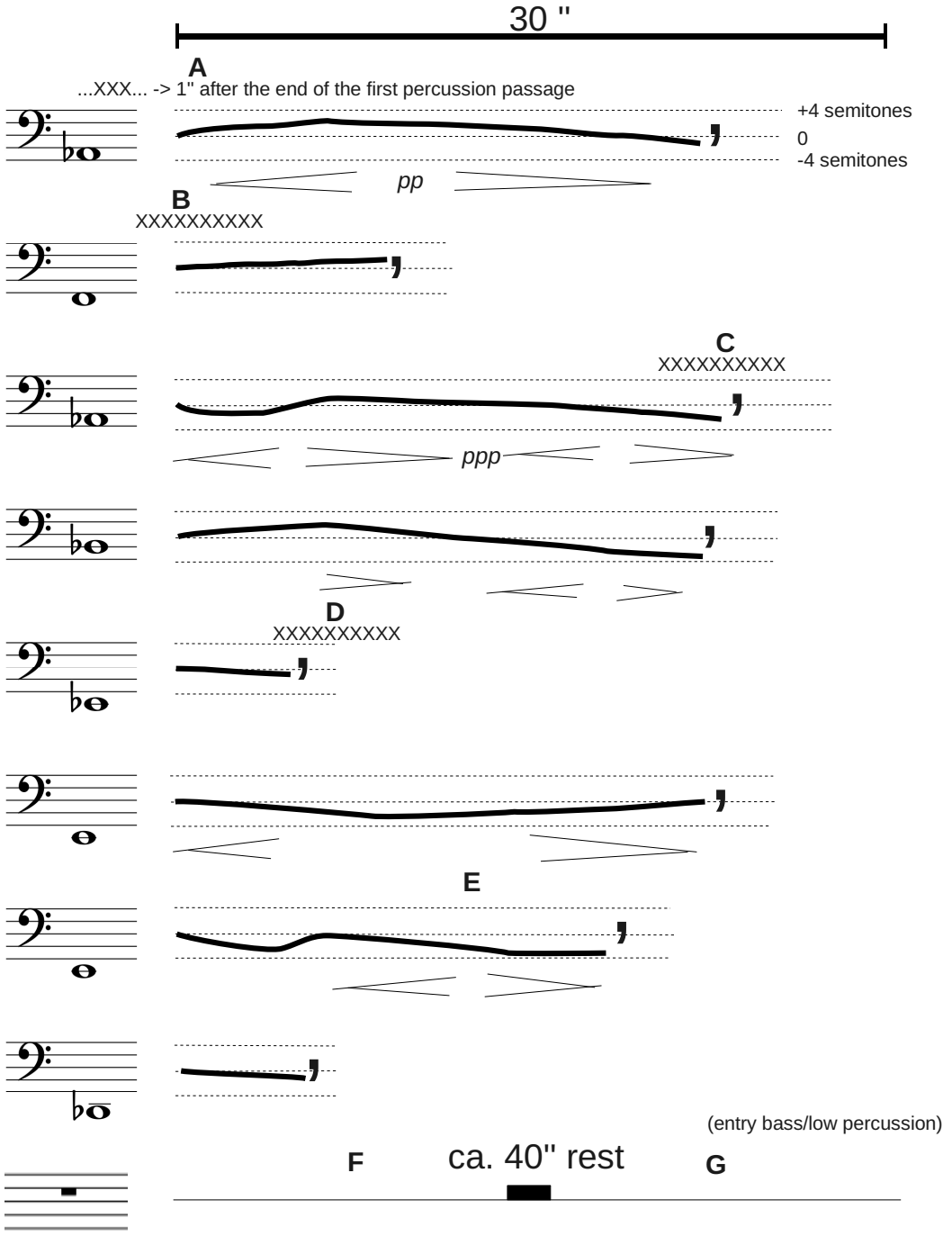
Hans Roels

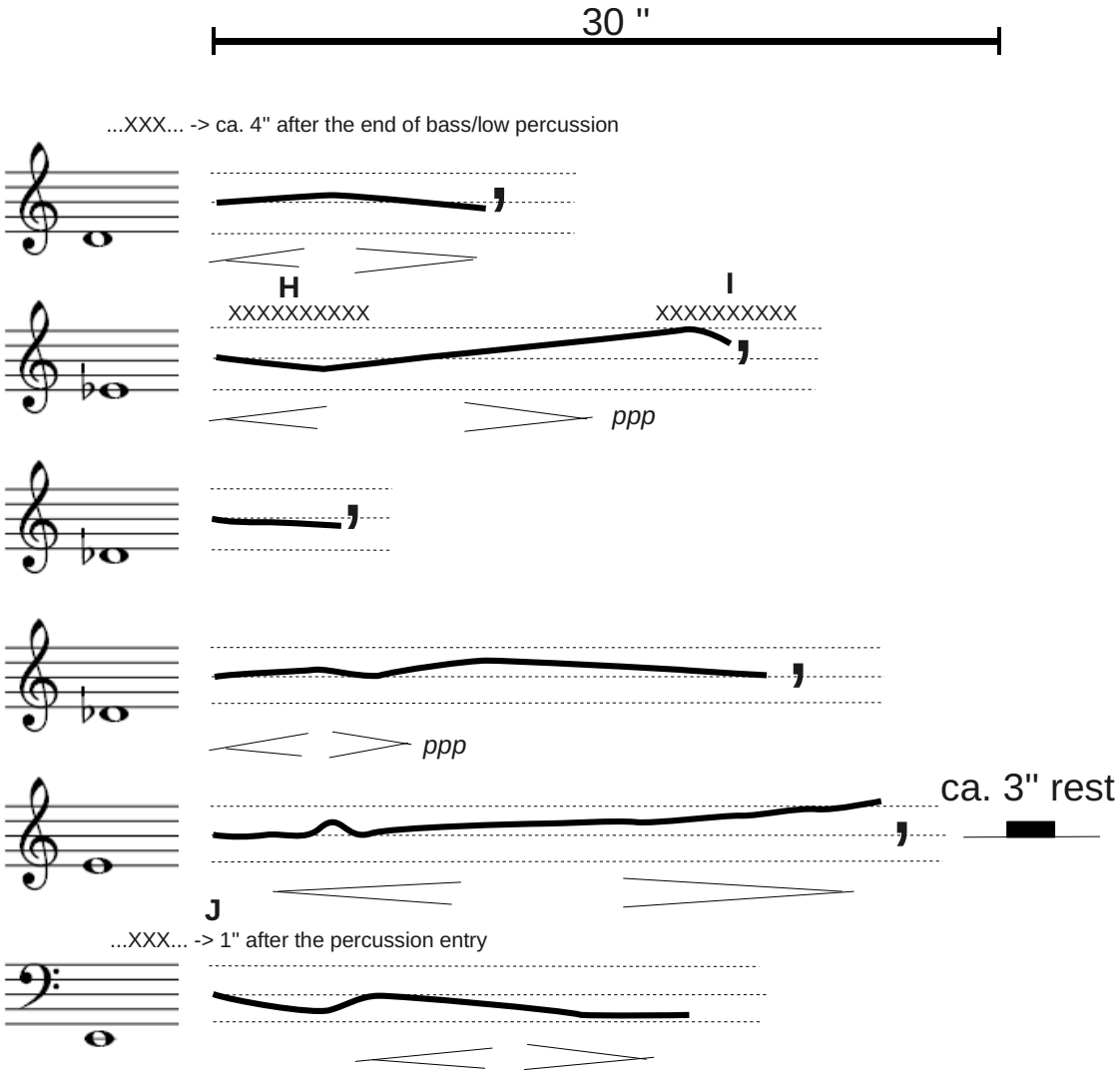



8vb
Bass instrument
F
3'36"
P.
p
8vb
G
3'51"
P.
p
8vb
H
4'25"
P.
p
8vb
I
4'41"
P.
p
3 objects (as in beginning)
J
ca. 2" after the end of instruments A,B and C
P.
fmp
fmp
fp
P.
pp

Threeway II (instrument C)

Hans Roels




30 "
...XXX... -> ca. 4" after the end of bass/low percussion
H
XXXXXXXXXX
I
XXXXXXXXXX
ppp
ppp
ca. 3" rest
J
...XXX... -> 1" after the percussion entry

20 Chunks & Streams: score

Chunks & Streams

2011

Hans Roels

for Zwerm, electric guitar quartet

Chunks & Streams - Remarks

Hans Roels

Key words (notated in a textbox), such as 'parlando', 'harmonics' or 'sostenuto' on page 1, are used to indicate an improvisation style. The first time these key words appear, there are described by a list of words. Try to improvise in a typical and distinct style with clear motives/themes/gestures and phrases. Don't use too much elements in one style and strive for a high degree of unity. If a style is used for a long period, try to create a long-term evolution.

A rest with a circle indicates a rest (silence) for all four players.

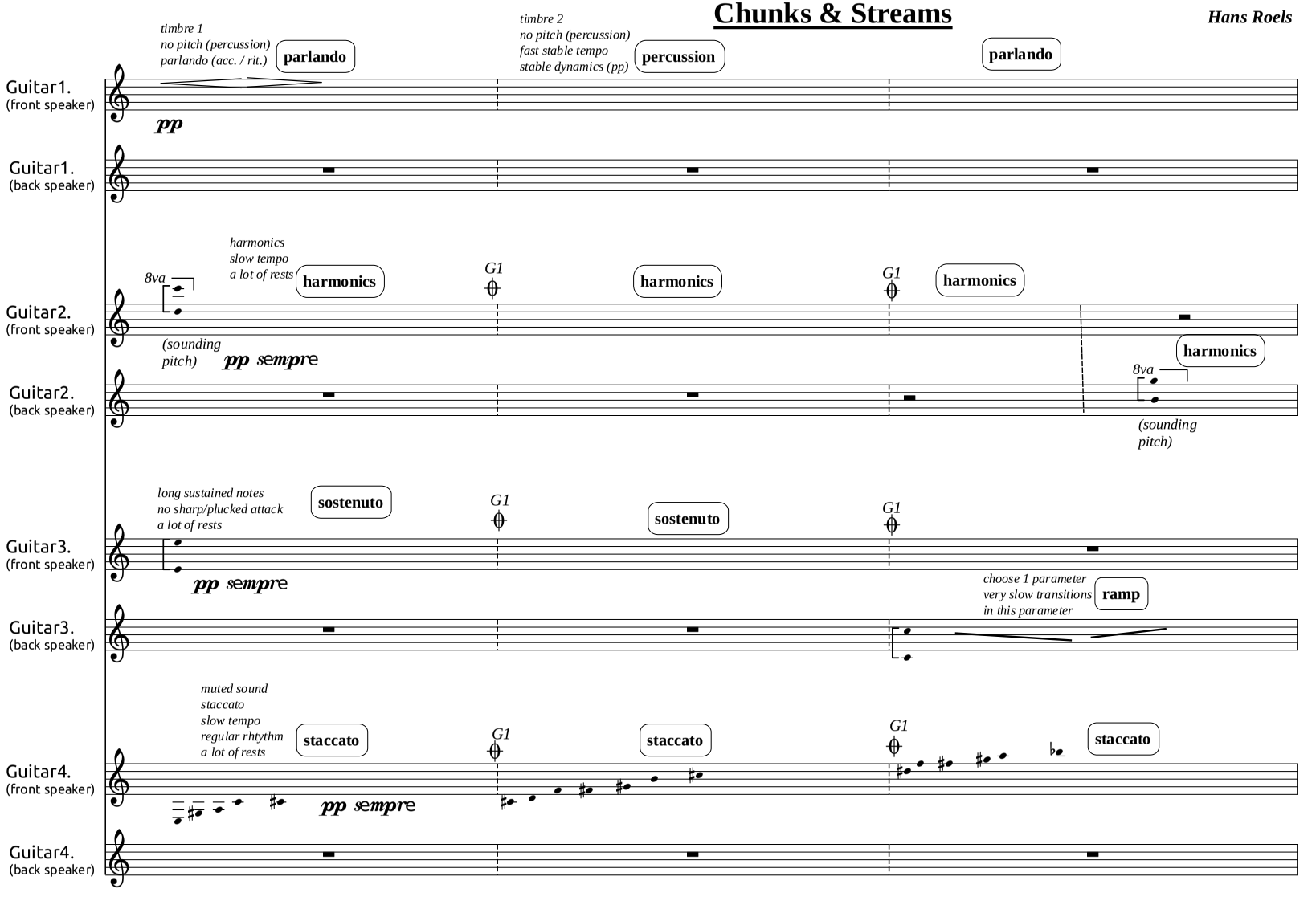
Dynamics between brackets, indicate the physical force and energy used to play; an indication such as *(ff)* combined with *p* means*:* play with a lot of energy (although it may only sound piano).

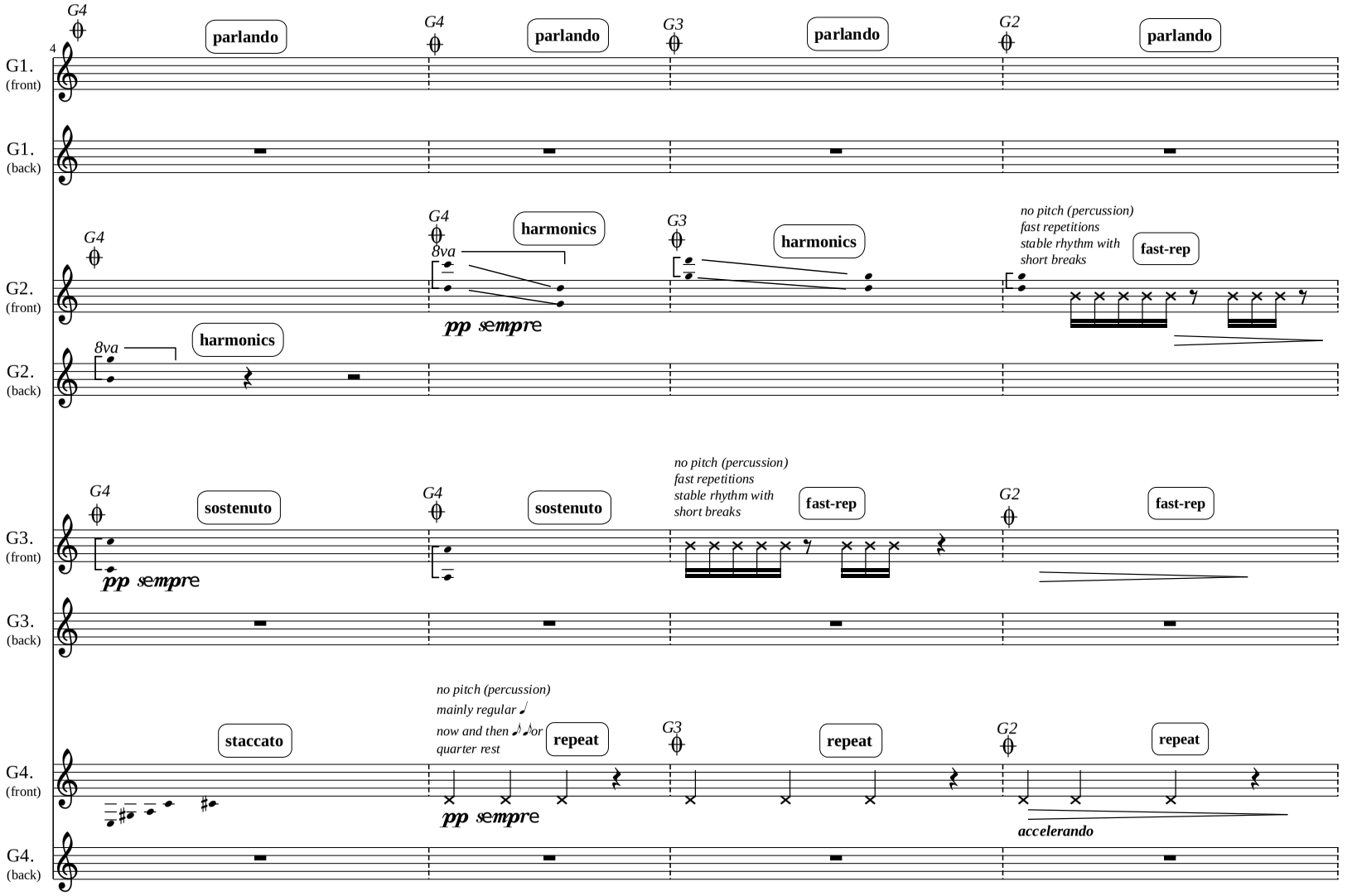
G1 = a synchronisation cue; listen to the part of Guitar 1 to proceed to the next bar/section. In general the synchronisation from one bar to another is not strict. Therefore the bar lines are dotted. Strict synchronisations are indicated by a normal, full bar line.

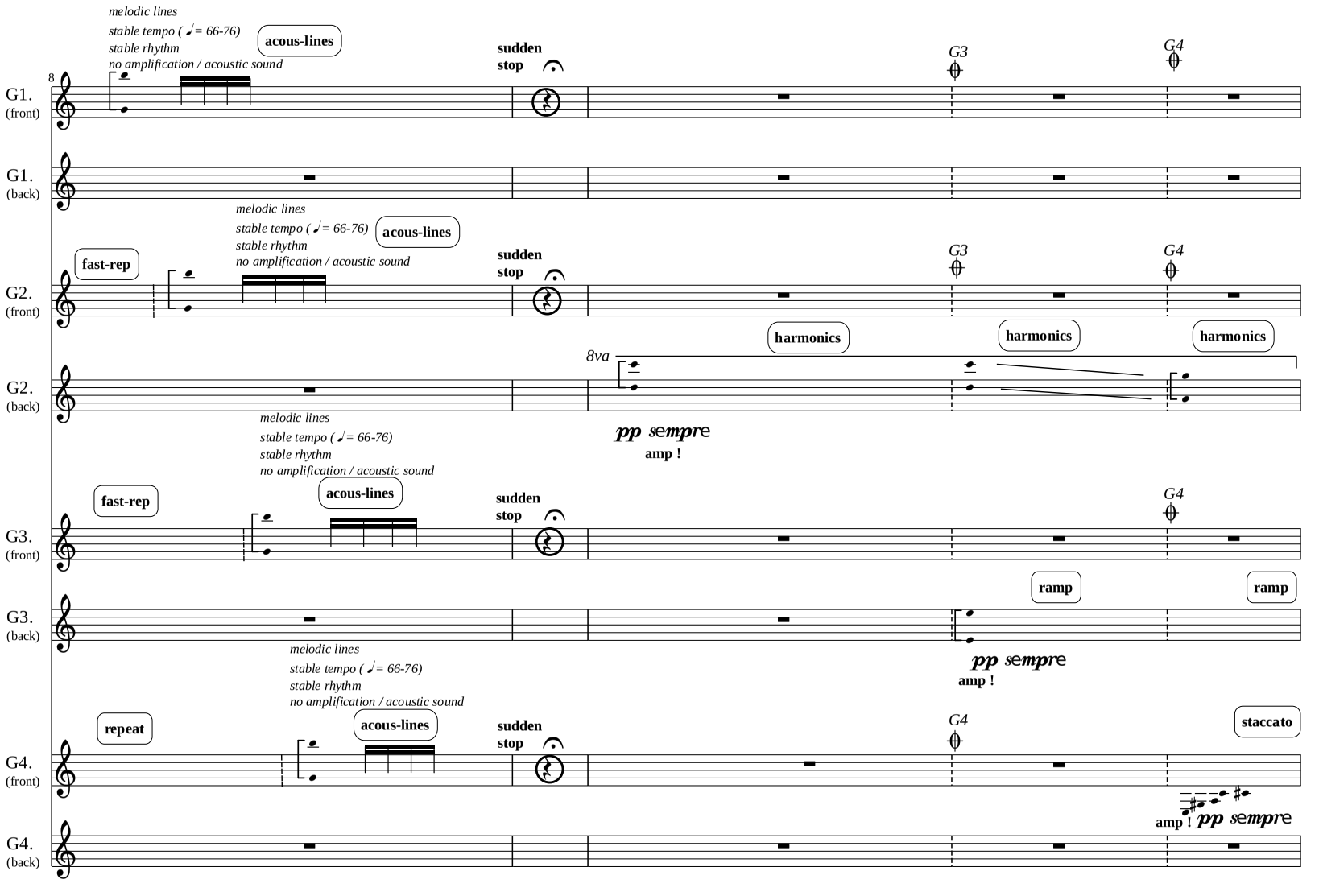
An empty bar – without a rest! – means that the performer continues playing in the same way as the previous bar.

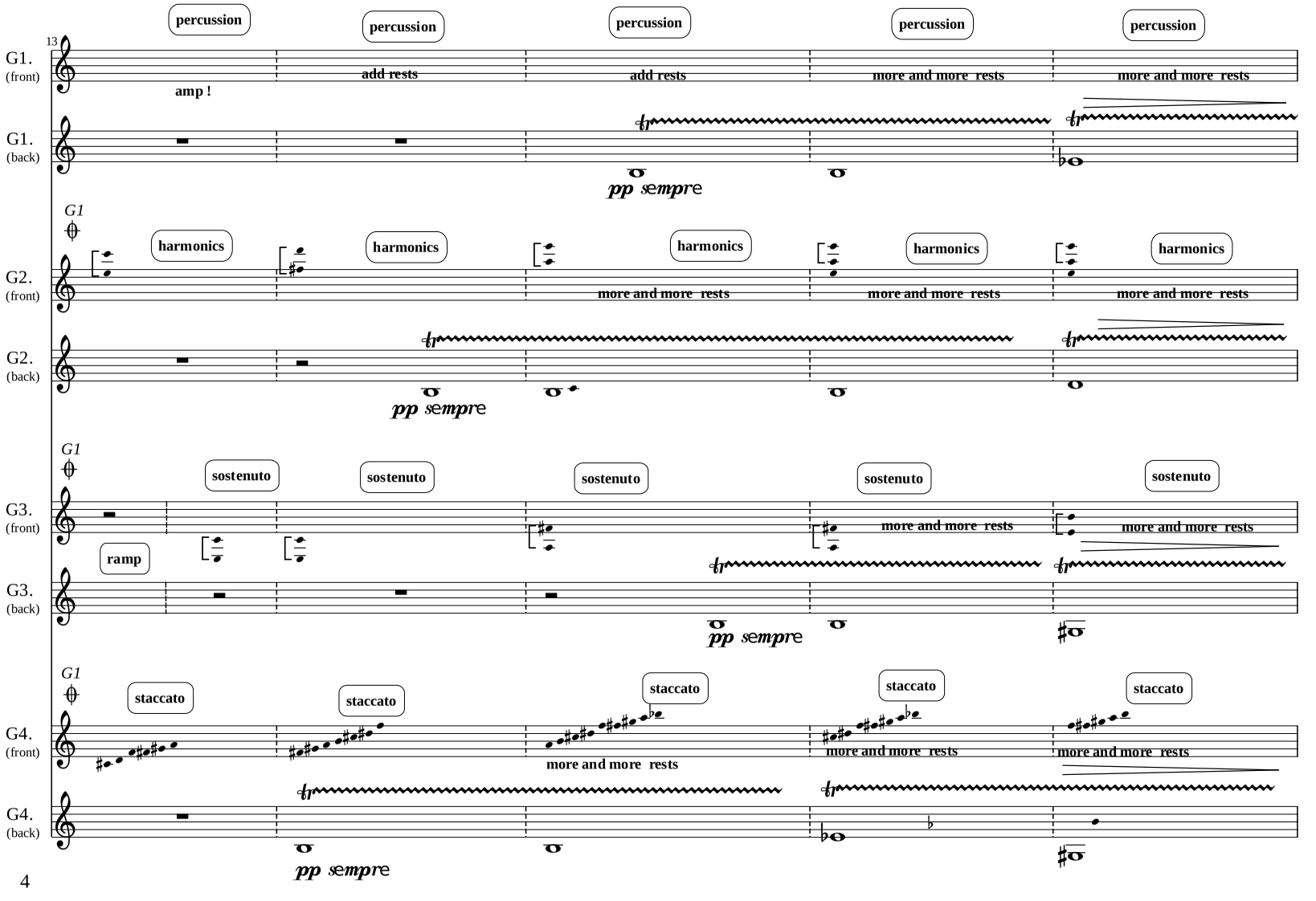
Chunks & Streams

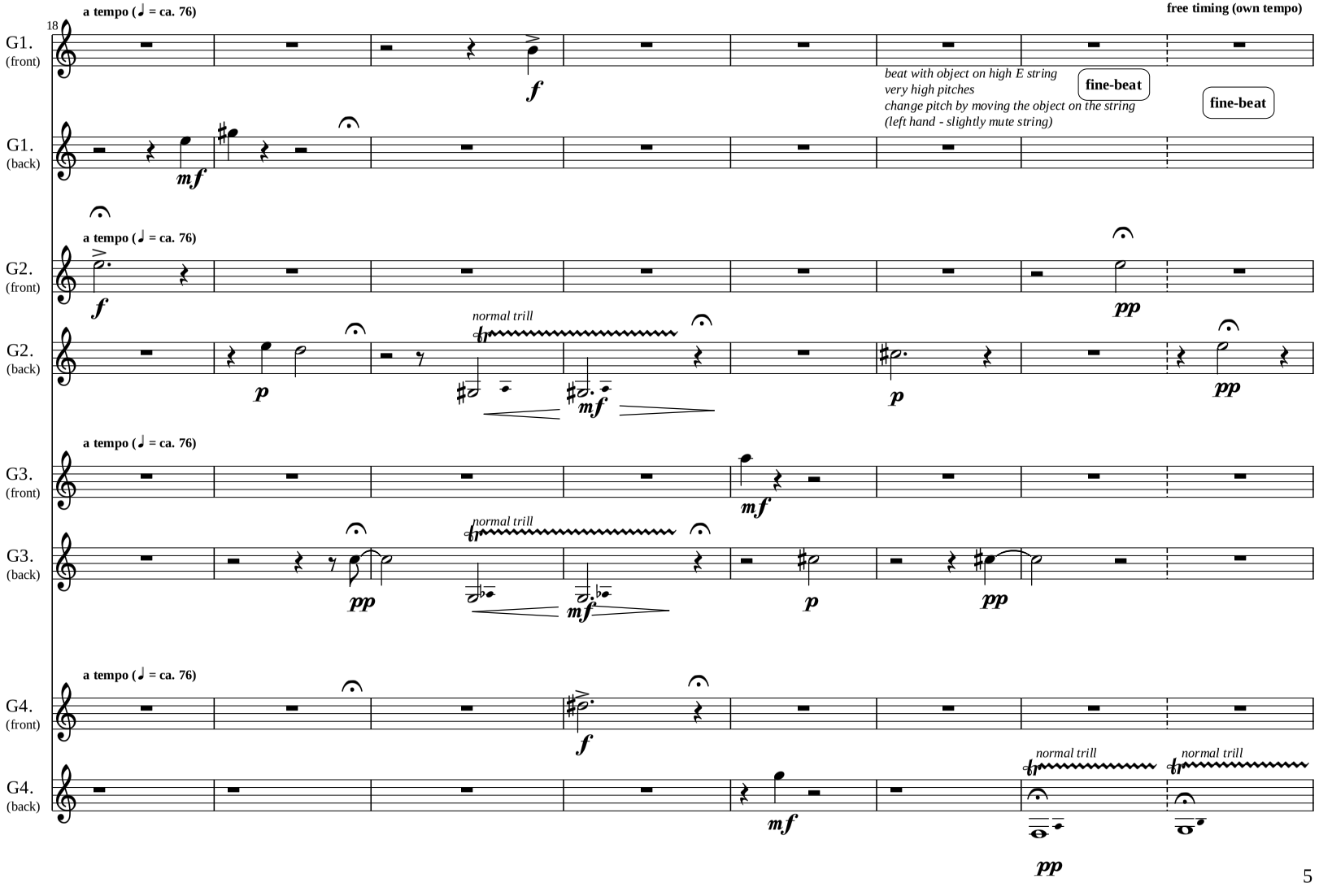
Hans Roels

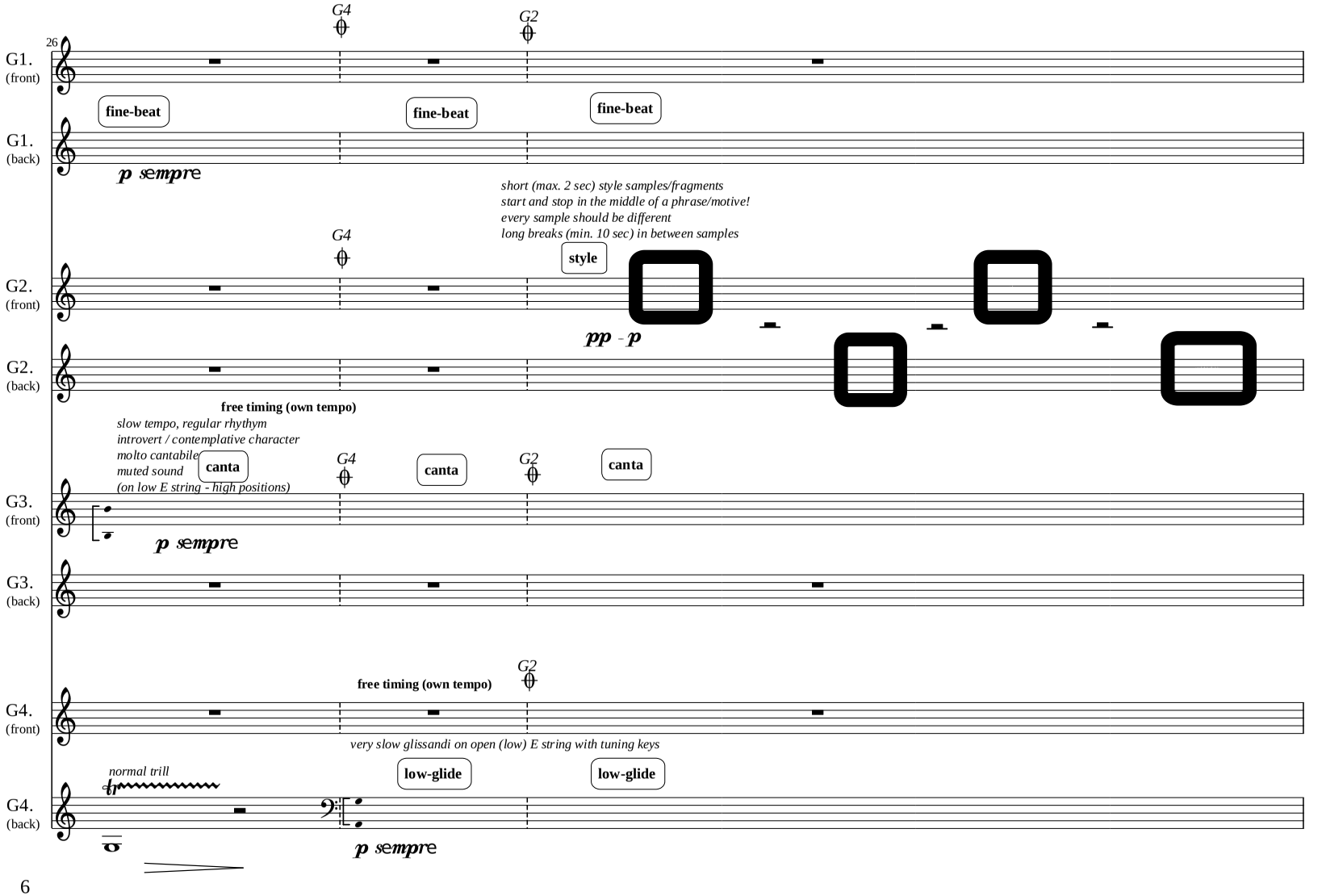


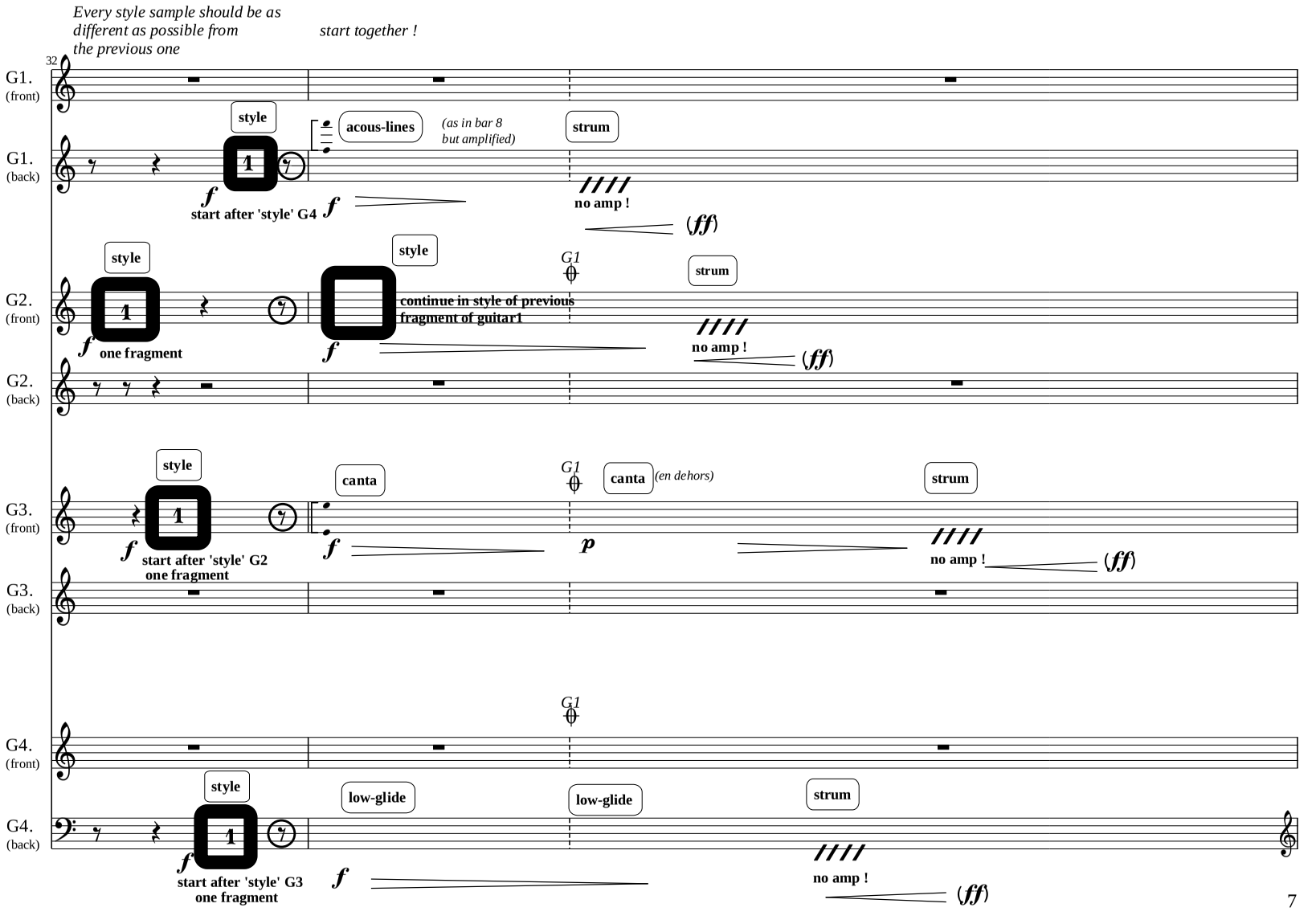

4
G1. (front)
G1. (back)
G2. (front)
G2. (back)
G3. (front)
G3. (back)
G4. (front)
G4. (back)
G4
G3
G2
parlando
harmonics
8va
pp sempre
no pitch (percussion)
fast repetitions
stable rhythm with
short breaks
fast-rep
sostenuto
staccato
no pitch (percussion)
mainly regular
now and then or
quarter rest
repeat
accelerando

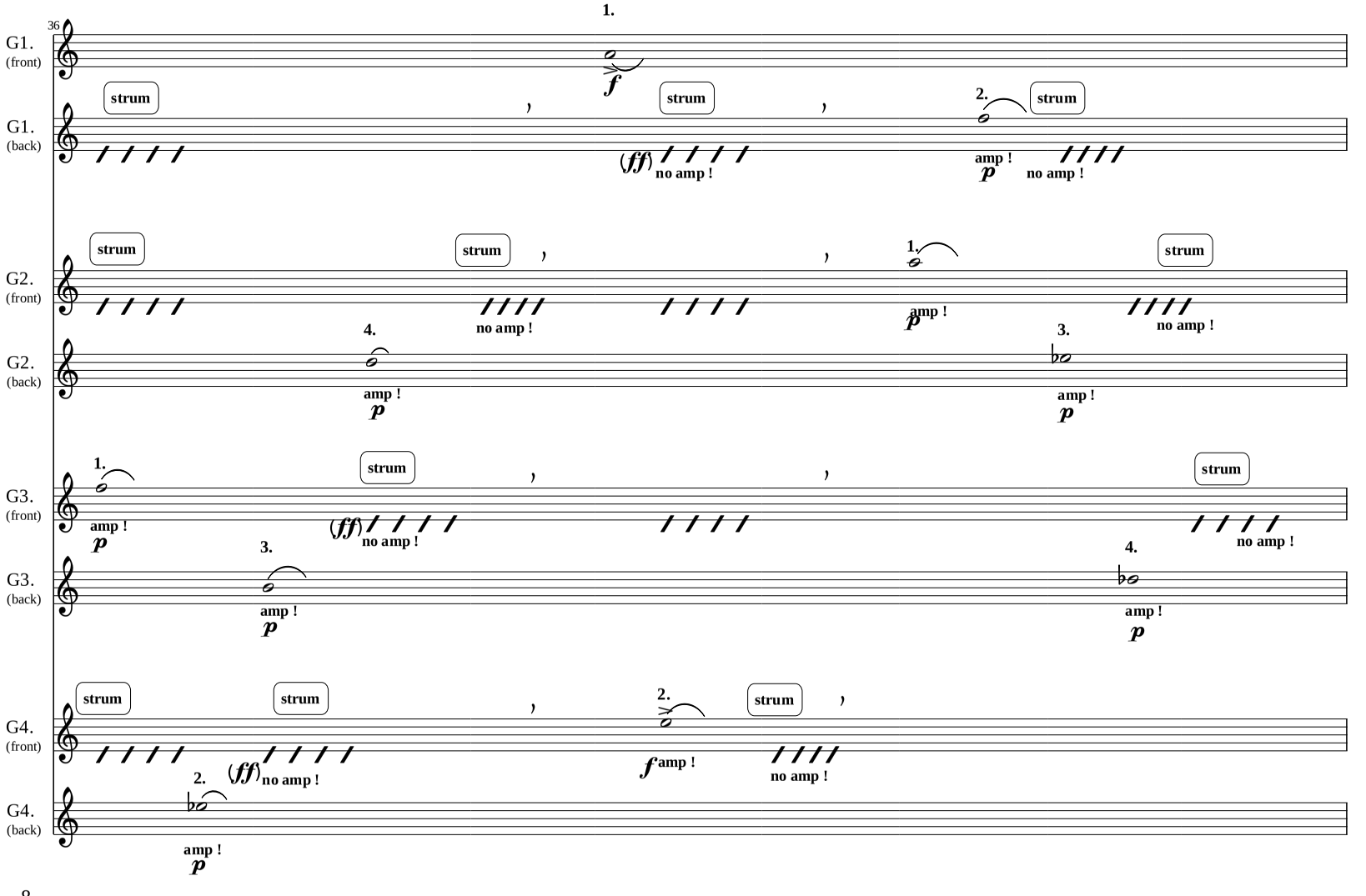

8
G1.
(front)
G1.
(back)
melodic lines
stable tempo (♩= 66-76)
stable rhythm
no amplification / acoustic sound
acous-lines
sudden
stop
G3
G4
G2.
(front)
G2.
(back)
fast-rep
harmonics
8va
pp sempre
amp !
G3.
(front)
G3.
(back)
ramp
G4.
(front)
G4.
(back)
repeat
staccato

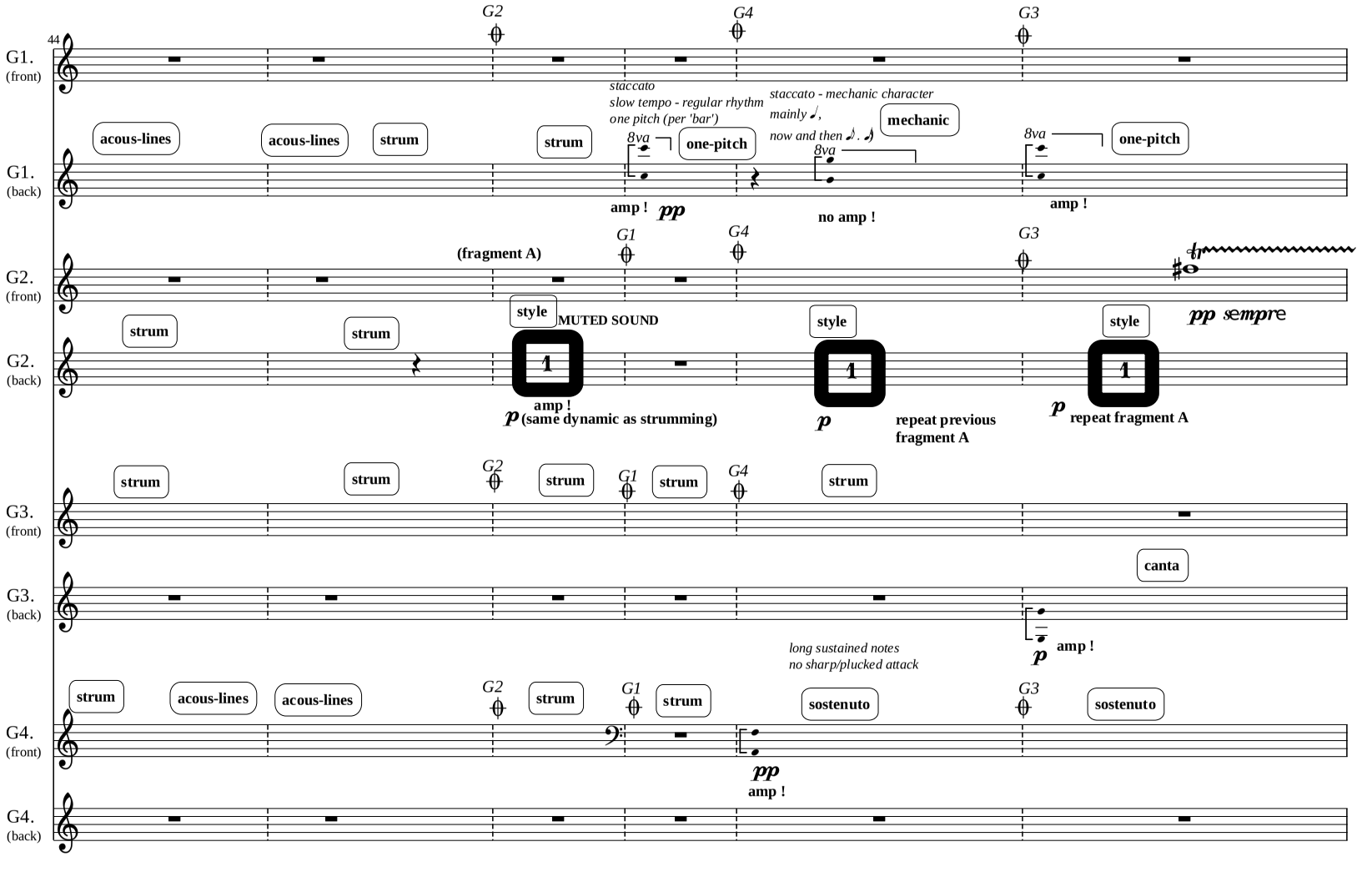

13
G1. (front)
G1. (back)
G2. (front)
G2. (back)
G3. (front)
G3. (back)
G4. (front)
G4. (back)
G1
percussion
amp !
add rests
more and more rests
pp sempre
harmonics
sostenuto
ramp
staccato

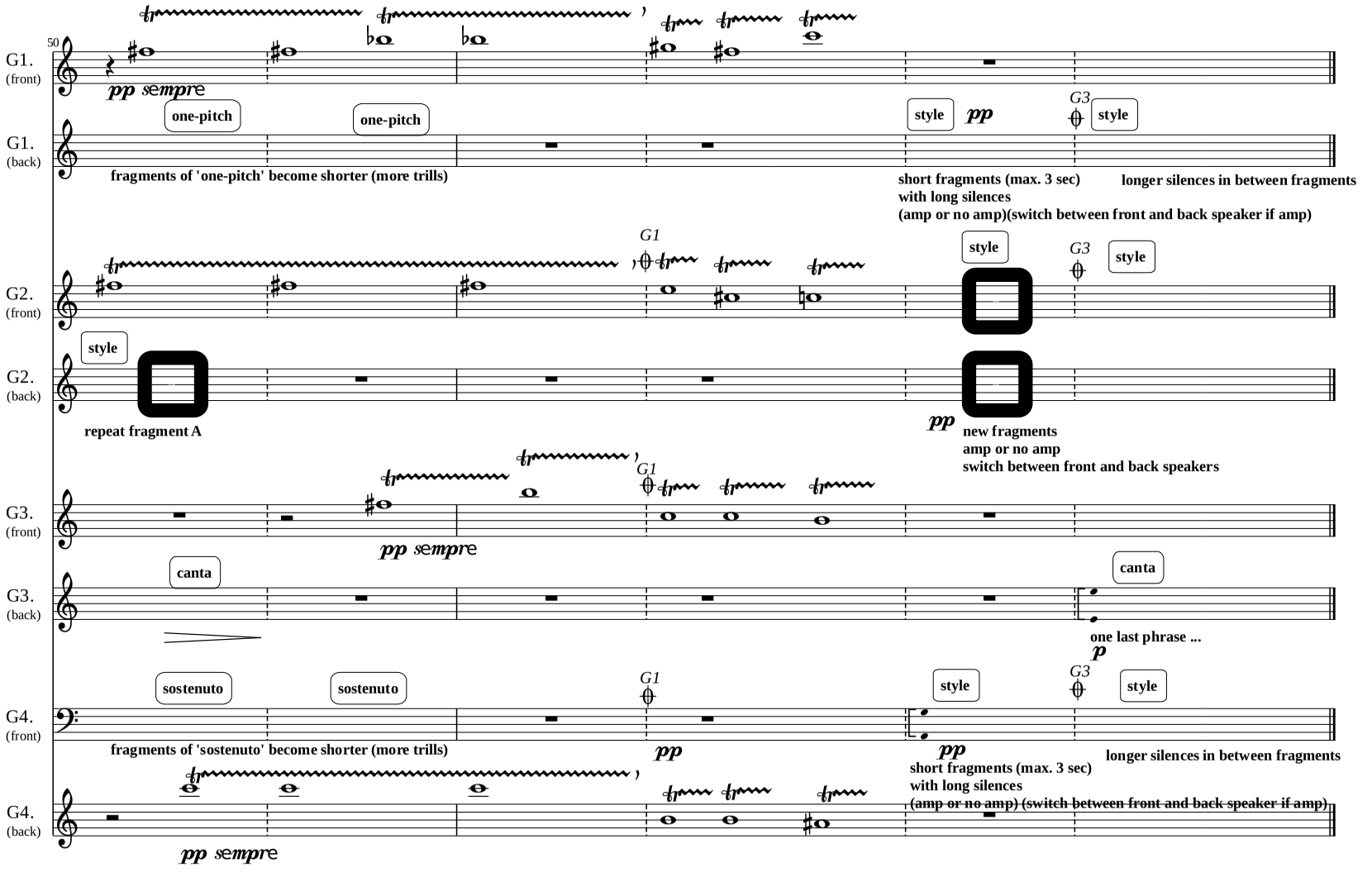

18
a tempo (♩ = ca. 76)
free timing (own tempo)
G1. (front)
G1. (back)
beat with object on high E string
very high pitches
change pitch by moving the object on the string
(left hand - slightly mute string)
fine-beat
fine-beat
G2. (front)
G2. (back)
normal trill
G3. (front)
G3. (back)
normal trill
G4. (front)
G4. (back)
normal trill
normal trill


26
G1. (front)
G1. (back)
G2. (front)
G2. (back)
G3. (front)
G3. (back)
G4. (front)
G4. (back)
G4
G2
fine-beat
fine-beat
fine-beat
p sempre
short (max. 2 sec) style samples/fragments
start and stop in the middle of a phrase/motive!
every sample should be different
long breaks (min. 10 sec) in between samples
style
pp - p
free timing (own tempo)
slow tempo, regular rhythym
introvert / contemplative character
molto cantabile
muted sound
(on low E string - high positions)
canta
canta
canta
p sempre
free timing (own tempo)
very slow glissandi on open (low) E string with tuning keys
normal trill
low-glide
low-glide
p sempre


Every style sample should be as different as possible from the previous one
start together !
32
G1. (front)
G1. (back)
style
acous-lines
(as in bar 8 but amplified)
strum
f
start after 'style' G4
f
no amp !
(ff)
G2. (front)
G2. (back)
style
style
G1
strum
continue in style of previous fragment of guitar1
f
one fragment
f
no amp !
(ff)
G3. (front)
G3. (back)
style
canta
G1
canta
(en dehors)
strum
f
start after 'style' G2 one fragment
f
p
no amp !
(ff)
G4. (front)
G4. (back)
G1
style
low-glide
low-glide
strum
f
start after 'style' G3 one fragment
f
no amp !
(ff)


36
1.
G1.
(front)
strum
f
strum
2.
strum
G1.
(back)
(ff)
no amp !
amp !
p
no amp !
strum
strum
1.
strum
G2.
(front)
no amp !
amp !
p
no amp !
4.
3.
G2.
(back)
amp !
p
amp !
p
1.
strum
strum
G3.
(front)
amp !
p
(ff)
no amp !
no amp !
3.
4.
G3.
(back)
amp !
p
amp !
p
strum
strum
2.
strum
G4.
(front)
(ff)
no amp !
f
amp !
no amp !
2.
G4.
(back)
amp !
p


44
G1. (front)
G1. (back)
G2. (front)
G2. (back)
G3. (front)
G3. (back)
G4. (front)
G4. (back)
G2
G4
G3
G1
staccato
slow tempo - regular rhythm
one pitch (per 'bar')
staccato - mechanic character
mainly ♩,
now and then ♪. ♪
8va
acous-lines
strum
one-pitch
mechanic
amp !
pp
no amp !
(fragment A)
style
MUTED SOUND
p (same dynamic as strumming)
repeat previous fragment A
repeat fragment A
pp sempre
canta
long sustained notes
no sharp/plucked attack
sostenuto


50
G1. (front)
pp sempre
one-pitch
one-pitch
style
pp
G3
style
G1. (back)
fragments of 'one-pitch' become shorter (more trills)
short fragments (max. 3 sec)
with long silences
(amp or no amp)(switch between front and back speaker if amp)
longer silences in between fragments
G1
style
G3
style
G2. (front)
style
G2. (back)
repeat fragment A
pp
new fragments
amp or no amp
switch between front and back speakers
G1
G3. (front)
pp sempre
canta
canta
G3. (back)
one last phrase ...
p
sostenuto
sostenuto
G1
style
G3
style
G4. (front)
fragments of 'sostenuto' become shorter (more trills)
pp
pp
short fragments (max. 3 sec)
with long silences
(amp or no amp) (switch between front and back speaker if amp)
longer silences in between fragments
G4. (back)
pp sempre

21 Eigengang: score

EIGENGANG

(2011-12)

Hans Roels

One piano & three pianists

EIGENGANG

for three pianists and one piano

Hans Roels

[october 2012 version]

There are two kinds of preparations in the strings:

1. rubber between strings 1-2 and 2-3 in the highest octave of the piano from c4 to c5 (MIDI pitch 96 to 108). Place the rubber at different distances to obtain different timbres (within the same, overall percussive sound)
2. two pieces of felt, fleece or tissue between the hammers and the strings, one from the pitch A2 (MIDI pitch 21) to Eb (MIDI 39) and another from c1 (MIDI 60) to b3 (MIDI 95).

There is no 'usual' score of *Eigengang*. The separate parts contain all the necessary performance information. The score of *Eigengang* is only provided to give an overview of the timing and synchronization between the players. The line XXXXX above a music staff in the score and the parts stands for a check point. Musical events, described by a short text above this line, should take place during this check point, i.e. the notated music, indicated by the line XXXXX. If the events occur before the line XXXXX, the performer needs to speed up slightly until the next cue or check point, or skip a few rests. If the event occurs after the line, do the opposite. If the event takes place during the line, the timing of the performed part is correct.

Overall the players use five techniques to play. These are the techniques:

- GLISCLUS: short clusters by wiping fast on a group of strings
- PREPARED: percussion-like sounds produced by playing normally on the keys with the rubber preparations (preparation no. 1)
- HARMONICS: very high harmonics produced by wiping fast along the strings with a piece of rubber
- MUTED: very muted and muffled sound produced by playing normally on the keys with the tissue between the hammers and strings (preparation no. 2)
- SUSTAINED: long sustained sounds produced by rubbing fast with a small stick across the strings

The details of these techniques are given on the following pages.

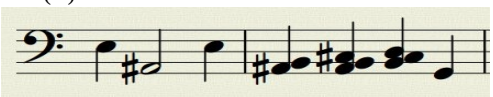
SUSTAINED *(player 2 and 3)*

→ Play all notated notes by moving a stick fast and repeatedly across the strings (tremolo). Wrap the top part of the stick with a soft tissue like felt or fleece. You can also use a short and (hard) rubber stick. The sound should be as sostenuto as possible.

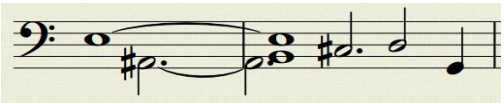
→ While one hand plays tremolo with this stick, the other plays the keys silently to make the strings vibrate.

→ Try to let as many notes as possible resonate by playing legato with the 'silent' hand on the keys. Thus, a possible realization of the fragment (A) from the score by this 'silent' hand is (B):

(A)



(B)



→ In solo fragments of the sustained technique one can also use the middle (sostenuto) pedal to obtain this legato or 'laissez vibrer' effect. Attention: don't use this pedal if one of the players is playing the muted technique.

→ The notes and rhythms that are notated in the score, only indicate the strings/notes that the hand with the stick plays (tremolo). Fragment (A) -and thus the score- indicates what the tremolo hand is playing. Fragment (B) -notated here as an example- indicates what the silent hand is playing. Rests in the score don't always indicate silences because the notes can still be resonating.

→ Pitches/keys that should be released are notated on the upper, smaller staff.

→ Alterations only change the next note except if this note is repeated. The repeated note can be part of a chord. Thus in example (A) the first two chords of the second measure are: A#-B en A#-B-C#

→ One cannot make a big dynamic range on one note/string with this sustained tremolo technique. A crescendo or diminuendo is usually obtained because more or less chord notes are added or subtracted in the score.

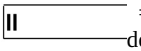
HARMONICS *(player 2 and 3)*

Rub a piece of rubber fast *along* the strings, just once. This produces a very high overtone (at least 2 octaves + a seventh higher). Only the pitch of the ground is notated in the score. This technique is used in the range between f (MIDI 53) and a1 (MIDI 69). Outside this range, the technique doesn't work. Instead of a piece of rubber, a finger or a piece of cloth can also be used. Some experimentation is required to find the right technique to produce these harmonics.

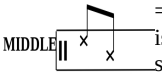
MUTED *(player 1 and 2)*

The cross-headed notes stands for sounds produced by pressing the keys very slightly and superficially. (Almost) no pitch should be heard.

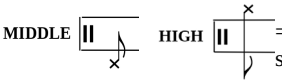
<u>GLISCLUS</u> *(player 1, 2 and 3)*

 = the main zones with strings inside the piano. There are 4 zones, the pitches in the following description are only indicative:

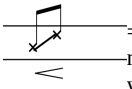
- LOW = the lowest zone or register, left from the metal bar at G (MIDI 43)
- MIDDLE = the middle register of the piano, between the metal bar at G (MIDI 43) and b1 (MIDI 71)
- HIGH = the highest register of the piano, right from the metal bar around b1 (MIDI 71)
- BEHIND = play behind the bridge of the high strings (strings above the middle metal bar around b1 (MIDI 71) and higher). There is a small overlap between the zones HIGH and BEHIND. Don't use the highest octave in HIGH (between MIDI 96 and 108) because this is where the rubber preparations are)(preparation no. 1)

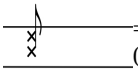


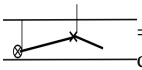
= wipe very fast across (not along) a group of strings in the MIDDLE zone. The sounding result is a mix of a cluster and a fast glissando. The first short note is in the middle of this zone, the second one in the lower part of this zone. The player can choose which hand he uses and whether this hand moves up or down. Use your finger pad (not the finger nails).

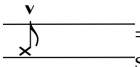


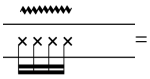
= wipe, in the first example under the MIDDLE zone (i.e. the LOW zone), in the second example above the zone HIGH (= BEHIND)

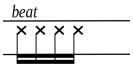
 = the first note: wipe slowly and accelerate to produce a glissando with a crescendo. The second note: wipe very fast to finish the crescendo effect with a loud sound. Play each of the two notes with a different hand.

 = wipe simultaneously fast with the RH downwards (descending pitches) and the LH upwards (raising the pitches) – or vice versa – in the same pitch range. When a forte is mentioned, this produces a cluster that is louder than one produced with only one hand.

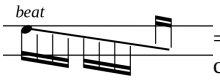
 = glissando, wipe up or down with 2 to 4 fingers on the strings, in fact this is a cluster that chromatically rises and falls.

 = wipe in a fixed direction around the approximate pitch, moving from the high to the low strings.

 = wipe in the same pitch range with some small variations (approx. 2 semitones) in pitch.

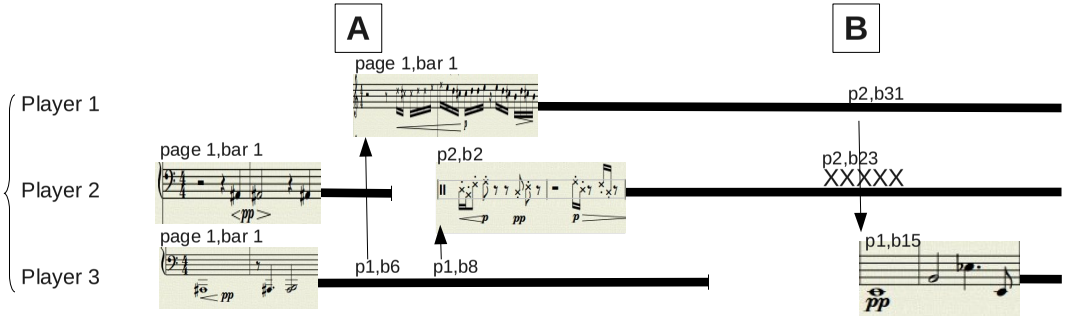


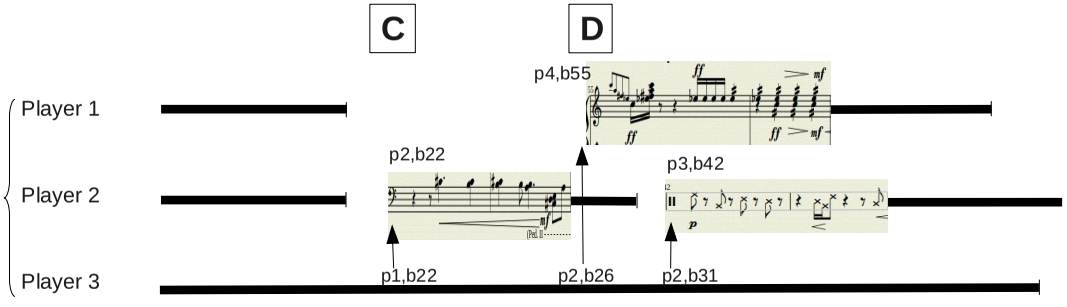
= beat with 2 or 3 fingers on the strings (with the finger pad).

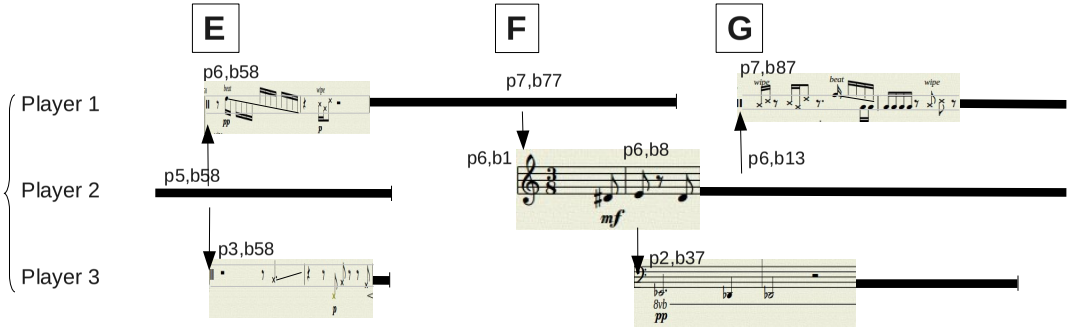


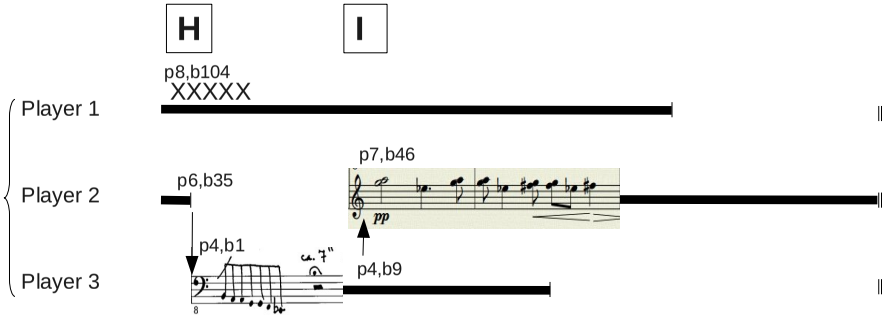
= produce a glissando by beating with 2 or 3 fingers on the strings (glissando of small cluster repetitions).

Eigengang (score)

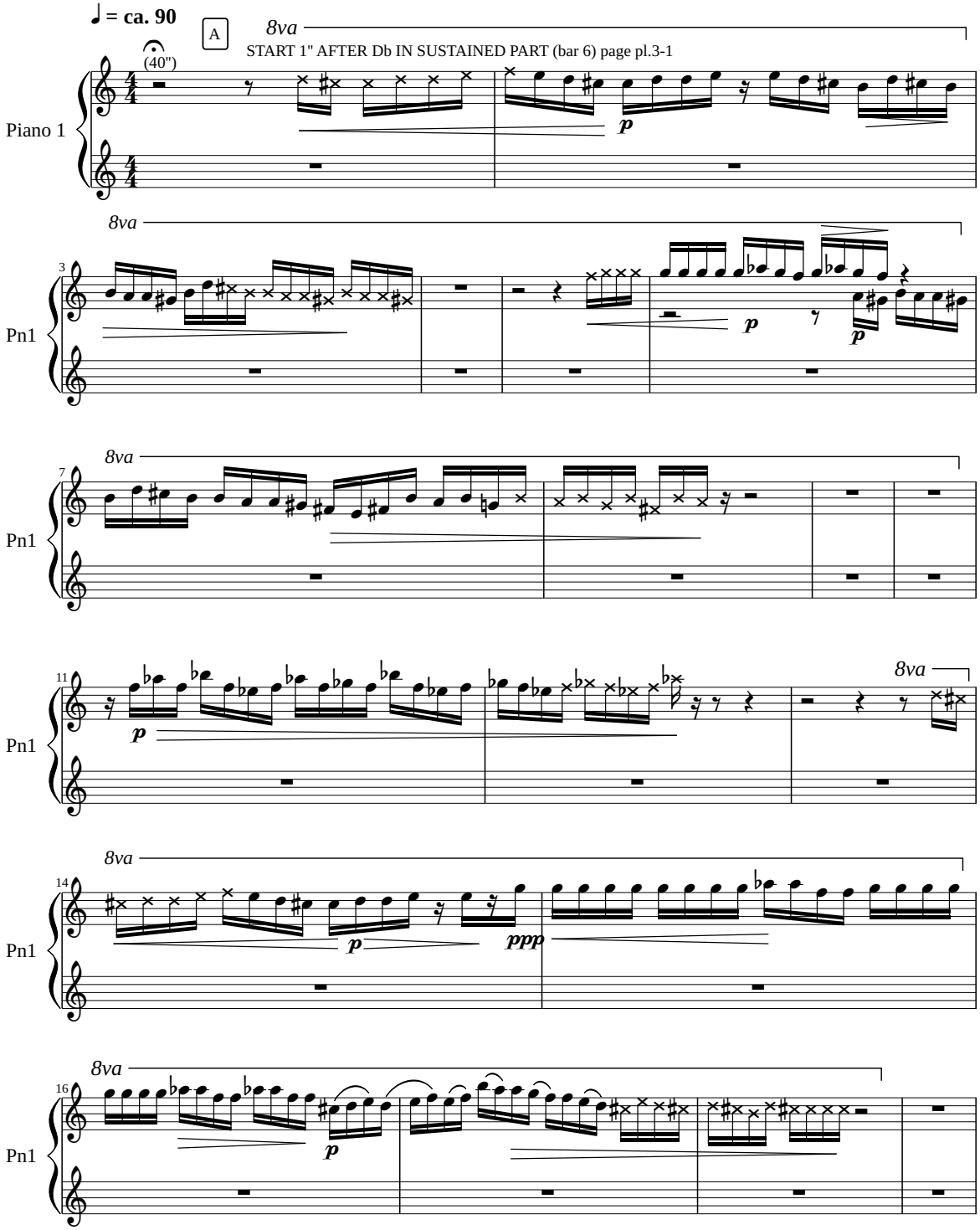





E
F
G
Player 1
Player 2
Player 3
p6,b58
p7,b77
p7,b87
p5,b58
p6,b1
p6,b8
p6,b13
p3,b58
p2,b37
mf
pp
8vb


H
I
Player 1
Player 2
Player 3
p8,b104
XXXXX
p6,b35
p7,b46
p4,b1
p4,b9
pp

Eigengang - *Muted*- Hans Roels



20

Pn1

p

23

Pn1

p

8va

pp

26

8va

Pn1

p

pp

29

8va

Pn1

p

B (cue for pl. 3)

31

8va

Pn1

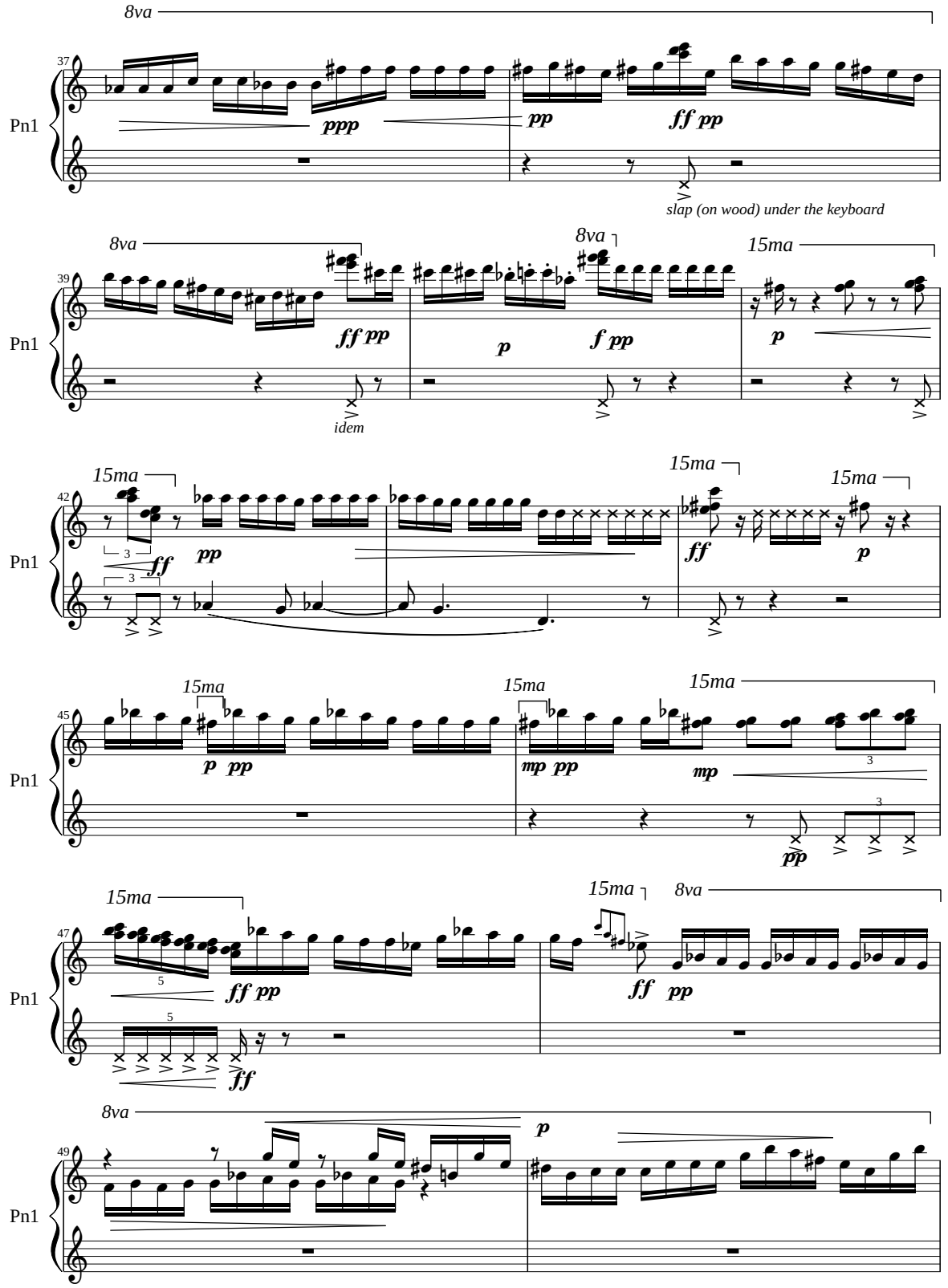
mp

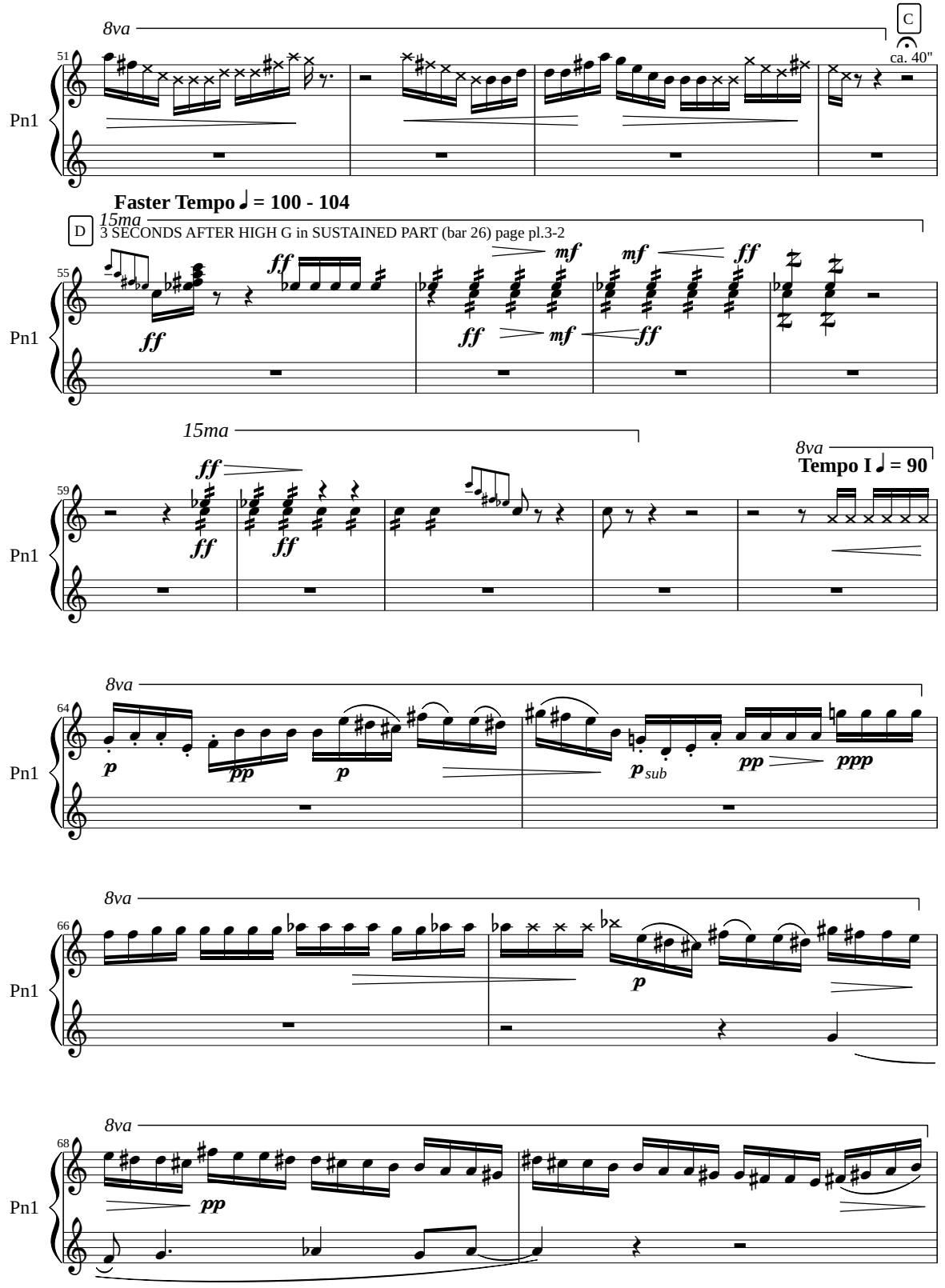
34

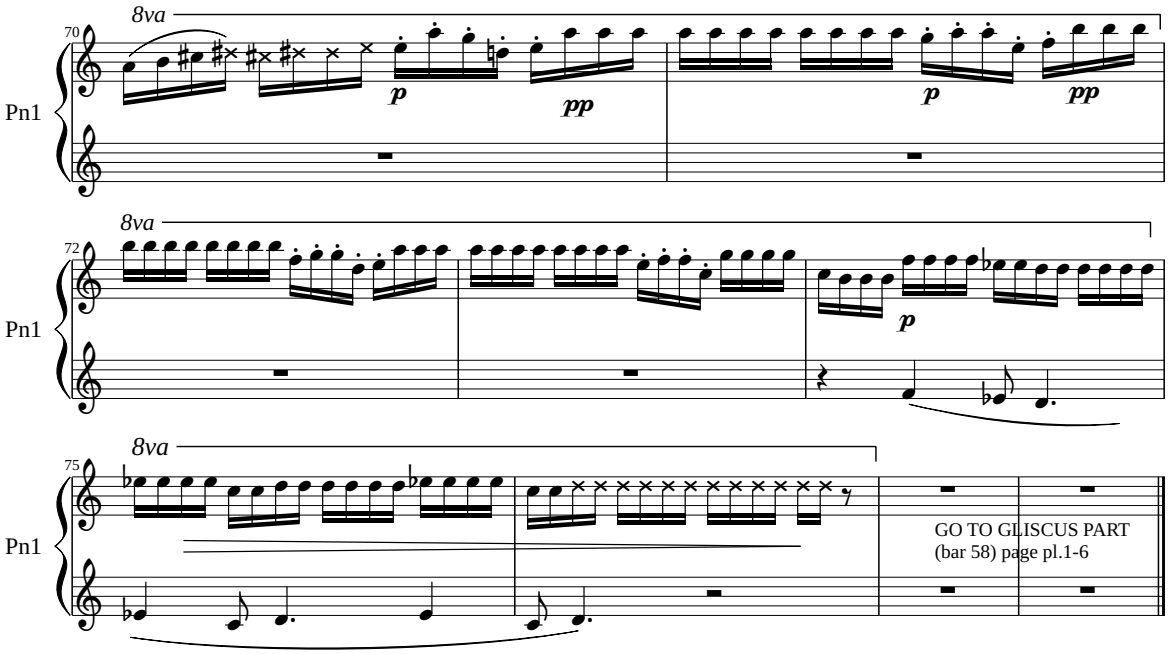
8va

Pn1

p


8va
37
Pn1
ppp
pp
ff pp
slap (on wood) under the keyboard
8va
8va
15ma
39
Pn1
ff pp
p
f pp
p
idem
15ma
15ma
15ma
42
Pn1
ff
pp
ff
p
15ma
15ma
15ma
45
Pn1
p pp
mp pp
mp
pp
15ma
15ma
8va
47
Pn1
ff pp
ff pp
ff
8va
49
Pn1
p


8va
C
ca. 40"
51
Pn1
Faster Tempo ♩ = 100 - 104
D
15ma
3 SECONDS AFTER HIGH G in SUSTAINED PART (bar 26) page pl.3-2
55
ff
mf
15ma
8va
Tempo I ♩ = 90
59
64
p
pp
p sub
ppp
66
68


8va
70
Pn1
p
pp
p
pp
8va
72
Pn1
p
8va
75
Pn1
GO TO GLISCUS PART
(bar 58) page pl.1-6

♩ = 88

E

58

Gl1 HIGH

beat pp wipe p beat pp

Gl2 MIDDLE

wipe pp p mf pp beat wipe glissando

Gl3 MIDDLE

wipe glissando p mf pp

61

Gl1

wipe f pp p

Gl2

beat wipe f f pp p

Gl3

beat wipe f beat pp

65

Gl1

mf pp f pp

Gl2

beat pp wipe wipe f p pp

Gl3

wipe beat pp

68

Gl1

p beat wipe p pp

Gl2

p wipe p ca. 20"

TO HARMONICS AND MUTED PART

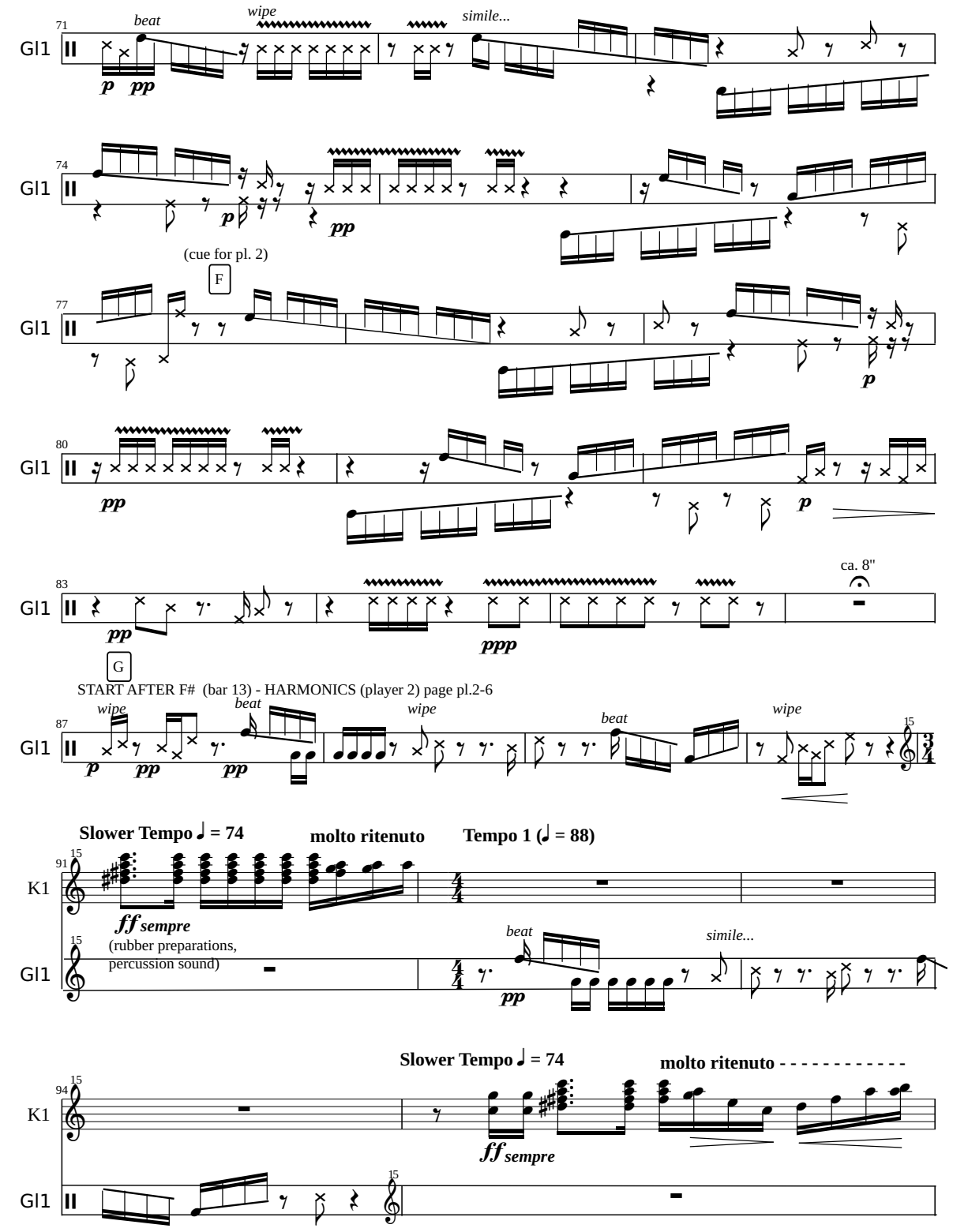
page pl.2-6

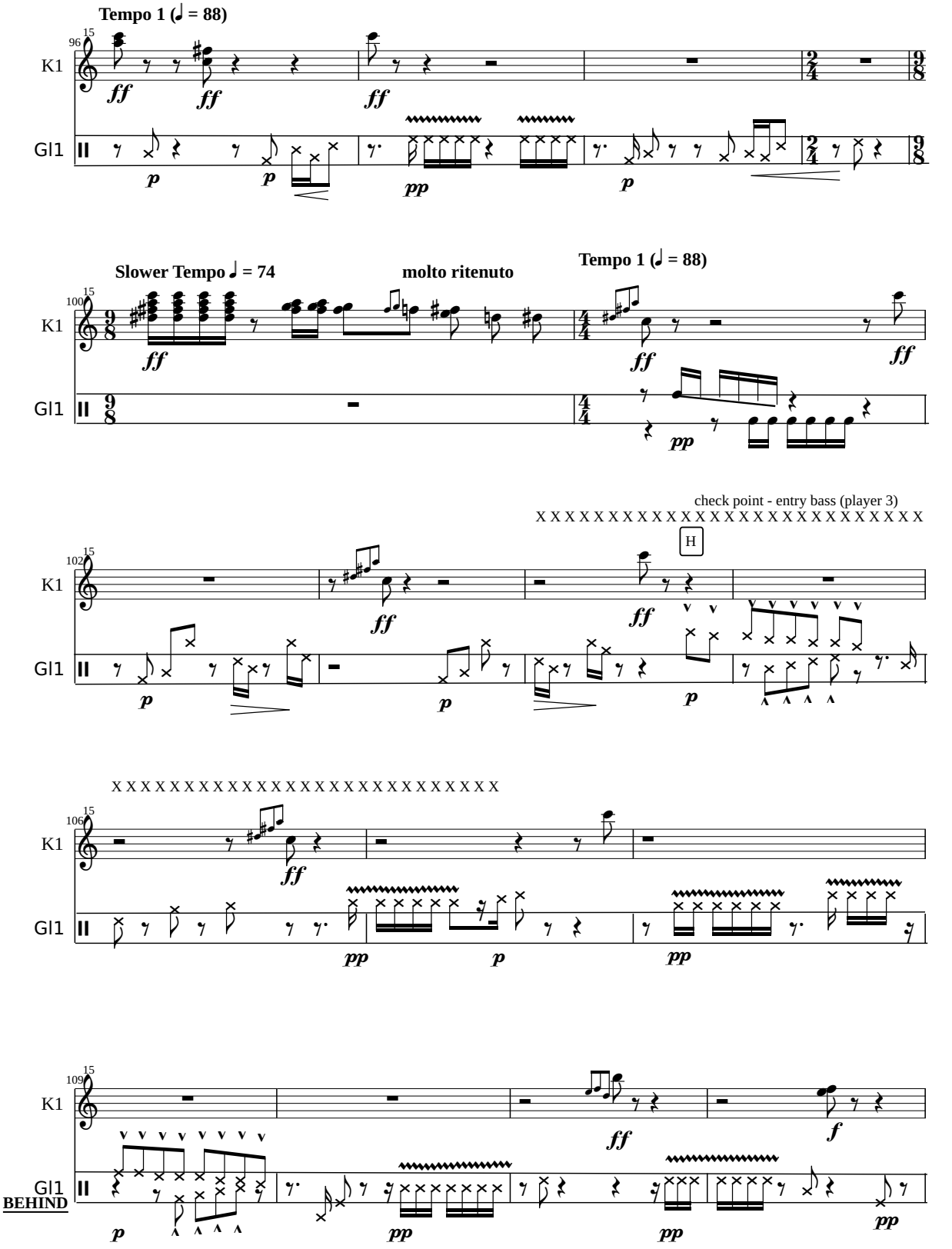
Gl3

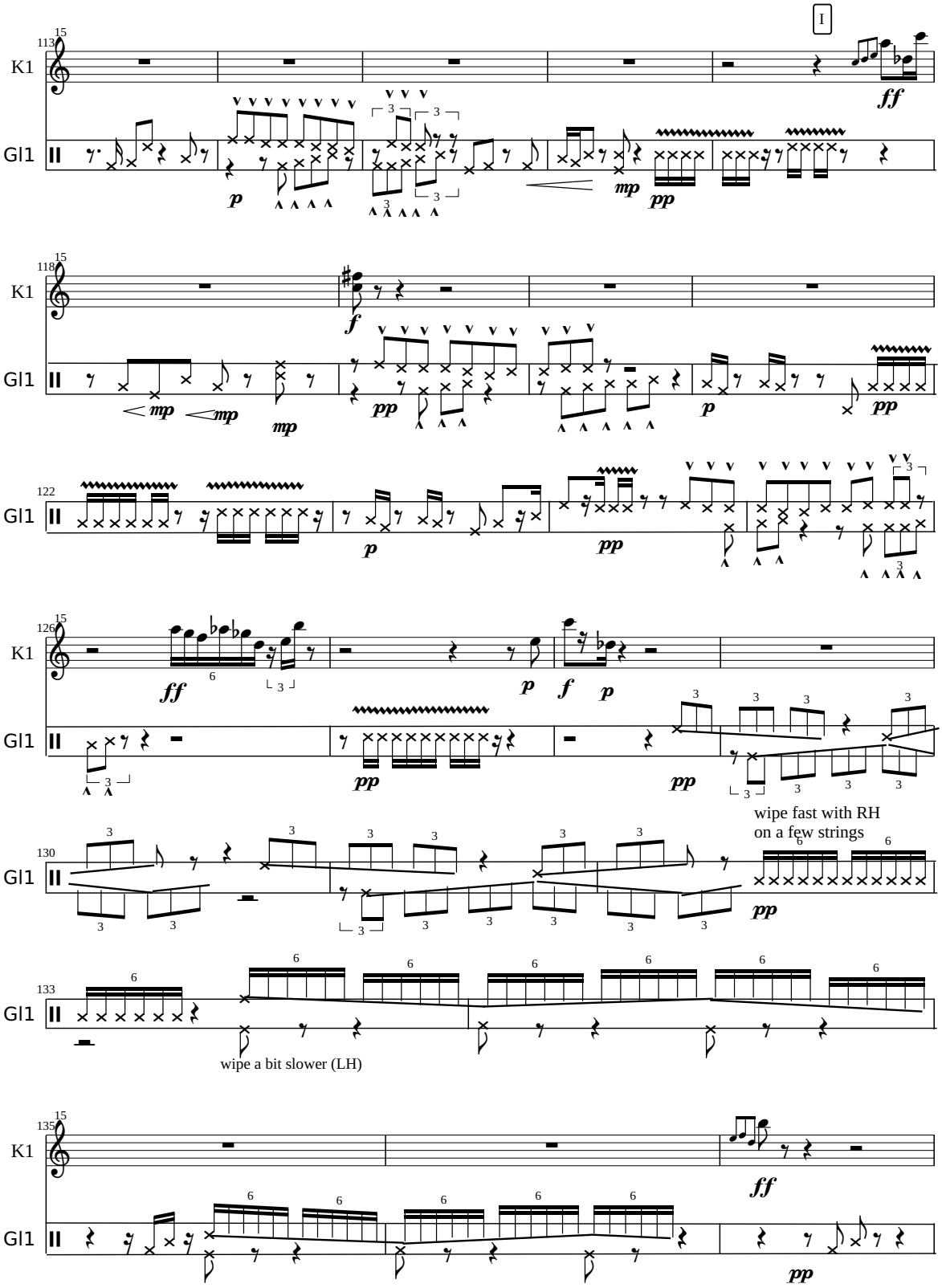
ca. 40"

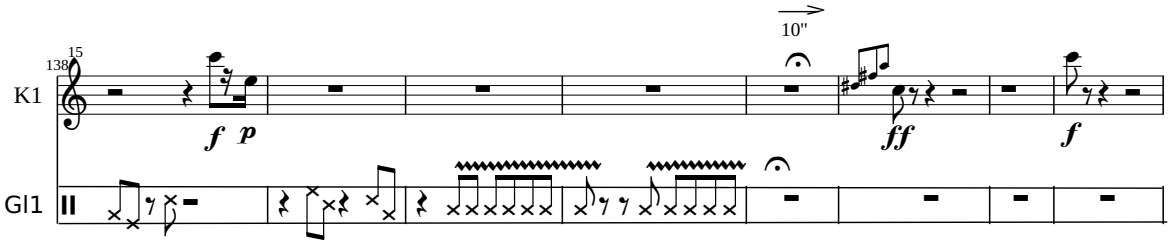
BACK TO SUSTAINED PART

bar 37 page pl.3-2


71
Gl1
beat
wipe
simile...
p
pp
74
Gl1
p
pp
(cue for pl. 2)
F
77
Gl1
p
80
Gl1
pp
p
83
Gl1
pp
ppp
ca. 8"
G
START AFTER F# (bar 13) - HARMONICS (player 2) page pl.2-6
87
Gl1
wipe
beat
wipe
beat
wipe
p
pp
pp
Slower Tempo ♩ = 74
molto ritenuto
Tempo 1 (♩ = 88)
91
K1
ff sempre
(rubber preparations,
percussion sound)
Gl1
beat
simile...
pp
Slower Tempo ♩ = 74
molto ritenuto - - - - - - - - - - - -
94
K1
ff sempre
Gl1

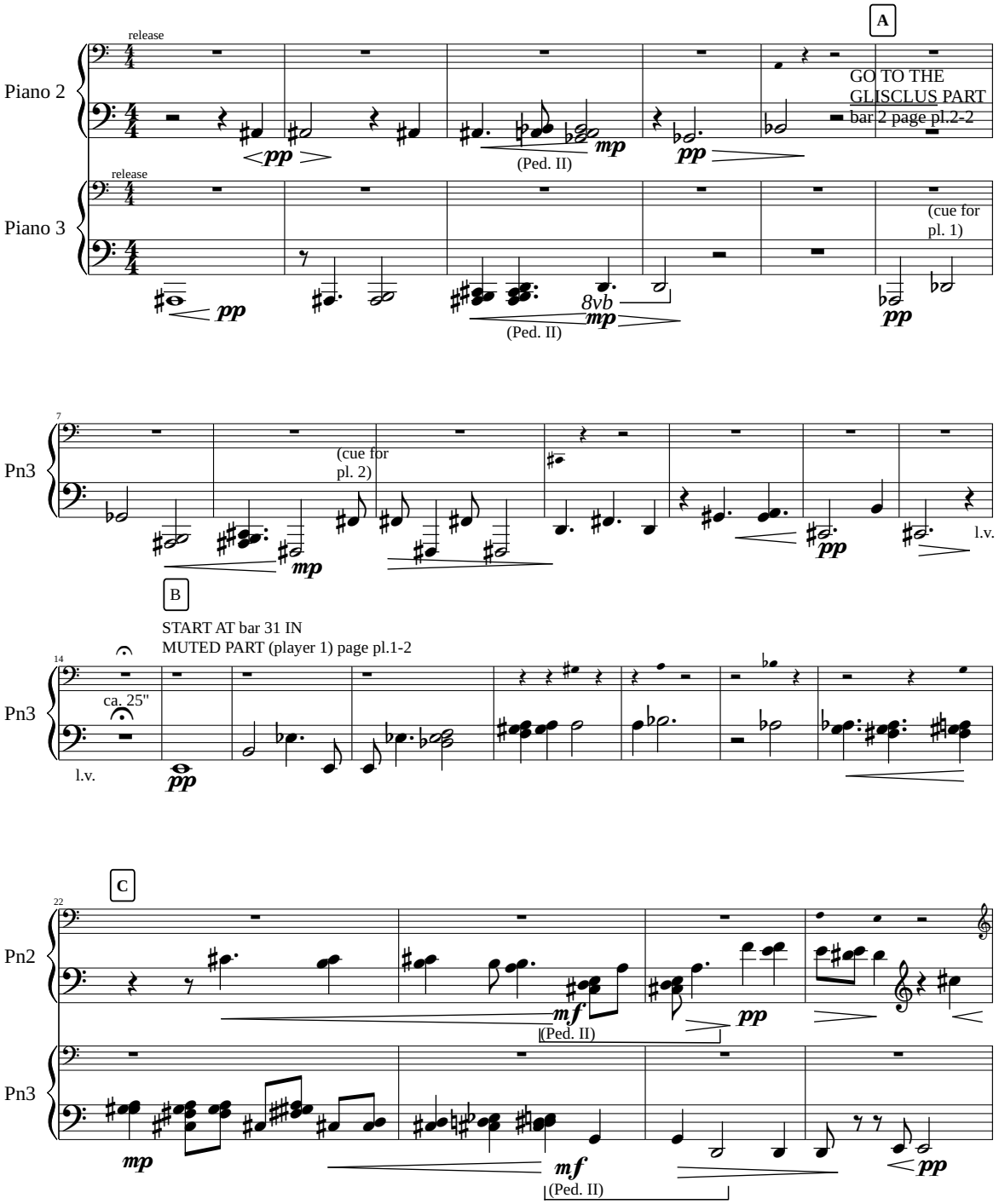

Tempo 1 (♩ = 88)
96
15
K1
Gl1
Slower Tempo ♩ = 74
molto ritenuto
Tempo 1 (♩ = 88)
100
102
check point - entry bass (player 3)
H
106
109
BEHIND


I
K1
Gl1
wipe fast with RH
on a few strings
wipe a bit slower (LH)

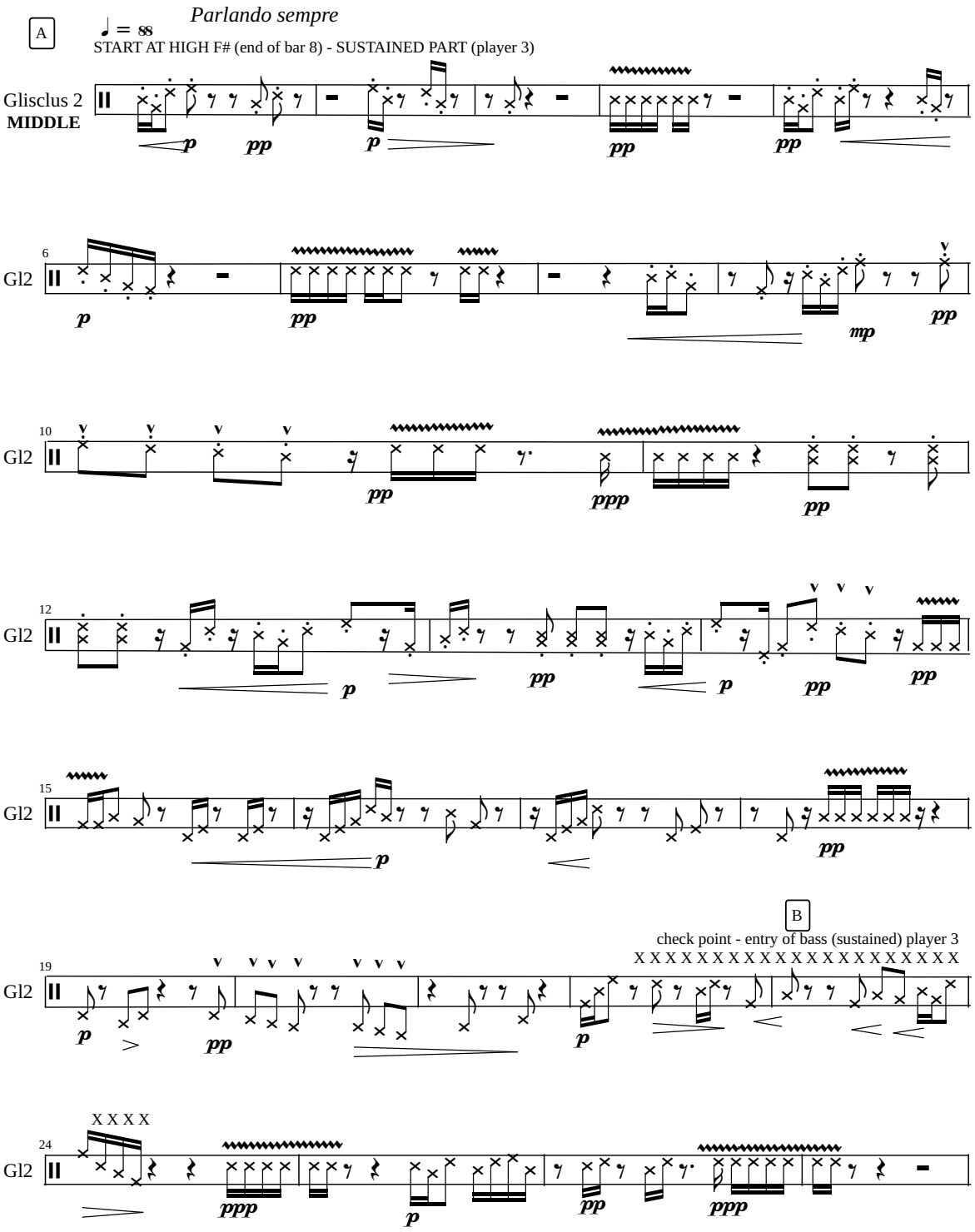


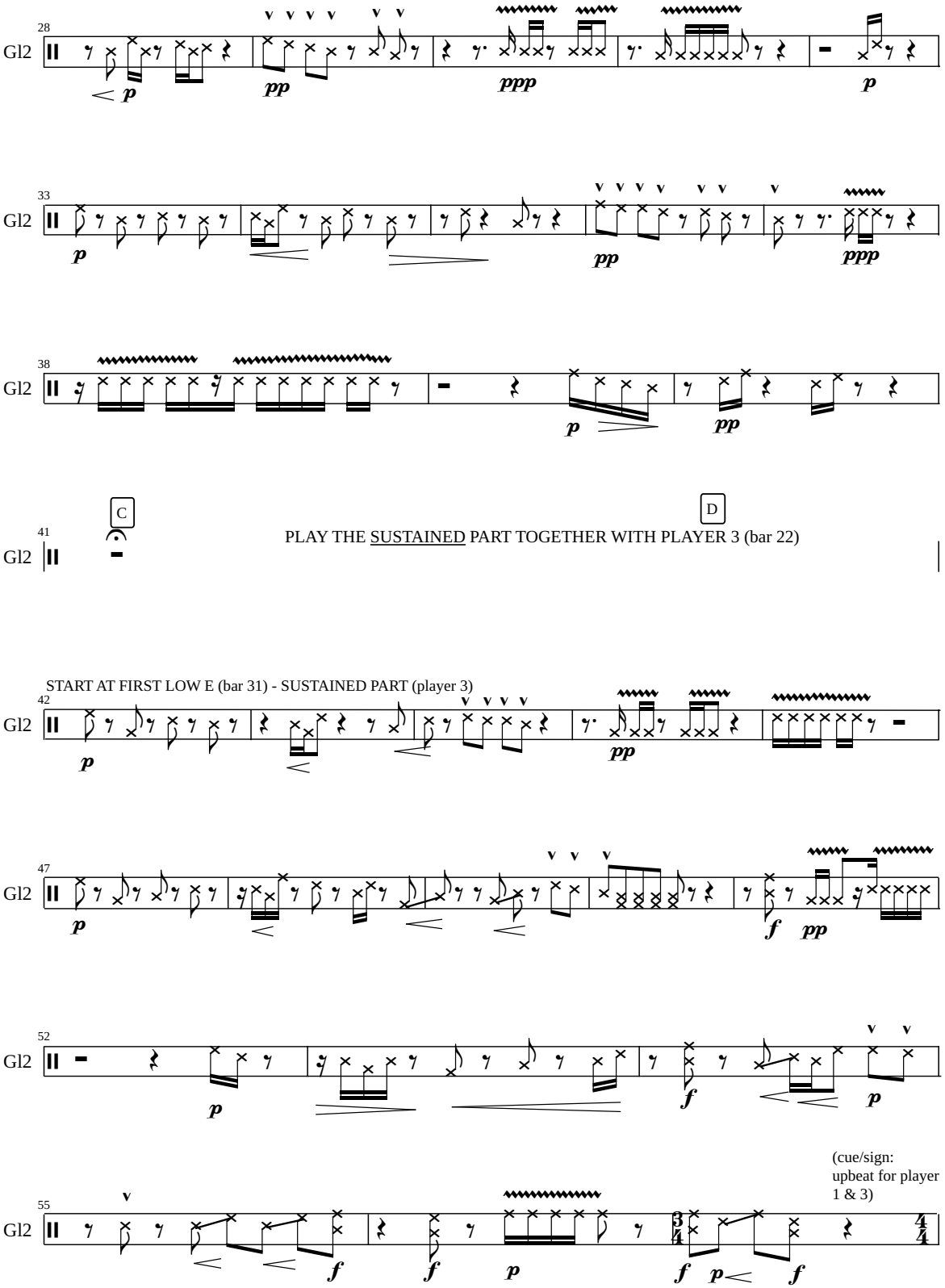
146

Eigengang - *Sustained* - Hans Roels



Eigengang - *Glisclus* - Hans Roels




28
Gl2
p
pp
ppp
p
33
Gl2
p
pp
ppp
38
Gl2
p
pp
C
D
41
Gl2
PLAY THE SUSTAINED PART TOGETHER WITH PLAYER 3 (bar 22)
START AT FIRST LOW E (bar 31) - SUSTAINED PART (player 3)
42
Gl2
p
pp
47
Gl2
p
f
pp
52
Gl2
p
f
p
(cue/sign:
upbeat for player
1 & 3)
55
Gl2
f
f
p
f
p
f

D

26

Pn2

(cue for pl. 1)

pp (Ped. II)

p (Ped. II)

GO TO THE GLISCLUS PART
bar 42 page pl.2-3

Pn3

pp (Ped. II)

p (Ped. II)

mp

pp

(cue for pl. 2)

32

Pn3

8vb

8vb

l.v.

E

F

(entry of harmonics)

36

Pn3

PLAY THE GLISCLUS PART (bar 58) TOGETHER WITH PLAYER 1 AND 2 page 3-3

G

START 3" AFTER HARMONIC C# (bar 8) in
HARMONICS PART (player 2) page pl.2-6

37

Pn3

8vb

pp

pp

42

Pn3

l.v.

45

Pn3

GO TO 'HARMONICS & MUTED' PART (bar 1) page pl.3-4

♩ = 88

E

58

Gl1 HIGH

beat pp wipe p beat pp

Gl2 MIDDLE

wipe pp p mf pp beat wipe glissando

wipe glissando

Gl3 MIDDLE

p mf pp

61

Gl1

wipe f pp p

Gl2

beat wipe f f pp p

Gl3

beat wipe f beat pp

65

Gl1

mf pp f pp

Gl2

beat pp wipe wipe f p pp

Gl3

wipe beat pp

68

Gl1

p beat wipe p pp

Gl2

p wipe p ca. 20"

TO HARMONICS AND MUTED PART

page pl.2-6

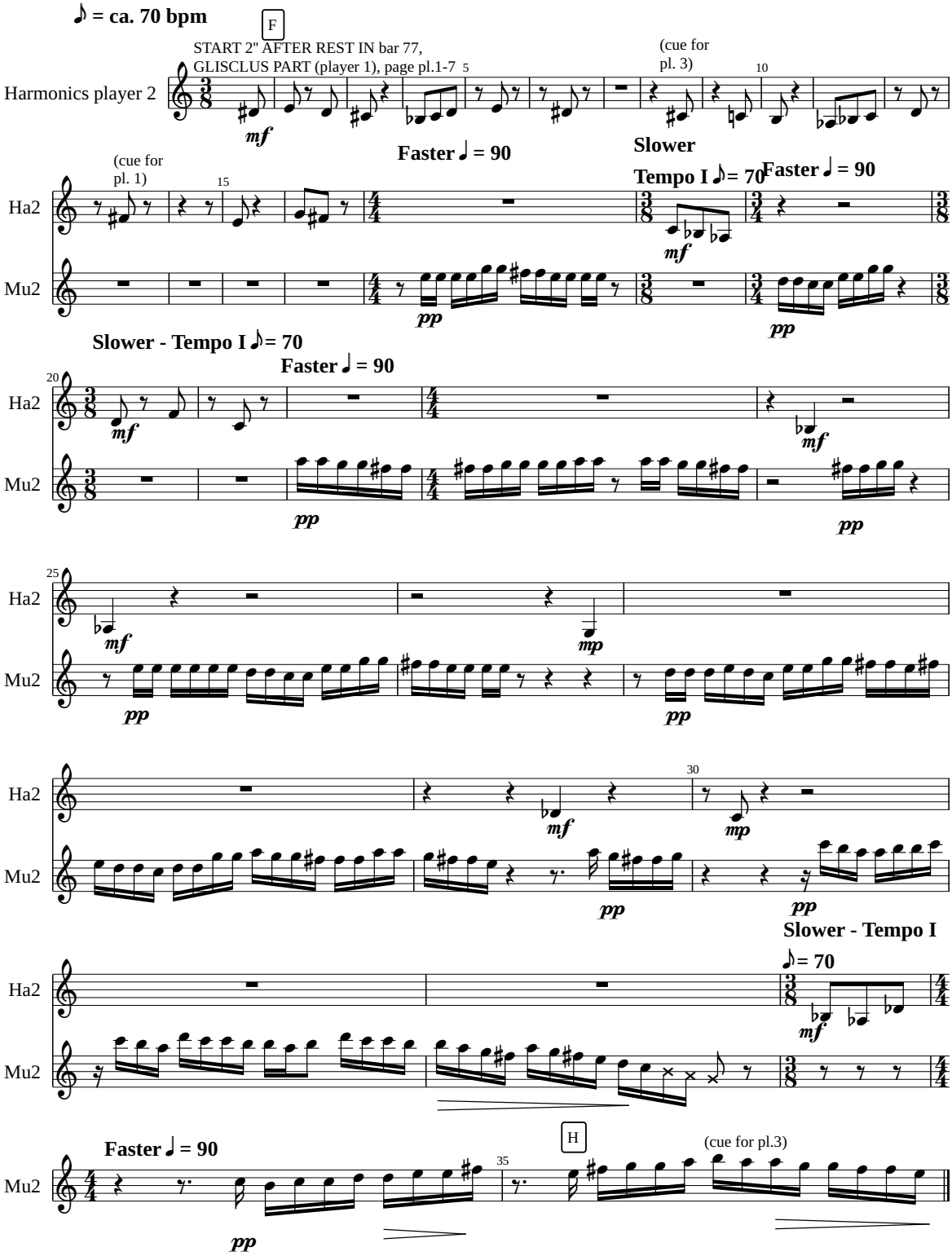
Gl3

ca. 40"

BACK TO SUSTAINED PART

bar 37 page pl.3-2

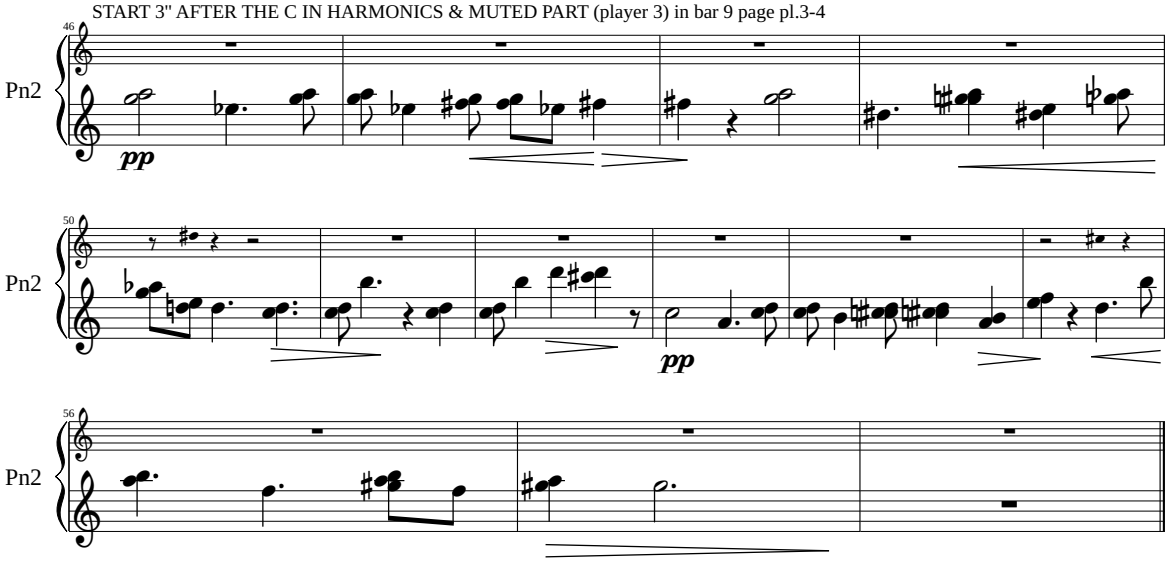
Eigengang - *Harmonics & muted* - Hans Roels



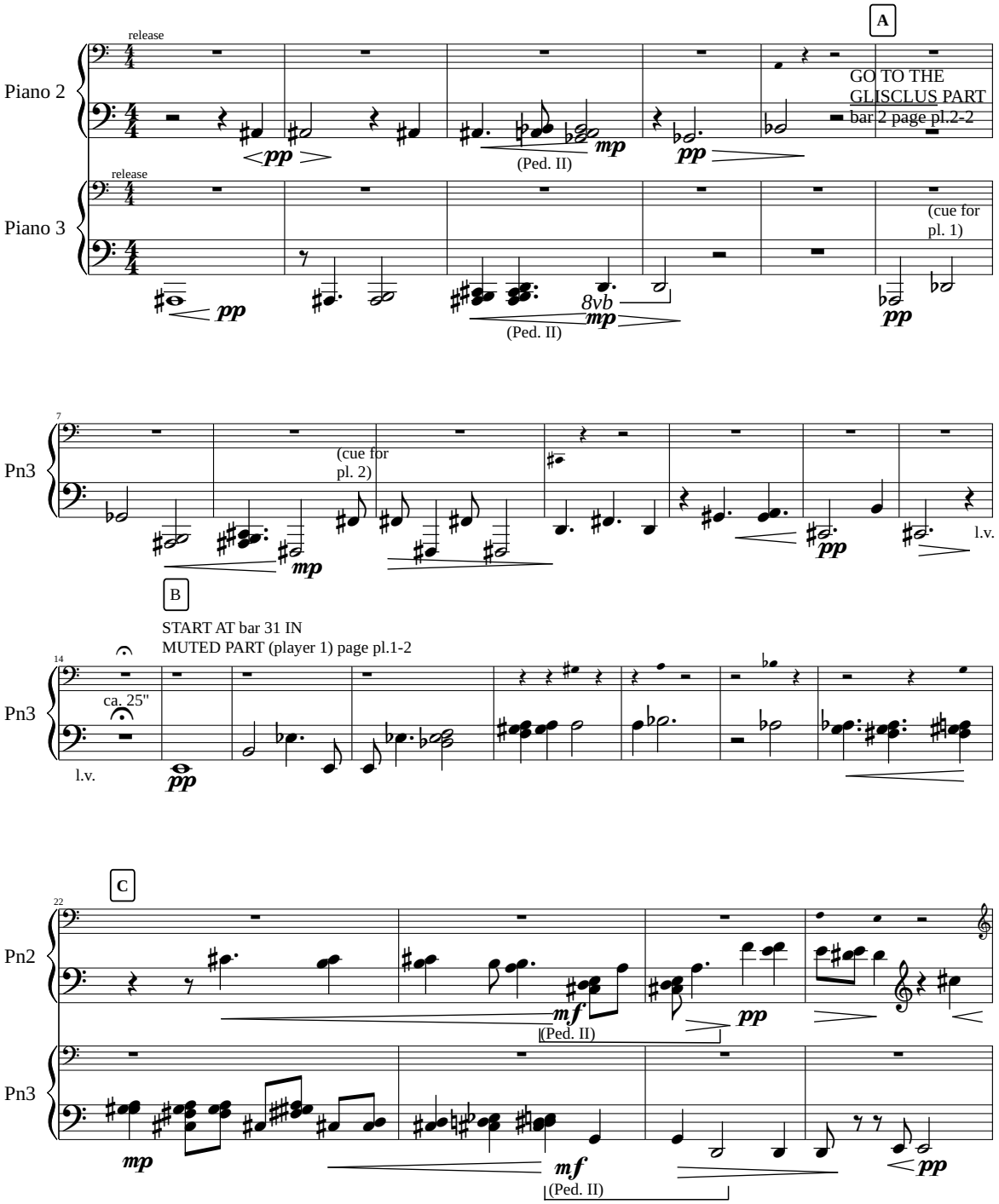
-> GO TO SUSTAINED PART
(bar 46) page pl.2-7

I

START 3" AFTER THE C IN HARMONICS & MUTED PART (player 3) in bar 9 page pl.3-4



Eigengang - *Sustained* - Hans Roels



D

26

Pn2

(cue for pl. 1)

pp (Ped. II)

p (Ped. II)

GO TO THE GLISCLUS PART
bar 42 page pl.2-3

Pn3

pp (Ped. II)

p (Ped. II)

mp

pp

(cue for pl. 2)

32

Pn3

8vb

8vb

l.v.

E

F

(entry of harmonics)

36

Pn3

PLAY THE GLISCLUS PART (bar 58) TOGETHER WITH PLAYER 1 AND 2 page 3-3

G

START 3" AFTER HARMONIC C# (bar 8) in
HARMONICS PART (player 2) page pl.2-6

37

Pn3

8vb

pp

pp

42

Pn3

l.v.

45

Pn3

GO TO 'HARMONICS & MUTED' PART (bar 1) page pl.3-4

♩ = 88

E

58

Gl1 HIGH

beat pp wipe p beat pp

Gl2 MIDDLE

wipe pp p mf pp beat wipe glissando

wipe glissando

Gl3 MIDDLE

p mf pp

61

Gl1

wipe f pp p

Gl2

beat wipe f f pp p

Gl3

beat wipe f beat pp

65

Gl1

mf pp f pp

Gl2

beat pp wipe wipe f p pp

Gl3

wipe beat pp

68

Gl1

p beat wipe p pp

Gl2

p wipe p ca. 20"

TO HARMONICS AND MUTED PART

page pl.2-6

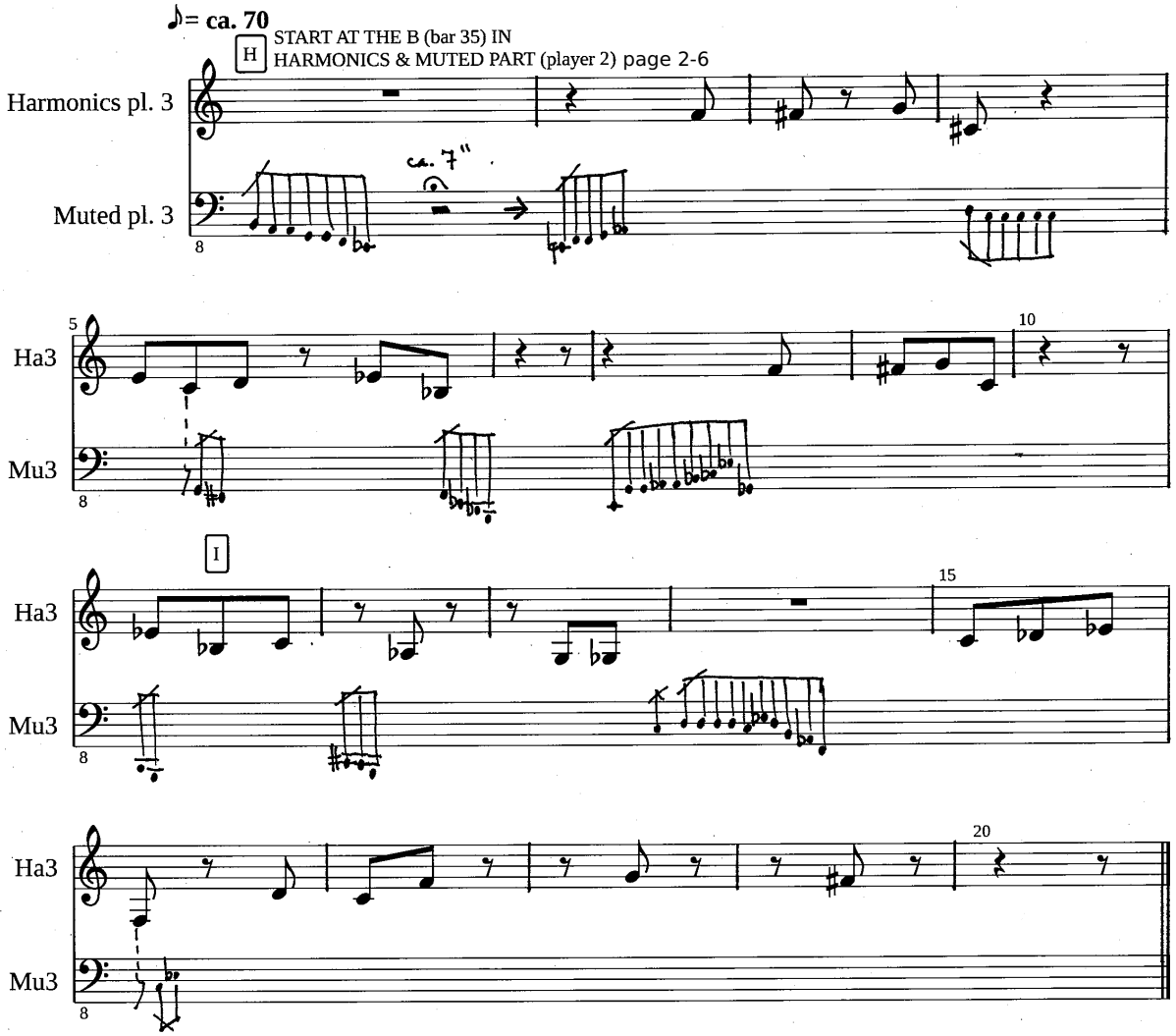
Gl3

ca. 40"

BACK TO SUSTAINED PART

bar 37 page pl.3-2

Eigengang - *Harmonics & muted* - Hans Roels



22 Centra : score

Centra (2013)

Hans Roels

Piccolo, Clarinet, Violin, Viola, Cello, Piano & Marimba

for the Spectra Ensemble

Centra - Remarks

The piccolo is placed at a distance from the piano, violin and viola. Even an invisible place (for the audience) is possible, as long as the piccolo sounds very soft and 'lontano'.
The piano has a central role and should preferably be placed in the center and front of the stage.
The marimba and clarinet may be placed at a further distance from the piano, violin and viola.

Most cues to synchronize the ensemble start from the piano part. The piano part plays continuously in the same tempo (with a short exception on page 12) throughout the whole piece. The cues are indicated by thick lines and arrows. A smaller dotted arrow means that a performer continues to play in his/her own tempo when moving on to the next page.

Piccolo

The U (from page 9 on) stands for a short (glissando) bend, with a pitch range no more than a semitone.

Clarinet

The indication 'beat on tube' (on pages 4 and 9) stands for beating with the hand on a tube to obtain a low, percussion-like sound. A bass clarinet (without mouth piece) or a cardboard tube can be used. Try to produce a different pitch (compared to page 4) when reproducing the effect on page 9.

Violin

The notation on page 4 and 5 stands for glissando on the E string in the highest pitch range of the violin. Try to produce a clear pitch and a homogeneous glissando.

Cello

In the second half of Centra the cello is played by beating/bouncing with a percussion stick (with a soft head) on the strings. The normal note heads stand for exact pitches, the small ones for less exact pitches. Notes without heads in a (glissando) line stand for less exact pitches in a glissando.

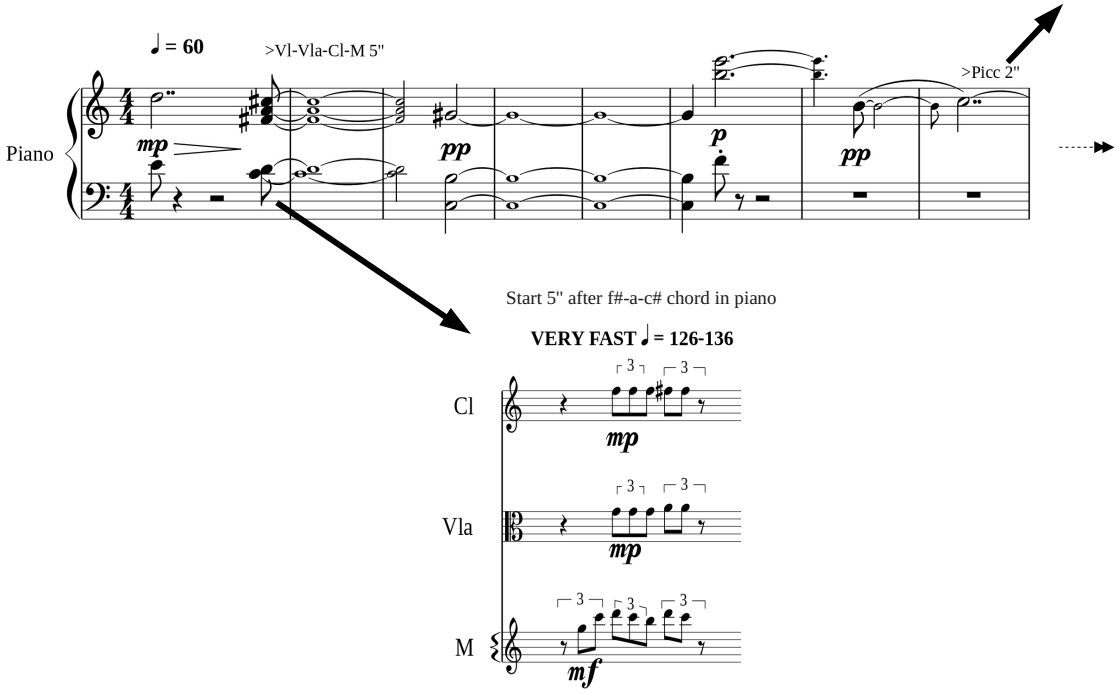
If convenient, the scordatura (of the lowest C string) on page 14 can be executed much earlier, for example during page 9 and 10.

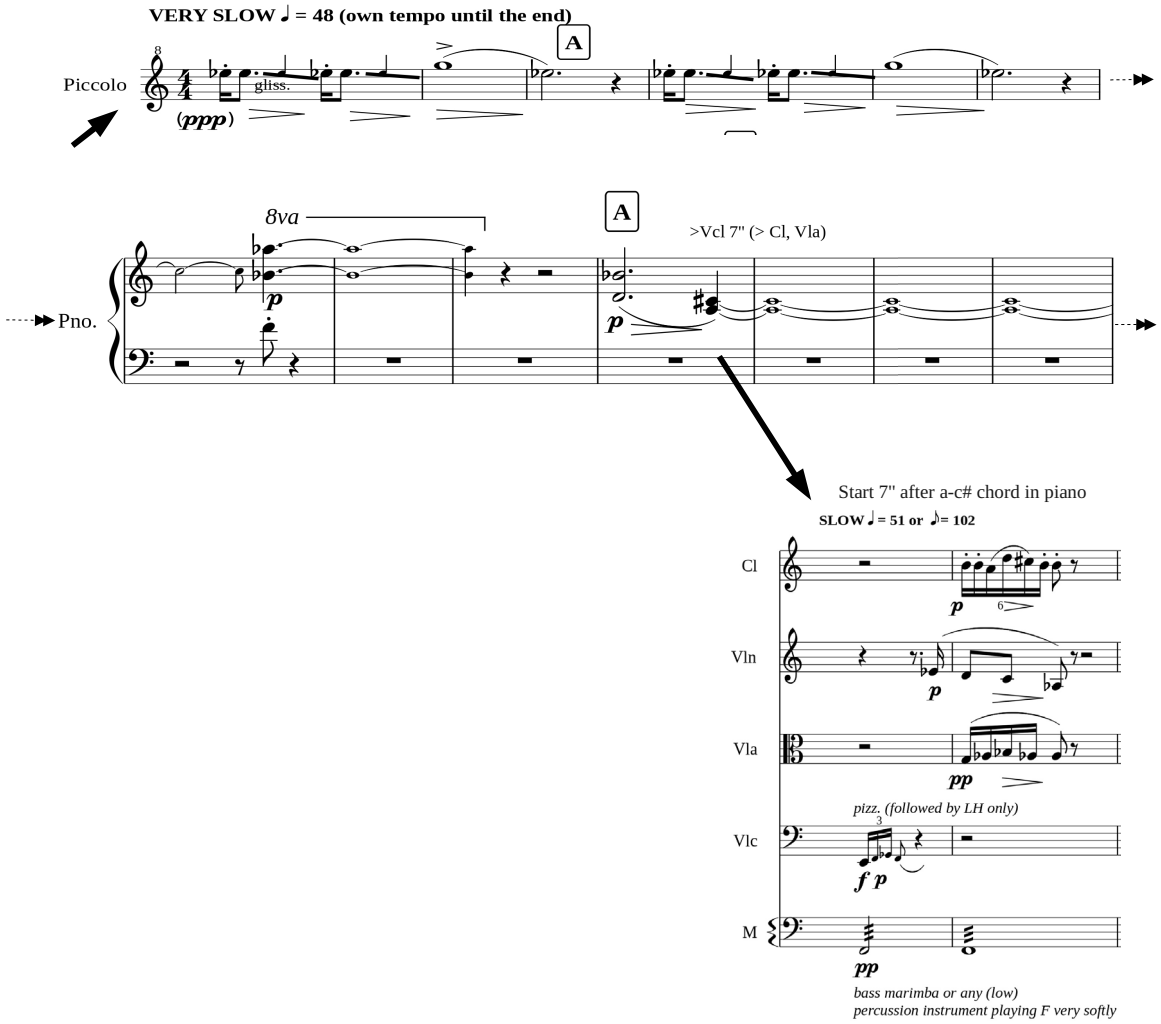
Marimba

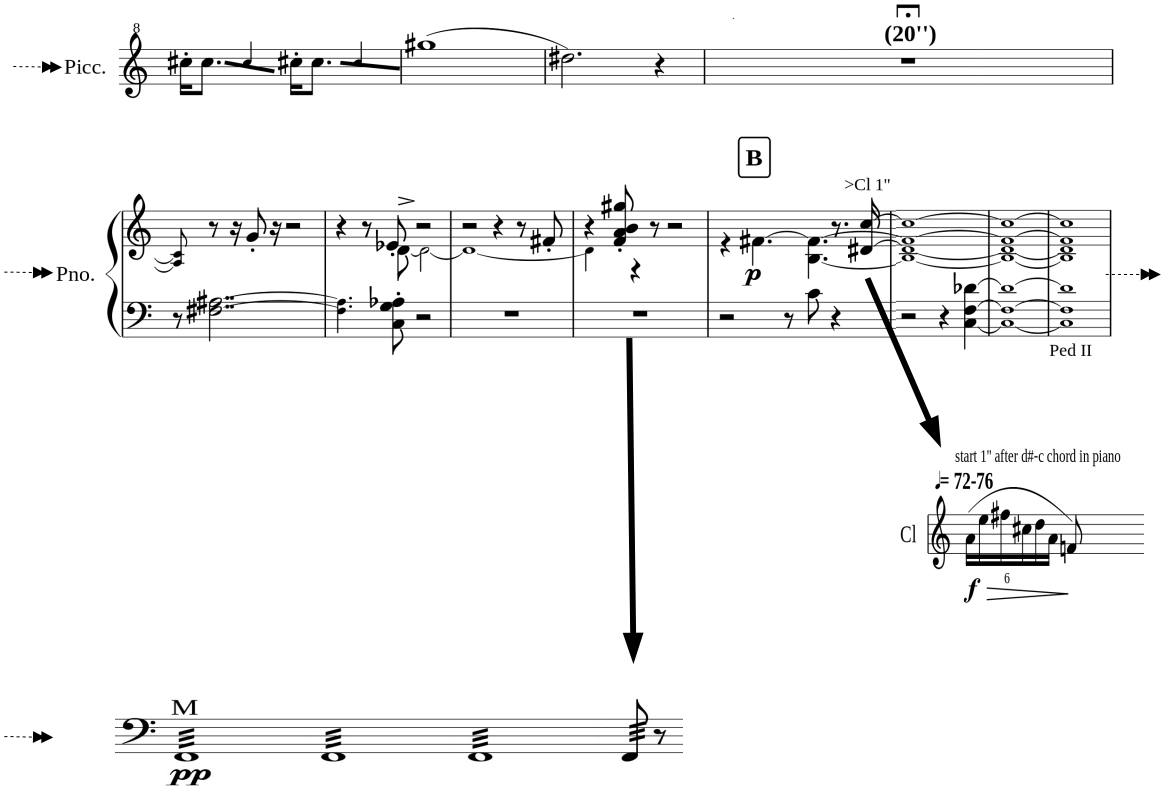
The marimba may be muted (for example, by a piece of cloth or foam) after the first ensemble fragment on page 1. There is more than one minute time to mute the marimba.

Centra

H. Roels




VERY SLOW ♩ = 48 (own tempo until the end)
Piccolo
gliss.
(ppp)
A
8va
p
Pno.
A
>Vcl 7" (> Cl, Vla)
p
Start 7" after a-c# chord in piano
SLOW ♩ = 51 or ♪ = 102
Cl
p
6
Vln
p
Vla
pp
pizz. (followed by LH only)
Vlc
3
f p
M
pp
bass marimba or any (low)
percussion instrument playing F very softly


Picc.
8
(20'')
B
Pno.
>Cl 1"
p
Ped II
start 1" after d#-c chord in piano
♩= 72-76
Cl
f
6
M
pp

Start 2" after G in piano

Picc.

(ppp)

>Cl 7"

>Fl 2"

C

>Vl 2"

Pno.

Start 7" after Bes in piano

Cl

♩= 60-64 beat on tube

mf

♩= 72 start 1" after 'beating' on tube by the clarinet player

M

ppp

very soft mallet

start 2" after f (preceded by staccato chord) in piano

♩= 56-60

Vln.

BRIDGE

FINGERBOARD

pp

Picc.

8

Pno.

D

>Vl 4"

>Vl-
Vla-
Vcl-
Cl 2"

p

pp

Ped

pp

start 4" after B-G motive in piano

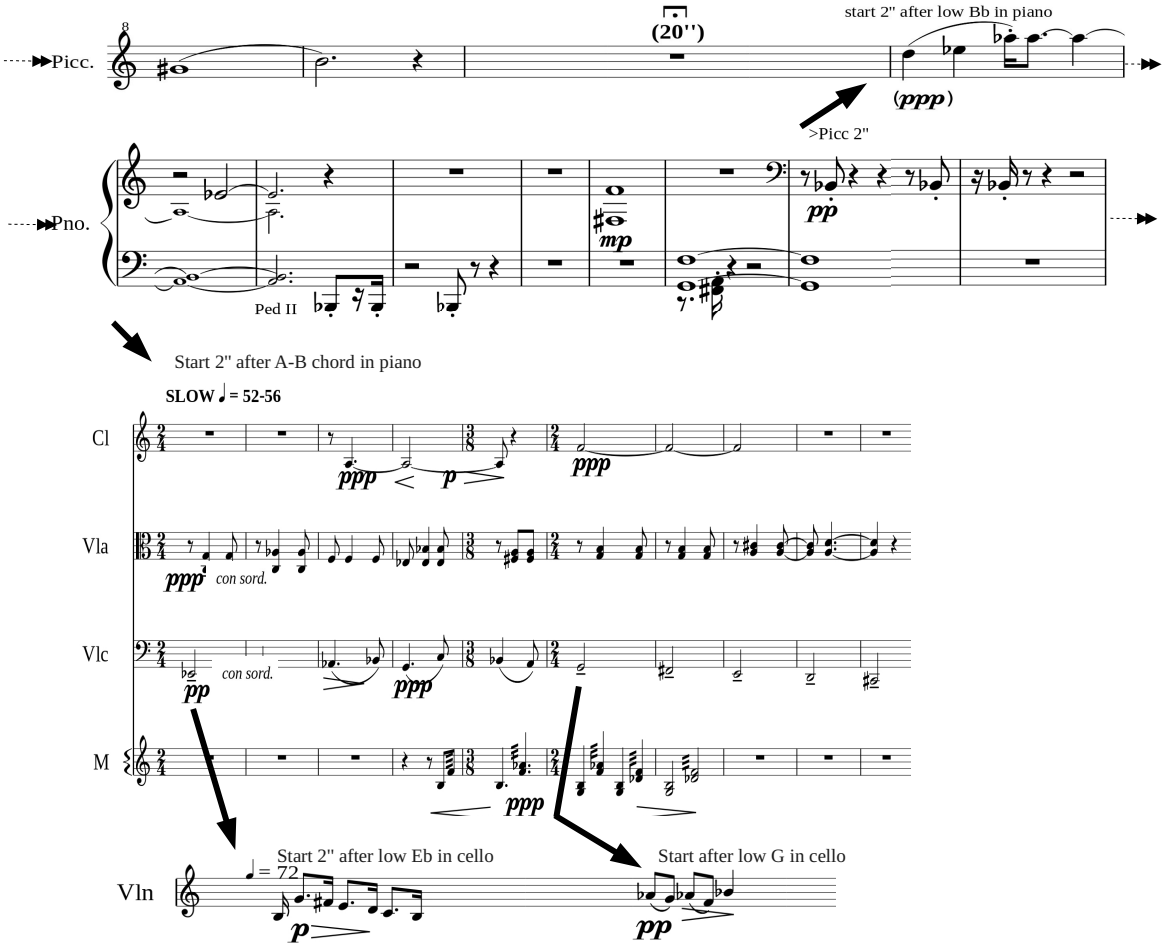
♩= 56-60

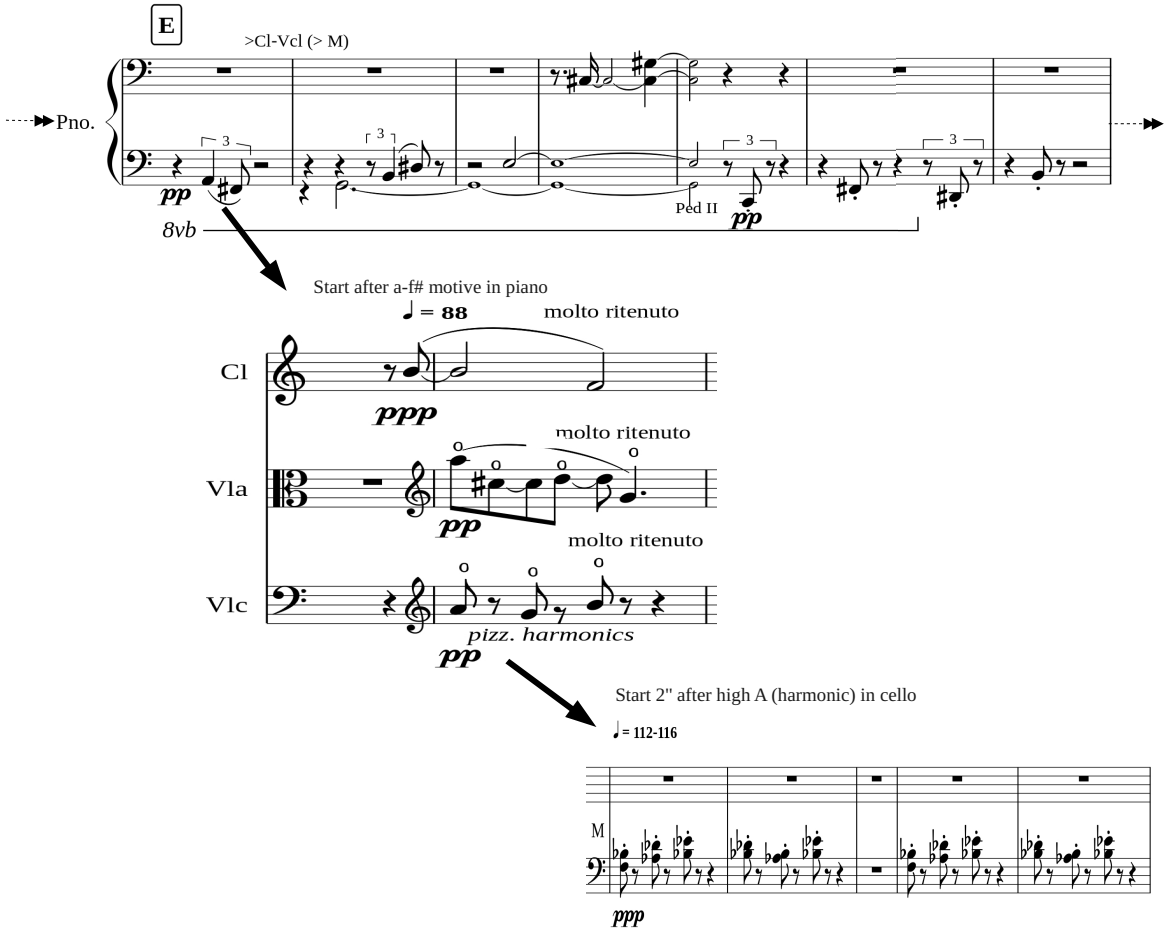
Vln.

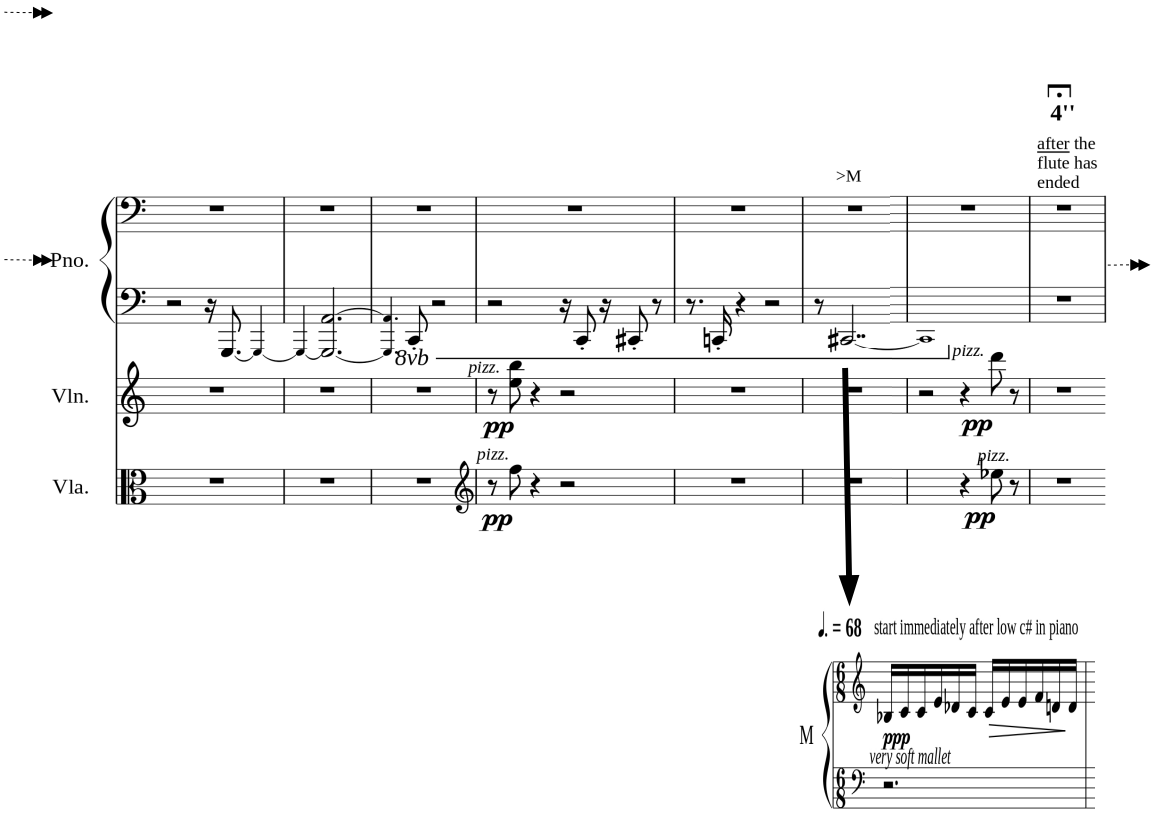
BR.

FB.

pp


Picc.
8
(20'')
start 2" after low Bb in piano
(ppp)
>Picc 2"
Pno.
pp
mp
Ped II
Start 2" after A-B chord in piano
SLOW ♩= 52-56
Cl
ppp
p
ppp
Vla
ppp
con sord.
Vlc
pp
con sord.
ppp
M
ppp
Start 2" after low Eb in cello
Start after low G in cello
Vln
♩= 72
p
pp


E
>Cl-Vcl (> M)
Pno.
pp
8vb
Ped II
pp
Start after a-f# motive in piano
♩ = 88
molto ritenuto
Cl
ppp
molto ritenuto
Vla
pp
molto ritenuto
Vlc
pizz. harmonics
pp
Start 2" after high A (harmonic) in cello
♩ = 112-116
M
ppp


4''
after the flute has ended
>M
Pno.
8vb
Vln.
pizz.
pp
Vla.
♩. = 68
start immediately after low c# in piano
M
ppp
very soft mallet

Picc.

(25'')

Start 1" after g# chord in piano

>Picc 1"

F

>M

>Cl

Pno.

mp p mp p

Vln.

arco pp pp

Vla.

arco pp pp

start 6" after a-f# in piano

♩ = 60-64

Cl

beat on tube

mf

♪ = 128-132

8va

Cl

f

♩ = 84

ppp

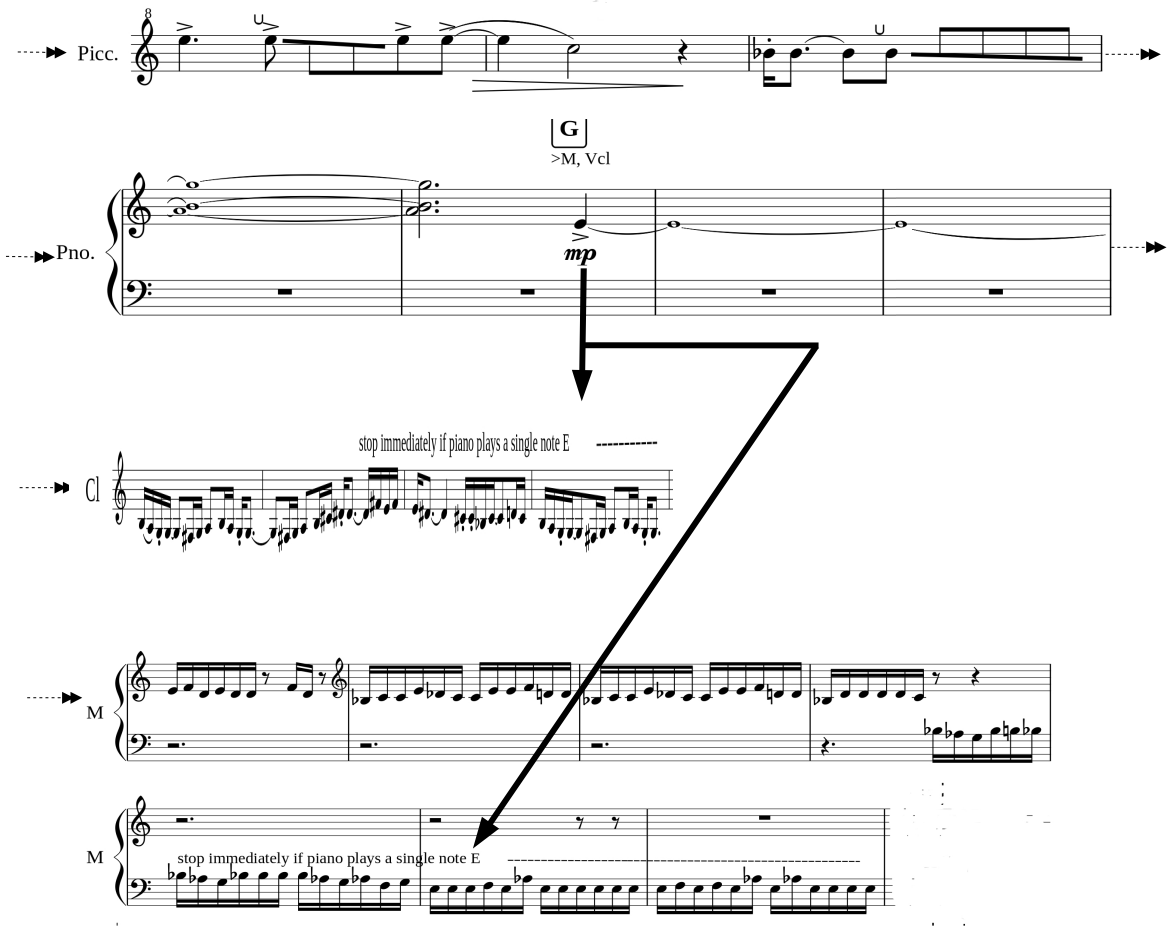
♩. = 68

start after a-f# chord in piano

M

very soft mallet

ppp


Picc.
G
>M, Vcl
Pno.
mp
stop immediately if piano plays a single note E
Cl
M
M
stop immediately if piano plays a single note E

Picc.

Pno.

>Vlc

p

A bit faster

♩ = 68

Vln.

>M

pizz.

pp

Vla.

pizz.

pp

Vlc

♩. = 68 start immediately after the piano plays a c#

beat with percussion mallet

ppp

moriendo together with marimba

wait 5"

and proceed

♩. = 68 start after violin pizzicato note G

M

ppp

Vlc

6

Cl

M

6

Picc.

H

Tempo I

Pno.

mf *fast glissando over strings*
(depress keys silently)
ppp *slow glissando*
>M 7"
>M, Vcl 2"
pp

Vln.

jeté *mf* *p* *pp* *arco* *pp*

Vla.

jeté *mf* *mf* *pp* *ppp* *arco* *p*

Vlc.

mf

Cl.

mf

Mrm.

mf

♩. = 68

M

start about 7" after second (soft) arpeggio by piano
ppp
L
R

M

moriendo when cello enters

Vlc

start 2" after the staccato chord of the piano a#-b-g
ppp

Start 2" after c-f-b chord in piano

Picc.

(30'')

(ppp)

I

>M

>M, Picc 2"

8va

Pno.

mp

p

mp

Vln.

pizz

p

Vla.

pizz

p

start immediately after c# chord in piano

♩ = 56

Cl

ppp

legato

♩. = 68

M

start after high f# in piano

ppp

M

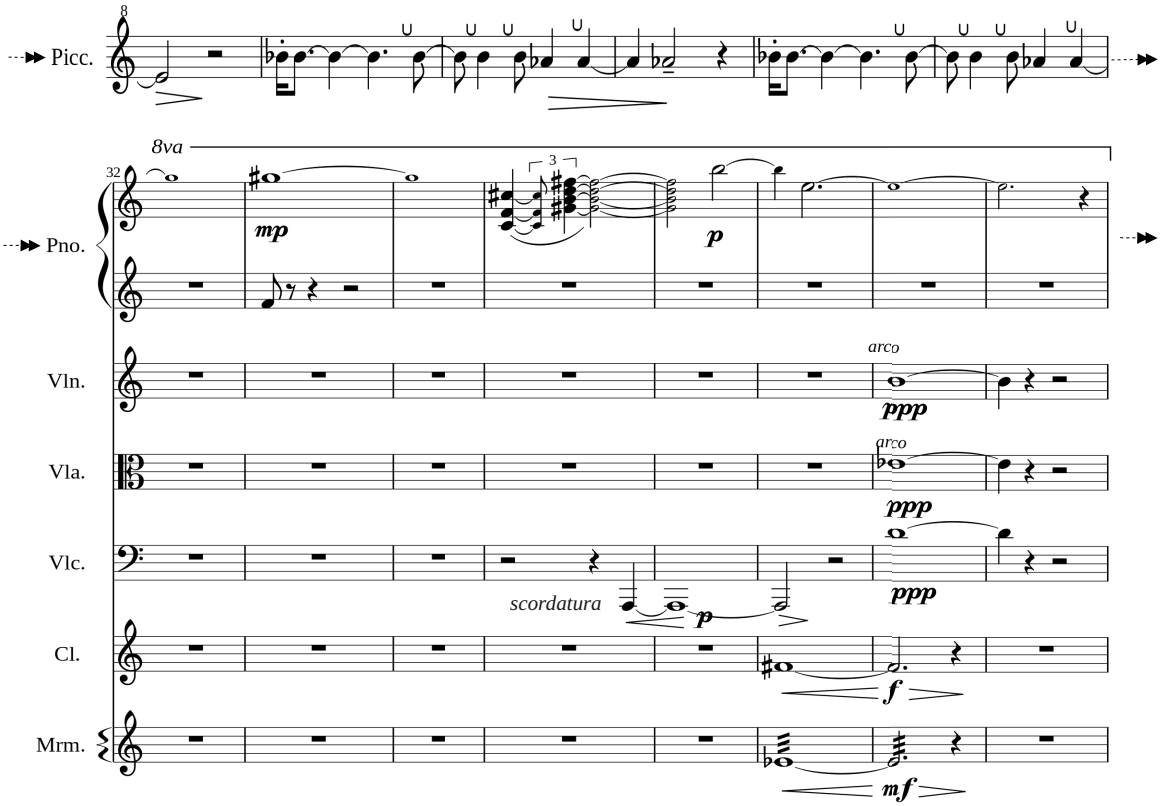
stop when piano plays c-f-b chord

Vlc

Vlc

stop when piano plays c-f-b chord

Vlc


Picc.
8
Pno.
32
8va
mp
3
p
Vln.
arco
ppp
Vla.
arco
ppp
Vlc.
scordatura
p
ppp
Cl.
f
Mrm.
mf

Picc.

J

>Vla 2"

>Vl 4"

8va

Pno.

p pp mp pp p

Vlc.

pp

scordatura

♩ = 56-60 start 4" after high Bb in piano

Vln. BR. FB.

pp

Fast ♩ = 112

start 2" after high g-f chord in piano

Vla

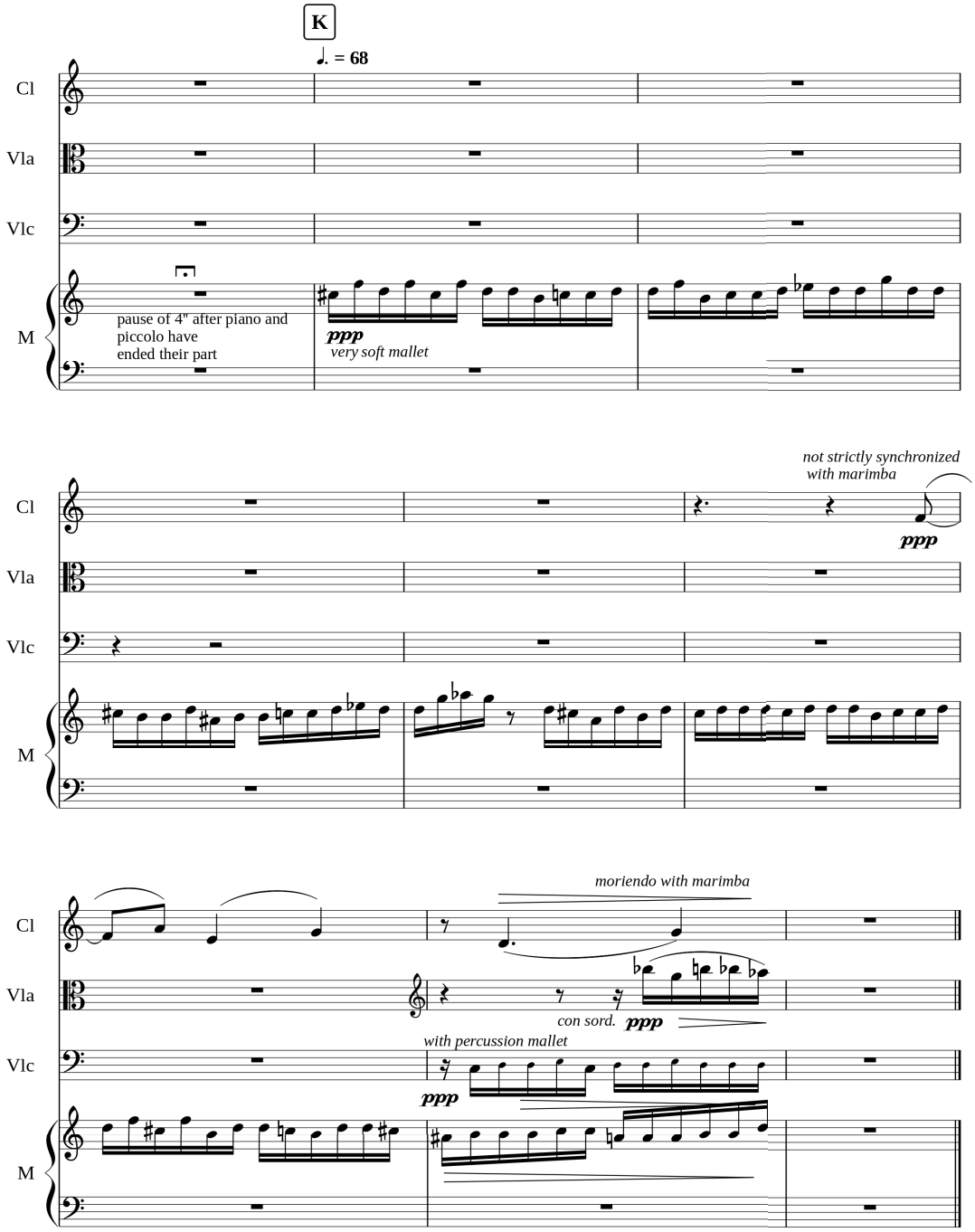
con sord.

ppp sempre

Vla

moriendo together with diminuendo of cello

Vla


K
♩. = 68
Cl
Vla
Vlc
M
pause of 4" after piano and piccolo have ended their part
ppp
very soft mallet
not strictly synchronized with marimba
ppp
moriendo with marimba
con sord.
ppp
with percussion mallet
ppp

23 (fl)ASH: score

(fl)ASH

(2012-14)

Hans Roels

for percussion and ensemble

(fl)ASH (version April 2014)

Hans Roels

for percussion and ensemble

General Remarks

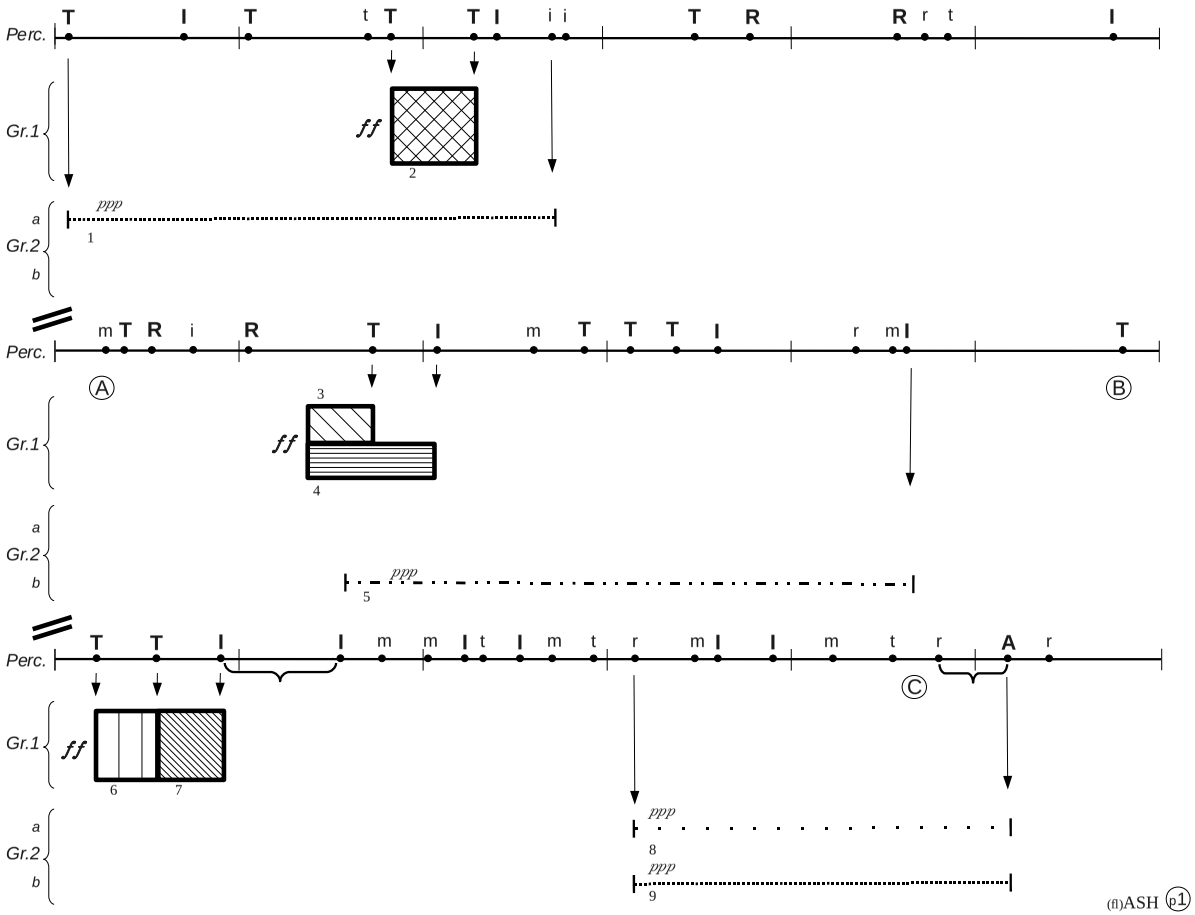
- The percussion player and Group 1 are located on the stage. Group 2 plays off-stage, close to the audience. Group 2 is divided in a minimum of two subgroups, each on a different location (e.g. to the left and the right of the audience).
- Group 1: minimum 6 players, Group 2: minimum 4 players. Try to have a diverse set of instruments. (Some of) the instruments in Group 2 should be able to switch from a very soft, muted sound to (very) loud while playing (e.g. around fragment number 30). Possible instruments (with extra mutes, pedals,...) are: standing piano, trumpet, horn, accordion, guitar (to be amplified in loud fragments),...
- The big majority of the percussion sounds is non-pitched while Group 1 and 2 play fragments of pitch-based music.
- One system = circa 30 seconds
- The beginning and end of a performance can be defined ad libitum (from any point in the score).

Percussion

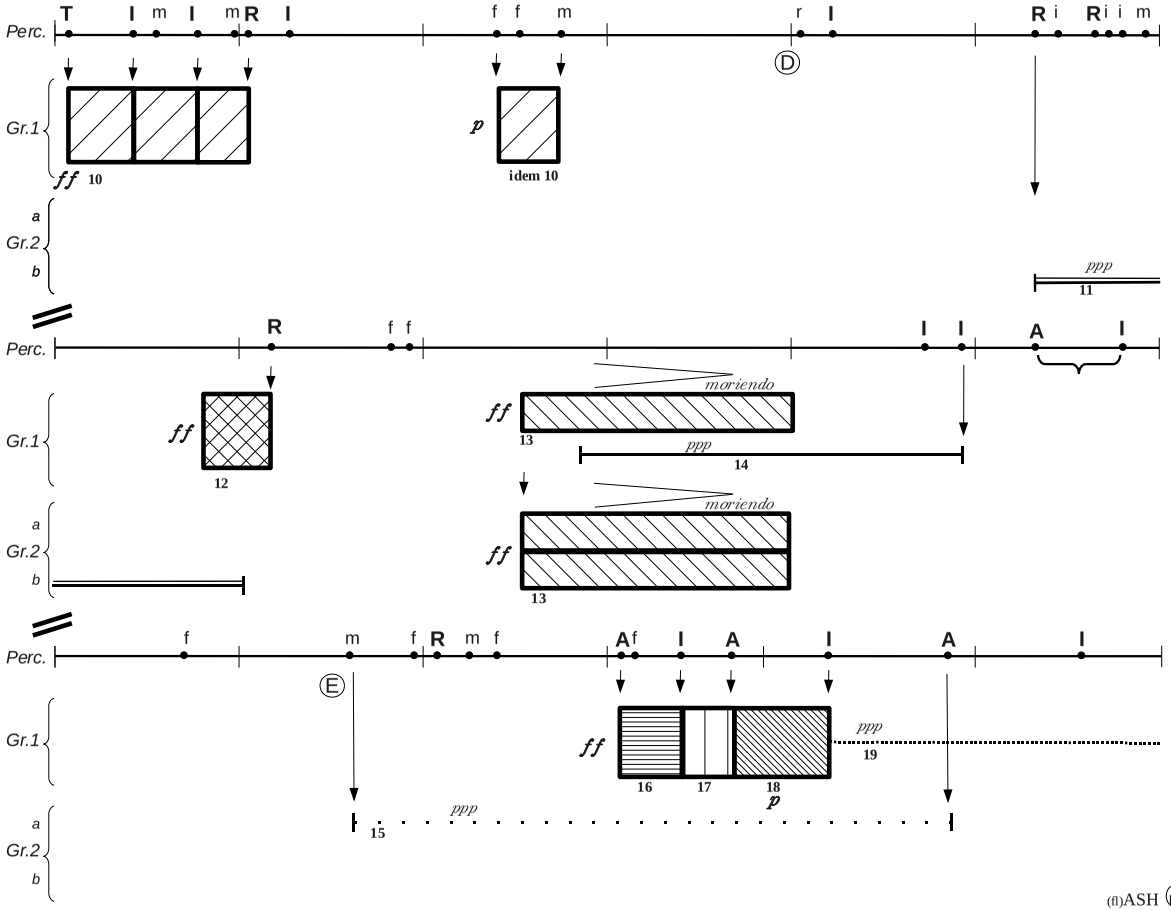
- Choose short, dry sounds with a (very) short decay.
- Each of the eight letters represents a group of similar percussion sounds. The letters in uppercase are played fortissimo, the ones in lowercase mezzo forte. The letters *m* and *f* are only used for the mezzo forte sounds.

Group 1 and 2

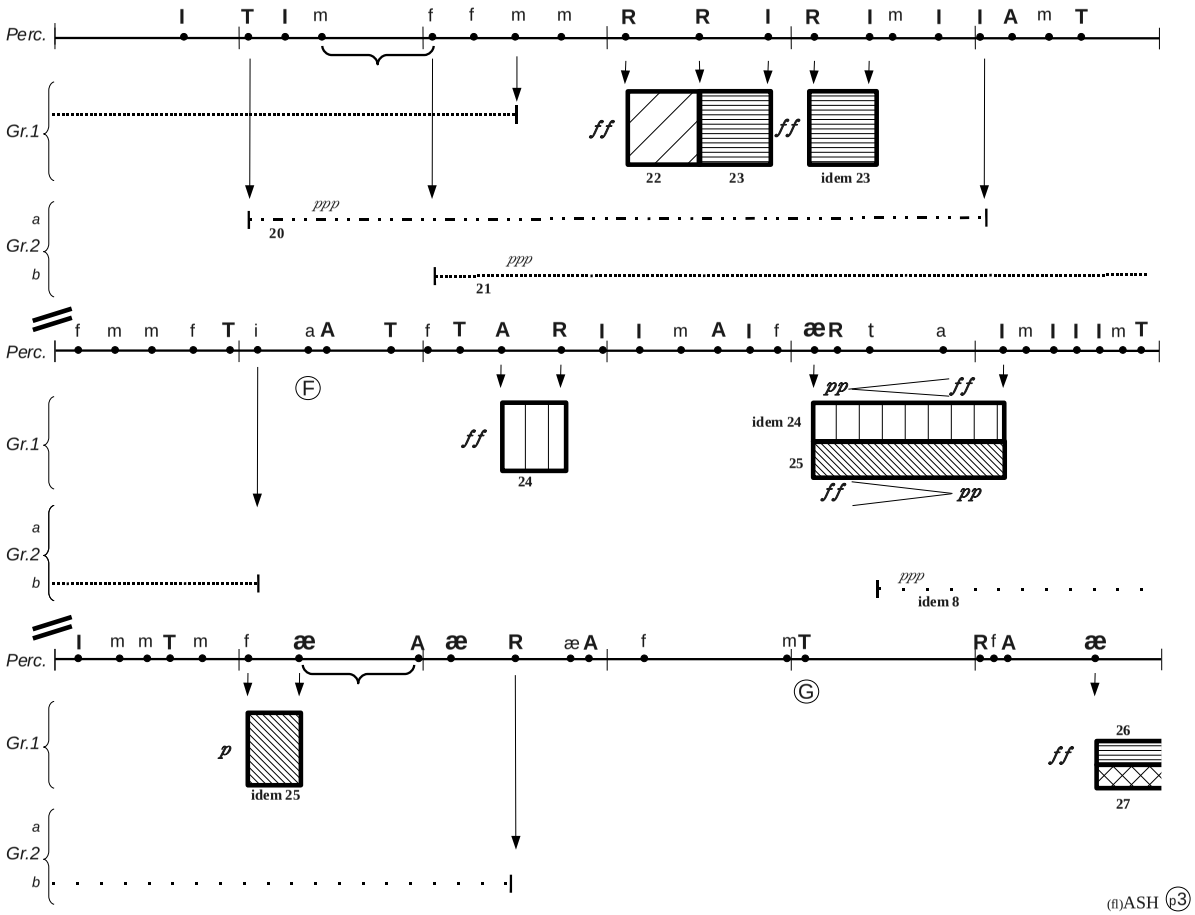
- Use fragments from sketches and unfinished music, from any period, region or style.
- The fragments in Group 1 and 2 should be very diverse and contrasting and have a distinct character. But within one fragment the timbre and especially the dynamics should be *homogeneous and continuous*, to ensure that the beginning and end of a fragment sound as a sudden rupture (and not as the end or beginning of a musical phrase or motive).
- The perfomers in Group 1 can form duos, trios, quartets,... ad libitum. One performer can play different instruments throughout this composition to obtain more diversity.
- In the score *idem 40* means: repeat fragment number 40. A repetition stands for an similar gesture from the same composition or sketch (in this example: the composition from which fragment 40 was derived).
- When several blocks with different hatching motives are notated simultaneously in the score, contrasting short music fragments are played. If there is only one block, these are the two options:
  → the voices and parts musically fit together e.g. melody, accompaniment and bass ('tutti')
  → a music fragment is cut in random pieces, these are performed simultaneously within a limited pitch range ('fused').
  The second option appears less than the first.
- In general the longer music fragments, notated with a line and *ppp*, should sound *extremely soft and muted*, the audience should barely hear it.
- A dotted line in the score stands for a fragment that is performed for circa two thirds of the indicated duration (always start and stop on a note of the percussion player). A full line is to be performed for the whole duration.

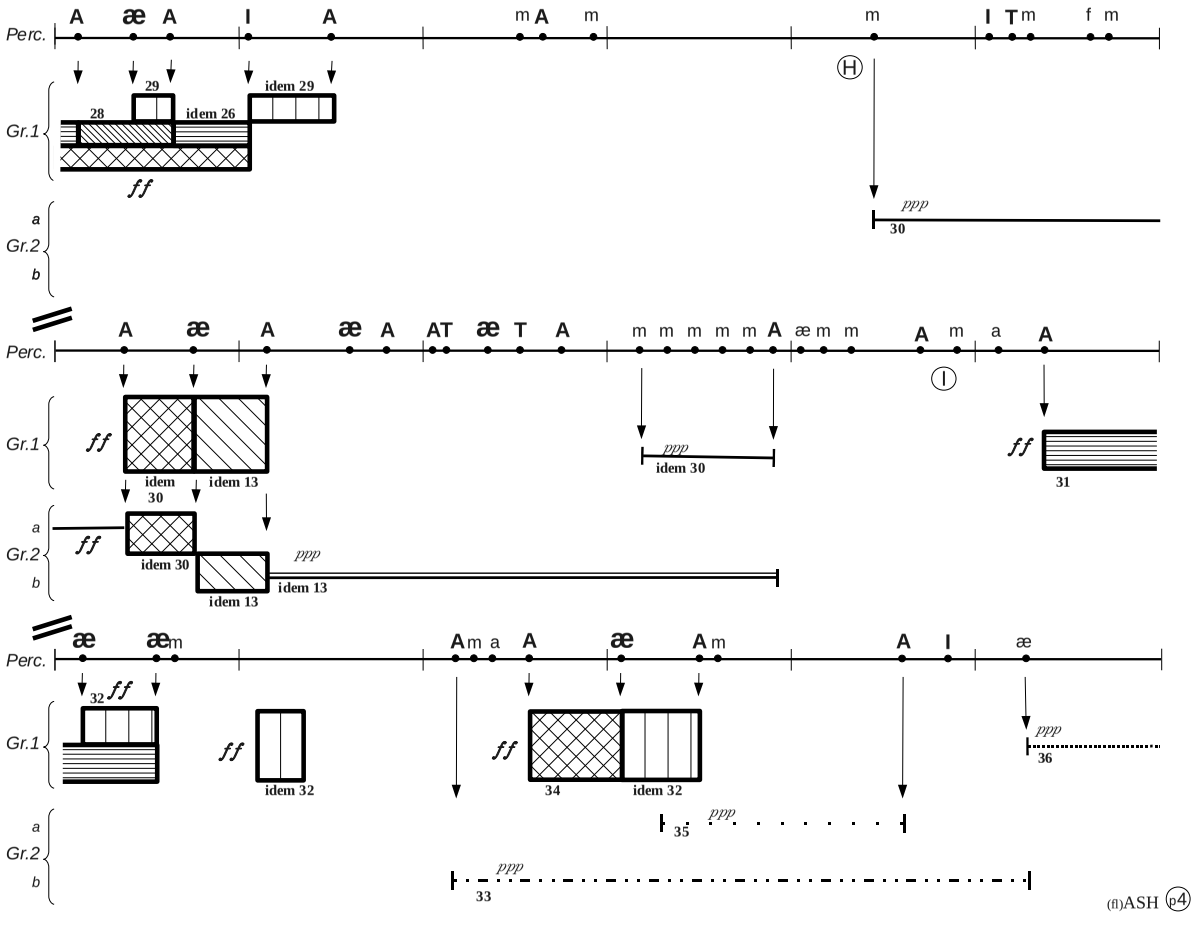

Perc.
T I T t T T I i i T R R r t I
Gr.1
ff
2
Gr.2
a
b
ppp
1
Perc.
m T R i R T I m T T T I r m I T
A
B
Gr.1
3
ff
4
Gr.2
a
b
ppp
5
Perc.
T T I I m m I t I m t r m I I m t r A r
C
Gr.1
ff
6
7
Gr.2
a
b
ppp
8
ppp
9

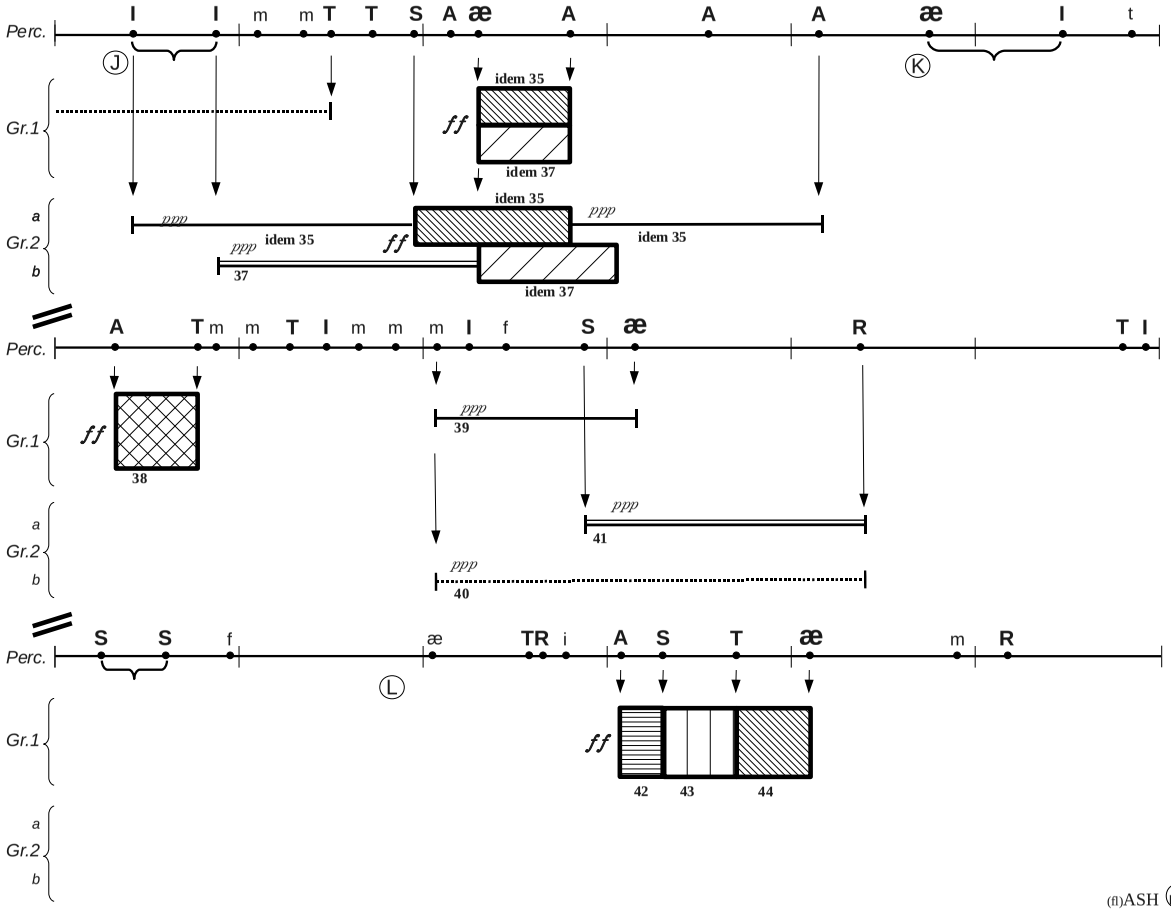
(fl)ASH p1

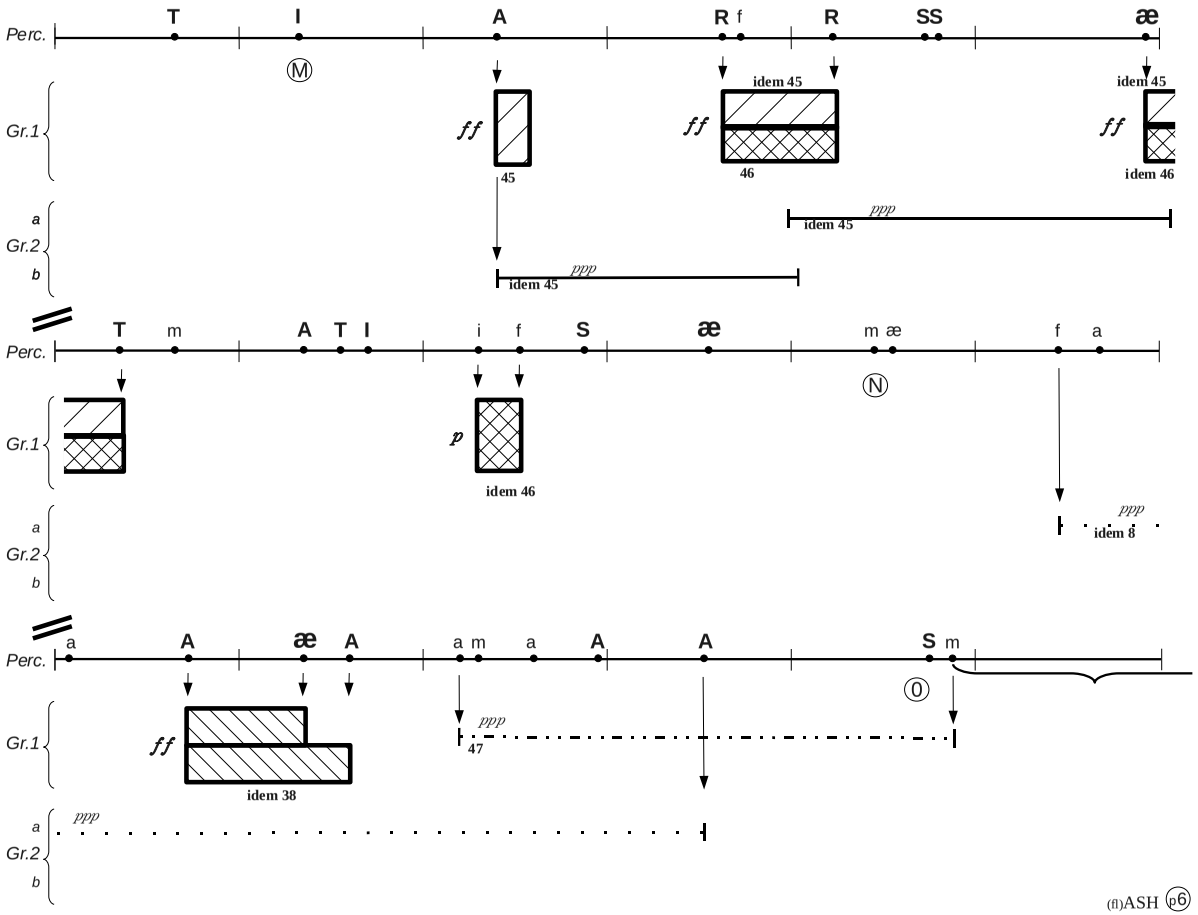

Perc.
T I m I m R I
f f m
r I
R i R i i m
D
Gr.1
ff 10
p
idem 10
Gr.2
a
b
ppp
11
Perc.
R
f f
I I
A I
Gr.1
ff
12
ff
moriendo
13
ppp
14
Gr.2
a
b
ff
moriendo
13
Perc.
f
m
f R m f
A f I A
I
A
I
E
Gr.1
ff
16
17
18
p
ppp
19
Gr.2
a
b
ppp
15

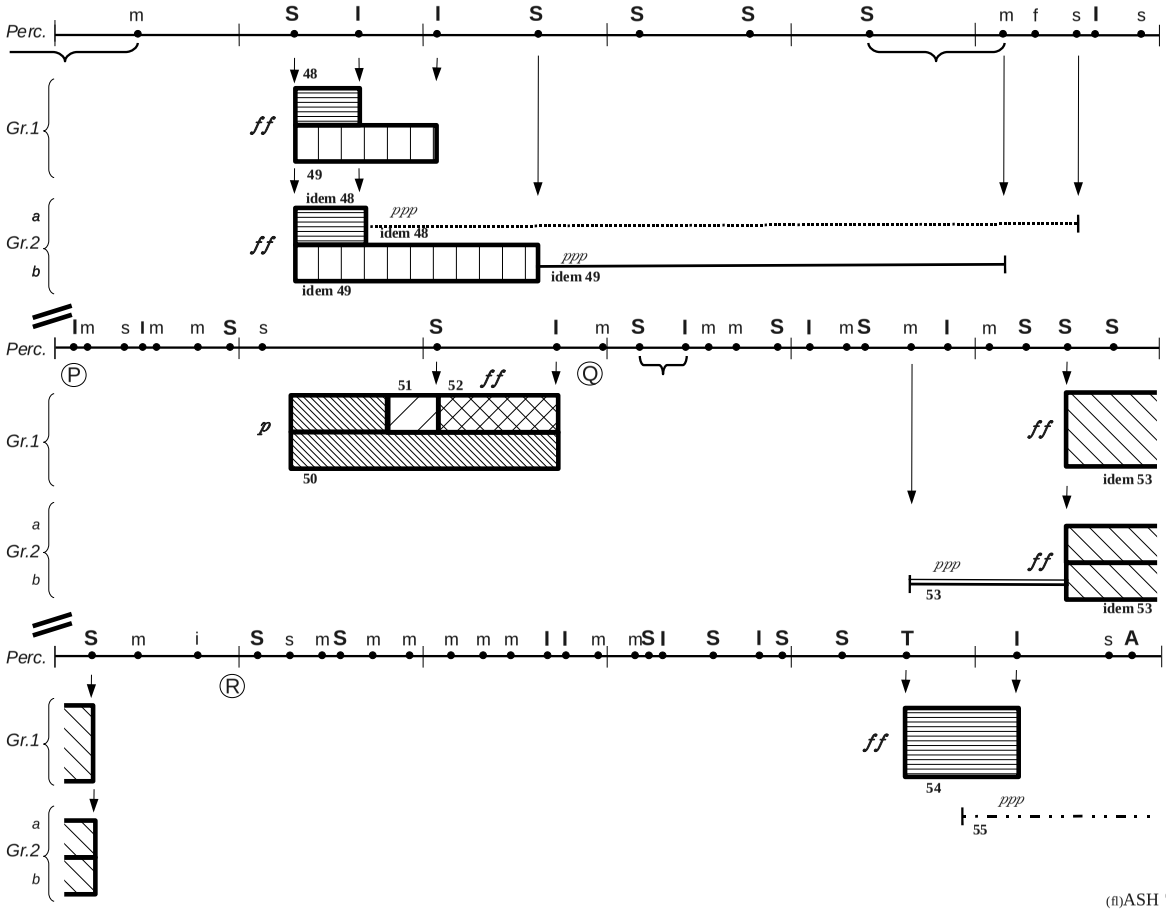
(fl)ASH p2


Perc.
I T I m f f m m R R I R I m I I A m T
Gr.1
ff
22
23
ff
idem 23
Gr.2
a
b
ppp
20
ppp
21
Perc.
f m m f T i a A T f T A R I I m A I f æR t a I m I I I m T
F
Gr.1
ff
24
pp
ff
idem 24
25
ff
pp
Gr.2
a
b
ppp
idem 8
Perc.
I m m T m f æ A æ R æ A f mT R f A æ
G
Gr.1
p
idem 25
26
ff
27
Gr.2
a
b
(fl)ASH p3

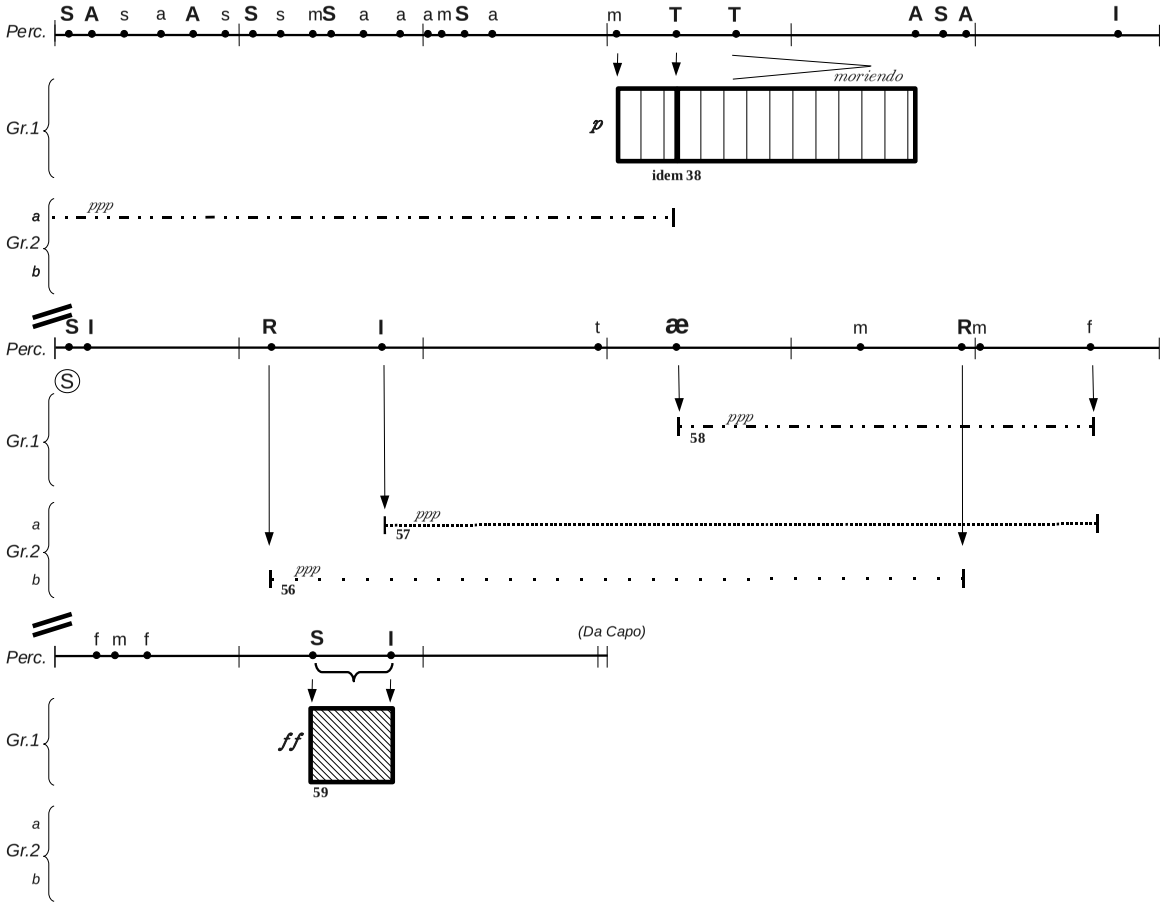

Perc.
A æ A I A m A m m I T m f m
H
Gr.1
28
29
idem 26
idem 29
ff
Gr.2
a
b
ppp
30
Perc.
A æ A æ A AT æ T A m m m m m A æ m m A m a A
I
Gr.1
ff
idem 30
idem 13
ppp
idem 30
ff
31
Gr.2
a
b
ff
idem 30
idem 13
ppp
idem 13
Perc.
æ æm Am a A æ Am A I æ
Gr.1
32
ff
ff
idem 32
ff
34
idem 32
ppp
36
Gr.2
a
b
ppp
35
ppp
33
(fl)ASH p4


Perc.
I I m m T T S A æ A A A æ I t
J
K
Gr.1
idem 35
ff
idem 37
Gr.2
a
b
ppp
idem 35
ff
ppp
idem 35
ppp
idem 35
37
idem 37
Perc.
A T m m T I m m m I f S æ R T I
Gr.1
ff
38
ppp
39
Gr.2
a
b
ppp
41
ppp
40
Perc.
S S f æ TR i A S T æ m R
L
Gr.1
ff
42
43
44
Gr.2
a
b


Perc.
T
I
A
R f
R
SS
æ
M
Gr.1
ff
45
idem 45
46
idem 46
Gr.2
a
b
ppp
idem 45
T
m
A
T
I
i
f
S
æ
m æ
f
a
N
p
idem 46
idem 8
a
A
æ
A
a m
a
A
A
S m
0
idem 38
47
(fl)ASH p6


Perc.
m S I I S S S S m f s I s
Gr.1
48
ff
49
idem 48
a
Gr.2
b
ff
ppp
idem 48
ppp
idem 49
idem 49
Perc.
I m s I m m S s S I m S I m m S I m S m I m S S S
P
Q
51
52
ff
p
50
Gr.1
ff
idem 53
a
Gr.2
b
ppp
ff
53
idem 53
Perc.
S m i S s m S m m m m m I I m m S I S I S S T I s A
R
Gr.1
ff
54
ppp
55
a
Gr.2
b

(fl)ASH p7


Perc.
S A s a A s S s mS a a amS a m T T A S A I
moriendo
Gr.1
p
idem 38
a
Gr.2
b
ppp
S I R I t æ m Rm f
S
ppp
58
ppp
57
ppp
56
f m f S I (Da Capo)
ff
59

24 Night Included: score

Night Included

How it takes place II (2013)

for six or more performers, playing any instrument or sound device

Hans Roels

[1.] Draw a scheme of the course of action of one recent day (24 hours) in your life. Use this scheme as a general guideline for your part. Perform this scheme once, starting from any point in the scheme. The sleeping and rest periods are silent or almost silent.

[2.] Adjust the balance and loudness of the parts by changing the location of the performers. The louder a performer wants to perform his/her part, the further he/she should be removed from the audience. A part with very soft sounds can be distributed among different performers or different small speakers, placed in the audience. In general, all parts should sound equally loud for the listeners.

[3.] Give every part a clear and simple identity. Give every part a distinct location.

[4.] Every part has a duration between 3 and 10 minutes (night included).

[5.] One or more players perform one or more normal, daily actions silently. Choose actions that normally do produce sound and find ways to perform these actions both naturally and silently. These muted actions are performed in any place visible for the audience but not in the center of the stage.

[6.] Don't interact with the other players, follow your own timing and course of action. Together create an environment where everyone can disclose his/her own identity.

About suffering they were never wrong,
The old Masters: how well they understood
Its human position: how it takes place
While someone else is eating or opening a window or just walking dully along;

from 'Musée des Beaux Arts' by W. H. Auden,
(on the painting 'The Fall of Icarus' by Pieter Brueghel)

25 Points to make: score

Points to make

(2013-2014)

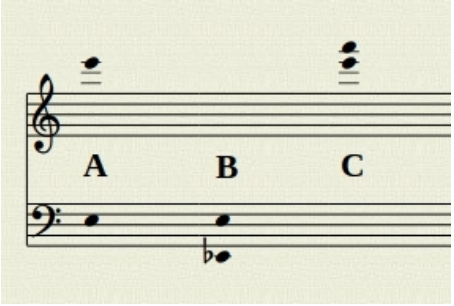
for minimum four players

Hans Roels

Points to make

General Remarks

a) All performers play music from staff 1, 2 and 3. Only short notes/sounds are played.
b) One system = ca. 30 seconds.
c) The five parts (A-B-C-D-E) may be performed in any order. Any part may be omitted or repeated. Parts may be grouped into one movement. Part B has a loud and a soft version (see score).
d) This composition requires minimum 4 performers. The main sounding pitch range (notated in staff 1 and 2) is represented by A in the following picture. This is the main range for all performers (but not all pitches have to be played by each performer, see remark (e)). At least two techniques/timbres (see remark e)) should also be able to play in range B, and two others in range C.



Staff 1 and 2

e) Each performer chooses several techniques/timbres to perform short notes. The pitch of these notes should be audible. Not every note should be played by all the available techniques/timbres. One may choose to play one separate note, one or more notes from a chord, the whole chord or skip notes. One may also choose to use a specific technique/timbre in a selection of the five parts. If one chooses to play a note or a chord, it should be played once or twice (but also see remark i).
f) Thus every note or chord in staff 1 and 2 should be heard as an (irregular) note repetition.

g) One performer can also choose to play two or more instruments to have a big variety in techniques/timbres. One performer can play one note or chord 'simultaneously' with different techniques/timbres, i.e. fast after each other.

h) Fast notes (notated near to each other) can be grouped ad libitum, i.e. each technique/timbre doesn't have to perform the notes of a group in the same sequential order.

i) Very soft (pianissimo) repetitions of the previous note/chord may be added ad libitum.

j) In general, when choosing a technique/timbre to perform a note/chord, one should make sure that they match with the dynamics of the note/chord on the one hand, and that in the overall version/performance of *Points to make*, there is a lot of diversity in techniques/timbres.

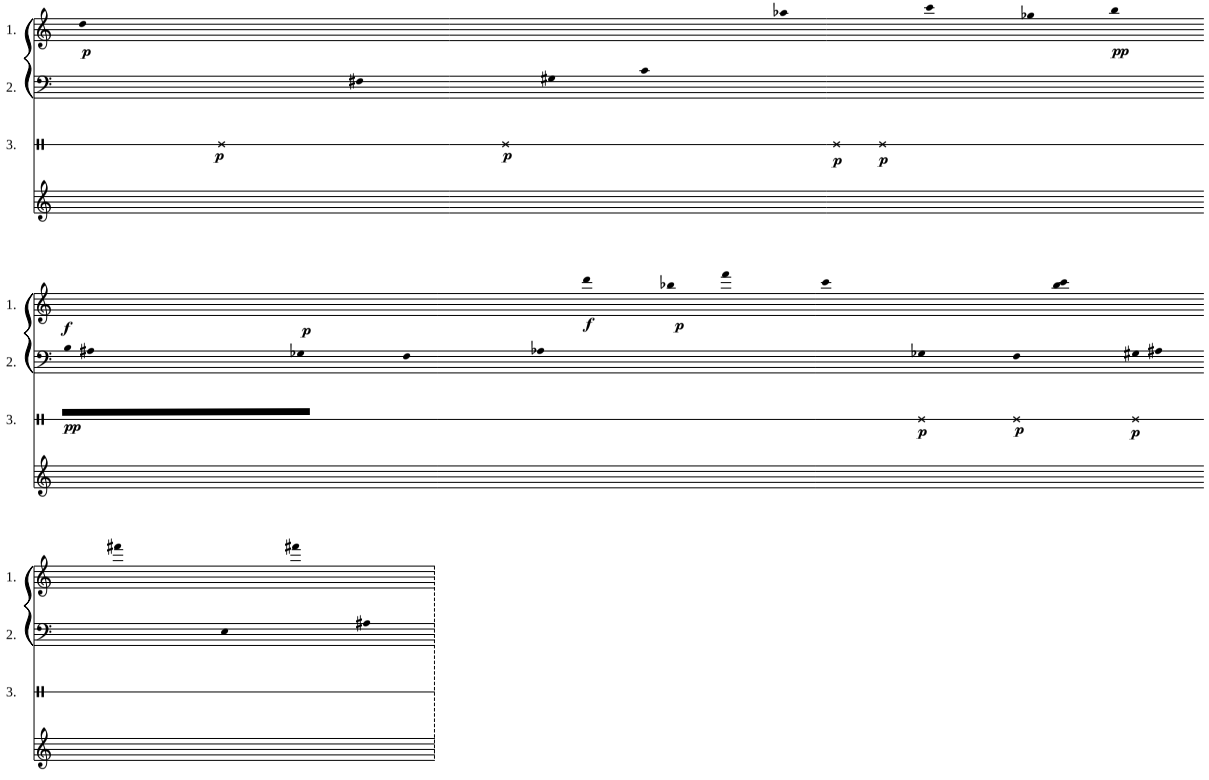
Percussion Staff

k) There are minimum five percussion sounds, these sound low and dry (without a long decay), and most of them don't have a clear pitch. These percussion instruments are distributed among and performed by the performers ad libitum. The five sounds are represented by just one note on the percussion staff.

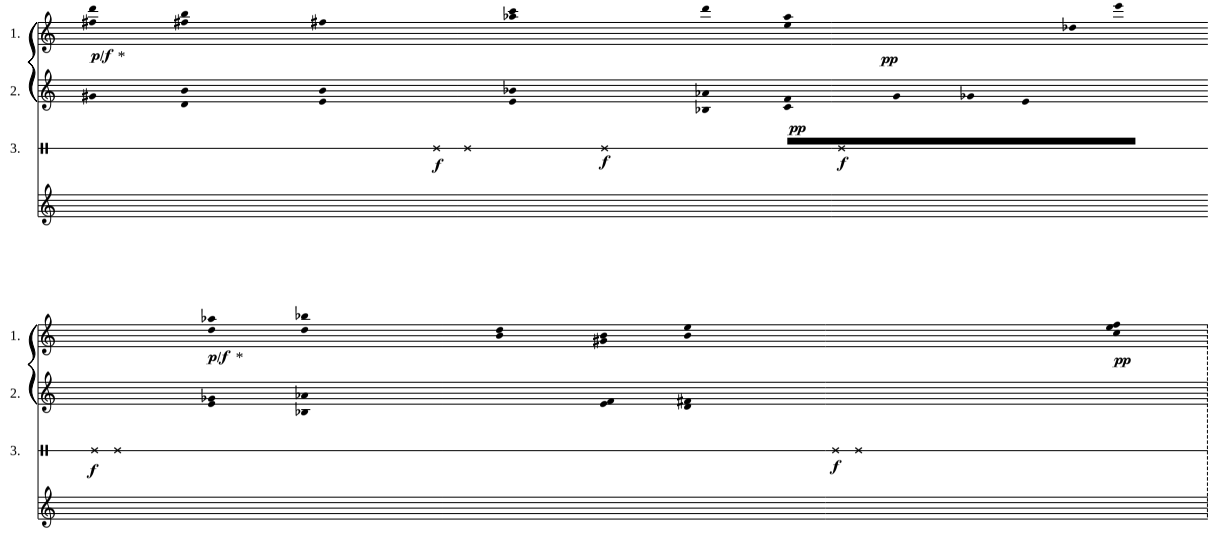
l) Notes on the percussion staff are performed once (compared to the note repetitions of staff 1 and 2). Notes of the percussion staff that seem to be notated together with notes of the upper two staffs should not necessarily be strictly synchronized.

m) The thick line, notated right above the percussion staff line, indicates an extremely fast but regular tremolo or trill-like motive, played by a performer ad libitum and repeated during the indicated duration. The tremolo/trill sound should have no (clear) pitch.

(A)

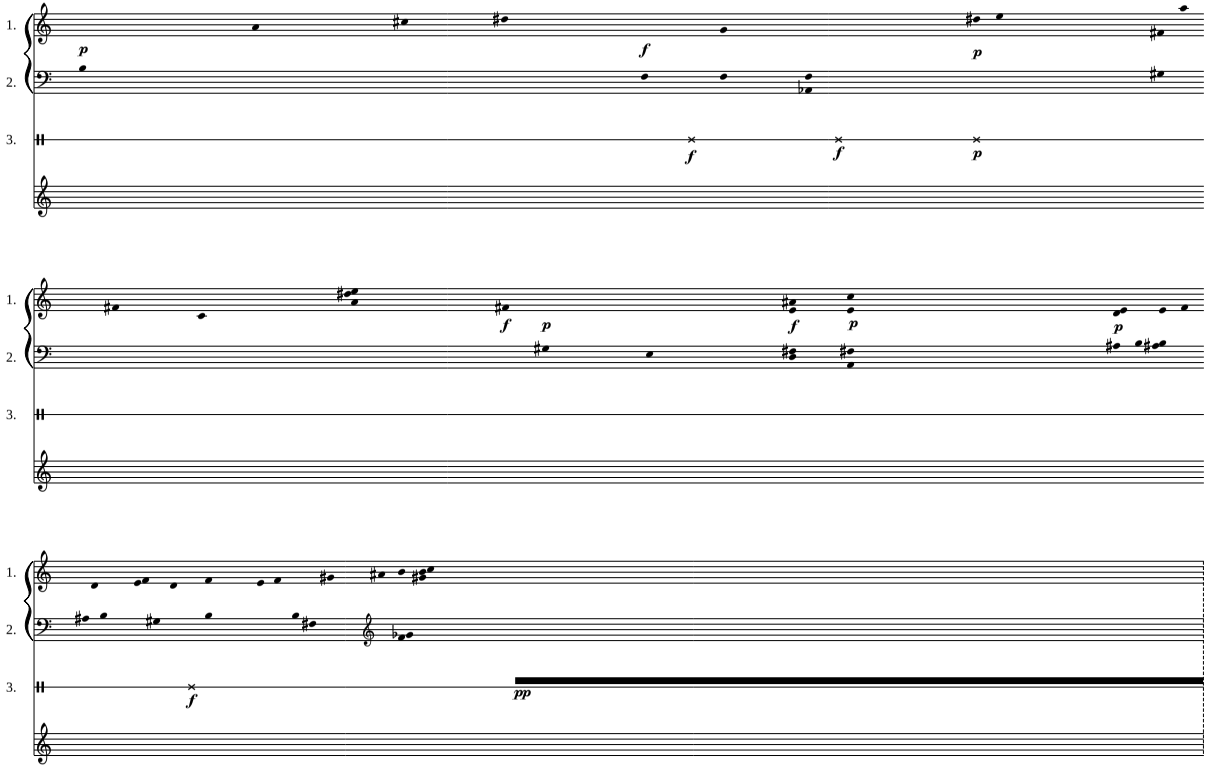


(B)

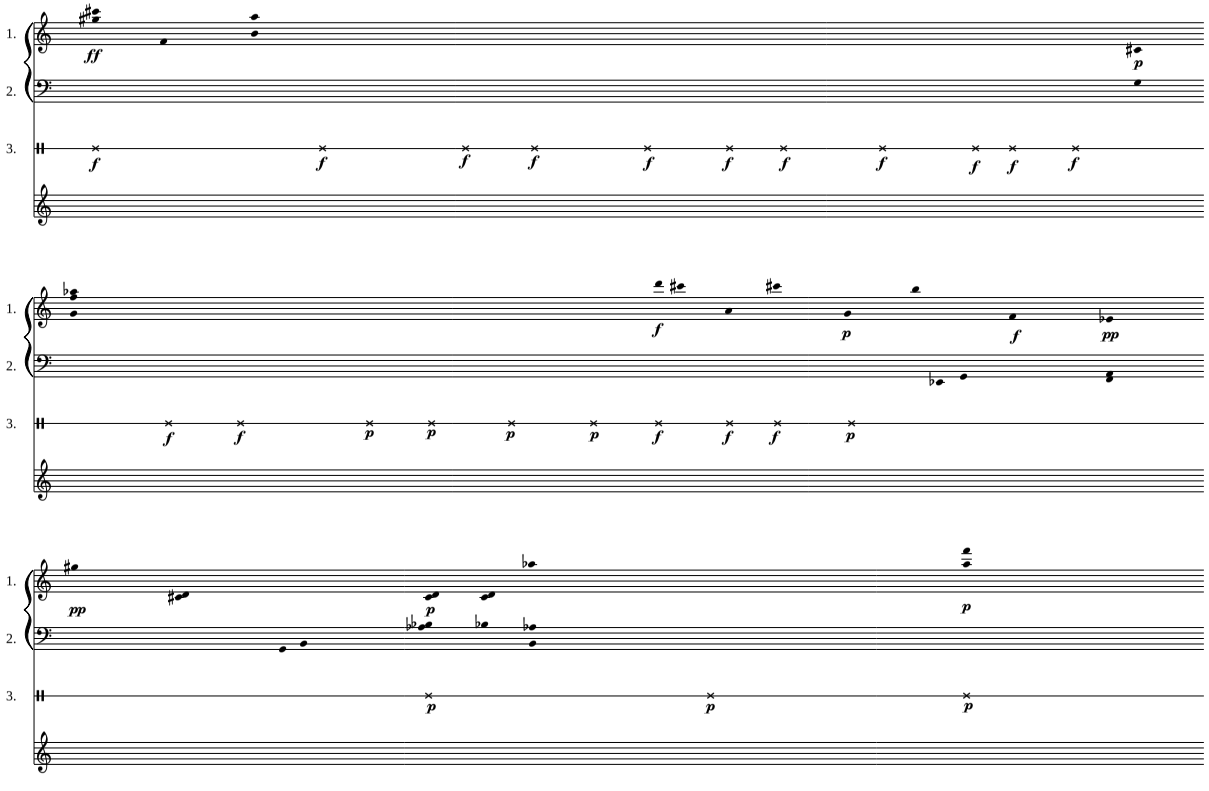


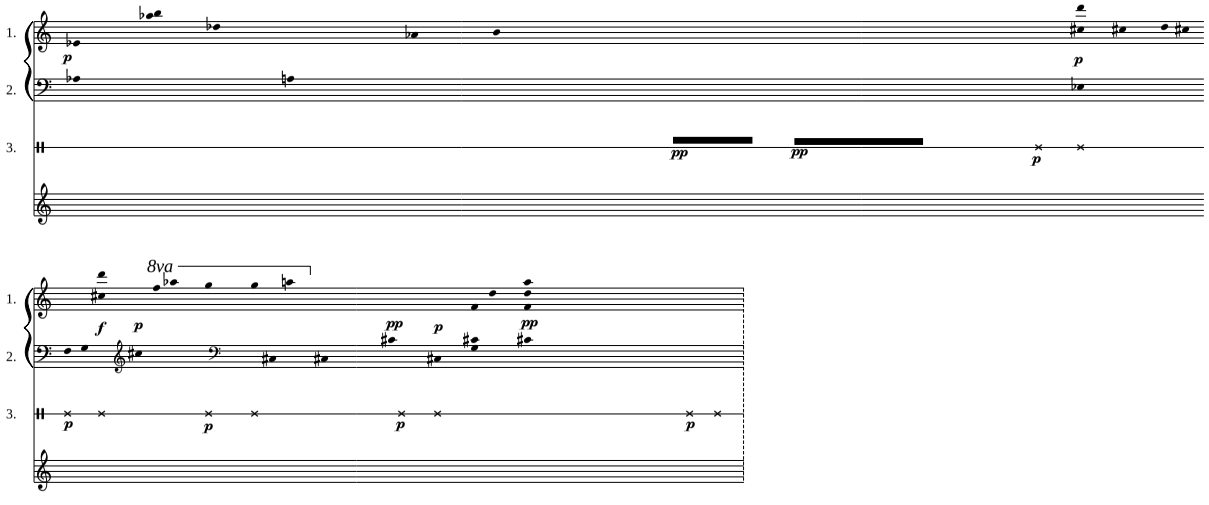
** piano or forte ad libitum for all performers untill the next pianissimo*

(C)

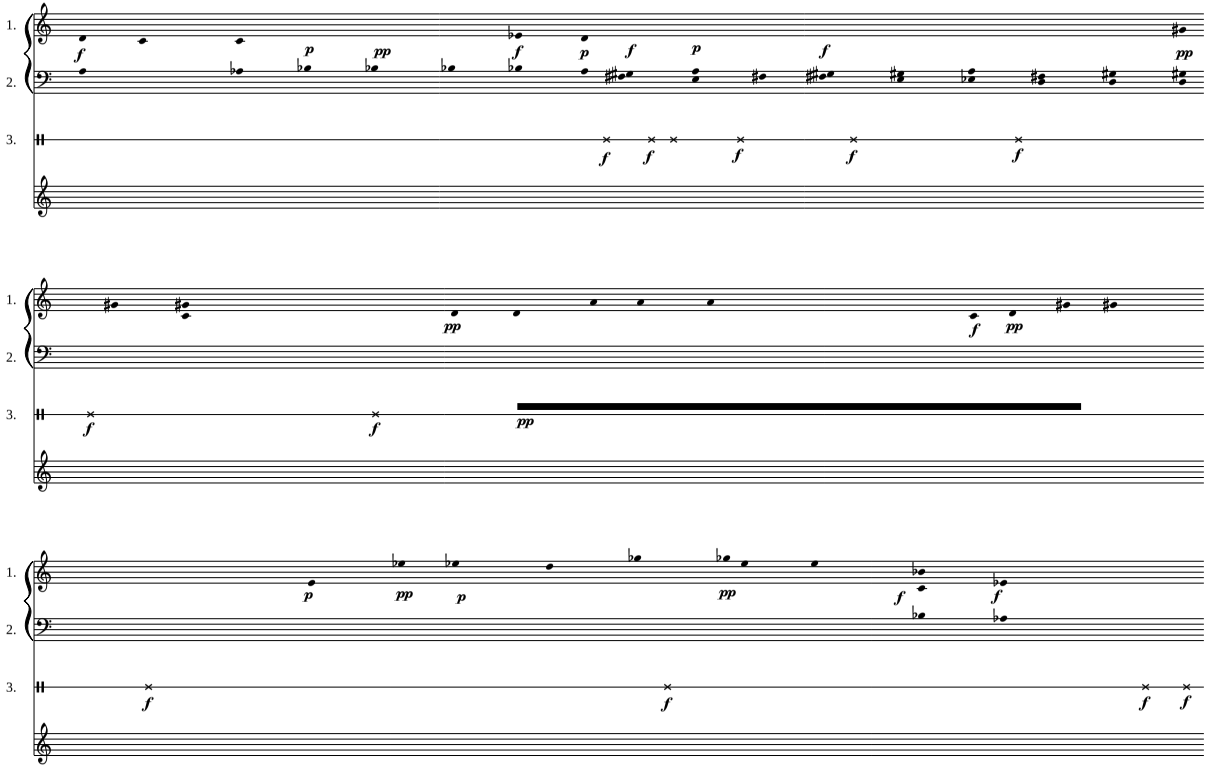


(D)

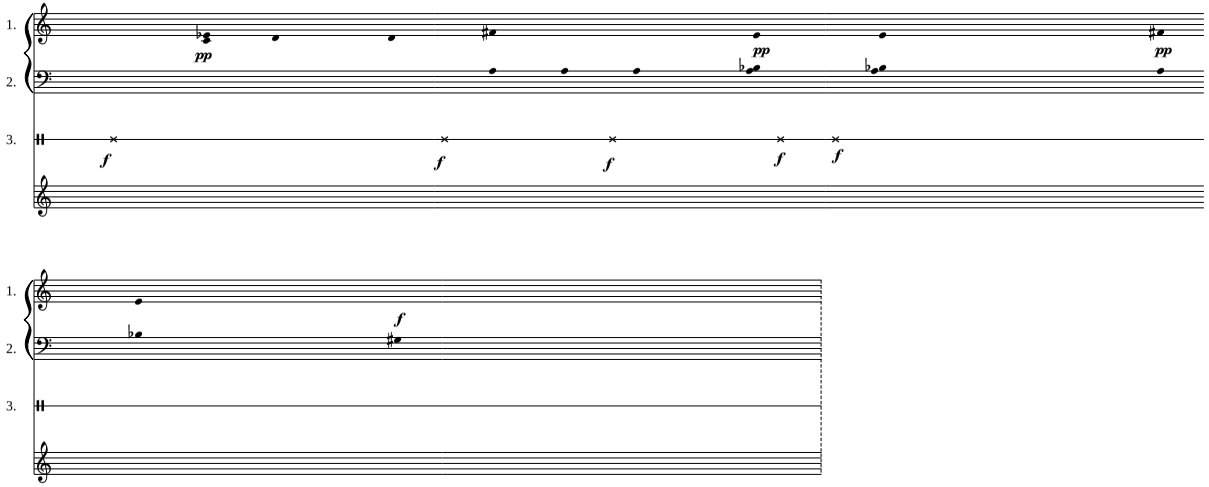



1.
2.
3.
p
pp
pp
p
8va
f
p
pp
p
pp
p
p
p
p

(E)



E-1


1.
2.
3.
pp
pp
pp
f
f
f
f
f
1.
2.
3.
f

Points to make: score

26 Samples of verbal reports

26.1 Sample from verbal report on Eigengang (23dec11-1)

Euhm eventjes kijken wat dat ik allemaal gedaan heb de voorbije vijf dagen. Het is nu vrijdagavond 23 december. Euhm, ik heb in het begin van de week, kweet niet precies meer wanneer, maandag of dinsdag, heb ik een aantal, vooral dan met het stuk rond, het slotstuk rond zeven minuten zeven minuten dertig bezig geweest, dus dat we spreken over het audacity bestand six mains 10. Dus eigenlijk heel het stuk dat komt na de solo van de glissclus rond vijf minuten dertig. Het stuk daarna heb ik meer beginnen uitwerken, na verloop van tijd heb ik beginnen zien dat er een soort van lijn moest inzitten, in de plaatsen waar dat er meer rustgevend was, waar er plaats is voor stiltes en waar dat de zinnen niet voortdurend doorlopen en de andere passages moeten meer continu zijn, en dus nu uiteindelijk is het idee (kucht) dat na die solo van glissclus, dat ge zo rond de zes minuten dertig iets een soort rustiger eventjes hebt, met nog wat flarden van verschillende stemmen. Dan komt er een heel deel dat eigenlijk echt bijna vijfstemmig is, waarin dat al die vijf verschillende stemmen door elkaar zijn. En dat zou dan direct overlopen in een soort slotdeel, zoals ik het toen zag waarbij der dan nog een paar stemmen van register veranderen. Dan dienen overgang van dat slotdeel, dat is rond zeven minuten dertig, six mains 10, daar heb ik nog wat mee zitten worstelen of dingen aan veranderen. Omdat ik enigzins wil dat hij vlot, dat er een vlotte overgang is van dat deeltje ervoor naar dat slotdeel, eerst was het iets anders, maar toch moet er een vlotte overgang zijn, want als ik daar weer pauzeer of weer een soort flarden doe dan lijkt het mij iets te veel euhm versnippert naar het einde toe, en dan woensdagavond had ik dan plots een idee om er nog een einddeel aan toe te voegen. Dus eigenlijk helemaal een ander idee dan dat ik vroeger, dan dat ik tot nu toe had. [2'30"]
Om er nog een soort tweede en derde deel aan toe te voegen, volgens de schets die ik op papier heb, tstaat daar een heel kort stuk zou komen waar dat ge eigenlijk vanalles door elkaar hebt ook simultaan dat er veel versmelt. Dat was het oorspronkelijke idee en dan erna euhm na dat korte stuk zou er weer een iets langer slotdeel komen waarbij dat ik het idee had met luidsprekers en met versterking het zo te doen alsof de piano heel groot geworden is, dat ge zo bassen helemaal links in de zaal hoort en de hoge helemaal rechts. Maar kan eventueel nu nog, maar nu was ik eigenlijk aan het denken aan dat deel dat ik nu aan het maken ben om daar nog een extra slotdeel bij te maken. En dat zou dan eigenlijk helemaal gebaseerd zijn op die percussie, dus tot nu toe hebben we eigenlijk drie grote zinnen gehad van percussie en waar dat ik nu naartoe wil streven was, maar dat nog niet helemaal uitgewerkt was, dat er een soort uitstervend einde ging zijn en de sus stem ging dan in hoogregister eigenlijk langzaamaan uitsterven, dat is ergens het idee. Dat is nog niet helemaal uitgewerkt in het audacity bestand sixmains tien, maar dat was een soort wat dat ik voor ogen had. Maar dan had ik dus plots woensdagavond, terwijl ik mijn tanden aan het poetsen was, het idee om daar een slotdeel aan toe te voegen, helemaal gebaseerd op die percussie.

26.2 Sample from verbal report on Centra (10aug12)

achttien juli toen dat ik op reis vertrokken ben, want daar heb ik eigenlijk nog geen commentaar op gegeven of uitleg over gegeven, en dan kijken we ook eventjes naar de partituren van dan, ik ben nu aan het kijken naar audacity file test beetje anders 5 juli 12 -5, waar dat ik zoiets tussen de één minuut en één minuut vijftien in de pianopartij bijgevoegd heb, ik herinner mij dat ik toen dacht of op het idee gekomen was dat het belangrijk is dat die piano continu blijft doorspelen, want anders krijg je weer te veel het gevoel dat het ergens toch een soort duet wordt met die klarinet of fluit of dat het een soort afwisseling wordt, met opzet, maar als die alletwee continu of toch die piano continu en die klarinet fluit continu met der altijd een bepaalde pauze tussen en dan weer een nieuwe zin spelen (hoest) dan heb je minder het idee dat het een soort duet is, kweet ook dat ik op een bepaald moment (hoest), kweet niet of dat nu op deze versie was, euhm er ook opgekomen was of beseft had dat ik euhm een soort continuïteit kon geven aan de piano door meer met nagalm te werken en sommige akkoorden langer te laten liggen, dat is niet altijd duidelijk hoorbaar in de opnamen, want kheb hier een buffetpiano, dus 'k kan de tweede pedaal niet gebruiken van een vleugelpiano waardoor je sommige noten of akkoorden langer kunt laten doorklinken, dat heb ik beseft doordat de moeilijkheid een beetje was in die pianopartij dat die een beetje verbrokkeld is, onsystematisch, maar om dus toch een soort continuïteit te geven ben ik dan op het idee gekomen op een bepaald moment, dat herinner ik mij toch nog, om met die nagalm of meer met liggende akkoorden te beginnen werken, voor de rest is er in deze versie niet zoveel verschil. (stilte)
en dan nu een keer kijken naar audacity file versie midden juli 12 – 1, (stilte/muziek) euhm, op het eerste gezicht is er niet zoveel verschil in, (stilte/muziek), ik herinner me dat ik gevonden heb die passages minuut dertig en twee minuten dertig in die versie midden juli 12 -1, dat dat wel ongeveer onmiddellijk het effect had dat ik wou, en dat ergens ook misschien werkte doordat weer een stuk te hebben waarbij dat ge alleen maar de piano hebt en dan die fluit of klarinet, en dat is niet echt het ensemble, dat versterkt wel het effect van die drie onafhankelijke lijnen, (stilte)
nu kijk ik naar versie midden juli 12 -2, eventjes luisteren (muziek), dan heb ik een vervolg gemaakt, ik heb die pianopartij verder uitgeschreven, ik weet nog dat ik aan het denken was om die pianopartij euhm onsystematisch, onsamenhangend te maken als contrast met die fluit klarinet partij, dat ik dus eigenlijk op een bepaald moment dacht dan aja, dan gaan er eigenlijk verschillende episodes die eigenlijk bijna niets met elkaar te maken hebben, altijd weer opnieuw beginnen bij de piano zoals dat je hier hebt aan die padam, ietsje voor twee minuten dertig in deze versie, begint er iets nieuws en dan een eind verder beginnen die typische stijgende en dalende motiefkes rond de vier minuten, maar dus later, toen ik terugkwam van vakantie heb ik me daarin bedacht, maar kweet dat ik toen dacht van aja, kga nu maken dat elke zin verschillend is, allez of elke passage in die piano, dat gaat dan een goed contrast zijn dacht ik met die fluit of klarinetpartij, voor de rest kan ik er niet veel meer over zeggen, ik weet dat ik wel het idee begon te hebben om dat verder te laten ontwikkelen, om een soort middendeel te hebben euhm waarin dat er een nieuwe, ik denk in de marimba een figuurke komt, en waarin dat de pianopartij eigenlijk stopt voor een bepaalde passage, dat heb ik uitgeschreven in labeltrack van die versie, voor de rest kan ik me niet meer veel herinneren, ik ga nog eventjes in de schetsen kijken van toen of ik me nog iets herinner, (stilte),

26.3 Sample from the verbal report on (fl)ASH (11jun13-2)

eventjes zeggen wat dat ik vandaag gedaan heb, dinsdag 11 juni, 'k heb eigenlijk gewoon verder gecomponeerd aan het stuk percussie solo, en vooral dan aan de schetsen, aan de schets die wiel noemt, allez wiel één, twee en drie, ik zat deze morgen voordat ik begon ongeveer halfweg pagina twee, ietske voorbij halfweg, ik geloof aan die zes minuten, zes minuten dertig ongeveer, waar die drie triple piano stemmen staan, bij die drie lijntjes van die heel stille stemmen,
dus ik heb dan eigenlijk verder gedaan tot het einde helemaal, (stilte) ja, en er op gelet dat er altijd een soort logica van korte termijn in zit, dat er afwisseling in zit en dat het ook overeenkwam met ongeveer de structuur die ik vooraf getekend had in potlood (mompelt iets) en terwijl ik dat aan het doen was bedacht ik me ook nog, dat staat bovenaan in het rood op bladzijde twee, bedacht ik me ook nog dat ik misschien ietske meer gebruik kan maken, structureel, van die paar zachte of stillere slagwerkgroep of instrumenten, groepen van slagwerkinstrumenten, dat ik die misschien iets meer kan benutten om er iets mee te doen op structureel vlak, en dan dacht ik ook van, ik moet nog een keer goed kijken hoeveel van die blokken voor het podium ensemble wil ik ook gewoon piano, omdat dat de uitzondering moet blijven, ik geloof dat ik ze geteld had en dat ik op iets van vijf uitkwam, maar ik denk dat het er iets meer zijn, ik moet daar ook nog eens juist op letten, het moet eigenlijk, dat is wel het hoofdidee, het moet blijven doorgaan met forte blokken, die altijd luid zijn, het heeft iets, een beetje ongenadig eigenlijk, iets wat altijd voort klopt, voort tikt,
en dan, ja, en dan daarna ben ik dan eigenlijk, dacht ik eventjes, voordat ik weer begon deze namiddag van, wat wil ik nu nog juist doen, dat staat daar bovenaan, denk ik, in die twee streepjes, in die twee puntjes met een pijl bovenaan pagina drie, dus dan heb ik eerst nog eens alle letters, dus eigenlijk de slagwerk groep, de groep van instrumenten ingevuld voor de percussiepartij, in het groen, en daar op gelet dat er daar zo geen ontwikkeling, maar dat er daar toch in grote lijnen iets gebeurt, maar dat staat dan weer een beetje los van de anderen om te vermijden dat er een soort overkoepelende ontwikkeling ontstaat, dus soms zijn dat een keer meer of minder letters, meer of minder groepen van instrumenten, daar opgelet, (stilte) en ook in de ene groep zijn die meer, zo even gespreid, die aanslagen van het slagwerk, maar daar had ik eigenlijk al in de voormiddag op gelet, dus dat heb ik al helemaal gedaan, deze namiddag, en dan heb ik ook nog een keer gekeken van waar kan ik eventueel nog een paar herhalingen insteken,
dan heb ik nu, ik heb denk ik nu, vijf herhalingen, twee die samenhoren en drie die samenhoren, ik denk dat dat wel werkt (stilte/achtergrondlawaai) en wat dat ik nu nog wil doen, eerst een beetje, ik ga daar nu niet aan verder doen, maar nu het vervolg, ik ga denk ik, behalve die een paar van die triple piano stemmen een keer effectief uitproberen, zoals die hoorn of die trompet, een keer met een muzikant, hoop ik, wil ik alles helemaal een keer goed doorlezen, maar het probleem is dat het niet zo eenvoudig is, maar 't zal niet anders kunnen, het is niet zo eenvoudig om mij daar de muziek bij voor te stellen, omdat het zo grafisch is, want die blokken, maar ik ga het toch proberen om een idee te hebben of dat er genoeg afwisseling in zit, dat het blijft verschillend genoeg zijn doorheen het hele stuk, misschien moet er hier en daar nog iets een beetje bijgeschaafd worden, ik weet het niet, aan de blokken, aan het soort forte blokken dat ik heb, of aan de percussiepartij of ja aan de triple piano ja, maar dus allesinds ik ga nog een keer zeker van het begin tot het einde geconcentreerd proberen doorlezen om dan nog een paar dingen te veranderen als dat nodig is,

27 Threeway II: course of action

In November 2009 the conservatory of Ghent and the IPEM institute of the University of Ghent decide to organize several events, during a Jazz and Sounds festival in March 2010. There will be performances, lectures, installations and new instruments demonstrating the artistic research that is being done. I plan to have “a few musicians demonstrate what a strange term like 'hyperpolyphony' could mean.” Initially I think about writing a study on synchronization, in which one instrument could practice synchronization techniques with the other instrument parts being played in different tempi. The use of click tracks or chronometers seems to be rather obstructive for the performers and as I start composing in January 2010 I have an important insight about a new synchronization technique which I call 'check points'. At certain moments, indicated in the score, the performers have to hear a salient entry of the percussion part. At this moment they do not stop, repeat and/or jump to the next phrase or fragment (as with cues) but check if this entry occurs somewhere in the indicated 'zone' in the score. While composing in February and March I struggle with the identity of the bass voice which never seems to have a clear identity when combined with the other three voices. The first half of the new composition is finished and is performed on March 22 during the artistic research demonstration. After this performance new ideas on the bass voice pop up and are written down in a short text note. In July and August 2010 the second half of the composition is made and the first half is rewritten: to enhance the transparency of the whole composition, the piano part is 'stretched' (rhythms are slowed down within the phrases and longer breaks are added between the phrases). Consequently there should be more space to hear the bass and other voices 'through' the piano part. The whole bass part is now based upon slow glissandi, a new idea that only appeared during these summer months. At the beginning of September this version is finalized and sent to a conference/performance in Coventry where it will be performed. In April 2011 I rework the last 1,5 minutes of the piece again, specifically the piano part which was not varied and exciting enough.

Conceptually *Threeway II* is closely related to the composition *Threeway I* (2007), this is what I had written before 2009 about *Threeway I*:

> "Threeway" is a polyphonic piece in which 3 main instruments play in a seperate tempo and a fourth follows and accompanies this trio. This piece wasn't written for 4 specific instruments, it has an abstract score that can be played by several instruments (with certain characteristcs).
>
> "Threeway" almost sounds as a soundscape with three clear and seperate voices that go their own way but -as if by accidence- fit together well.

28 Chunks & Streams: course of action

In September 2009 Zwerm has plans to create a concert program called Timestretch with compositions of James Tenney and Larry Polansky. They ask me to write a new piece for this program but they do not have any concert dates yet. In the end of September 2010 they announce that in may 2011 they will play the new concert program in London (Brunel University).
On the first short introductory rehearsal in December 2010 I retry an improvisation experiment that I had done a few months before with an improvisation class of the pianist Frederik Croene (in the music academy of Gentbrugge). I gave the performers a simple instruction: “try to be as different as possible from the other players, go your own way and 'communicate' as less as possible but do not overrule the other performers.” This resulted in a short improvisation of one to three minutes, and this was repeated several times but the performer that started changed for every improvisation. Later on we tried longer improvisations by adding the following guideline: “switch to something new now and then but try to remain different from the others, or, do the opposite and try to imitate and fuse together with one of the other performers.”
The guitar players of Zwerm also used effect pedals ad libitum to obtain different timbres.
Zwerm had agreed to arrange three rehearsals in February, March and April with several weeks in between. I had asked for this arrangement to collaborate and try out ideas and sections during the whole creative process (and not just at the end, when there is less time left to change a composition).
After the first try out, I thought about using a set-up with two speakers per guitarist, placed at different locations in the space. Every guitar player would have a pedal to switch from one speaker to the other.
A first notion of the structure of the composition was written down in text form and for the rehearsal in February. I had a list of ideas notated on paper, these ideas (on which the sections of the structure were based) explored
spatialization and related performing techniques, such as:

- playing a melody while controlling the switch pedal. This lead to spatial patterns through the 8 speakers
- contrasting music fragments: these were improvised and played sequentially or simultaneously, the fragments were notated with a few words in the score
- playing acoustically on an electric guitar (using several techniques)
- combining the previous ideas.

After this rehearsal the idea to use two pedals per performer (a volume pedal and a switch to select the speaker) was dropped and only the switch pedal remained. The structure was adapted, the order of the sections changed, a sudden stop – a rupture – is added at the end or beginning of some sections. On the rehearsal in March I present a (handwritten) score containing all the sections (fully elaborated) in the right order. After the rehearsal I adapt the central sections of the piece and base the climax on short fortissimo fragments of a few seconds. Next I make a digital copy of the last draft. In between a try-out concert in April and the first concert on May 2 I keep on readjusting the structure of the piece: changing gradual transitions from one section to another into abrupt

transitions and vice versa, and adding/moving/deleting (recurring) ideas within these sections.

This is a text, written by me in september 2011, after the score was completed:
"*Chunks & Streams* is dominated by a continuous flow of heterogeneous musical textures and events on top and after each other. Gradual transformations and sudden shifts link these events. Longer fragments of music are compressed into shorter fragments by presenting extreme short samples sequentially after each other or by combining different musical ideas simultaneously. The result of this manipulation of our perception of time and our perception of identity and difference is an overall form which is at the same time audible and unpredictable, a stream of sounds and musics which is chaotic but not loud nor hectic."

29 Eigengang: course of action

15 October – 4 November 2011
I decide to write a composition for a concert on artistic research for the *Week van de Hedendaagse Muziek* (School of Arts) for one grand piano and three performers. I am fascinated by the vision to write a composition for this intimate ensemble where the performers sit very closely together. I want to write a polyphonic work in which the musical distance of contrast between the separate layers is very large. I experiment with an amplified piano setup that would augment the piano sound through space. I envision *Eigengang* having three main parts, the last one would use this augmented/spatialised piano.
I explore extended techniques on the piano and musical material from a previous unfinished composition.

8 November – 29 November 2011
I further explore extended techniques and arrive at a set of four techniques that seem promising to me. I compose a first sketch of the first minutes of the piece, freely based upon the structure of a previous, unfinished composition called *Klavier4tet*. The image of three pianists that focus on one technique but alternately play together and help each other using the same technique, also fascinates me.

30 November – 6 December 2011
Now the new realization of the first minutes of my composition is not based upon the structure of the previous unfinished composition *Klavier4tet* anymore. The exploration of extended techniques and its musical potential continues and I find a fifth technique for my new composition. I am searching for the right simultaneous musical combination of these techniques and its distribution among the three performers.

7 December – 10 December 2011
I now have an idea of how the whole composition will develop; the alternation between polyphonic sections with several layers and techniques on the one hand, and 'monophonic' sections in which more than one performer uses the same technique on the other, plays an important role in this structure. I try to create a construction in which the layers/techniques develop independently from one another. The shape of monophonic sections should grow organically out of the previous layer with the same technique. As I continue composing, some layers are fully notated while others are improvised along general guidelines and recorded.

11 December – 23 December 2011
I now have a definitive plan of the distribution of the five extended techniques along the piano range and among the three performers. A first draft of the whole composition (made in an audio editor, based on recordings) is finished. I compose and notate several voices/techniques in detail now.
I meet two performers to demonstrate the extended techniques and give them a short, very

incomplete demonstration score.

24 December – 13 January 2012
While making digital copies of some of the parts, I also compose and notate other parts in detail (on paper). Two tutti-sections are revised again. I struggle with the character and shape of one voice/technique -the muted technique with a piece of cloth between the hammer and the strings- which was only improvised until then.
While still making digital copies, I make a synchronization plan – because the different voices/techniques play in different tempi – and start adding cues to the parts. On January the 13th I send the almost complete scores to the performers.

14 January – 2 February 2012
I write out the last section of the 'muted' technique/voice and revise the first sections of this technique/voice. On January the 18th I send the last scores to the performers. The day before the first rehearsal I make a systematical plan to have an overview of the synchronization of the separate parts. During the past months and even after the first performance I continuously had plans and ideas about how the second and third main part of *Eigengang* would sound, although until now only the first part was composed.

6 – 18 March 2012
I make several adjustments to the 'monophonic' sections and transitions from one section to another to obtain a better balance between continuity and discontinuity in the overall pace of the composition on the one hand, and a more independent (polyphonic) development of the separate voices/techniques. I also simplify the synchronization method and adjust the cues. The idea of a second and third part of *Eigengang* is abandoned in the following months, after producing a few sketches and drafts.

September – October 2012
As I play the part of player 1 in a performance of *Eigengang*, I make some changes -mainly details- to this part to add more diversity.

30 Centra: course of action

In September 2011 I have a meeting with the Spectra Ensemble and plan to write a new work. A few weeks later I sketch out ideas for this work:

- three pages (in music notation) concern blocks of simultaneous 'fragments'
- one block contains a sequence of four fragments, every fragment is triggered by a single percussion beat
- the fourth page contains ideas for the layers/voices for the polyphonic piece.

In April 2012 I compose and improvise 3,5 minutes of piano music. I want to give the piano part a simple and rudimentary shape and a central role. I imagine scraps of contrasting ensemble fragments, intervening as a kind of distant accompaniment. In general the new composition should balance between form-less (no structure) and an illusion of form. There should be no development, some events or motives appear just once, others twice, and some are continuously present.

23 June – 27 June 2012
I realize that there will not be enough contrast between the piano part and the short ensemble fragments and create a second solo part (apart from the piano) for an instrument that can play sustained tones, I am still doubting between the clarinet or the flute. Next, I try out some short fragments for the ensemble and a few days later write down an overview of my ideas to check what is missing. I want the piano and the flute/clarinet part to be clearly perceptible.

July 2012
During the next weeks I compose the following minutes and often revise existing fragments. Specifically the piano part is rewritten a few times, to find the correct shape of this part, in between the short ensemble fragments and the continuous flute/clarinet part. In the middle of July I start to have an idea of the middle and end section of the new composition: the flute/clarinet part and the short ensemble fragments will remain the same but a marimba will enter and play continuously and very soft, the piano will fade out but reappear in the end section with simple, descending chords.

August 2012
To have enough variation in the ensemble fragments I try-out a rhythmic layer. After recording and listening to it, I abandon this idea and conclude to focus on pitched sounds in this composition. A few days later I decide to start composing another new work (*((fl)ASH*), a second one, which will use ideas and elements similar to the work I was composing for the Spectra Ensemble.
In September I meet the clarinet and flute player on a rehearsal of the Spectra ensemble. We try out the second voice and I decide to have it played by the piccolo. We also check the balance and loudness of the piccolo when it is playing from a distance, in another room.

November 2012
After a break of two months, I listen to my latest version of August and I revise the whole piano part except for the first minute. I am in doubt about the character I want for the composition. I want

it to be quiet and meditative but the ensemble fragments should also contrast as much as possible with the two solo parts and the preceding ensemble fragments. It is difficult to create these contrasts without changing the character of the composition.
In the next days I add a new part for the violin in the highest range above the piccolo and revise some existing fragments. I imagine the middle section to consist of a multitude of different motives, playing very softly in the background. Now and then a piano tone triggers a sudden change in the background voices.
In the beginning of December I organize a so-called 'open sketch' performance in the conservatory of Ghent for a select audience of ten people. The first part of my new composition *Centra* is performed on this occasion.[30]

December 2012
At the end of December I have an important insight: instead of thinking about the middle section, I'll start to think about the *end* of the composition.

21 – 23 January 2013
A few weeks later the overall structure of the developing composition becomes problematic. I want to avoid a typical linear development, based on density, for example by letting more and more independent layers enter in the second part. I also don't like a structure which is too clearly perceptible like an AB or ABA form (the latter in case the piano would disappear and re-enter again at the end).

25 – 30 January 2013
I have a new idea: the clarinet will form a duo with the marimba and also play longer, continuous fragments (in the same range but with different melodies and styles). Both can spatially stand together, separated from the other performers, especially from the piano. I receive an email from the ensemble with the deadline which is earlier than I expected. During the next 6 days there is also a misunderstanding between me and the percussion player. We believe that the percussion part is too difficult and I start revising it. Six days later I realize that there was no problem at all, only a wrong tempo indication that I had given to the percussion player.At my relief, I make a notated music sketch which gives me an overview of the second half of my composition. I give up the idea to create a *continuous*, soft marimba layer in the second half but I struggle with an alternative that creates the desired structure for the whole composition.

1 – 8 February 2013
In the beginning of February, I have a new idea: apart from the clarinet, I'll create a second shadow-instrument to complement or replace the marimba part. I implement this idea, add a new ending and again revise some ensemble fragments. I feel like the composition is more or less finished, but I spend another 5 days to notate the whole score and create a digital copy. During and after this notation work I still rewrite two ensemble fragments.
At the end of March my new composition *Centra* is performed by the Spectra Ensemble.

30 The performers were Lukas Huisman (pn), Jelle Proost (perc), Eline Duerinck (vcl), Danre Strydom (cl) and Annelies Heyvaert (fl), together the Warped Ensemble.

10 – 11 July 2013

I revise two short ensemble fragments to make the character more distinct and outspoken. I also change one section of the piccolo part because it had too much repetitions although I keep the same, simple and symmetrical form in this part. I also decide to make the very soft layer of marimba, clarinet and cello (in the second part) less continuous and more fragmentary. This is done by omitting a longer cello fragment and adding a short clarinet fragment.

31 (fl)ASH: course of action

August 2012
During the creative process of *Centra* the idea grows to create another new composition in which very short, loud music fragments would be triggered and interrupted by a percussion solo player. This percussionist only plays dry percussion instruments, with a short decay time. In the background now and then very soft fragments would be performed or played through miniature speakers. The image of a *(fl)ASH*, a suddenly appearing music fragment, disrupted and followed by a silence, is the main inspirational image for the new composition.
Although I don't have a commission to write this new piece and no occasion to perform it, I start working on this composition. I write down all my existing and new ideas on paper. Because I want to create a graphical score -with room for improvisation or experimentation before the performance- I focus on the description of the main features of the new composition.

1 – 15 September 2012
I decide to start composing and notating the first sketch. To obtain the desired timing I improvise the percussion solo part with my voice and write down the timing/rhythm of this part. After composing the first 1,5 minute for the whole ensemble, I design a structure based on asymmetrical episodes and continue composing until I have about 3,5 minutes of music. Next, I want to be sure that my sketch is effective, and I start making a realization in an audio editor based on own (new) recordings and short fragments of diverse (recorded) music.

16 September – 16 October 2012
While making this realization I shorten the pianissimo fragments and start having doubts about the presence and number of non-pitched noise fragments. In general I want to create a static structure with changing and contrasting fragments. Exceptionally, there will be a small number of fragments that is repeated within a short period of five to twenty seconds, and another small group of fragments return over the long term (the total duration of the composition). Next, I create more than ten configurations of fortissimo fragments to ensure that I have diverse material to start composing again.

25 November 2012 – June 2013
In November I compile a performance score based on my sketch of the first 3,5 minutes, and in the beginning of December this version is performed in the conservatory of Ghent in a laboratory setting (a so-called 'open sketch') for a small, selected audience.[31] Just before this performance I have an idea to use voices, reading and shouting a poem of W. H. Auden (on the painting of Brueghel), in my new composition. I make a short mockup version of this idea in an audio editor. The next months I am composing another work, *Centra*, but now and then I evaluate the performance and the state of my *(fl)ASH* composition. First, I decide to use the voice idea in a new, other composition based on fl(ASH), second I am convinced that the dynamics of the pianissimo

31 The performers were Lukas Huisman (pn), Jelle Proost (perc), Eline Duerinck (vcl), Danre Strydom (cl) and Annelies Heyvaert (fl), together the Warped Ensemble.

fragments should be more homogeneous and that the performers of these fragments shouldn't move (because this creates to much action in a static composition). Third, I abandon the use of technology (amplification, miniature speakers, video,...) and the pianissimo noise fragments without being really aware of these two decisions. I try to arrange a performance together with the Dutch Ensemble MAE/MAZE ensemble but this attempt fails.

3 – 6 June 2013
I re-enter the world of my new composition by reading through (and listening to) previous sketches, verbal reports and recordings. I am not sure how to continue composing and I list the main decisions that have to be taken. Then I create some configurations of fortissimo fragments, ensuring that the instrumentation is thicker. Next I rethink the structure for the composition and list the features which support this structure. A new idea for such a feature arises: I want to create short sections where both the onstage and offstage ensembles play loud and play the same music fragment, preceded and/or followed by pianissimo sections of the same fragment (for an example see page four of the score, immediately after the rehearsal mark H). I also have two other new ideas (on configurations of fragments) that can add more variety on a 'micro-time' level: the onstage ensemble will also play very soft, muted fragments and sometimes the offstage ensemble will play very soft, muted music from the same fragment as the onstage ensemble. Both ideas are meant to appear only 3 to 5 times in the whole composition.

10 June – July
I feel reassured to start composing again and write down the next 8 minutes of the piece in the following two days. For the offstage ensemble I need instruments that can switch easily from pianissimo (muted) to loud, therefore I test out some fragments in different styles with a horn player and me playing the standing piano (with the special muted pedal).

October – March 2014
In October, inspired by a presentation at a conference I decide to use only “unfinished and incomplete” music from different historical periods as a source for the music fragments in my new composition. I am enthusiastic about this idea as it fits well with the concept and the music of my new piece. In November I create a digital copy and in December and January I create a first realization of my composition -now entitled *(fl)ASH* for percussion and 14 instruments. This version is created by students of the School of Arts Ghent at the Week of Contemporary Music on the 31st of March 2014.

24 – 25 April 2014
The rehearsals and first performance reverberate in my mind and I revise my composition once again to make the static structure (at a macro-time level) and the diversity of ideas and configurations (at a micro-time level) more outspoken. Apart from giving existing ideas and sections a clearer and more distinct character I also add silence and one extra new idea (a 'moriendo' configuration of fragments) at different moments in the composition.

32 Night Included: course of action

At the end of August 2013 I get inspired by an article on music and biological rhythms and have an idea to base a new work on the circadian rhythm, the alternation between night and day. This rhythm, and its inclusion of action (day) and rest (night) seems to be a good framework for the structure of a new composition, characterised by improvisation and a text based score. The performers can freely associate and improvise based on this day/night rhythm. I hope to avoid a 'typical' climax development by adding the remark that each performer has to start from a different moment during a chosen period of 24 hours.

To create more musical diversity, I add the idea to the composition in development that the dynamics can be adapted by the location of the performer. All parts should have the same dynamic level for the audience, but, for example, a performer can choose to play loud and stand further away from the audience. I have doubts about creating a purely 'musical' work and look for an extra-musical dimension. I think about an older inspirational image – the painting *The Fall of Icarus* by Brueghel – and connect silent theatrical actions (by the performers) with the idea of suffering.

I have the vague intention to try out the composition with the improvisation class at the School of Arts in Ghent. I don't really bother about a possible performance because the instrumentation is very open, thus there will be an occasion to try out the work somewhere in the future.

In October 2013 I further elaborate the text score. I want the text to be short – it should fit on one page –, simple and poetic. I also revise the indications (in the score) on the timing of the (improvised) parts of every performer, to make sure that they produce a diverse structure.

33 Summary of problems in the CP of Eigengang

The following text describe the two main problems, the configuration of the voices and the structure, followed by two minor problems, the synchronization and the development of one specific voice.

33.1 Configuration of polyphonic voices and extended techniques

Creating a polyphonic texture with contrasting voices within the practical constraints is what the 'configuration' problem is about. These contrasting voices -especially their timbre- are linked to specific performance techniques on the piano. The practical constraints are plentiful:

- Some extended techniques cannot be combined with each other in the same pitch range, for example the short pizzicato's and the glissando clusters need to sound short and cannot be used in combination with the 'sostenuto' technique; in this last technique the string is struck rapidly with one hand while the other silently presses a key. Other techniques can be combined, for example the high harmonics (by wiping fast along the string) can be produced in the same pitch range where a piece of cloth is placed between the hammer and the strings.
- The piece of cloth between the hammer and the strings produces lots of noisy sounds in the highest pitch ranges of the piano.
- The 'sostenuto' technique sounds very differently according to the number of strings (for each key)
- There needs to be enough time for the performers to switch from the keyboard to the inside of the piano when another technique is used.
- The performance space in the piano is small for the three performers.

In the verbal reports I also express my aim to produce a composition that can be played on several types of grand pianos. Consequently, I have to take the different metal frameworks of other piano types into consideration.
Musically I have to take care that each technique has a pitch range that is wide enough to produce interesting, melodic voices. Ideally, the same technique can also be performed simultaneously by the three performers because this would enable the creation of strong solo sections in the composition. These are non-polyphonic sections where one single technique is used by a group of performers.

On top of this, the techniques may need to be notated differently because some -for example the glissando clusters- are very difficult to perform if all the exact pitches are notated. Moreover, an exact notation is not flexible enough to allow performances on other piano types (with a different framework).

The configuration problem occurs immediately from the start of the CP until mid-december 2011 when the overall configuration of techniques is fixed. The problem is solved simultaneously by working on several levels:

- exploration of the extended techniques on a piano: their technical difficulty and musical potential is discovered through improvisation
- composition of the work: as the new composition evolves and grows, it becomes clear which extended techniques will be used and where in the composition this will be done
- planning: several plans of the pitch range of the piano are created with a division and possible combinations of the techniques for the different pitch ranges.

The last plans made in the middle of December allow me to create the end section of the composition. In this end section, the arrangement of the techniques for each performer change. Several months after the overall configuration is fixed, some small adaptations are made in the revisions of *Eigengang* in March and October 2012. These adaptations concern adding a deeper, fuller sound to the percussive sounds in the highest pitch range, produced by placing rubber preparations between the strings. The overall configuration is not changed by these adaptations.

33.2 The structure of the composition

There are two core issues in the structure, the first one being the independent form for each layer of the polyphonic texture, the second the combination (or transition) of the polyphonic sections with the solo sections. In these solo sections several players play the same extended technique whereas in the polyphonic sections several techniques and layers are combined.

At the end of November 2011 a specific problem appears when the percussive layer is composed: this percussive layer enters the scene with an immediate fortissimo but this fortissimo should emerge unexpectedly, without being announced by the developments in the previous layers, and it should evolve independently, i.e. one of the other layers should not develop into a forte too soon after the percussive entry. Similar problems arise with other layers later on. When the first version of the solo section of the glissando cluster technique/layer is put together, it appears too much as a climax of the previous, overall polyphonic texture, and not of the glissando cluster layer.

Although a general vision of the structure is fixed around December 10, local adaptations of the structure are being made until the end of the CP. In general, after this date the timing of the entries and the ending of the sections are still changed. This is done by moving them forward or backward in time or changing the duration of the entries. The order of the sections and layers remains the same though.

From the end of December until January 18 the mentioned problem is less prominently present but it is revived again by the synchronization problem at the end of January 2012. The synchronization problems clarify that the structure, more specifically the duration and entries of the sections, are influenced by the cues. In March 2012 both problems are tackled together (see course of action in Appendix 29).

33.3 Synchronization problem in Eigengang

As the music of *Eigengang* is almost fully notated on January 11, 2012, I start thinking about the synchronization methods, specifically the cue and check points, that I will use. This also includes

thinking about the exact places in the score to notate these cue points. Therefore, a synchronization plan of the whole composition is made, with the exact cue points and the calculation of the duration of sections, based on the notated music. The first rehearsal brings up two problems: first of all, there are too many cue points, and this is too complicated for the performers; secondly, the cue points cause fluctuations in the timing which trouble the structure of the composition (see previous problem of structure). At the end of January and in March the synchronization problem is solved by combining it with the structure of the composition (see course of action in Appendix 29) and simplifying the synchronization (writing lesser cue points).

33.4 Development of the 'muted' voice

At the end of December 2011, the structure of the composition is fixed and most layers of the polyphonic texture have been elaborated and notated (on paper or digitally). But one layer – the 'muted' voice with the preparation of a piece of cloth between the hammer and strings – only has overall contours which were improvised and not notated. The main contours of the character for this layer had appeared in the previous month: it would consist of a regular, fast rhythm with alternating sections in different styles. Moreover, these fragments would fade in and fade out continuously. The elaboration and development of this layer becomes a problem. How big should the diversity of the fragments be and how fast should the fragments change are questions that regularly pop up in the last week of December and the first three weeks of January. Moreover, it is unclear how the changing fragments in this layer relate to the character of the other layers in the polyphonic texture.
In the end, the number of fragments is reduced, especially in a solo section where the 'muted' voice was supposed to play alone.

34 Summary of problems in the CP of Centra

The following text describes the three main problems encountered while composing *Centra*.

34.1 The 'incoherent' piano part

In the first months of the CP I proposed several descriptions of the character of the piano part which I'd like to be 'incoherent', 'inconsistent', have a 'searching' character as if it is 'getting lost'. The piano part should create the illusion that at specific moments a motive or even a phrase is appearing, while at other moments only 'loose' chords and notes appear. At the same time the piano part should play a central role in the composition, it should be in the forefront but never dominate the other parts.

The searching process to produce such a piano part mainly consists of an iterative loop of composing/rewriting-performing-recording-listening-evaluating. Between July and the November 7 the (sections of the) piano part are rewritten several times; thereafter, almost no further revisions of the piano are required.

In the evaluations of the (re)written piano parts a number of insights surface between July and November: there should be no real phrases or developments in the piano part because this creates the effect that the piano dominates the other layers, there should not be too much different material (motives, chord structures,...) in the piano in a short time period, the piano should develop very slowly and the changes in pitch range should (in general) occur very gradually. The evaluations and explanations in the verbal reports also include attempts to verbalize the character of the piano more clearly. At other moments I try to analyse the successful sections of the piano part and systematize how many times certain motives, chord constellations or pitch intervals should be repeated and how many loose or disconnected musical elements should appear within one section. Some temporary solutions appear, such as creating more continuity in the piano part by using more resonance. This resonance solution is evaluated as a good, productive idea but later on it is not really elaborated further.

In the background the problem of the piano part is connected to the character of the two other main layers because the aim is to let the piano part contrast with both layers: there is the piccolo layer, consisting of a classical, symmetric form and continuous sections of approximately one minute and pauses of half a minute; the ensemble fragments which are always short and very diverse in character form a second layer. The recordings of the piano part are often evaluated in combination with mock-up versions of the other layers (on a synthesizer). The problem of the piano part is solved while the composition process proceeds, i.e. the piccolo and ensemble layer are also composed and written. When this problem is solved (November 7th), around four minutes of the composition-in-progress have been composed.

34.2 The global character

In November a new problem arises caused by the layer of short ensemble fragments. The aim was to have short fragments different from the previous fragments that also contrast with the other two layers (piccolo and piano). The longer the composition becomes, the more fragments are written. The contrasts pitched versus non-pitched and loud dynamics versus soft are 'easy' solutions to create these contrasting fragments but I feel that the loud fragments do not always fit in the overall -rather meditative- character of the composition. And in August I had already evaluated that non-pitched, percussive fragments would not be used in *Centra*. The restrictions I have set earlier on make it difficult to keep on creating contrasting and unexpected fragments as the composition proceeds. Therefore I start doubting about the overall character of my composition. But by the end of December, especially after the performance of the first part of *Centra*, it is clear that I should stick to the initial character of the composition. In November I also list the ensemble instruments that I can use for the fragments and make an imaginary overview of all the techniques and timbres of these instruments. New ideas for the ensemble fragments appear as a result of this 'imaginary listing'.

From November onwards until the end of the CP, the ensemble fragments remain the sections that are most often rewritten and revised. I also keep on making lists and overviews of the available instruments and the applied techniques (in the fragments) because the appearance of a new layer – with marimba, clarinet and cello – changes the availability of the ensemble instruments for the short fragments.

34.3 The structure and the continuous marimba layer

In the first half of the CP (April – December 2012) my projections of the future evolution of *Centra* gradually evolve but they often contain the image of a very soft and fast layer that emerges in the marimba. Whilst composing the second half of *Centra* in December and January, I have a clear vision on the form that I do not want to produce for this new composition. Two formal constraints apply: first of all, I don't want to create a form with a clear development (for example, by gradually increasing the density of layers, leading to a climax in the middle or end section) and secondly, I want to avoid a simple form – like a two-part AB or three part ABA form – that is too outspoken or clearly perceived. I express the desired structure as being 'static' or only 'suggesting a form'. The structure of the composition is linked to the problem of the marimba layer: if this layer is continuously present in the second half of *Centra*, I risk to end up in a too obvious AB form (or ABA when the piano would disappear and re-appear again in the end section). If it is cut into fragments, I have too avoid that a development of density appears in some sections.
From December to February several formal plans are made and rewritten, and the marimba part -and its timing and position within the other layers – is also often rewritten. There are a number of (structural) insights during this period:

- I envision the (future) composition part after the first four minutes as the 'end' of the composition, and not as the middle section as I used to do in the first months of the CP. Unconsciously, I had a formal vision consisting of three parts in this initial period.

- I realize that the structure and especially the density is connected to the piccolo part because this continues with the same alternation of performed sections (of approximately one minute) and pauses (of half a minute). The piccolo part gives important indications on the location of ensemble fragments to avoid developments that are too obvious.
- The marimba layer is extended, first by the clarinet and later on, by the cello; this enables me to make more variation whilst remaining close to the overall character of this layer (very soft, muted and with fast rhythms).

At the very end of the CP, in the last revision in July 2013, it becomes clear that the marimba layer should not be continuously present in the second half of *Centra* but rather remain fragmentary.

35 Summary of problems in the CP of (fl)ASH

The following text describes the two main problems while composing (fl)ASH, the short fragments and the structure. Next two minor problems are presented, the open score and the configuration of the performance space in this composition.

35.1 Fragments

During the whole CP of *(fl)ASH*, questions on the effective use of fragments appear now and then. The first realization – based on my own recordings – in September 2012 and the try-out performance in December 2012, are evaluated, focusing on the question: why do some fragments, and the pre-existing music on which they are based, have the desired 'flash' effect, and others not? To explain the aimed effect, it is important to note that there are two kind of fragments: loud ones with a duration of just a few seconds, and very soft ones (by the off-stage ensemble) with a longer duration (between a few seconds and twenty seconds). The loud fragments should appear suddenly and break off as if they are disrupted, and the following silence should sound as a surprise and question mark. The very soft fragments should have a similar effect, additionally, it is only when they break off, that the listener should realize that these (very soft) fragments are part of the composition.
Through the listening and evaluation sessions, insights on the effect emerge:

- the fragments should be homogeneous, especially in their dynamics, to obtain the rupture effect
- the instrumentation of the loud fragments should be “thick” enough; solos or duos do not work
- fragments should start and stop in the middle of a phrase or motive.

After the first performance in March 2014, the insight emerges that the very soft fragments should also have a muted, lontano timbre (not too many high frequencies in the spectrum). Some of these insights result in a rewriting of the score, more specifically of the general remarks at the beginning of the score. In general, this problem remains unsolved and open during the CP of *(fl)ASH* which might be related to the fact I have worked with an open and not a detailed score, without a definitive selection of fragments. For every realization of *(fl)ASH* new music and fragments were brought together.

35.2 The global structure and local diversity

Two very related problems are present during the whole CP: which (static) form fits the new composition? And how to ensure that there is enough diversity at a local (smaller time) level in the fragments? Both problems are connected because the static form can only work if there is enough diversity at any moment in the composition. Moreover, the static or minimal global form is based

upon a small number of constellations of fragments that are repeated or have a 'supra-local' salient effect.

The local diversity problem is mainly solved by exploring the possible fragments (and constellations of fragments) before composing, imagining all kinds of constellations and making two overviews (one at the beginning of the CP, and a second one in June 2013 before composing the next 8 minutes of the composition). These overviews or plans are used as a guideline when actually composing and writing the next section. A few new ideas (of constellations of fragments) appear after making these overviews and these new ideas result in an integration of the new idea by rewriting the existing version.

I aim to make the global form effective at two levels: first, there are gradual, almost unnoticeable changes, these do not produce a musical 'development' but ought to ensure that at any moment in the composition the music is constantly changing. These gradual changes are obtained by changing several features 'out of phase', i.e. feature A changes every 20 seconds, B every 28 seconds, etc. Both the percussion solo part and the constellations of fragments are organized in this way. During the CP, some new structural features are added; based on these 'out of phase' features structural plans are made. On a second level, there should be a minimal or suggestive structure. In the beginning of the CP, the global, 'suggestive' events are a small number of repetitions of fragments, i.e. these fragments are repeated a few minutes after they have been heard the first time. In June 2013, the ideas arises to use a second, structural element: constellations of fragments in which both the off-stage and on-stage ensemble play the same fragment.

An important idea on the structure had also appeared before that, in October 2012: the duration – the number of performed bars – and the start and end point can be chosen ad libitum before a performance. Thus, when the structural plan is rewritten in June 2013, the structural repetitions and events are spread almost randomly across the total duration of the composition to ensure that different forms may appear depending on the chosen start and end point.

In the last revision I do not only add a new idea of a constellation of fragments but I also notice that my previous structural plans were built upon features which had been omitted (at a certain stage in the CP) or did not prove to be effective in the first performance. This leads to revisions of ensemble fragments and the percussion solo part, which had been given less attention in the second half of the CP.

35.3 Open score

This problem focuses on the question: which events and parameters are notated in the score and which should be left free to the performers to interprete? This problem is mainly relevant at the beginning of the CP. During August and September 2012 a first list is made of the most important features of the fragments (see previous problem 'Fragments'). At first, it remains unclear whether the pitch range or the polyphonic/homophonic character of the fragments will be part of the notation method. Quite soon however an open notation method for the percussion solo part is found, based on an approximate notation of the rhythm and the use of letters to suggest timbres. While composing, a notation method for the fragments appears and this is tested in the try-out performance at the beginning of December 2012.

As the composition process proceeds, I realize that the number of performers, the chosen duration for each performance (see the previous problem 'The Global Structure') and the nature of the open score are interconnected. The try-out performance involved five performers to play about 4 minutes of music, the first performance of *(fl)ASH* involved 15 performers for a version of approx. eight minutes. In the latter case, the realization of the open score required several weeks of preparation work (searching for fragments, re-arranging fragments and digitally notating all the fragments). For the try-out version a few days to prepare the performance were sufficient, i.e. the performance fragments could be played from existing -copied- pages of the original scores. In the end, if a longer version of *(fl)ASH* is made, for a large ensemble, the 'open score' turns out to be a detailed compositional plan, from which a new version can be derived.

35.4 Space

The problem of space focuses on two main issues. One, how should the performance space be arranged?; And two, will the performers move around or not? If the latter question is answered positively, the answer implies that there would be no clear separation between the off-stage and on-stage ensemble. In the first months the contradiction between movement and separation of the on-stage and off-stage ensemble is solved by stating that just a few performers can move from on-stage to off-stage (or vice versa) locations. The advantage of allowing the (off-stage) performers to move are clear to me, according to the verbal reports. In this case different instrument ensembles become possible and this increases the possibilities to create local diversity in the fragments (see problem 'The global structure and local diversity). For example, in the case there are five offstage performers, several solos, duos, trios and quartets could be formed by walking around in between the performed fragments.

All these questions and issues pop up during the first half of the creative process of *(fl)ASH*. Additionally, there is an idea that some of the off-stage performers (playing the pianissimo fragments) could be replaced by a device (mp3 players or mobile phones), playing all kinds of music fragments through small, simple speakers spread throughout the performance hall. It is only after the try-out in December 2012, that the moving performers idea is abandoned because these movements created a too hectic atmosphere which stands in opposition to the static idea of the composition.

During the next months the idea to use technological devices and speakers is also dropped. When I start composing again in the beginning of June, the configuration of the performance space is almost fixed and solved: in general one on-stage ensemble will play loud short fragments while the off-stage ensembles play very soft, longer fragments. All ensembles remain at a fixed position (which is determined before the performance). Moreover, while notating the score, in November 2013, I realize that my solution of the space problem also implies that a minimum of *two* off-stage ensembles at different, fixed locations is necessary to perform the score.

36 Loose ideas

The number is brackets such as [036] are the numbers given to the loose ideas in my self-study. Apart from these numbers, the following loose ideas are not edited.

[036]
-polyfonisch werk met enkel geluiden onder vb 30dB, zoveel mogelijk 'gedempte' of heel stille instrumnten (clavichord, prepared gitaar, melodica 'in 'doos' met 'slurf',...) + allerlei klankobjecten + alles verdeeld over ruimte + automatische treintjes + auto's ev. met daarop vb 2 of 3 verschillende muziekdozen

[037]
FM transmitters
-gsm's (FM-radio) van publiek gebruiken als speakers (Deinze, einde jaar), in vb 5 groepen verdelen
-rondrijdende auto's met FM-radio als mobiele speakers, akoestische instrumenten met soort patroon-repetitief stuk (ev. contact-micro's op versch plaats van piano), bassen v instr1 naar FM transmitter 1, hoge tonen naar FM 2, bassen van instr 2 naar FM 3,... + 1 live mixer/bediener, die ook deze verdeling kan veranderen, dan een compositie + een soort choreografie maken

-FM transmitters als speakers maar nu met feedback, dus ook een aantal mensen in publiek een FM trasnmitter geven voor hun gsm; mensen kunnen zelf hun volume veranderen van hun radio, zo ontstaan allerlei feedback netwerken/combinaties, opnieuw een live uitvoerder aan een mengpaneel die mengt en naar kanalen stuurt

-1 werk met versch virtuele klankruimtes ; een solo werk - vrij stil- met vb 5 live elektronika uitvoerders die dit bewerken en naar 5 FM kanalen uitsturen; publiek kan met zijn FM-radio en koptelefoon veranderen van ruimte (How it takes place II)

[040]
solo/vraag - chorus/antwoord model zoals in etnische muziek (Pygemeen); chorus altijd hyperpolyfoon

[042]
----------BALLADES

-> stem & komputer episch / ballade 2 * 15 min nieuw

[043]
----------ALLERLEI
-> gitaar met nagel (zeer karakteristieke sound)
zie gitaar-nagel folder in compositie met meer uitleg per opgenomen file (opnames-gitaarnagel-uitleg.txt)

[044]
----------compositorische stellingen

idee zoals in klavier4tet: zinsbouw is zoals in homofonie (bijna recitativo) maar begeleidende akkoorden zijn altijd onafhankelijke stemmen met de dynamiek van een begeleidende stem (en vormen samen een harmonie? - variant)

[045]
voorgrond enkele instrumenten heterofonie (beetje zoals stuk 'Tesknota' vn Guy Klucevsek), achtergrond muzikanten: hyperpolyfoon, totaal onafhankelijke stemmen (die 1 van de hoofdstemmen 'volgen'?), sommige van de hoofdstemmen veranderen af en toe van functie en doen mee met achtergrondstemmen of beginnen die te begeleiden, of de achtergrondstemmen beginnen af en toe de hoofdstemmen te begeleiden of mee te doen met de hoofdstemmen, of de heterofone 'versierde' hoofdstemmen beginnen steeds individueler/eigener te worden en belanden uiteindelijk in de achtergrondstem

[046]
akkoordenbegeleiding bestaande uit polyakkoorden (3 akkoorden) elk akkoord telkens anders 1. bourdon (grondnoot + vb kwint) + viool (folk) 2. akkoorden met soort rimtebox (op midi slagwerk controller) 3. akkoorden met glissandi soort zangstem
voorgrond: cello of altviool - zigeunertechniek -touwtje (en tussenin 'meedoen met 1 van de begeleidingen?)
(ook bourdon in indische muziek - sitar)

[050]
solo/vraag - chorus/antwoord model zoals in etnische muziek (Pygemeen); chorus altijd hyperpolyfoon

soort koor met ev. basso continuo/dirigent : per 'akkoord/cue' cirkelt idereen rond bepaalde harmonische noten maar wel in totaal verschillende stijlen en tempi (eigenlijk meer motieven/patronen want toonmateriaal is beperkt), telkens op teken van dirigent veranderen

[051]
te snelle noten in de stemmen en te trage noten doen de 'sequential streaming' uiteenvallen -> passages 'gewoon' hyperpolyfoon wisselen af met snelle ritmes en versmelting en harmonische effecten of unisono's (een beetje zoals hierboven koor idee) of wisselen af (als de ritmes te traag worden) met een soort heel trage heterofonie...

[052]
-"toevallige" events laten ontstaan als bvb 3 stemmen zelfde P hebben, of zelfde tabel kiezen,...
-speciale events in partijen van de onafhankelijke stemmen triggeren een nieuwe stem (eigenlijk een soort 'random box' -zoals in 'multi-seqn' met randomize op hoogste, een aantal events/nummers in een doos, telkens wordt er 1 uitgenomen en terug in gestoken, timing is min of meer -met random marge- gekend), hier kunnen allerlei dingen mee gebeuren:
a- akoestisch : vb slagwerk dat met voet bediend wordt
b- met computer : synthesizers doen spelen,... scherm met instructies/grafische partituur versturen naar 1 of 2 andere muzikanten op basis van ontstane patroon
deze toevallige events zouden ook opgesplitst kunnen worden in 2 stromen/layers vb 1 stem zet een nieuw patroon in een soort ritmbox aan, andere stem iets anders...
-nieuw ritmisch patroon op basis van onfankelijke stemmen en de marge van de sync error; iedereen met een heel verschillend instrument (voor eigenheid); 3 onafhankelijke stemmen doen een 4de ontstaan door de timing-combinaties

[053]
-3 onafhankelijke stemmen met elk een begeleider die sporadisch op basis van hun 'leider' of 'hoofdstem' 1 of enkele akkoorden spelen -> zo toch een totale harmonie doen ontstaan
-3 onafhankelijke stemmen met 1 begeleider (als soort basso continuo idee) die totaalbeeld volgt
-->> begeleider vb enkel ritmisch (schakelt tussen de versch stemmen)

[054]
-3 of 4 stemmen die qua timbre identiek zijn (vb 3 clarinetten of 3 violen/ of strijkkwartet of clarinet4tet of sax4tet of blokfluit4tet) komen en gaan naar elkaars ambitus,vormen soms clusters, soms staccato, soms groeperen 4 samen of 3 + 1 (3 in cluster, 1 daarbuiten) of 2 + 2; spelen met versch toonaarden (en dus verschillende clusters) en dan 2 mogelijkheden
a- ev. 1 hoofdstem totaal verschillend? (met scherpe aanslag envelope of met ambitus waar 4tet niet komt, dus heel hoog of heel laag) of 1 zelfde instrument als 4tet maar verstrekt en meer korte staccato en ruis geluiden
b- begeleidende harmonie die blijft voortlopen en dus zowel tijdens polyfone als cluster delen geldt
-

[061]
----------KLAVIER4TET2
vleugelpiano + 3 buffetpiano's
vleugelpiano : ondanks fysieke nabijheid en meeste intieme samenspelvorm, 2 of 3 totaal verschillende partijen (met eigen tempo), elke stem heeft een eigen begeleider (buffetpiano) af en toe 'rollen omgedraaid': buffetpiano's ongedempt samen in zelfde tempo (forte hoketus - fysiek ver weg maar toch samen) en hyperpolyfone begeleiding van de 3 stemmen op vleugelpiano

vleugelpiano : speciale versterking met contactmicro's vb onderaan hoge register versterken; binnenin de piano op balk of zo contactmicro; prepared, inside

[071]
----------CELLOCONCERTO
-cello heeft volumepedaal waarmee het volume (+ filter) van begeleidende stemmen veranderd w
(el gitaar, miniatuur versterkte klankobjecten, synthesizers, computer,...)

[072]
----------LASERLAMPJES

"een wens? met min 5 en max 10 woorden
Deze zin op de plafond 'schrijven' met laserlichtje op deze manier:
-> zo traag mogelijk de letters schrijven (ca. ... sec per letter), na elk woord een pauze (van ca. ... sec)
Kies uit deze zin 1 (voor jou belangrijk) woord dat op deze speciale manier geschrijven wordt:
-> heel snel schrijven op een fantasievolle manier (zigzag,curves,knipperend met heel grote letters,...) met na elke letter een pauze

----------muziek:
uitvoerder speelt op een synthesizer enkel iets dat hij zelf hoort, maar door bewerking van audio en (vooral) door controle data ontstaan een massa verschillende stemmen/partijen die ergens wel iets te maken hebben met het ongehoorde origineel; minstens quadrofoon (4 speakers), de structuur is op voorhand vastgelegd

(…)

[073]
----------YOU & ME----versie 2
('you' kan dus zowel enkel- als meervoud zijn)

zie muziekidee van 'laserlampjes' hierboven maar nu (zonder laserlapmjes/happening) met 2 uitvoerders:
1. speelt enkel iets voor zichzelf (dit werk is wel door mij gecomponeerd) als bron voor een heleboel stemmen
2. kan live de structuur en 'algemene eigenschappen' (van alle stemmen) veranderen

(of in deze versie uitvoerder 2 weglaten, deze versie = versie 1 maar zonder visuele happening)

Andere kennen onszelf beter dan wij onszelf kennen, door te handelen in het publieke openbaren wij onszelf aan anderen (Hannah Arendt of Richard Sennett - the fall of public man?)

eigenlijk een soort variatievorm, maar:
-variaties zijn simultaan te horen
-het eigenlijke thema wordt nooit gehoord door het publiek en is alleen aan de centrale uitvoerder

gekend

[080]
----------YOU & ME----versie 3

zie muziekidee van 'laserlampjes' hierboven maar nu (zonder laserlapmjes/happening) met 2 uitvoerders:
1. speelt een zelf gekozen werk enkel voor zichzelf (lettend om de omstandigheden van elk concert) als bron voor een heleboel stemmen
2. kan live de structuur en 'algemene eigenschappen' (van alle stemmen) veranderen

(of 3 of 4 uitvoerders die het werk van 1 centrale uitvoerder veranderen, past nog beter bij het concept)

[081]
-soort DJ/algo stuk
database met karakteristieken van vb 50 stukken
struktuur van vb een klassiek symfonisch werk (op basis van dynamiek, textuur, solo-tutti, toonaard, terugkerende thema's...)(terugkerende thema's worden vb terugkerende stijlen)
DJ/uitvoerders kiezen telkens uit lijst van werken die de computer suggereert met het ook op het hyperpolyfonisch samenspel en met het oog op de totale structuur. Computer zou vb ook kunnen beslissen dat een nieuwe partij begeleiding is bij een andere hoofdpartij (begeleiding betekent dan dat vb de dynamieken van de hoofdpartij (opgeslagen in een array) worden toegepast op begeleidende partij of dat begeleidende partij wordt getransponeerd naar 'tooncentrum/toonaard' van hoofdpartij).

[082]
----------sinus met allerlei interfacen

-alle mogelijke speelwijze met sinus maken en computer keyboard
envelope beinvloeden
sequencer aan
op basis van vorige gespeelde noten
glissandi (snelheid / richting)
glis : of zoals mijn soffitto stuk : eerst zelf sequens invullen die zichtbaar is op scherm (vb grote duur van een gliss, of begin- en eindnoot,...)

[083]
-idee van amplitude die via de toetsen van een keyboard bespeeld wordt (ooit zoiets in reaktor gemaakt), zachte glijdende sinustonen spelen automatisch (met sequencr of zo af)

[084]

-iets met idee van 'sine voice sythesis' formanten van letters nabootsen met 3 a 5 sinustonen; vb met besturing via faders: fader A: wijzigt de afspeelsnelheid van 1 letter - fader B: wijzigt de overgangstijd tussen de klinkers - toetsen met 'letters' als klankgenerator (dus toets 't' creeert de klank t)

[085]
-besturing via een microfoon vb hoeveelheid ruis in stem (vb van klank 'iiiiiii' naar 'chiiiii') bepaalt hoeveel hoeveel stemmen er ontstaan in een soort sinuskoor (of pitch detector maar alle 'foute' noten worden vb enkele octaven hoger getransponeerd als een extra stem)

[086]
-iets met een geluidsfile die als generator voor controledata gebruikt wordt (intern in patch, sample niet zichtbaar), verschillende env~ objecten met verschillende window length (zodat controle data van smooth tot heel grillig zijn) en daarmee een algoritmisch koor besturen

[087]
-hyperpolyfoon stuk maar enkel met sinusgeneratoren (timbre is gelijk)

---------- EFFECTEN DOEN POLYFONIE ONTSTAAN
[088]
-zoals in stukje voor muziekschool met gong en klokkenspel: versch timelines -> pitchshifter die dus een soort motieven met elk een tempo doet ontstaan
-met envelopes of grain-sample (en record-samples) : heel korte grains in een bepaald ritme (met multi-clock)
-met vocoder : ruis door micro blazen, een geluidsfile als als modifier en ruis vormt daaruit opnieuw die melodie (ex2p in abunch maar met micro ipv waves 1)

[090]
-ook plan om Bach partijen van inventies & sinfonias door elkaar te zwieren, met versch tempi in elk eigen register maar zelfde zinsbouw

[091]
----------ENKEL 'DIRECTIONAL' INSTRUMENTEN
-zoals trompet, hoorn, trombone,... (klank komt uit 1 duidelijke plaats) of electr instr met 1 mono versterker (en geen akoestisch geluid)
-ofwel: soort choreografie/bewegingen maken voor spelers; luisteraars kunnen binnen veld van spelers wandelen/luisteren, sommige muzikanten draaien geregeld om, sommige deelvelden zijn heel zacht
-deze instrumenten kunnen ook sterk gedempt worden
-niet op hoogte van luisteraar spelen (dus rechtopstaand of zittend) maar heel laag (liggend op de grond of met instrument gericht naar de grond) of heel hoog (op een ladder?)
-ofwel: een concertstuk, af en toe met rug naar publiek spelen (zou heel stil moeten kunnen zijn)

[092]
----------ALLERLEI
-verzameling verschillende soorten (zachte ruis) die als 'echo' gebruikt worden voor tekst die in lettergrepen/woorden van uiteenlopende lengte (soms wel soms geen toonhoogte) gezegd wordt

----------nog hyperpolyfone ideeen
[093]
--> een werk waarbij vooral handelingen staan die de muzikant moet uitvoeren, niet met zijn instrument maar 'normale' dagelijkse handelingen, dit alles binnen een timing van vb 6 minuten, ondertussen probeert de muzikant zo goed en zo kwaad het kan een partituur uit te voeren -> resultaat: flarden van muziek & veel bijkomstige handelingen (muziek als residu, verzinkt, verdwijnt in bijgeluiden) zie ook ander probeersel 'tango-blues2.aup' in map My documents / My Music

[094]
--> partijen met vnl. (amplitude) curves die de muzikant bovenop een ander werk moet leggen, dit werk mag hij/zij kiezen maar moet aan bepaalde vereisten voldoen (ev. iets voor PAtchwork, voor eenvoudige stukken, curves kunnen ook door computer en versterking gebeuren, vb digitale piano of el. gitaar of midi-ctrl-synth)

[100]
A.
-4 improvisatoren begeleiden simultaan elk een film die niet gezien wordt door publiek (film als een partituur); live-elektronisch of live elektro-akoestisch
enkele regels als afspraak/partituur:
-4 genres/stijlen van filmfragmenten omschrijven
-enkele 'muzikale' regels (maximum 3?): -vnl. hoog / midden / lage frequenties
-niet te abstract, mag programmatorisch zijn
(door film/scherm komen ze gemakkelijker los van elkaars muziek, minder entrainment; door ze van de muziek af te leiden eigenlijk de muziek interessa

[101]
een werk waarbij vooral handelingen staan die de muzikant moet uitvoeren, niet met zijn instrument maar 'normale' dagelijkse handelingen, dit alles binnen een timing van vb 6 minuten, ondertussen probeert de muzikant zo goed en zo kwaad het kan een partituur uit te voeren -> resultaat: flarden van muziek & veel bijkomstige handelingen (muziek als residu, verzinkt, verdwijnt in bijgeluiden) zie ook ander probeersel 'tango-blues2.aup' in map My documents / My Music, beschreven in docto-ideeen.txt / 'compo-experimenten'
de partituren/partijen die aan iedereen gegeven worden moeten wel voldoen aan enkele eigenschappen (zie mijn schema in “docto-sound-parameters-3.vue”)

[102]

partijen met vnl. (amplitude) curves die de muzikant bovenop een ander werk moet leggen, dit werk mag hij/zij kiezen maar moet aan bepaalde vereisten voldoen (ev. iets voor PAtchwork, voor eenvoudige stukken, curves kunnen ook door computer en versterking gebeuren, vb digitale piano of el. gitaar of midi-ctrl-synth); dus eigenlijk een werk voor elektronische of elektro-akoestische instrumenten die niet of enkel heel zacht akoestisch klinken

[103]
----------ideeen artistieke experimenten
A.
-4 improvisatoren begeleiden simultaan elk een film die niet gezien wordt door publiek (film als een partituur); live-elektronisch of live elektro-akoestisch
enkele regels als afspraak/partituur:
-4 genres/stijlen van filmfragmenten omschrijven
-enkele 'muzikale' regels (maximum 3?): -vnl. hoog / midden / lage frequenties
-niet te abstract, mag programmatorisch zijn
(door film/scherm komen ze gemakkelijker los van elkaars muziek, minder entrainment; door ze van de muziek af te leiden eigenlijk de muziek interessanter/scherper/radicaler maken)

of variant hierop:
eerst eenvoudige muziek maken, verschillende stemmen
dan dansers vragen om hierop te dansen, dit opnemen per stem
dan deze video opname als 'partituur' gebruiken voor muzikanten, zij proberen te synchroniseren met dansers (dit zal sowieso met een flinke error timing marge zijn)

[110]
----------muziek:
uitvoerder speelt op een synthesizer enkel iets dat hij zelf hoort, maar door bewerking van audio en (vooral) door controle data ontstaan een massa verschillende stemmen/partijen die ergens wel iets te maken hebben met het ongehoorde origineel; minstens quadrofoon (4 speakers), de structuur is op voorhand vastgelegd

---
of combineren let idee van model/set-of-rules en bib Henry Van de Velde
uitvoerders verspreid in ruimte (tussen liggende mensen) laten improviseren (en iedereen -uitvoerders + publiek die laserlampjes gebruiken- zien een soort LED-'klok' of iets met simpele geprojecteerde cues)

[112]
----------trio kinderstuk met GM midi - snelle wisseling van stijlen en instrumenten
-stiltes tussen fragmenten
-verschillende lengt van fragmenten
-plots met 3 samen luid
-opzettelijk wel of geen vermenging plots

-een werk in brokken laten verdergaan/ontwikkelen ook al wordt het voortdurend door korte fragmenten onderbroken;
combinaties:
f (melodie) continu met piano/zeer korte interrupties
p (melodie) continu met forte/zeer korte interrupties
-3 stukken samen die alledrie pp zijn

[121]
[soort tweede deel]
1 speler midi percussion
altijd aan begin (en op het einde?) van fragment een bepaald percussie instrument en dan plots een totaal ander fragment met de 2 synthesizers (of ook met vb pp drum loops die meestal op synth zitten)
zachte loops continu met daarop 2 andere stemmen, drum loop naar ander patroon en 2 andere stemmen veranderen ook (maar die 3 stemmen hebben eigenlijk niets met elkaar te maken; voor de fun ook eentje bij die wel samen is)

technisch :
-3 synthesizers waarvan 1 (of 2) keyboard controller die dus akkoorden kan spelen
-beperken tot standaard GM instrumenten?

-ook als stuk voor mijn patchwork cyclus voor kinderen?
---
[122]
-> een werk met bijna eenstemmig klanken na elkaar die altijd zo verschillend mogelijk zijn, gebaseerd op model/set of rules, minimalistisch zoals Feldman of Cage stuk
---

[123]
----------polyfonie & ruimte
-hyperpolyfoon met verschillende stemmen/instrumenten & stijlen; bij het componeren niet letten op de luidsterkte van elke stem/stijl maar bij de uitvoering moet de afstand in de ruimte tussen de stemmen/instrumenten zodanig aangepast worden dat alle stemmen min of meer gelijk klinken voor het publiek

-om de meest zachte en dus meest nabije geluiden luid genoeg voor iedereen in het publiek te doen klinken ofwel die instrumenten dubbelen of versterken met 2 of meer speakers rond & in het publiek

[130]
Amplitude curves bovenop ander instrument
(uit files compo-ideeen.txt)

partijen met vnl. (amplitude) curves die de muzikant bovenop een ander werk moet leggen, dit werk mag hij/zij kiezen maar moet aan bepaalde vereisten voldoen (ev. iets voor PAtchwork, voor eenvoudige stukken, curves kunnen ook door computer en versterking gebeuren, vb digitale piano of el. gitaar of midi-ctrl-synth); dus eigenlijk een werk voor elektronische of elektro-akoestische instrumenten die niet of enkel heel zacht akoestisch klinken

een lichtjes ander uitgewerkte versie van dit idee (london mei11):

----------impro idee2 voor digitale (stomme) instrumenten
-stom/fake : spelen zonder geluid te produceren -> choir
-1 uitvoerder (soloist) bespeelt controllers of (akoestisch heel zachte maar versterkte) klankobjecten die luidsterkte van andere controlleert, deze uitvoerder 'bespeelt' dus de anderen'
-choir speelt extreem onafhankelijk - totaal verschillende muziek/stijl/ideeen
-elk lid van choir heeft een tweede optie (die slechts af en toe -in minderheid- toegepast wordt): niet meer 'stom'/digitaal spelen maar echt/akoestisch (ev. of toch digitaal maar totaal ander idee) en in dit geval dus niet meer gecontroleerd worden door de soloist), dynamiek wel stil/pianissimo vb digitaal keyboard - (duim)piano, stem (spreken of zingen of neurien of fluisteren - vb telefoongesprek), allerlei andere eenvoudig te bespelen akoestische instrumenten; als het speel-technisch kan, mogen stom/digitaal en 'echt/real' spelen simultaan gecombineerd worden (vb met stem kan dit)
-zoek naar instrumenten die timbraal/karakteristiek zeer verschillend zijn
-(voor soloist) laat enkele stiltes waarbij je dus het choir enkel visueel ziet spelen (+ ev. degenen die echt/akoestisch spelen)
-iets over ontwikkeling/structuur?

suggesties:
-zoek naar verschillende structuren

[131]
Improvisatie hyperpolyfoon textscore (heading 2)
impro idee1 voor 3 tot 6 spelers
-2 speelmogelijkheden: 1. speel extreem onafhankelijk zonder te overstemmen of 2. versmelt
-zoek naar instrumenten (of instrumenttechnieken) die in de 'onafhankelijke' passages timbraal zeer verschillend zijn
-onafhankelijk: merendeel van de tijd, slecht hier en daar passage versmelting
-iets over ontwikkeling/structuur ?
-nog iets oier voorzichtige toenadering/ontmoeting of zit dit in 'versmelt'

suggesties:
-laat veel stiltes, hele passages mogen solo, duo of trio zijn (dus niet altijd tutti spelen)
-zoek naar verschillende structuren
-bij 'versmelt': als je met 2 of 3 hetzelfde muzikaal idee maakt/opbouwt, let dan op dan de

dynamiek blijft zoals hij was voor 1 instrument

[132]
Second and Third voices
-muzikanten die enkele begeleidende partijen spelen uit andere werken: wel een begeleidende partij die af en toe een hoofdmotief (bindmotief, even de hoofdpartij, even de hoofdpartij dubbelen (in octaaf of andere afstand); begeleiding mag op alle mogelijke manieren gereduceerd worden-moet zacht kunnen klinken voor de balans tussen de verschillende instrumenten, hoofdmotiefjes moeten wat benadrukt worden zodat ze wat uit de begeleiding springen
-zo een verdeling maken in tessituur

[140]
Carrousel van muzikanten

enkel instrumenten point-source, dus directioneel (zoals trompet) , muzikanten lopen rond in een cirkel op het podium zodat ze vooral hoorbaar zijn als ze in de richting van het publiek spelen (ev. Door dit effect te accentueren en ook zachter te spelen als ze meer naar achter in de cirkel gaan spelen.
Dan hier een soort choreografie mee maken: vb 2 cirkels die draaien, één of enkele buitenstaander
Micro's gebruiken? Micro vooraan in de cirkel zodat deze plaats versterkt wordt; of een micro ergens anders buiten de cirkel (en daarmee verbonden locatie van een speaker)
Muzikaal: locatie in cirkel niet enkel verbinden met dynamiek (vooraan-forte, achteraan-stil) maar ook met andere kenmerken (per stijl per uitvoerder anders)

Dit idee is verwant met 'enkel directional' instrumenten' idee in 'compo-ideen.txt'

minder voor de hand liggende directional instrumenten:
-menselijke stem
-versterking, wel niet handig om mee rond te lopen; oplossing: kleine radio of map3 of gsm speler

'Movements and Interludes':
-movements: 2 of 3 delen met bewegende instrumenten
-interludes: solo (of toch kleinere bezetting) zonder beweging maar wel op specifieke locatie op podium

uitwerking carrousel:
-per speler 3 of 4 te memoriseren stukjes, deze ook als basis gebruiken voor improvisatie
-die stukjes: traag of snel spelen
-iedereen unisono of iedereeen zelfde stuk
-opbouw of afbouw van het aantal muzikanten, vb in begin maar 1 muzikant beginnen die in alle 'kwartalen' verschillende stukjes speelt (dus 4 stukken per cirkel), daarna 2de muzikant die meestapt maar die speelt veel pauze en enkel in 1 kwartaal...
-1, 2 of 3 muzikanten die uit de cirkel gaan en tegenstem improviseren bij wat ze daar op dit locatie

van de carrousel horen

Grafische score / parcours gebaseerd op model/set of rules (heading 2)

[141]

-idee : (variant op vroeger idee van violen verdelen ts publiek en link tussen dynamiek en spatialisering), ballade, sprekers/vertellers verdelen ts publiek, intiem, zij vertellen sociaal verhaal, muzikanten staan verder van publiek (1sept12)

[142]

5sept12

(nog altijd op basis van vorige vergelijking van txt files)
-idee van vroeger stuk met link tussen dynamiek en spatialisering : in partituur werken met vb 4 ruimtes,
ruimte 1: heel stil, tussen het publiek, instrumenten/stemmen mogen ad libitum gedubbeld worden,
ruimte 2 : zoals de 'normale' afstand van een podium tot publiek
ruimte 3: ver, zodat een het dynamische bereik van geen supeerluide instrumenten (viool, fluit,...) op zijn luidst toch nog stil is
ruimte 4: zeer ver, zodat het dynamische bereik van heel luide instrumenten (piano, trompet, sommig slagwerk) op zijn luidst toch nog stil is

[200]

Saturday, November 24, 10:28 AM

idee van voorgrond en achtergrond, belangrijke dingen die op de achtergrond gebeuren en niet op de voorgrond

[207]

de ideeën dat ik soms heb van stukken of van muziek is af en toe om dingen te maken die een heel duidelijk statement zijn dan, misschien niet meer puur muzikaal, maar toch, alsof je op een podium iets met heel veel overtuiging zegt, een beetje op een rituele manier, die, ja dat is ook zoiets, een flard of een idee die geregeld wel een keer terugkomt, 'k denk dat ik vroeger een keer een idee had om een stuk te maken dat dan, 'k weet niet wat het stuk was, dan bijvoorbeeld van pamflet nummer één of zoiets naar pamflet nummer twee, een soort reeks,

[208]

er schoot me nu net iets te binnen, maar ik kan het me niet meer herinneren, ik had ook zo af en toe een idee, iets dat soms eens opduikt, het is meer een conceptueel klankidee, om een soort geluids, een soort performance is het woord niet, een happening te organiseren waarbij dat ge bijna random een plaats kiest, stel je voor, ik zeg maar iets, dat ge in Antwerpen een soort performance te doen of een happening, het zou er op neer komen dat ge bij toeval een plaats vastlegt in Antwerpen en dan zou de performance uit niet anders bestaan, uit het idee van nu gaan we een keer proberen dat het op die plaats stil is, en dat natuurlijk ver door te drijven, wat het zou betekenen, als daar verkeer is, proberen het verkeer plat te leggen, proberen allerlei dingen te doen die maken dat het één minuut stil is eigenlijk, zoiets, 'k weet niet hoe lang dat idee al terugkomt, maar het schiet mij nu net te binnen met over de Ardennen te praten en dat idee van stilte en het idee dat je eigenlijk een soort statement stilte creeërt op een plaats, enfin da heeft wel iets leuks, 't heeft wel iets

----------2013

[202]

Friday, January 11, 2:59 PM snel-vraag-random

ideetje dat ik had tijdens beluisteren concert in Logos, ergens rond 20dec12; zit ik sindsdien af en toe aan te denken, is een soort variant op snelle-afwisseling-van stijl/fragmenten-in-een-snel-tempo (met snelle ritmes), ik denk dat ik dit een maand of meer geleden al eens neergeschreven heb. dit is het idee: soort chaotische, 'distortion' van deze snelle-afwisseling-van-fragmenten, alsof op al die verschillende stijlen/fragmenten één zelfde effect wordt toegepast waardoor alles maar vaag herkenbaar wordt, vb overal snelle random noten tussen, of vervormd; een beetje als een slechte pitch detector die bij aanzetten of ruis te veel noten detecteert en de track die gedetecteerd wordt, is dus die afwisseling van fragmenten/stijlen.

[203]

Wednesday, February 13, 9:39 PM

idee om met versterking extra dynamieken en diepte/ruimte te creëren; dus eigenlijk 'gewone' partijen die op sommige plaatsen versterkt en dan weer niet versterkt zijn; zo veel ruimte en diepte en nivo's proberen creëren zonder speciale effecten maar enkel hier en daar, wisselend, versterking

[205]

Wednesday, March 13, 3:20 PM trio stuk pn-fl-cello (was gamba)

2 andere delen of fragmenten met hetzelfde procédé, nml. 2 instrumenten versmelten tot 1 geluid, dus vb piano en cello versmelten (vb pizz cello en cluster/inside techniek glisclus van eigengang

piano versmelten) , ook nog iets voor fl en cello zoeken

[206]

Friday, March 15, 9:31 AM

(na beluisteren kz Bijloke Japans ensemble)
percussiewerk voor 3 of 4 (of meer?) spelers: een beetje zoals Drieweg II, elk stam gaat eigen gang, maar alle stemmen vooral (of enkel) non-pitches, ruis of halfruis/halfpitch klanken (dus weinig of geen gewone pitched stemmen), zou wel een uitdaging zijn; daarbovenop idee van vroeger, van een extra stem die verspreid zit over alle (of een deel van de spelers), de timing van die partij is dus niet heel precies, random marge rond elke noot; elke speler heeft dus een groot deel 'eigen' instrumenten en daarnaast ook enkel instrumenten gemeenschappelijk (of van dezelfde groep) die dan dienen voor die extra gemeenschappelijke stem

[210]

Friday, March 15, 9:41 AM <snelle ritmische stroom>

idee van snelle ritmische stroom waarin versch fragmenten snel na elkaar volgen had ik ook gisteren opnieuw; ik denk dat er genoeg instrumenten moeten zijn om dit interessant te maken zodat ik voortdurend kan wisselen van textuur/timbre, 'dikte' orkestratie vooral; ktwijfel er wel aan dit idee wel realiseerbaar en interessant genoeg is, denk maar aan hoogste pianopartij in eigengang...

Monday, March 18, 7:55 PM ideetjes waar ik in het 'nabije' verleden volgens mij over zitten denken/fantaseren heb;

hoe lang geleden kan ik moeilijk zeggen (een paar weken tot maanden geleden gok ik)
[211]

- vermenging van led-lampjes audience participation idee van vroeger met idee van live instrumenten tussen publiek of idee van allemaal kleine, eenvoudige speakertjes in mp3-spelers enz

[212]

- idee van groter ensemble werk (met veel instrumenten), piano die clusters vanuit de verte speelt, dynamiek die verbonden is met locatie/afstand

[213]

idee om Zwerm stuk te herwerken, om een bepaald moment dacht ik om dat op te splitsen in 2 stukken: 1 compositie en 1 meer compositie-improvisatie

[215]

Tuesday, May 7, 5:00 PMnog iets voor trio fl-pn-cello/gamba

verschillende delen zoals ik nu al 1 deel heb met een stationaire textuur: 3 stemmen gaan hun gang maar daartussen 'intermezzo's' die kort zijn (20sec a 1min30) korte fragmenten, flarden na elkaar met stiltes tussen of niet (zoals perc-solo stuk), zo vb 30 sec flarden (totaal verschillend aan voorgaande deel + aan deel dat daarna gaat komen); als ik me zo de volledige structuur/globaal stuk voorstel heeft dat wel iets: vb stationairA - intermezzo1- statio2-inter2-statio3-inter3; is tegelijkertijd een eenvoudige vorm, niet gebaseerd op opbouwen van densiteit of ontwikkeling maar is toch wat onvoorspelbaar, zeker als de lengtes van die delen -zowel statio als inter- telkens verschillend zijn...

[221]

Tuesday, May 7, 5:06 PM

had enkele dagen ook nog idee van doedelzak performance-happening; in Gent is er een doelzak-band; spelers op verschillende plaatsen in het park; of op versch hoge gebouwen in het centrum

[224]

Saturday, July 13, 11:04 AM kamermuziek met veel diepte

Na uitproberen met hoorn -en dat was heel goed gelukt, of: dat gaf een fascinerend stil geluid- heb ik nu verschillende ideeën over wat ik daar allemaal mee kan doen; ik zou vb een trio of quartet kunnen maken met vb buffetpiano, hoorn, trompet; dan geef ik een trage 'hoofdmelodie' aan vb trompet achtergrond ppp aan buffetpiano en hoorn; die laatste twee kunnen natuurlijk ook luid; dus ik kan 'uitzonderlijk' ook de hoorn of piano luid laten spelen, of heel plots alle drie samen forte; de trompet kan natuurlijk ook ppp; de trompet een beetje een hoofdrol laten spelen zoals piano in Centra.

Daarnaast zou ik ook nog met een paar andere instrumenten willen uitproberen of dit ppp naar ff effect (ook midden in een zin, zonder te verspringen van register) met andere instrumenten; ik vermoed dat dit zou kunnen lukken met vb trompet, contrabas, marimba (door heel snel stokken te verwisselen, kan dit?) of met ander slagwerk instrument die toch min of meer pitch hebben: pauken, buisklokken, gongs, crotales,... probleem: ik ken geen trompettist en tis net vakantie (om studenten te vragen); ik kan ook met versterking werken (met speaker zoals gitaar speaker vlak naast speler) vb voor gitaar of viool

Monday, August 26, 8:33 PM ideeën van de voorbije weken

op vakantie in Frankrijk (27jul-10 aug) niet zo veel bezig geweest met componeren; sinds vorige week woensdag 21 aug vooral -ik denk uitsluitend qua compositie- met how it takes place II

[230]

ballade idee : gemixt met idee van instrumenten die heel zacht versch muzieken spelen, ook gemixt met idee vn perc-solo-ensemble stuk waarbij er korte, luide voorgrondblokken zijn; 1 zanger/stem zingt het verhaal, melodie geschreven of toch richtlijnen voor gegeven; muzikanten maken daarbij vooraf versch bewerkingen/arrangementen/begeleidingen bij die melodie in versch stijlen (wel altijd forte? - bedenking van nu); zanger zingt vrij constant/continu, af en toe een korte forte blok arrangement door alle instrumenten (vrij te kiezen waar?) cfr perc-solo-ens stuk, daarnaast hier en daar continue ppp stemmen (terwijl zanger zingt) cfr perc-solo-ens stuk; uitzonderlijk zingt de zanger zacht/gedempt mee met een zachte melodie (met hand voor de mond? of met gezicht weg van publiek draaien)

[231]

kamermuziek idee , quartet of zo met vb trompet, hoorn, buffetpiano en clarinet; ongeveer idee van hieronder 13 juli, niet zo veel gewijzigd maar blijft wel door mijn hoofd spoken; dat superzachte hoorn spelen van Frank werkt inspirerend, heeft iets

[232]

multi-media : een variant op perc-solo-ens stuk; maar nu met korte beelden er bij in plaats van de percussie; beelden gaan uit, geen licht -> equivalent van stiltes tussen percussie; geinspireerd door het lezen van graphic novels en manga's op vakantie en nadenken hoe je daar iets van kan maken

[234]
Monday, October 28, 8:56 PM**trompet patronen**

(idee van 24 of 25oct) bewegende/wandelende trompettist speelt 'patronen', op een paar plaatsen staat pupiter, daar meer uitgewerkte 'solo's'; ook 'spatialisatie-effect' met dempen tijdens bewegen/wandelen; doorheen de trompet speelt ensemble flarden

[240]

Wednesday, November 13, 3:17 PM

partituur: 4stemmig 'koraal' met ritmisch vrije noten; geen enkele noot mag samenvallen!!!; asynchroon spelen; altijd net voor of na elkaar zodat de timbre verschillen hoorbaar zijn;

instrumenten: enkel instr met korte attack en decay zoals pn, harp, marimba, vl-pizz, cl-floep, gitaar,...; instrumenten kunnen wijzigen tijdens spelen, moeten wel altijd een zin uitspelen met 1 bepaald instrument of speeltechniek (dus vb minimum 4 noten); er spelen altijd minimum 2 instr; alle spelers bepalen zelf waar een zin begint of eindigt; dynamiek: f of p; als er f staat, hoeven niet altijd alle instrumenten die die stem (met f) hebben, f te spelen, de anderen kunnen ook p spelen;

[241]

Thursday, December 12, 8:26 PM <minitrio variant>

Ik had nog maar eens een idee over mijn mini-trio, doordat ik naar de opname luisterde voor mijn afspraak met Wannes (2 dagen geleden, dinsdag) over editing van opnames in ex-comp studie; zo'n kort werk blijft knagen; ik had een soort 'trigger' idee; eenvoudige 'kale' pianonoten of akkoorden met veel stiltes (beetje zoals centra) in die uitstervende nagalm: korte diverse muziekjes van cello, fl of inside piano, deze muziekjes meestal wel dimnuendo/moriendo; af en toe een plotse forte van enkele muziekjes samen of van 1 fragment (zoals in (fl)ASH), toen (=gisteren of eergisteren) dacht ik om dan in de loop van deze 'tweede sectie' weer terug te komen naar iets begin-achtig; vandaag idee: soort heel vrije 'variatie' op wat ik al heb in minitrio: 3 stemmen spelen continu in hetzelfde register stil maar voortdurend andere muzieken/fragmenten (wel continu aan elkaar gelijmd), dit zoals trage, melodie van piano/fluit in begin/bestaande minitrio; dan af en toe luide 'accenten': korte passages van diverse muziek zoals (fl)ASH blokken.

[242]

Thursday, December 12, 8:33 PM

Zat vandaag ook te denken aan een versie van (fl)ASH met tekst (met roepen en spreken, zie vroeger) en als tekst slogans of citaten te nemen; misschn dit dan op eindconcert van mijn doctoraat doen, als (fl)ASH daar ook uitgevoerd wordt; dit omdat ik mijn onderzoeksfinancies aan het bekijken was vandaag en nadacht over wat ik tot eind vn mijn contract/doctoraat nog kan doen/organiseren.

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[243]
Thursday, January 9, 6:31 PM**stille actie**

idee om een reeks actie-stukken te maken waarbij uitvoerder-acteur-muzikant telkens probeert om een bepaalde actie zo stil mogelijk uit te voeren; dus een aantal micro's op podium zetten (zodat je toch stille geluiden hoort, maar niet overdreven); vb reeks rond 'gevoelens' en fenomenen, vb
crime : iemand probeert iets mee te nemen dat op het podium ligt of vasthangt
liefde : koppel dat als het ware een slaapkamer binnensluipt en probeert zo stil mogelijk te vrijen

zonder dat vb ouders in kamer daarnaast of iemand anders daar vlakbij dit kunnen horen
oorlog: zo stil mogelijk proberen wegsluipen zonder dat de vijand je hoort, verscholen zitten; hier zouden luide blokken geluid (cfr flASH of zonder-pitch) op onregelmatige tijdstippen voor -random- momenten kunnen zorgen waarop verscholen persoon toch kan bewegen of geluid maken

moet er in elk deel muziek/muzikanten zijn?
functie van deze muzikanten? (zou ook een soort koor kunnen zijn, dat commentaar geeft) (in blokken klank zodat de zachte geluiden van uitvoerders/acteurs hoorbaar blijven

[250]

Tuesday, January 28, 2:43 PM

ideetje dat ik vorige vrijdag had denk ik, toen ik aan de realisatie-score (met fragmenten) aan het werken was, meerbepaald aan Vieuxtemps-fragment: 2 hoofd- of solo-instrumenten (piano en contrabas), partij beetje zoals piano in Centra, op achtergrond een ensemble dat een bestaand stuk speelt, de noten van solo instrument zijn triggers, die doen sommige partijen wegvallen of verschijnen; soms zijn er vb 2 stukken op achtergrond, soms enkel 1 begeleidingspartij

[251]

Friday, March 28, 8:54 PM idee voor cello-pn stuk

(na een heel snelle nog vage vraag vn Frank Nuyts)
eerst dacht ik: twee instrumenten is te weinig om iets mee te doen, al mijn ideeen zijn voor meer instrumenten; maar dan had ik een paar ideeen om die 2 instrumenten toch 'meerstemmiger' te maken zodat 1 speler toch verschillende dingen simultaan kan doen; ook met versch microplaatsingen werken en speakers die ver uit elkaar staan en 1 register van het instrument 'ver-wijderen':
met nagalm zoals in Lachenmann stuk, in versch nagalmen korte fragmenten in versch stijlen spreken (tekst, ballade?,...)
micro aan hoge toetsen en dit vb naar verre rechter speaker
stem ev ook naar de andere speaker
cello:
cello spelen en ondertussen spreken, zingen,fluiten
contactmicro op krul van cello voor bassnaren (dit naar vb verre linker speaker)

Ik was ook aan het terugdenken aan dat lied dat ik als student gemaakt hebt (uit cyclus) met zangeres die ook slagwerk speelde en piano die prepared was...