Künstlerisches Doktoratsstudium

Restructuring Hierarchy
Within and Between
Jazz and Classical Orchestras

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Abstract

This artistic research focuses on music for jazz symphonic orchestra (JSO), a type of ensemble that mixes two important cultural traditions in music: the symphony orchestra and the jazz big band. My investigation is based on my artistic exploration as a way of questioning the established vertical hierarchy that tends to be present in large jazz ensembles, asking the main question: how can we establish communication between jazz and classical musicians, empowering them to engage in collaboration in large ensemble contexts? To answer this question, I focused on creating mechanisms to change the social dynamic in large ensembles, and exploring ways of incorporating improvisation in these contexts.

During a preliminary research phase, I examined the establishment of the jazz symphonic orchestras in the historical context, linking it with the development of "third stream" music and showing the aesthetic and social implications that this cultural establishment currently reproduces, using examples from the two most active JSOs in the world, the Metropole Orkest (Netherlands) and the Orquestra Jazz Sinfônica do Estado de São Paulo (Brazil).

However, the core of this artistic research is my own artistic practice. In this phase, I composed a total of 18 pieces of music for four distinct large ensembles. The pieces were rehearsed, performed live and recorded. Besides the artistic practice itself, ethnography and qualitative research support the research methodology, in the form analyses of the artistic results (recordings and videos) and collected data (interviews and documentation of the process). As a result, this dissertation complements the artistic component of the research: it is a report, discussion and reflection on these practical experiences and how the process affected me, on the social relations in the large ensembles and our experience of making music.

I believe that focusing our attention on large jazz ensembles and researching the aesthetic and social possibilities that alternative hierarchy and leadership models offer can help us think about our contemporary world – a world in which which different cultures are very close and cooperation is more essential than ever before.

Acknowledgements

Before starting this artistic research journey, I would like to say a big thank you to Prof. Dr. Deniz Peters and the faculty of the Doctoral School for Artistic Research (KWDS) in Graz, to my internal advisers Prof. Dr. André Doehring and Prof. Ed Partyka for the immense support and motivation; to my external advisors Prof. Dr. Chris Stover and Prof. Rainer Tempel, to the University of Music and Performing Arts Graz for the great support during the last nine years of studies, and to all the musicians and technicians involved in this artistic research.

I would also like to thank my friends and family, who continually gave me the energy and motivation to keep going, as well as the external people who helped during the research process with interviews, tips, recommendations and critics: many thanks to Jim McNeely, Vince Mendoza, Henk Heijink, Marjolein Fischer and Jolien Plat (from the Metropole Orkest), Arrigo Barnabé, João Maurício Galindo and Fábio Prado (from the Orquestra Jazz Sinfônica do Estado de São Paulo), Dr. Jens Badura, Dr. Barbara Lüneburg, Prof. Wolf Kerschek and Prof. Florian Geßler.

It was a luxury to be able to dedicate four years of my life to this doctoral research, in which financial considerations could, at least for a short period of time, be forgotten and the spirit of exploration, curiosity and enchantment of the new were the driving force. I hope you enjoy reading my account of this journey, and listening to the music that came to life during the project.

I would like to dedicate this work to my mother Maria do Carmo Cardoso Sampaio. She was born in a very poor family in Cicero Dantas (in Bahia, Brazil) and had the dream of learning how to read and write. She not only succeeded in that, but also became a professor and writer and finished her doctoral thesis in her 70s. She unfortunately passed away in January 2021, while I was finishing this dissertation, one of many reasons to express that she was my biggest inspiration to keep studying and investing my energy in my dreams, like she did!

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I - Introduction

From 2017 to 2021, I dedicated my time and energy to the development of this artistic research project. To put this complex and intricate journey in words, I wrote this dissertation, which guides the reader through the development of the four-year work. It describes, discusses and reflects on the paths I experienced through the research, and how they contributed and transformed my views on the subject and on my own music. The dissertation and the artistic products are the results of this artistic research; they complement each other in understanding the project. In order to better comprehend the work as a whole, I will begin by relating a little about the background of this project, as a result of my personal experiences in the last years.

In 2012, after my musical studies in Brazil, I moved to Graz, Austria, with the goal of writing music for big band (a tradition that is less well-established in Brazil than in Europe or the USA). My previous works as a composer were focused on a jazz nonet, under the name "Projeto Meretrio," but after 2012, I decided to focus on writing my own big band music. This led to the release of my first big band album[1] as a composer and bandleader in 2015, when I finished my master's degree.

The master's program opened a big new window for me, on the Western classical tradition. My curiosity and love for large ensembles (previously limited to big band) started to grow in the direction of orchestral music. In 2015, a four-day jazz symphonic orchestra (JSO) project at the University of Music and Performing Arts Graz was led by Michael Abene – the former chief conductor of the WDR Big Band – with the goal of performing large orchestra pieces from students, who not only composed, but also conducted and rehearsed the orchestra. This was my first experience conducting a jazz symphonic orchestra (JSO) including both jazz and classical musicians and it was a pleasure to work with an orchestra like this; listening to the music come to life from mere pieces of paper with dots was something indescribable. While on stage rehearsing and performing with the orchestra, I had a strong feeling of fulfillment and happiness; I wished it would last much longer. The live performance can be watched on:

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[1] "Tourists" (2015, Session Work Records).

The JSO fuses two important musical traditions: the symphony orchestra and the jazz big band. I see the JSO as a very special kind of ensemble, not only because of the instrumentation itself, but also because of its human constitution. Musicians with both popular and classical backgrounds perform, rehearse and work together on a daily basis, offering the development of improvised complexity and the use of the textural diversity of the classical orchestra in multiple combinations. It presents us with a type of musicality that mirrors the musical world of our daily lives, where barriers between genres are dissolving.

Coming back to my experience in 2015: although it was extremely fulfilling, I could not stop thinking about a sensation I had during the whole time while working with the orchestra and also while observing the other composers' experiences during that week. I was continually annoyed by an "invisible wall" that was created between the jazz and classical musicians in the orchestra. It was not only that the string players socialized mostly with one another because they were colleagues or friends, for example; it was as if a separation was created and reinforced by the music itself, and by our creative process.

Until that time, my passion for music was closely connected to the interaction and collaborative possibilities that performing music could create. However, even in my early experiences conducting a big band in Graz, I realized that the big band hierarchy established in the process of making music was organized more vertically (with decisions being made from the top down). The work of the composer and the power of the conductor were greater than in my previous experience. Although I was in love with the orchestration possibilities offered by a JSO, I was also irritated by its hierarchical organization and lack of spontaneity, interaction and collaboration. With this unresolved feeling, I started thinking about how this "invisible wall" might be dissolved. Could the music be composed or notated differently? Could the orchestra rehearse differently? Perhaps all these things played a role and were connected.

These important questions in my artistic life, and the existence of the Doctoral School for Artistic Research at the University of Music and Performing Arts Graz seemed to coincide perfectly and it was a logical path for me to look for answers to these questions while enrolled in an artistic research program, which in Graz consists of an intertwined, systematic combination of artistic experimentation and scholarly/scientific reflection. This combination proved fruitful not only for my work as an individual artist, but also aimed to contribute to the artistic and scientific communities. It supported my artistic exploration while allowing me to systematically reflect on the

development of a long-term artistic objective, and resulted in recordings and documentations of the practical part – and also in this dissertation.

The backbone of this dissertation is the discussion of two practical case studies conducted with different large ensembles, where hypotheses and ideas were put into artistic practice. In the course of the research, I organized large ensembles mixing jazz and classical musicians and rehearsed, played and recorded new compositions in each case study. Besides the artistic practice itself, ethnography and qualitative research supported the methodology and through analyses of the artistic results (recordings and video) and collected data (interviews and documentation of the process), I aimed to answer the question: how can we establish communication between the musicians, empowering them to engage in collaboration in a large ensemble context?

To answer this question, I subverted the hierarchy present in large jazz ensembles by creating mechanisms to change the social dynamic in the ensembles, exploring a multidirectional relationship between musicians, conductor, composer and notated music. Secondly, I explored various means of incorporating improvisation in the ensemble contexts. I would argue that the JSO offers us an environment that favors the exploration of improvisation. "The act of improvising enacts an alternative to social relations constructed by the Western art music tradition, and it is in this respect an act of social experimentation."[2] As we find in recent anthropologies and sociologies of art, the relationship between art and the social should be understood as bi-directional influences, "just as social conditions and processes shape art and music, so do art and music shape social life".[3] In this sense, my project is intended to contribute to the evolving field of jazz composition, and further expand to the world outside.

The questions proposed in this research are relevant both artistically and socially: they ask if our traditional models and approaches to making music with large ensembles are appropriate to our time, or if they need revising and rethinking.

> Over the past two decades, a shift has occurred in how we think about, understand, and theorize organizational phenomenon. […] New models of leadership recognize that effectiveness in living systems of relationships does not depend on individual, heroic leaders but rather on leadership practices embedded in a system of interdependencies at different levels within the organization. This has ushered in an era of what is often called "post-heroic" or shared leadership, a new approach intended to transform organizational practices, structures, and working relationships. New models conceptualize leadership as a

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[2] Born, Lewis and Straw, *Improvisation and Social Aesthetics,* 9.

[3] Ibid., p. 6.

> more relational process, a shared or distributed phenomenon occurring at different levels
> and dependent on social interactions and networks of influence.[4]

Although the debate about leadership and organizational and relational processes has been very present in recent years, we can still ask to which extent it has transformed our experiences in reality. I would argue that the structures themselves have changed very little — and more importantly, the cosmetic changes in how businesses phrase these concepts has even done insidious damage, by covering over or making invisible the hierarchical frameworks that still guide events, and guide how – at the grossest level – wealth gets distributed.

In the field of large jazz ensembles, we can say that orchestras and big bands still make use of the hierarchical organizational models inherited from the Romantic classical orchestra and military band traditions respectively, where leadership is built on a vertical, top-down model and rarely questioned. I believe that thinking about shared leadership as a complement to vertical leadership in large jazz ensembles can open possibilities for new aesthetic experiences, offering us a chance to question the hierarchy and the kinds of relationships that we reproduce in large ensembles. Ideally, this will allow us to reshape them in more meaningful ways, extrapolated from musical practice and even applicable in daily life.

With these thoughts, I started my artistic research project, focusing on the creation of music for JSO, questioning the established hierarchies and frictions between jazz and classically trained musicians, between conductor and orchestra, and between notated music and musicians/conductor. Christopher Small, in his book "Musicking", points out that when we make music, we bring a set of relationships (between the sounds and between the participants) into existence that model ideal relationships as we imagine them to be, allowing us to learn about them by experiencing them.[5] As he shows, making music (or musicking) can have a more important social function than we might initially think: "performance does not exist in order to present musical works, but rather, musical works exist in order to give performers something to perform".[6] I believe this dissertation makes this importance explicit.

The dissertation is divided in five parts:

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[4] Fletcher and Käufer, "Shared Leadership, Paradox and Possibility," 21.

[5] Small, *Musicking,* 218.

[6] Ibid., p. 8.

I)   Introduction

II)   Research Object and Research Question

III)   Methodology

IV)   Results

V)   Artistic Result and Conclusion

The audio recordings, videos and this dissertation build a triangle that attempts to reconstruct my journey as an artistic researcher, supporting the reader's understanding of how the artistic results came into reality and their importance for the whole project. The recordings resulting from this research were released on two albums[7] and can be accessed at any time at:

With this work, I hope to reach composers, conductors, performers and artistic researchers, as well academics and scholars from other disciplines – from the humanities and any other areas – who may be interested in large ensemble music mixing jazz and classical musicians. After this long (but necessary) introduction, I will continue by discussing my research object and research question in depth.

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[7] *Music for Large Ensembles Vol. II* (2020) and *Eight Works Against Racism and Poverty for Jazz Symphonic Orchestra* (2021/22).

II - Research Object and Research Question

2.1 Research Object

> Artistic research operates from an inside perspective that is based on the immediate involvement of the artist in the process of art making and the practice within the field. Often the research object must first be created and the process of creation may be part of the investigation. Furthermore, the research is used to systematically study and possibly change the domain itself and the investigated field, including the artist him- or herself.[8]

My research object was constructed through my artistic practice (in the form of case studies) and was a fundamental part of my investigation. Although the practical case studies will be described in detail in each respective chapter, it is important to contextualize my artistic practice both historically and socially. In the following pages, I will discuss some intrinsically related topics: the emergence of JSOs, the frictions between composition and improvisation, and the fusion between jazz and classical cultures. In chapter 2.3, "Improvisation", I will focus on this nebulous subject; chapter 2.4, "The fusion between jazz and classical music in large ensemble context" will deal with the historical development of the tension between jazz and classical music in the last century, bringing us to the present. These discussions aim to give a broader understanding of my research object. To begin, I will consider the research object, focusing on the JSO.

The emergence of the JSO was not a direct consequence of the appearance of the classical orchestra, but was only possible after its emergence, which took shape around 1750.[9] Beginning with Haydn's late symphonies, written in 1791 and in the following years, the orchestra had a standard instrumentation[10]:

Strings	Woodwinds	Brass	Percussion
First Violins	2 Flutes	2 French Horns	2 Timpani
Second Violins	2 Oboes	2 Trumpets	
Violas	2 Clarinets		
Cellos	2 Bassoons		
Double Basses			

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[8] Lüneburg, *TransCoding,* 130.

[9] MGG Online, "Orchester."

[10] Ibid.

These early symphony orchestras were a mix of amateur and trained musicians. This changed radically, however, with the foundation of the first full-time professional symphony orchestras – the Vienna Philharmonic and the New York Philharmonic, both founded in 1842. Later, classical orchestras grew ever larger, reaching their peak at the beginning of the 20th century. At the same time symphony orchestras were inflating, jazz was developing.

In the 1920s, jazz bands began to evolve to bigger formats, combining elements of ragtime, black spirituals, blues, and European music. Duke Ellington, Ben Pollack, Don Redman, and Fletcher Henderson led some of the popular early big bands. This development, and the emergence of swing music, led to what is generally called the "Swing Era" (1930-1945)[11], during which the big band format was firmly established. After the 1940s, the standard big band instrumentation consisted of:

Rhythm Section	Brass	Woodwinds
1 Drums	4 Trumpets	5 Saxophones
1 Bass	4 Trombones	
1 Guitar		
1 Piano		

As with the symphony orchestra, we find many variations in the big band standard instrumentation. I would say the biggest developments from the big bands of the 1940s to the present day include: 1) the frequent use of doublings in the woodwind section, such as flutes and clarinets of all types and even instruments such as oboe or duduk. Partially due to the necessity of adapting to the demands of the film industry and Broadway productions, it gradually became a standard for saxophone players to be proficient at flute and clarinet. 2) The role of the rhythm section has changed through the use of instruments such as keyboards, electric bass and electronic effects, as well as means of interpretation nonexistent in the Swing Era.

The JSOs (also known as "studio orchestras") appeared in the 20th century, as a mix of classical orchestras and big bands. They were hybrid orchestras; they played a major role in the movie industry, recording great numbers of soundtracks, and had a strong presence during the radio era. Nowadays, JSOs are less present in the film industry; there are only two professional, active JSOs in the world: the Metropole Orkest (Netherlands) and the Orquestra Jazz Sinfônica do Estado de

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[11] Schuller, *The Swing Era.*

São Paulo (Brazil). Both depend partially on government support, and regularly perform original music; they will be discussed in more detail later.

At the time JSOs appeared, the stereotypes of classical and jazz musicians were well established. We still recognize them today when we listen to prejudices about jazz musicians not being able to read music or play in tune, or that classical musicians don't understand harmony and cannot improvise, for example. As I will discuss in the chapters "A reflection on third stream" and "The musicians of today," our social context has changed drastically in the last decades, and the musicians of today are no longer the musicians of the past. The education of the new generation of musicians is generally broader, since they have access to institutionalized education and other tools; they are equipped with better instruments, and at the same time, barriers between musical genres that used to be more defined gradually dissolved in the 20th century.

Nevertheless, I would like to point out that the two JSOs cited above have absorbed the hierarchy of the Romantic classical orchestra tradition, and this has rarely been questioned. As in symphony orchestras, decisions in a JSO are made vertically, in a top-down leadership model: composer – conductor – musicians (section leaders and then tutti players). I believe that using the JSO as a laboratory to research the aesthetic and social possibilities of alternative hierarchy and leadership models can help us to contribute new ideas to the field of jazz composition – ideas that can resonate with our contemporary world and its challenges.

In conclusion: for the purposes of this work, the JSO can be defined as a large ensemble including all sections of a big band and of a symphonic orchestra. Although its size can vary considerably, the presence of a rhythm section, classical percussion, brass, woodwinds and string orchestra is characteristic of its sound. Even more important than its instrumentation, the JSO is a platform to explore large-ensemble music in a broad sense, which may or may not be attached to a tradition such as jazz or western classical music.

2.2 Research Question

Since JSOs employ musicians with extremely different backgrounds (usually a mixture of jazz and western classical traditions, the proportions varying for each individual musician), it seemed a perfect venue for me – as an artistic researcher and jazz composer – to look for ways to dissolve the

"invisible wall," aiming to reconstruct the hierarchy of a large ensemble to encourage more spontaneity, interaction and collaborative work.

My artistic research addresses the following primary research question: how can we establish communication between so-called jazz and classical musicians, empowering them to engage in collaboration in large ensemble contexts such as the JSO?

This broad but foundational research question splits into several sub-questions, which – as I demonstrate below – were answered in part through active, engaged artistic practice and social research. These sub-questions include: What aesthetic particularities result from music created more democratically by the composer, conductor, and classical and jazz musicians working together? How should the written score and individual parts be structured and notated? How should a large ensemble be rehearsed in order to promote shared leadership in the process of making music? These questions were engaged through artistic practice.

In terms of social research, other important questions emerged: how does the process of performing the music composed during this research (in rehearsals, live performances and studio sessions) affect the musicians as individuals and as a group? Besides this, the role of the conductor, interpreter, composer, and score also entered into the discussion.

In sum, I am not just asking how I can improve communication, but also on how many levels the communication can be improved. As a composer, I felt my responsibility was to look for a way of making music that supports more intensive communication between the musicians. To look for answers, I undertook four practical artistic experiments, which will be described in detail in the next chapters. During this process, I worked with mixed groups of jazz and classical musicians on four different occasions and had the chance to rehearse, perform, and record new compositions (written specially for each occasion) with them. Through analyses of the artistic results (in audio recordings and on video) and collected data (interviews and documentation of the process), I evaluated the research and reflected about the whole process, approaching all research steps and its artistic outcome in a multidirectional process of analysis, where social research and artistic experience informed one other in a sort of feedback loop.

2.3 Improvisation

> There is scarcely a single field in music that has remained unaffected by improvisation, scarcely a musical technique or form of composition that did not originate in improvisatory performance or was riot essentially influenced by it. The whole history of the development of [Western art] music is accompanied by manifestations of the drive to improvise.[12]

The JSO's emergence, and its relevance to this study, has been briefly discussed in the last pages and will be discussed more in detail in chapters 4.1 and 4.2. However, the use of the term "improvisation" needs to be better defined, in order to help us understand how jazz and classical musicians use the term in their discourse and how they positioned themselves in the field during this research.

Different meanings of the term improvisation have existed simultaneously, competing and shifting throughout its history, and artists and theorists hold a variety of opinions, hopes, demands and prejudices concerning it. This chapter is divided into four parts: 1) understanding how blurred the discourse on improvisation is, and how differently it is understood in various music by different authors; 2) approaching some of the improvisation concepts developed in the 20th century in both jazz and contemporary classical music; 3) discussing different uses of improvisation in the music of selected big band composers; and 4) defining a theoretical framework for the understanding of improvisation in this research.

Improvisation – a debated field

Although improvisation has existed throughout the history of music, it has been associated with very different understandings, discourses and uses in various periods. This reveals not only aesthetic preferences but also deeper characteristics of the societies and cultures of specific times. Improvisation has been recognized in Western musical culture since the 15th century; it was ubiquitous in the music of the baroque, classical and early Romantic periods. Many famous composers, including J.S. Bach, Händel, Mozart, Beethoven, Chopin, Brahms and Liszt, were accomplished improvisers. However, the interest in improvisation fell slowly into decline during

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[12] Ferand, *Improvisation in Nine Centuries of Western Music,* 5.

the18[th] and 19th centuries; a resurgence – coupled with increased discussion and debate in academia – did not begin till the mid-20th century.

The term improvisation has an extensive and complex history. At first glance, it would seem that improvisation can be briefly and succinctly defined, but unfortunately, the reverse is true: improvisation in music has proven difficult to define.[13] It is also difficult to define it as a phenomenon distinct from composition, since criteria such as spontaneity, the absence of notation and singularity of results – often used to characterize improvisation – can also describe composition.[14] Since the 1950s, improvisation has become a global, amorphous and problematic term.

The popularity of the word "improvisation" is due to its special nature, giving rise to terms like "improviser," the verb "to improvise," the adjective "improvisatory," etc.[15] In the 1970s, while studying the definitions of musical improvisation in dictionaries and encyclopedias, Bruno Nettl encountered conflicting views, still present in the discussion of improvisation today:

> Some sources […] indicate the relevance of the concept to non-Western, particularly tribal, musics, and state that, given the absence of notation, these are basically improvised. Others confine the idea of improvisation only to music for which there is basically a notation system from which the improviser departs.[16]

Dictionaries and encyclopedias tend to approach the subject from a predetermined and simplistic perspective. Intuitively, we think of improvisation as the practice of making or doing something without preparation[17], but an examination of the literature on the subject quickly shows that this intuitive understanding is incomplete and unclear. Authors such as Derek Bailey, Rudolf Frisius, Christian Kaden, Tiago de Oliveira Pinto, Nicholas Cook, Ed Sarath, Bruno Nettl, Ernest T. Ferand, and many others have written about different aspects of improvisation and made efforts to explain the phenomenon.

Robin Moore, for example, defines it as:

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[13] Bailey, *Improvisation,* 83.

[14] Feißt, "Negotiating Freedom and Control in Composition," 206.

[15] Feißt, "Der Begriff "Improvisation" in der Neuen Musik," 19.

[16] Nettl, "Thoughts on Improvisation: A Comparative Approach," 2.

[17] MGG Online, "Improvisation."

> A performance and event-based musical act deriving its structure and characteristic style
> from a combination of longstanding cultural models and individual interpretations of them.
> The models are so familiar to the performer(s) - and frequently other participants - that they
> have been internalized and are understood on both conscious and intuitive levels.[18]

This is a very broad understanding of improvisation, pointing out its complexity as a phenomenon that does not happen out of context and – as we will see in the section "Improvisation in this research" – it can be understood as an "event-based musical act" reflecting a cultural and social context.

Since this research deals with improvisation in a compositional context, it is also relevant to touch on the unresolved subject of the relationship between improvisation and composition, an intricate and ongoing discourse. Lukas Foss, a German-American composer, pianist, conductor and founder of the "Improvisation Chamber Ensemble," attempted to define the relationship between improvisation and composition in 1962:

> Improvisation is not composition. It relates to composition much in the way a sketch relates
> to the finished work of art. But is not the very element of incompleteness, of the merely
> intimated, the momentarily beheld, the barely experienced what attracts us in the sketch? It
> is work in progress. And so is improvisation as we practice it; it is a spontaneous, sketch-
> like and incidentally un-repeatable expression, full of surprises for the listener and for the
> performer as well. It is a music in which even the choices of pitch and duration are part of
> the act of performance. It is performers' music. Viewed in terms of a composed piece,
> improvised music remains 'on the way', a mere hint, raw material "exposed" rather than
> "composed". And so it should be. That is the virtue and that is the limitation of
> improvisation.[19]

Improvisation and composition were understood, especially in the European classical tradition, as very distinct creative processes. However, sometimes improvisation is understood as a preliminary stage of composition, or as the simultaneity of creation and performance. Sabine Feißt observed that improvisation and composition are sometimes described as "equally important and identical", "possibilities of the same process", "part of the same idea". Bruno Nettl suggested that maybe it would be better to think of composition and improvisation as "rapid" and "slow composition" respectively; Schoenberg suggested exactly the opposite – understanding composition as a slowed-

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[18] Moore, "The Decline of Improvisation in Western Art Music," 66.

[19] Foss, "Improvisation Versus Composition," 684-685.

down improvisatory process;[20] Pauline Oliveros views composition as slowed-down improvisation, and improvisation as sped-up composition.[21] I would argue that improvisation and composition are strongly connected and part of a continuum; however, George Lewis points out that "improvisation is still often compared with the practice of composition with clear prejudices in favor of the last"[22].

Researching improvisation opens a broad horizon of investigation indeed; I came to realize that this concept is much more open than one might think. In the literature, authorship, notation, closeness and reproducibility are some of the ideas related to composition, while important characteristics of improvisation often include the *impossibility* of notation and reproduction and the presence of spontaneity and playfulness.[23] These definitions describe improvisation and composition superficially and are problematic in many ways – not nearly enough to help us comprehend the complex phenomenon of music composition and improvisation.

Since the early 1950s, there have been continuing attempts to re-integrate improvisation and composition in classical music,[24] which brought the complex debate of the relationship between improvisation and composition to a new level in the 20th century.[25] I argue that this problem is in large part a result of the constant comparison of improvisation and composition. As Peter Elsdon argues, reconceptualizing improvisation would mean recognizing that what is at stake is not just the classification of a particular musical process, but larger aesthetic questions. "What is necessary is to see improvisation as the site of conflicts and negotiations about music".[26]

As a development of this discussion, improvisation has recieved special attention from academia in recent years, including important contributions that supported my reflection during this research, such as *The Routledge Companion to Jazz Studies* (2019), a collection of texts that discuss how jazz studies work nowadays within jazz as an interdisciplinary field and contribute to the debate on new ideas about improvisation. Other relevant works include *Doing Jazz* (2017), which views jazz from a sociological perspective, aiming to understand jazz not as something that exists in itself but as a

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[20] Feißt, *Der Begriff "Improvisation" in der Neuen Musik,* 22, 23, 28, 31, 32.

[21] Ibid., 177.

[22] Lewis and Piekut, *Critical Improvisation Studies,* 3.

[23] Feißt, *Der Begriff "Improvisation" in der Neuen Musik*, 23.

[24] Bailey, *Improvisation,* 61.

[25] Feißt, *Der Begriff "Improvisation" in der Neuen Musik,* 32.

[26] Elsdon, "Re-Imagining Improvisation," 4-6.

social construction. *Improvisation and Social Aesthetics* (2017), another collection of texts from scholars aiming to broaden the traditional subject of aesthetics with a focus on improvisation, supported my research in relation to the discussion on how aesthetics can signal a commitment to or a questioning of social identifications, and how and why a set of experiences or objects is valued or devalued in certain contexts. *Improvisieren. Material, Interaktion, Haltung und Musik aus soziologischer Perspektive* (2016) analyzes the process of improvisation in small ensemble contexts from a sociological perspective, offering an improvisation model which served as a reference for my own analyses during this work. Finally, but no less importantly, *Critical Improvisation Studies* (2016), a collection of texts that position improvisation in an interdisciplinary context, discusses performative notions of improvisation but also the cultural contexts that influence and shape improvised traditions[27].

These works aim to better comprehend the phenomenon of improvisation from diverse perspectives and were important to my own contextualization and broader understanding of improvisation, as well as contributing to the theoretical framework of this research.

Diverse concepts – from jazz to New Music

This section and those that follow, "Improvisation and big band" and "Improvisation in this research" have three main objectives: 1) to historically contextualize the improvisational concepts that were artistically explored during this artistic research in the practical case studies that are discussed later in parts 4.3 and 4.4; 2) to critically reflect on what these concepts tell us in relation to the narrative of how improvisation, jazz and New Music is told; and 3) to inspire my compositional work objectively and subjectively (specifically discussed in 5.1).

Improvisational concepts from the jazz and classical traditions seem initially to be incompatible. Although these concepts are not new, they are generally restricted to certain aesthetics and niches that have their own musicians, audience, specialized critics and social circles. On the surface, the reason for their seeming incompatibility seems to relate to their differing relations to tonality, pulse, form, notation and structure, but on a deeper level, it would seem to relate to their distinct social contexts and frictions, subjects discussed by George Lewis in *Improvised Music After 1950: Afrological and Eurological Perspectives.* He uses the terms "Afrological" and "Eurological" to

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[27] Lewis and Piekut, *The Oxford Handbook of Critical Improvisation Studies*, xi.

refer metaphorically to musical belief "systems and behaviors which can exemplify kinds of musical 'logic' and at the same time, intend to historicize the particularity of perspective characteristic of two systems that have evolved in such divergent cultural environments".[28]

Beyond jazz and contemporary music, many other improvisational traditions not cited in this work co-exist in the world. However, my objective is not to enumerate all possibilities (this would be both impossible and naïve), but to delimit a field in which I hope to contribute to the field of jazz composition for large ensembles in an artistic research context. In my artistic practice, I aim to put different improvisational discourses in contact, which can lead to dialogue or conflict – or both. Although improvisation is aligned with certain kinds of musical language that are culturally and historically specific, and as much it can be inclusionary, it will always exclude other styles.[29] This is true here as elsewhere: my own background and experiences in life have given me a certain worldview that does not encompass the totality; although this is not a problem in any way, it is important to take into account.

My musical education was grounded in popular music and jazz, one of the reasons why jazz has an important role in my work. Derek Bailey argues that the single most important contribution to the revitalization of improvisation in Western music in the 20th century was jazz.[30] Just as complex as the term "improvisation", the term "jazz" is also in permanent development and there is extensive literature on it, in which the discussions are often interdisciplinary and involve fields such as sociology, philosophy and psychology.

The idea of jazz is in constant flux and I use it in a broad sense, referring not only to the music related to swing, bebop, blues and the other historical styles of the last century. I think of jazz as a complex musical phenomenon, encompassing influences from various sources. According to David Ake, "jazz, like every other genre, isn't just a style or collection of musical techniques or forms, but rather an evolving idea or actually a constellation of ideas and narratives".[31] Although the approaches to jazz are legion, jazz has a strong and important improvisational component that is often object of scholarly research. As Christian Müller points out, "jazz is above all defined by the fact that it is music that consists to a large extent of improvisation, or deliberately leaves undefined

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[28] Lewis, "Improvised Music after 1950: Afrological and Eurological Perspectives," 93.

[29] Elsdon, "Figuring Improvisation," 228.

[30] Bailey, *Improvisation,* 48.

[31] Ake, "After Wynton, Narrating Jazz in the Postneotraditional Era," 79.

open spaces that only materialize in interplay".[32] It is important to stress again that improvisation in jazz opens up a huge variety of approaches that do not relate only to what we commonly understand as jazz improvisation (often "blowing over changes"). In the study "Constructive elements in jazz improvisation," Frank Tirro describes what was commonly understood as jazz improvisation in the 1970s:

> Improvisation […] consists of simultaneous acts of composition and performance of a new work based on a traditionally established schema - a chordal framework known as the "changes." The jazz improviser works from a standard repertory of changes derived from popular songs, blues, riffs, show tunes, and a few "originals." As a well-constructed tonal melody implies its own harmony, these chord patterns imply their own pre-existent melodies.[33]

With this attempt, Frank Tirro tried to show how the jazz standard repertoire is largely based on chordal frameworks that are part of the jazz musician's harmonic (and melodic) accumulated knowledge. To avoid this simplification, Sabine Feißt argues that for making music in jazz, the existence of an exchange between predetermined and spontaneous actions, arrangement and improvisation, and writing and verbality,[34] are all significant. In *Doing Jazz*, Christian Müller focuses on the analyses of performances of trios and quartets; the same can be observed in the book by Silvana Figueroa-Dreher and other authors.[35] Nevertheless, jazz is not only performed by small ensembles, and it has a history and a tradition of large ensemble music that I will further discuss in the next part, "Improvisation and big band," and in the chapter "A reflection on third stream". As we can see in the literature, improvisation in jazz has been the focus of recent research in jazz studies. Unfortunately, the focus is rarely on large ensemble approaches, which makes my artistic research unique.

In the 20th century, contemporary music contributed to new perspectives in musical improvisation in parallel to jazz as well, leading to the rich musical scenario of the present, which offers almost unlimited ways to work with improvisation. The rediscovery of improvisation in classical music in the 1960s and 70s was not a linear continuation or the resumption of a tradition. The emergence of the phenomenon that today appears under different terms, such as "free improvisation," can be seen

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[32] Müller, *Doing Jazz,* 19.

[33] Tirro, "Constructive Elements in Jazz Improvisation." 286-287.

[34] Feißt, *Der Begriff "Improvisation" in der Neuen Musik*, 196.

[35] Some works that were milestones in the recent discourse of jazz improvisation are Berliner, Paul. 1994. *Thinking in Jazz: The Infinite Art of Improvisation*; Monson, Ingrid. 1997. *Sayin' Something: Jazz Improvisation and Interaction;* Rinzler, Paul. 2008. *The Contradictions of Jazz*; only to cite some.

as a reaction to the development that occurred at the same time in composed music. However, many contemporary composers who explored improvisation in their work did not feel at ease with the term "improvisation" and redefined it or coined new concepts related to it. "These new terms served to stake out individual aesthetic and musical-political territories and to hide or expose artistic influences or associations".[36]

Some of these concepts related to improvisation have been part of the discourse since the 1950s, and influenced my music as well. Terms such as "improvisation" and "indeterminacy," for example, appear to be only distantly related – but in certain cases, an indeterminate composition can form the basis for improvisation. Composers such as John Cage, Morton Feldman and Christian Wolff had an important role in the incorporation of the terms "indetermination" and "improvisation" in composition and performance.[37] A progressive development took place after the 1950s in the application of techniques of chance, indetermination and improvisation, in which the composer could leave musical decisions open to the performers. By giving the performers more freedom, the interpreter increasingly became a co-creator; execution and interpretation became the center of interest.[38] Cage, for example, "realized indeterminacy through new and ambiguous types of notation, leaving various aspects of sound and sonic combinations to the performer's choice".[39] Although these ideas can suggest a relationship to improvisation or even to jazz, Cage himself rejected the term improvisation (and any relationship to jazz). This was due to a combination of factors: on one level, the context of his aesthetic aimed to exclude self-expression, as a strategy to prevent unsuitable performances of his works; however, it was also connected to his social location:

> Composers such as Cage and Feldman located their work as an integral part of a sociomusical art world that explicitly bonded with the intellectual and musical traditions of Europe. The members of this art world, while critiquing aspects of contemporary European culture, were explicitly concerned with continuing to develop this "Western" tradition on the American continent.[40]

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[36] Feißt, "Negotiating Freedom and Control in Composition," 208.

[37] Feißt, *Der Begriff "Improvisation" in der Neuen Musik*, 51.

[38] Ibid., 70.

[39] Feißt, "Negotiating Freedom and Control in Composition," 208.

[40] Lewis, "Improvised Music after 1950: Afrological and Eurological Perspectives," 98.

This alignment with the European/"Western" culture supported an understanding of jazz and "serious" music as opposites. In the words of Cage: "Jazz per se derives from serious music. And when serious music derives from it, the situation becomes rather silly".[41]

Although Cage's terminology aimed to move away from improvisation and its relationship to jazz, his influence on improvised music is obvious, and in the 1970s and 80s, Cage showed increased interest in the term "improvisation" and integrated it in his works. His goal at that time was to explore improvisation free from taste, memory, and feelings, to "make it a discipline." Cage wanted to give improvisers a "problem to solve," often giving them unfamiliar materials such as plants or shells as instruments; challenging the performers to not relate to their memories or taste, trying to achieve an often illusory goal of improvisation: doing the unforeseeable.[42]

Another term which was extensively explored by contemporary composers was "aleatory," derived from the Latin *aleator* – the dice player. It was a term that European composers such as Pierre Boulez, Franco Evangelisti, Witold Lutosławski and Karlheinz Stockhausen preferred to apply instead of Cage's "chance". Boulez inaugurated the use of the term in his lecture "Alea", published in 1957, where he presented his conception of "aleatory" as the absorption of "chance operations" in composition. Here, "aleatory" was understood as a sort of "controlled chance," where performers had the freedom to choose the order of sound events or larger sections of the pieces.[43]

Lutosławski, on the other hand, intended to predict all possible versions produced by "aleatory" processes in his compositions, avoiding the term "improvisation." It was not his intention to give more freedom to interpreters of his works:

> I am adherent of a clear-cut division between the role of the composer and that of the performer, and do not wish even partially to relinquish the authorship of the music I have written.[44]

Lutosławski points out a practical problem that appears when the division between the role of the composer and performer is blurred: how to deal with questions of authorship and, consequently, copyright. This reflection reverberated in my work during this research; I discuss it in section 5.1, "Copyright issues".

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[41] Cage, *Silence: Lectures and Writings*, 72.

[42] Feißt, "Negotiating Freedom and Control in Composition," 208.

[43] Feißt, "Negotiating Freedom and Control in Composition," 210.

[44] Skowron, *Lutoslawski on music*, 54.

The Italian composer Franco Evangelisti, founder of the improvisation ensemble Gruppo di Improvvisazione Nuova Consonanza in 1964, interpreted "aleatory" differently than Boulez or Lutosławski. Instead of associating the term with "chance," he interpreted it as "risk." His concept encompassed a wide range of possibilities for open compositions and was also connected with his concept of improvisation. A good example is the piece "Aleatorio" (1959) for string quartet, where Evangelisti leaves the players room to determine elements, such as pitch, duration, tempo, dynamic and timbre, for themselves. According to him, the limitation of interpretation to a finite set of predictable possibilities meant that nothing was left to chance. In the context of aleatoric music, Hermann Heiß should also be mentioned. To Heiß, aleatory practice was appropriate for group improvisation; its possibilities ultimately resulted in free improvisation. This is why he developed principles or basic rules for improvisation, which he explored together with his improvisational groups. Above all, Heiß saw free improvisation as the proper context for aleatory techniques. The relationship between aleatoric practice and improvisation is as enigmatic as the individual terms themselves, and different composers understand the terms completely differently. When improvisation is required within an aleatory piece of music, it depends primarily on the language of the individual composer, and where the boundary between aleatoricism and improvisation is set. There are many overlaps in the individual definitions of the terms; what one composer calls "aleatory" may be called "improvisation" by other. Aleatoricism seems to refer to various forms of interpretative flexibility, not necessarily requiring improvisational skill of the performer.[45] The division between improvisation and interpretation is blurred; interpretative flexibility can be understood as improvisation and vice versa, especially concerning improvisational traditions in history that are strongly connected to the act of developing variations of a given structure, melody or harmony: in such cases, interpretative flexibility can be considered part of the improvisation practice.

Another focus of interest in the 1950s and 60s was "open form." The term is in many ways contradictory and abstract; it served to describe various degrees of indeterminacy in a work, pertaining to elements such as notation, structure, material or sound.[46] The openness of the form is sometimes seen as an intermediate step to improvisation, but the affinity between open form and improvisation depends – again – on the individual composer.[47] Earle Brown was one of the first to

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[45] Feißt, *Der Begriff "Improvisation" in der Neuen Musik,* 83, 86, 91, 92.

[46] Feißt, "Negotiating Freedom and Control in Composition" 211.

[47] Feißt, *Der Begriff "Improvisation" in der Neuen Musik,* 113-114.

use the term "open form" for his compositions, and considered improvisation and spontaneity of great importance. According to Brown, predefining all elements in the composition would preclude immediate communication and collaboration within the ensemble.[48]

In the 1960s and 70s, improvisation was also significant in the context of minimal music, which is often based on reduced musical materials: simple melodic structures and rhythmic figures, harmonic circles, ostinatos and vamps. Short elements can be repeated over and over in layers and in various phasing relationships, producing complex structures and textures.[49] Steve Reich and Philip Glass were two of the composers that explored this technique. The idea of minimalism includes any music that works with limited or minimal materials: pieces that use only a few notes or a few words of text, or pieces that take a very long time to move gradually from one kind of music to another kind.[50] Improvisation was also an important aspect for minimalist composers such as La Monte Young, Terry Riley and Pauline Oliveros.[51] Terry Riley, for example, described his compositions as based in structures that would slowly modify during the performances, in which improvisation would play a major role.

The concept of "experimental music" was developed by American and European composers beginning in the 1960s. "Cage's definition of experiment and its semantic proximity to improvisation inspired many composers, among them Anthony Braxton, Cornelius Cardew, Alvin Curran, Frederic Rzewski […] to use the idea of experiment in conjunction with improvisation".[52] Improvisation was encouraged by combinations of traditional notation with newly invented symbols, texts and graphic notation.

From 1960 onwards, improvisational groups such as the Association for the Advancement of Creative Musicians (AACM), the New Music Ensemble, Nuova Consonanza, the Globe Unity Orchestra, the Art Ensemble of Chicago, the Instant Composers Pool, New Phonic Art, the Feminist Improvising Group and many others – some still active today – continued to explore ideas of collective improvisation, aiming to create music free of notation, arrangement, style, idiom or influence. Derek Bailey describes the two main forms of improvisation as idiomatic and non-

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[48] Bailey, *Improvisation,* 61.

[49] Shelley, "Rethinking Minimalism," 46-49.

[50] Johnson, *The Voice of New Music,* 20.

[51] Feißt, *Der Begriff "Improvisation" in der Neuen Musik,* 171, 176.

[52] Feißt, "Negotiating Freedom and Control in Composition," 216.

idiomatic: idiomatic improvisation is more widely used, and mainly concerned with the expression of an idiom; it also takes its identity and motivation from that idiom. Non-idiomatic improvisation has other concerns and is most often found in so-called "free" improvisation. While it can be highly stylized, its aim is not usually the representation of an idiomatic identity.[53] However, Sabine Feißt points out that this idea

> [...] was more wishful thinking than reality. Every free and non-idiomatic improvisation draws on familiar materials since the improvisers cannot completely ignore their musical baggage. And whatever seems new at first glance, can be at risk of quickly solidifying into a musical idiom.[54]

This complex discussion of idiomatic and non-idiomatic improvisation is of particular relevance later in part 4.3, "Between idioms," which focuses on the discourse of the musicians who participated in the practical case studies, and on how idiomatic and non-idiomatic improvisation played a role in the construction of the narrative of their musicking experience.

A further tool used by composers was the use of textual instructions for interpretation. Complex textual instructions were explored by contemporary composers such as Christian Wolff and Frederic Rzewski. Christian Wolff's "Prose Collection" (1968–1971) consists of an eight-page booklet containing instructions for the performance of actions and word games, using the voice and simple instruments. These instructions direct the performers to improvise; although they are very clear and objective, they leave space for countless possibilities for the performers. Frederic Rzewski also explored new forms of verbal notation; a good example is "Sound Pool Notes" (1972), an abstract plan for improvisation consisting only of verbal instructions. The instructions include advice for the improvisers, such as: "if you are a strong musician, mostly do accompanying work," "be a timekeeper: provide a basic pulse," "play long sounds and short ones, soft as well as loud; discover new ways of playing," and "find your own theme and improvise on it".[55]

Another musician who helped transform the relation between composition and improvisation was Butch Morris. In 1985, Butch Morris introduced his concept of "conduction," short for "conducted improvisation." Simply put, it was an improvisational format for ensemble and conductor, where

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[53] Bailey, *Improvisation,* xi, xii.

[54] Feißt, "Negotiating Freedom and Control in Composition," 219.

[55] Feißt, *Der Begriff "Improvisation" in der Neuen Musik,* 135-137.

Morris used a vocabulary of gestures and signals to interact with an ensemble that had learned and rehearsed the vocabulary in advance.

Younger composers are increasingly writing specifically for improvisers and/or incorporating freedom into their works. These composers include Karlheinz Essl, Gerhard E. Winkler, Jorge Sánchez-Chiong, Stefan Prins, Anthony Braxton, Elliott Sharp, George Lewis, John Zorn, Joëlle Léandre, Gene Coleman, Ingrid Laubrock and Mary Halvorsen. For the implementation of the concepts developed by different composers, flexibility and experience with complex notation and the ability to free improvise freely is often required.[56]

The increasing interest of musicians and composers in improvisation during the 20th century was one of the factors that encouraged the emergence of musicians schooled in both the jazz and classical music traditions. Today, different concepts of improvisation that developed during the 20th century reverberate in different, simultaneously existing musical practices. Contemporary music is a result of this process of testing the limits of improvisation.

As mentioned above, some of the concepts presented here served as an inspiration for my compositional work during this research, but one question remains: what does this historical narrative tell us?

The way music history is created and told – especially the kinds of music considered "high culture" – is generally dependent on socially dominant perspectives. The narratives present in contemporary classical music show us that the tradition of the "genius (usually white) composer" is prevalent in the discourse.   Although performers have played a fundamental part in the results of these composers' work, the literature rarely refers to the performer's importance, or questions the performer's perspective in the development of concepts such as indeterminate music or graphic notation. Positions of power held by composers and conductors have undoubtedly left a footprint on the way history is told, promoting their demands and aspirations; this research aims to approach this subject from an alternative position – including the performers in the evaluation and discussion of the artistic experience, as we will see later (especially in parts 4.3 and 4.4).

Music history has not only been written by composers and conductors; it has been written mainly by white male composers and conductors. As George Lewis points out, the discourse on improvisation since the 1950s has been

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[56] Polaschegg, "Improvisation," 278.

(…) a construct almost invariably theorized as emanating almost exclusively from a generally venerated stream of European cultural, social, and intellectual history — the "Western tradition." In such texts, an attempted erasure or denial of the impact of African-American forms on the real-time work of European and Euro-American composers is commonly asserted.[57]

In my artistic research, I aim to reflect and challenge these narratives and the framing of the relationship between jazz and classical music. This can also help us to create music that connects us to our reality in the present and ultimately, support relevant social struggles, such as that against racism and poverty, to which the final compositions that resulted from this artistic research are dedicated (see 5.1).

Improvisation and big band

My work as a composer for large ensembles relates strongly to the jazz historic development in which big bands represent a relevant type of ensemble. Big bands were vital to the development of jazz, and were extensively explored during the last century. The use of improvisation in big band contexts would be material enough for a whole book, but I would like to discuss the approaches of a few composers who had a personal impact on me and served as inspiration for my artistic work.

In the next pages, I will discuss how the discourse about improvisation relates to composition in works by Duke Ellington, Charles Mingus, Bob Brookmeyer and Maria Schneider. I will discuss some elements of how these composers approached the challenge of incorporating improvisation in their work, and how each of them offers a different perspective on improvisation in a big band context. I chose these of composers not only because of my personal affinity for their work, but because they all use traditional notation (which I also used during this research) and combine improvisation with pre-composed music. I would like to point out that these four composers belong to different generations and historical contexts in big band history; it is not my intention to compare them to one another.

Although improvisation is an important characteristic of jazz, and is present in almost all jazz repertoire, improvisation assumes distinct roles depending on the sub-genre of jazz and on the size of the ensemble. Ensemble size is an aspect that changes the practical use of improvisation, but most of the literature about jazz improvisation focus on its practice in small ensembles. The study

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[57] Lewis, "Improvised Music after 1950: Afrological and Eurological Perspectives," 92.

of big bands opens a window into musical practices, social interactions and collaborations, and the relationship between composers' and players' approaches to the interpretation of pre-composed music.[58] Many composers and arrangers have thought carefully not only about how players interpret their pre-composed material, but also about how to incorporate improvisation into their work. Far from constraining individuals in musical notation, big bands can offer composers the potential to combine and "juxtapose individual and large-scale collective expression".[59]

We find good examples in big bands that emphasize additive techniques and open forms, where group improvisation is a favored practice. Collective improvisation preserves a high degree of individual freedom, and the Mingus Big Band, for example, has "made a specialty of this practice".[60] In some pieces, chaos emerges from the progressive addition of improvisers; in others, two or more soloists will start improvising, not yielding to one another. Although Sue Mingus[61] generally chose the soloist(s) on a given piece, in the performance anything could happen, leading to arguments or even dismissal of musicians from the band. Alex Stewart points out that, far from being a free-for-all, collective improvisation (and composition retaining a high degree of indeterminacy) requires some level of aesthetic restraint from performers.[62] Even in the big band context, where the instruments have roughly the same volume level and can play simultaneously without obscuring one another, the result is often a loud, undifferentiated mass of sound if there are no compositional guidelines or other strategies to help coordinate the action.

If some big band composers explored freedom ranging from chaos to organization, others chose intentionally to make less use of improvisation in their larger works. Duke Ellington, for example, generally kept his compositions "under control," making use of so-called "simulated improvisation." The critic and composer André Hodeir describes the technique thus:

> Essentially, it seeks to introduce in written music that which makes improvised music so
> appealing: an impulsive turn of mind, accidents in thinking that a composer's pen would

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[58] Stewart, *Contemporary New York City Big Bands,* 170.

[59] Stewart, *Contemporary New York City Big Bands,* 177.

[60] Ibid., p. 190.

[61] Sue Mingus was the band manager and the widow of the jazz composer and bassist Charles Mingus. After Charles Mingus death in 1979, Sue Mingus established bands to perform his music, beginning with the Mingus Dynasty, a septet that toured internationally, and the Mingus Big Band and Mingus Orchestra.

[62] Stewart, *Contemporary New York City Big Bands,* 191, 195.

repress, and an extreme attention given to phrasing, from which jazz derives most of its powers.[63]

Often, parts of Ellington's pieces that seemed the spontaneous inventions of a soloist were actually thoroughly planned and written out in advance. The idea behind this approach was to give the audience the impression of a spontaneous, improvised solo while staying in control as composer. Why would a composer do this; what is the benefit of creating the illusion of improvisation? He points out that improvisation is not only relevant when it is really happening (begging the question : can we ever really say whether it is occurring or not?); what matters is the idea and value that improvisation can aggregate to music.

> The shared sense of time allows us to experience musical events differently because they are being improvised. The emergent music can be inspiring and visceral purely because it allows us to hear music in the moment of its creation by a musician. And this is exactly the capital that music can acquire when it is understood as improvised.[64]

It is important to understand how music can evoke qualities of improvisation and how the idea of improvisation emerges in particular contexts, even when a piece of music is highly notated and fixed. The Mingus Big Band offers us a good example of this "evoked improvisation" in a big band context: arrangers for the Mingus Big Band would often write "unplayable" phrases, exploring the extreme ranges of instruments or huge leaps in melodic lines, often resulting in cracked notes or making them sound like risky, spontaneous choices from the players, as exemplified in this recording of the composition "Mingus Fingers"

from the album *Nostalgia In Times Square* (1993). The arranger's choices not only challenge the musicians, they produce a musical effect that I would describe as "the sound of musicians struggling." This has an effect on the audience as well on the band: listening to a musician performing something almost beyond the limits of the instrument and the instrumentalist summons a feeling of admiration and respect – similar to when we cheer for an athlete attempting to break a record.

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[63] Hodeir, "Improvisation Simulation," 261.

[64] Ibid.

Another composer who though carefully about the integration of improvisation in his works was Bob Brookmeyer. His major concern was how to integrate improvised solos in compositions, while avoiding clichés and "patterns from the jazz repertoire":

> My first rule became: the first solo only happens when absolutely nothing else can happen. You don't write a solo until you [the composer] have completely exhausted what you have to say. If you give a soloist an open solo for 30 seconds, he plays like he's coming from the piece that you write. Then he says, 'What the hell was that piece that I was playing from?' and the next 30 seconds is, 'Oh, I guess I'll play what I learned last night.' And bang! Minute two is whoever he likes, which is probably Coltrane.[65]

Brookmeyer's concern stimulated him to develop composition strategies that "forced" his musicians to avoid jazz clichés. Briefly, it was the practice of "running the changes" that Brookmeyer was trying to avoid when including improvisation in his music.[66] To prevent this (to him) undesirable practice, he avoided using clichéd harmonic sequences, forcing improvisers to find alternatives and different ways of playing. As a result, improvised solos could assume structures more relevant to the composed material, building a sense of "big-picture" development. Stephen Guerra, in his study of Bob Brookmeyer's music, also identifies another compositional strategy used to stimulate creativity in improvisation: the exploration of phrases that occur in odd number of bars, at the time a rare occurrence in the jazz repertoire.

> Requiring a soloist to improvise over irregular phrases is another effective way that Brookmeyer engages the soloist compositionally. Combining phrases of different lengths requires a soloist to readjust their conventional thinking in regard to rhythm and melody. Traditional jazz forms are firmly set in the practice of consisting of phrases that occur in even numbers of bars.[67]

Brookmeyer often required the soloists to readjust their thinking to different frameworks, avoiding common harmonic cadences and building phrases with an uneven number of bars. By doing this, Brookmeyer was trying to engage the soloist to think more about the role of the improvised solo in his compositions and – as a result – create more cohesion between the composed and improvised sections of a piece of music.

As a further development of Brookmeyer's concept I would like to cite the work of the jazz composer Maria Schneider, who began as Gil Evans' assistant and later worked with Bob

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[65] Ratliff, "Bob Brookmeyer."

[66] Guerra, "A Study of Bob Brookmeyer," 118.

[67] Guerra, "A Study of Bob Brookmeyer," 123.

Brookmeyer as a freelance arranger. Many of her pieces (such as "Choro Dançado", for example) devote a large percentage of their length to improvised solos. Although the solos develop over chord changes, she tries to avoid the use of repetitive harmonic patterns to underpin them. Like Brookmeyer, she creates solo sections that are distinct from presentations of the themes, and often uses solos as a tool to bridge contrasting sections. The soloist's help is thus enlisted to make the transition from one section to another feel inevitable.[68]

> Discussing the flow of the form, Schneider brought to attention the fact that it is much harder to create the feeling of inevitability during improvised sections. In those sections the composer has to rely on the musical vision and ability of the improviser to create momentum. As arranger, Schneider points out that it is her responsibility to inspire and guide the improviser. According to her, written backgrounds can help the soloist to create directionality and keep the momentum.[69]

As we see, Maria Schneider believes in a shared responsibility between composer and improviser to create momentum, and points out the arrangement's role of guiding the improviser. Although she works mostly with traditional notation for improvisers, she also makes use of verbal text instructions and includes musical suggestions about how to improvise, which instrument range to use, and other ideas as inspiration. I developed this concept further; examples of extended traditional notation for large ensembles will be discussed during the case studies.

As we have seen, exploring improvisation in the big band context stimulates composers to rethink how to deal with their music and integrate the performer's voice in their work. Although big band music is to a great extent notated and fixed, it still offers a good deal of freedom to be managed and explored.

Improvisation in this research

In the last pages, I have discussed the term "improvisation" from different points of view, shown how undefined the field of improvisation is, placed the discussion in a historical context and argued that improvisation's relation to composition seems inevitable. In "Diverse concepts" and "Improvisation and big band", I offered an overview of the different approaches to improvisation explored by jazz and contemporary composers, and reflected on the social friction permeating the

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[68] Stewart, *Contemporary New York City Big Bands,* 178.

[69] De Lima, "Blurred Distinctions," 57.

relationship between jazz and new music, which was intensified from the 1950s onwards. I would now conclude with a theoretical framework used to think about improvisation during the development of this artistic research.

My intention in this research was to explore improvisation as a social activity; to this end, certain works were central for me: Silvana Figueroa-Dreher's book *Improvisieren. Material, Interaktion, Haltung und Musik aus Soziologischer Perspektive*[70] and George Lewis and Peter Elsdon's ideas on improvisation.[71]

Figueroa-Dreher offers a new model for analyzing improvisation as a social process, rather than in terms of musical text. It approaches improvisation from a sociological point of view, discussing and reviewing other models developed in the last decades by Jeff Pressing (1984, 1988), John Sloboda (1985), Klaus-Ernst Behne (1992), Reinhard Andreas (1993, 1996), Ingrid Monson (1996), Paul Berliner (1996), Oliveira Pinto (1998), Philip Johnson-Laird (2002) and others. Besides reviewing past important contributions to the field, her work examines improvisational processes with a focus on creativity in performance, proposing a model that expands the notions of improvisation, embracing popular and contemporary music as well – these aspects were of fundamental importance to my reflection and research.

This dissertation often uses Figueroa-Dreher's terminology; to avoid misunderstandings, I will summarize the way in which her improvisational model attempts to comprehend the improvisational process from a double perspective: action theory (*Handlungstheorie*) and interaction theory (*Interaktionstheorie*). Figueroa-Dreher views improvisation as a continuum of action and interaction combining four dimensions that can vary in quantity and quality: 1) musical material, 2) interaction, 3) attitude of action, and 4) emergent music. This model takes into account the spectrum of various degrees of improvisation without relying on a dividing line between improvisation and no-improvisation.[72] Not fixing a strict line between improvised and non-improvised music was of definitive importance for my research, since it stresses the idea that composition and improvisation are both part of a fluid continuum that integrates improvisation as part of composition, and vice versa.

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[70] Figueroa-Dreher, Silvana K. *Improvisieren. Material, Interaktion, Haltung und Musik aus Soziologischer Perspektive.* Springer VS, Wiesbaden, 2016.

[71] Elsdon, Peter. "Figuring Improvisation." In *Routledge Companion to Jazz Studies*. Edited by Nicholas Gebhardt, Nichole Rustin-Paschal, and Tony Whyton. Routledge, New York, 2019.

[72] Figueroa-Dreher, *Improvisieren,* 167, 168.

Musical material not only designates sounds, scales, intervals, chord progressions, etc., but also the knowledge that enables improvisers to improvise. The material is the starting point of the artistic design and forms the basis for the interactions between the players, as well as for the shaping of the musical outcome, involving the accumulated experience and knowledge of each individual musician. Specific musical genres consist of specific material, which is incorporated by the musicians and essential to the understanding of idiomatic improvisation. Musical material can be summarized as a combination of a perceptible dimension (sounds, scales, chord progressions, notes, etc.) and an immaterial knowledge dimension, which is a social and subjective one.[73] During improvisational processes, not only the updating and transmission, but also the invention and modification of material takes place. In this sense, improvisation is a space of knowledge creation, knowledge acquisition and knowledge transformation.[74]

Interaction between musicians is an integral part of any improvisational process and occurs based on the development of the material, where the participants look for ways to "answer" what is happening, while also referencing the material proposed by the others. The principles of respective genres play a central role: the more pre-structured each genre is, the more bound and structured the interaction tends to be.[75] Besides genre, other aspects play a role in the way interaction happens in different scenarios, including the role of the instrument, whether it is accompanying or leading, the modeling of material in the collective, interaction coordination, coordination strategies and the emergence of new material.[76]

Another dimension in Figueroa's improvisation model is musicians' attitudes in dealing with the unexpected, unplanned and incidental in their acting during improvisation. In the playing situation, the attitude of the musicians is a continuum between open and closed attitudes relating to the musical contributions of the others. In order to have an open attitude, she argues that a certain relinquishing of control over one's actions is necessary in musical interaction.[77] This attitude is necessary in order for musicians to be able to react, adapting their previous, individual plan to new information that appears during improvisation development.

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[73] Figueroa-Dreher, *Improvisieren,* 172, 173.

[74] Ibid., p. 193.

[75] Ibid., p. 264.

[76] Ibid., p. 225.

[77] Ibid., p. 268 - 269.

Finally, emergent music is understood as the sonic result of the process. The music results from performance, transcending rules and other "*Fixierungen*" (fixed conditions). Decisions – concerning materials, instrument, or technique, for instance – can be made before the performance; the extent to which music is pre-structured depends mainly on the genre. The fewer decisions are made in advance, the more these decisions have to be made during the performance. An emergent dimension is present in every music, but the more improvised the music is, the more pronounced the emergent dimension is – the spontaneity, unpredictability, combinatorics and self-variation/modification.[78]

In short, the phenomenon of improvisation can be seen as a situational-interaction-based modeling of perceptible musical material, where modeling means simultaneously inventing and executing. The simultaneous invention and execution happens in terms of interaction by listening to the material created by others and oneself. Due to an (open) attitude, musicians are able to generate, integrate, react, and modify material that is not (entirely) predictable. This process relates lastly to the emergent music, which is more than the sum of the material played: it suggests and/or imposes directions for further playing. Ideally, the process described above happens with high intensity, but it should be taken into account that improvisation is a continuum that varies in quality and intensity.[79]

In the context of this research, George Lewis and Peter Elsdon's ideas on improvisation complemented Figueroa-Dreher's work, helping me to locate it in relation to discourses about musical practices and cultures where improvisation represents a set of beliefs created in particular social contexts. As Christopher Small points out, the trap that exists in the reification of the acts of "musicking" or "improvising" into the objects "music" or "improvisation" creates a major obstacle to our understanding of the nature of these acts.[80] As such, seeing improvisation as a social phenomenon helps us understand and reflect on it. In working with both jazz and classical musicians, I found myself in the midst of complex musical traditions; reflecting on these cultural discourses from a contemporary point of view was fundamental for my artistic exploration. Peter Elsdon argues that jazz studies sees improvisation as a broad category of music making, incorporating a wide range of ideas and approaches that articulate values, identities, relationships, and so on. Improvisation is significant because of its power to embrace the ideas of personal voice,

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[78] Ibid., p. 302.

[79] Ibid., p. 312, 313.

[80] Small, *Musicking,* 61.

individuality, agency. It is a product of sociocultural conditions that has to be understood in relation to its context, which George Lewis confirms when he says that "a more nuanced view of improvised music might identify as more salient differentiating characteristics its welcoming of agency, social necessity, personality, and difference, as well as its strong relationship to popular and folk cultures".[81]

In this sense, the next chapter continues the line of reasoning, discussing the sociocultural moments most relevant to my object of study: the development of third stream music, which stressed the idea of fusion between jazz and classical music in the 1950s, and our present moment as musicians.

2.4 The fusion between jazz and classical music in large ensemble context

A short historical review

During the 20th century, various musical currents explored the possibilities of combining elements of classical music and jazz. Composers and musicians experimented using different instrumentation, from chamber music to symphony orchestra, as well as big band. In the next pages, I offer an overview of important historical moments where the fusion between jazz and classical music was explored in a large ensemble context, and discuss why this artistic research approaches this subject in a singular way.

In 1920s, the term "symphonic jazz" was coined by Paul Whiteman, a white violinist with experience in symphonic orchestras who later developed an interest for jazz and experimented in fusing it with classical forms.[82] He was also a businessman who understood how to adapt elements of Afro-American music, trivializing them in such a way that they still conveyed the charm of the new but did not oppose the needs of the white middle class listeners for "civilization". The term "symphonic jazz" appeared after the famous concert organized by Whiteman at the New York Aeolian Hall. Titled "An Experiment in Modern Music" (1924), it featured a mixed program including an old New Orleans piece and George Gershwin's "Rhapsody in Blue", which had its premiere at the concert. With this concert, Whiteman wanted to present his view of the development

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[81] Lewis, "Improvised Music after 1950: Afrological and Eurological Perspectives," p. 110, 111.

[82] Harrison. "Symphonic jazz".

of jazz, which for him developed from a crude and barbaric music (exemplified at the concert with the performance of an old New Orleans piece – as a parody – by Whiteman) to a higher art form deserving of the concert hall.[83]

Various well-known white classical composers of the 20th century were also captivated by the emergence of jazz. Its vigor and syncopated dance rhythms were fascinating traits of this type of music.[84] Some examples of well-known pieces influenced by jazz are "Quiet City" by Aaron Copland (1939). Originally composed for the play *Quiet City* by Irwin Shaw, the piece is originally scored for two clarinets (doubling on bass clarinet and saxophone), trumpet, and piano. The play was a failure, and Copland rearranged it in 1940 as a one-movement piece for trumpet, English horn and string orchestra; this version became very well-known[85]. Other examples include Stravinsky's "Ebony Concerto" (1945) and "Prelude, Fugue and Riffs" by Leonard Bernstein (1949), both commissioned by the bandleader and clarinetist Woody Herman for his band; "Concerto for Jazz Band and Symphony Orchestra" (1954), written by the Swiss composer Rolf Liebermann, for the German broadcaster SWR in Baden-Baden. The piece features the radio symphony orchestra and Kurt Edelhagen's jazz ensemble. Another example is "Three Pieces for Blues Band and Symphony Orchestra op. 50" by William Russo (1968), which combines a symphony orchestra with a four-piece blues band. A performance by the San Francisco Symphony and the Siegel–Schwall Band, conducted by Seiji Ozawa, was released by the label Deutsche Grammophon in 1972 and became one of the company's best selling records, reaching number 21 on the Billboard Jazz Chart and number 105 on the Billboard 200.[86] "Mass: A Theatre Piece for Singers, Players, and Dancers" by Leonard Bernstein (1971) is a musical theatre work composed for symphony orchestra, choir, guitars, bass guitar, keyboards and various percussion instruments. Although the initial critical reception, including the review in the New York Times, was partially negative[87], the record had excellent sales.

Besides these works, black classical composers have also incorporated and mixed influences of classical and jazz music in their language. However, they have long been denied a place in the

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[83] Jost, *Sozialgeschichte des Jazz in den USA,* 82-84.

[84] De Lima, "Blurred Distinctions," 24.

[85] Kleppinger, "The Structure and Genesis of Copland's Quiet City," 30.

[86] "Three Pieces for Blues Band and Symphony Orchestra, Op. 50." MusicBrainz. Accessed May 10, 2020. https://musicbrainz.org/work/73a4627c-2ad1-4ab7-bedf-d97a377e77eb.

[87] Schonberg, "Bernstein's New Work Reflects."

Western classical music tradition. I hope to help to change this by bringing light to some expressive black composers from the last century:

Florence Price (1887 – 1953) was the first African American woman to win widespread recognition as a symphonic composer and to have an orchestral work performed by a major American orchestra. Her musical language stays within the Romantic nationalist style of the 1920s–40s, but also reflects the influence of her cultural heritage and the ideals of the Harlem Renaissance of the 1920s–30s: she incorporates spirituals and characteristic dance music in classical forms, at times deviating from traditional structures to explore her African American influences, in works such as "Ethiopia's Shadow in America" (1932) or "Dances in the Canebrakes" (1953).[88]

Samuel Coleridge-Taylor (1875 – 1912) was an English composer, conductor and political activist. His work incorporates black traditional music with concert music; he became known as the "African Mahler". Although this was meant as a compliment, it shows us how structural racism is present in culture at a very deep level. Coleridge-Taylor saw it as his mission in life to help establish the dignity of African Americans; his orchestral works include "African Suite, Op. 35" (1898) and "Toussaint l'Ouverture" (1901).[89]

Julius Eastman (1940-1990) was an American composer, pianist, vocalist and dancer. His pieces addressed his status as a black gay composer in a white-dominated musical elite, with composition titles such as "Evil Nigger" (1979) and "Gay Guerrilla" (1980). In 1969, he joined the Creative Associates at the University of Buffalo as a composer-performer; the group presented some of his works for large ensemble, such as "Stay on It" (1973), a 24-minute minimalistic piece incorporating pop tonal progressions and free improvisation in a classical composition context, and "If You're So Smart, Why Aren't You Rich?" (1978).[90]

Undine Smith Moore (1904-1989) was a composer, music professor and co-founder of the Black Music Center. Her output includes over 100 pieces, only 26 of which were published during her lifetime. In her words: "One of the most evil effects of racism in my time was the limits it placed upon the aspirations of blacks, so that though I have been 'making up' and creating music all my life, in my childhood or even in college I would not have thought of calling myself a composer or

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[88] Brown, "Price [née Smith], Florence Bea(trice)".

[89] Banfield, Dibble and Laurence. "Coleridge-Taylor, Samuel."

[90] Dohoney, "Eastman, Julius."

aspiring to be one".[91] The granddaughter of slaves, she integrated melodies her mother and father had learned from their parents in her mature works – most explicitly in choral arrangements, but also in her orchestral work "Scenes from the Life of a Martyr" (1981), a 16-part oratorio composed in memory of Martin Luther King Jr. and premiered at Carnegie Hall.

William Grant Still (1895-1978) was a successful arranger for theatre orchestras and radio, but he was determined to become a composer of concert music and opera. In 1931, the New York Philharmonic gave the premiere of his *Afro-American Symphony* (1930), the first symphony by a black American to be performed by a major orchestra. I can also cite "And They Lynched Him on a Tree" (1940), a work written for two choirs: an all-white lynch mob, and a black chorus of mourners of a murdered man. The piece protests against the institutionalized racism of the time. Still's work mixes source materials from blues and spirituals with modal inflections, irregular phrase lengths and descending melodic curves; the latter can be heard in most of his works, which are rooted mainly in the neo-Romantic idiom and employ traditional harmony.[92]

In the 1950s, the term "third stream" was coined by Gunther Schuller; he defined it as "a musical offspring born of the wedlock of two other primary "streams": classical and jazz".[93] He intended to describe a kind of music that already existed, but which did not have a name or a label so far. Decades later, Schuller himself redefined third stream as a "new genre that attempted to fuse the improvisational spontaneity and rhythmic vitality of jazz with the compositional procedures and techniques acquired in Western music (…)"[94]. Some well-known pieces from the third stream repertoire are "Poem for Brass" by J.J. Johnson (1957), "Three Little Feelings" by John Lewis (1957), "Piece for Guitar & Strings" by Jim Hall (1961) and "Abstraction" (1961) by Gunther Schuller. All of the pieces appears on the seminal albums *The Birth of the Third Stream* (1957) and *Jazz Abstractions* (subtitled "John Lewis Presents Contemporary Music: Compositions by Gunther Schuller and Jim Hall"), from 1961. In the next chapter, I will discuss the third stream separately because of its importance and intersections with this artistic research.

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[91] Fiddy, "10 Black Composers."

[92] Murchison and Smith. "Still, William Grant."

[93] Schuller, *Musings: the Musical Worlds of Gunther Schuller,* 119.

[94] Ibid., p. 115.

After the middle of the 20th century, many other symphonic works fused elements from rock and pop music; research on this trend has been done by Horst Herold, for example, who focuses on the music of Jon Lord.[95] We can also cite representative works from Frank Zappa, especially the album *The Yellow Shark*[96] and Gary McFarland's album *America the Beautiful: An Account of its Disappearance*[97] as good examples of hybrid symphonic works fusing jazz, symphony orchestra, rock and pop music.

What do these historical moments tell us about today, and how do they relate to this artistic research? Observing these historical moments and the music they produced, it is interesting to see that certain elements of jazz and classical music were combined or stressed, while others were left out or diminished. I claim that the hierarchy of the Romantic classical orchestra, for example, was largely incorporated in the works written for large symphonic ensembles in the last century. Silvana Figueroa-Dreher synthesizes how the hierarchy present in the classical symphony orchestra discourages spontaneity, individuality and shared leadership:

> Since the 17th century a [symphony orchestra] concert presupposes that the harmonization of different actors takes place on the basis of a composition, made concrete in a score. The score in the classical sense determines the individual actions and the role of each musician. Furthermore, the figure of a conductor defines how coordination in the large ensemble will work, and a hierarchical organizational form is implied. The terms score and concert in the classical sense reflect the idea of acting together as a reproduction of social order and attach little importance to spontaneity, improvisation or the possibility of individual creative moments of expression.[98]

The hierarchy incorporated in large symphonic works generally focuses on the importance of the composer, followed by the conductor and the orchestra. As a contrast, in jazz, the performer is the focus of the musical work. It is simple to see this difference by observing albums from Charlie Parker, Miles Davis, John Coltrane or other icons of jazz history. Most of their albums feature a music composed by various other composers. However, when we listen to a Miles Davis album – for example *Round About Midnight* (1957) – although it has no pieces composed by Miles, we refer to the album as his work because he was the performer, improviser and bandleader on the record.

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[95] Herold, Horst. *Symphonic Jazz – Blues – Rock: Zum Problem der Synthese von Kunst- und Unterhaltungsmusik in symphonischen Werken des 20. Jahrhunderts.* Populäre Musik und Jazz in der Forschung, 5, LIT-Verlag, Münster, 1999.

[96] Album of orchestral music by Frank Zappa, released in 1993. It features live recordings from the Ensemble Modern's 1992 (Frankfurt, Germany) performances of Zappa's compositions.

[97] Jazz symphonic orchestra piece divided in six movements (1968, Skye Records).

[98] Figueroa-Dreher, *Improvisieren,* p. 261. Translated from German by the author.

Among other reasons, the relevance of the performer gains this importance because of the high degree of improvised content that these performances present.

In large ensemble works that mix jazz and classical music, the great majority of composers focused on the importance of the composed material. We find almost no improvisational content, nor are the individual voices of the performers highlighted. As an example, the cover of the album *The Yellow Shark* by Frank Zappa makes it clear that the focus lies on the genius of the composer. Even though the composer's picture on the cover may be a decision by the record label or graphic designer, this does not
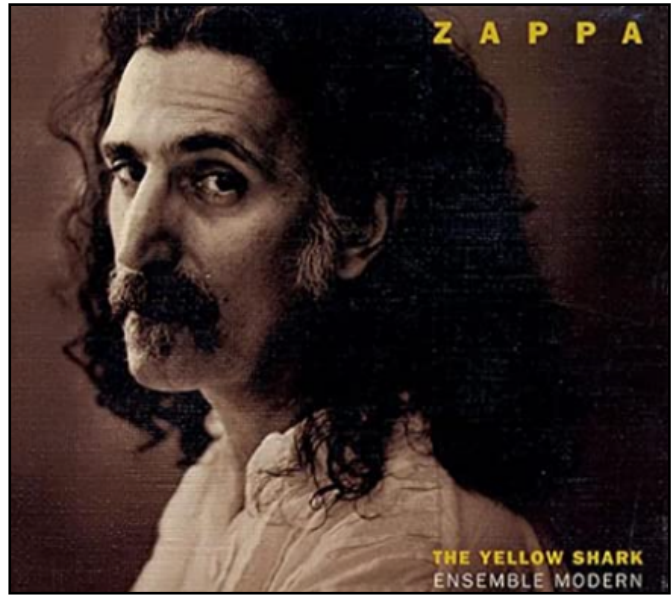
Yellow Shark album cover

change the fact that the composer is seen as the most important figure in a work which may involve dozens or even hundreds of people.

The jazz "flavor" incorporated into works for large ensemble mixing jazz and classical instrumentations was more in the form of jazz inflections – "swing feel", use of "blue notes", bebop scales, typical jazz harmonies and jazz traditional instrumentation with drums, electric guitar or saxophone, which were still relatively young instruments and neglected in classical music until then.

Improvisation was not ignored, but it had a rare place in the works written for large ensembles that intended to fuse jazz and classical traditions. Third-stream composers, for example, involved improvisation in their works, but it was done only by jazz musicians; the classical musicians performed purely written material. The third stream generated very controversial discussions about its musical results and quality, and even brought moral and racial issues into discussion; that is the reason I discuss third stream in more depth in the next pages.

A reflection on third stream

Building on the discussion of mixing jazz and classical music cultures, I now turn to the third stream movement specifically. – at first glance, it may seem that the object of this research is similar to the conceptual idea present in third stream, but it is not.

The term "third stream" was first used in a lecture by Gunther Schuller in 1957. Schuller was born to German immigrants in 1925 in New York and became a French horn player. He had intense contact with both jazz and classical music during his early years and his career as a professional musician. He was an intellectual white man from a wealthy family; differently from most jazz musicians of his time, he wrote and published not only music, but texts and essays elucidating his ideas and goals as an artist. The reading of some of his texts from the 1950s until 2000 supported my reflection on the concepts and ideas behind third stream, and how they may or not relate to my own artistic research.

Third stream was an important attempt in the history of fusion between classical music and jazz traditions in the 1950s, especially since the barriers between classical music and jazz were strongly defined at the time. It was developed not only by Gunther Schuller but also by John Lewis, Charles Mingus, J.J. Johnson, George Russell and others.

The meaning of the term "third stream" changed drastically over time. In the 50s, Schuller himself defined third stream as a "new genre that attempted to fuse the improvisational spontaneity and rhythmic vitality of jazz with the compositional procedures and techniques acquired in Western music (…)"[99]. The album *The Birth of the Third Stream* (1957) includes compositions by Gunther Schuller, John Lewis, Jimmy Giuffre, J.J. Johnson, George Russell and Charles Mingus. At that time, these composers were highly influenced by the European avant-garde and incorporated its ideas and techniques – such as extended forms and twelve-tone music – in their own work.

Schuller also had the opportunity to organize a concert bringing different composers of third stream together at the 1957 Brandeis Creative Arts Festival, where he programmed pieces for large ensemble with mixed instrumentation (woodwinds, brass, harp and rhythm section). Schuller divided the composers he invited for this project into jazz and classical categories, involving three "jazz composers" (Charles Mingus, George Russell and Jimmy Giuffre) and three "classical composers" (Milton Babbitt, Harold Shapero, and Schuller himself). Schuller described the pieces

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[99] Schuller, *Musings: the Musical Worlds of Gunther Schuller,* 115.

as very diverse in form, harmonic language and style, but he pointed out some similarities: all six pieces were based or developed out of thematic ideas, and the emphasis of the pieces was on the composition. Giuffre, Shapero and Babbitt avoided improvisation, Mingus and Schuller used very little of it, and only Russell's involved substantial improvisation, by the jazz pianist Bill Evans.[100]

In May 1960, Gunther Schuller and John Lewis presented another concert with third stream pieces in collaboration with Charles Schwartz's "Jazz Profiles" series, which resulted in a high-profile review by John Wilson in the New York Times and generated an instant buzz among musicians and critics. Many magazines and critics considered third stream a failure "that had to be stopped",[101] claiming jazz and classical music could never be mixed. The jazz press, for example, claimed that the music was not jazz and that it could not swing,[102] while "universities and symphonies rejected jazz with persistent racism and elitism".[103] In Schuller's perception, improvisation was the only feature valued by the critics and the composed elements were ignored, being the major reason for the negative reviews.

In 1961, Schuller pointed that third stream was still at its beginning and much musical adjustment would have to be made by both sides (jazz and classical) before compositional ideals of composers could be realized on the performance level.[104] As we observe, the idea of third stream was strongly influenced by the innovations of classical music in the beginning of the 20th century: the move from tonality to atonality, from symmetrically patterned rhythms to asymmetrical, irregular rhythms, from closed, predetermined forms to open-ended and individualized forms, twelve-tone music, etc. The aesthetics of perfection, which takes composition as a paradigm and is present in Schoenberg's discourse, stresses the timelessness of the work and the authority of the composer and emphazises the autonomy of the composer-genius in the creation of masterworks – which, he insisted, requires the complete subservience of the performer.[105]

> Composers, especially in the 20th century, have often railed against the "liberties" taken by
> performers who dare to interpose themselves, their personalities and their ideas between

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[100] Ibid., p. 462.

[101] Ibid., p. 493.

[102] Ibid., p. 494.

[103] Harrison, "Third Stream – Then & Now," 36.

[104] Schuller, *Musings: the Musical Worlds of Gunther Schuller,* 117.

[105] Hamilton, *Aesthetics & Music,* 195.

composer and listener. Igor Stravinsky (1947) was especially vehement in this regard, condemning "interpretation" (…) and demanding from the performer a rigidly objective approach called by him "execution".[106]

The "ideal of composers", in Schuller's words, was dominant in the third stream discourse and the performers were mostly seen as executors. This discourse strongly influenced his work and that of other composers who wrote third stream pieces. Improvisation was in large part avoided by third stream composers, because the focus of their works was the fusion of compositional elements coming from both the jazz and classical music cultures. The aesthetic and formal innovations presented in many of the third stream pieces are undeniable, but I would like to point out that improvisational aspects and its possibilities were overlooked.

Much later in 1981, Schuller redefined third stream as:

> a way of composing, improvising, and performing that brings musics together rather than segregating them (…) Its is a global concept which allows the world's musics – written, improvised, handed-down, traditional, experimental – not of competition and confrontation. (…) It is a non-traditional music which exemplifies cultural pluralism and personal freedom. It is for those who have something to say creatively/musically but who do not fit the predetermined molds into which our culture always wishes to press us. Third stream is anti-label music, its very essence is based on the concept of diversity and non-categorization.[107]

From his definition of the 1950s ("fusion between two main streams"), it turned into music that "exemplifies cultural pluralism and personal freedom". The meaning present in this new definition changed the understanding of third stream completely from its early focus on mixing classical and jazz music, while neglecting the sociocultural environment around them – as if composers could simply isolate the elements of certain genres, separating the music from the performers. As Schuller observed in 2000:

> If there were some failures in the 1960s, it was not so much the fault of the composition per se as it was because at the time there was only a small cadre of "bilingual" musicians who could perform on both sides of the music stylistic fence. Those who could swing and improvise couldn't read too well (and certainly not complex atonal scores), while those who could read well couldn't swing or improvise.[108]

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[106] Small, *Musicking,* 6.

[107] Schuller, *Musings: the Musical Worlds of Gunther Schuller,* 119-120.

[108] Schuller, "Third Stream Flow," 70-72.

I disagree in part with Schuler's argument and think the non-success of third stream was less the fault of the performers than of the composers. Instead of mixing jazz and classical music concepts isolated from reality, I argue that the aesthetic and social implications in mixing musicians that are part of these both different cultures are astonishing: this is an intersection with third stream appearing in my artistic research. Musicians bring to the table a huge amount of knowledge about the musical cultures to which they belong; including them in the process of making music and exploring their different qualities open up important aesthetic possibilities that were explored in my artistic research.

I will finish this reflection on third stream with an observation that reinforces the idea that third stream overlooked the importance of improvisation in the hybridization process of classical music and jazz. During Schuller's tenure as president of the New England Conservatory (NEC) from 1967 to 1977, he established the first fully accredited jazz studies program at a conservatory in the USA.[109] Some years after, he instituted the third stream department, which later changed its name to "Contemporary Improvisation" (CI):

> With an emphasis on ear training, technique, conceptual ideas, interdisciplinary collaboration, and a wide range of improvisational traditions, the CI program is uniquely positioned to produce the complete 21st-century musician.[110]

The renamed department focuses on "interdisciplinary collaboration and a wide range of improvisation traditions", signaling that the importance of improvisation for the concept of third stream has been recognized not only by Schuller, but also institutionally. In a loose sense, we can say that this artistic research explored the aesthetic and social potential of this contemporary understanding of third stream, focusing on interdisciplinary collaboration and exploration of a wide range of improvisational traditions. This is a parallel between third stream and my artistic research, in which I aimed to go one step further: thinking about collaboration and improvisation as tools to question the hierarchy in large jazz symphonic ensembles.

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[109] "New England Conservatory Celebrates 40 Years of Jazz Studies." JazzEd Magazine RSS. Accessed May 10, 2020. http://www.jazzedmagazine.com/articles/report/new-england-conservatory-celebrates-40-years-of-jazz-studies/.

[110] "Contemporary Improvisation." New England Conservatory. Accessed May 10, 2020. https://necmusic.edu/contemporary-improvisation.

The musicians of today

Improvisation has always been part of musical practice. In Western classical music, improvising was and is a big part of the composer's life, as evidenced by Mozart, Bach, Beethoven, Chopin, and others. Among performers, even in 17th-century orchestras, for example, musicians would often have a melody and a bass line with a numerical shorthand and were proud of their ability to improvise on the composer's idea.[111] Because of many different factors that Robin Moore discusses in his work "The Decline of Improvisation in Western Art Music: an Interpretation of Change," improvisation gradually disappeared from classical music during the latter half of the 19th and early 20th centuries.

During the 20th century, there was also a major separation between what was considered art music and entertainment, "serious" and "non-serious" music. This accentuated the fact that classically trained musicians who were able to improvise became more and more rare. I do not refer to improvisation in a jazz sense, but to the improvisation practice that was also common in Western art music, such as improvising cadenzas. According to Robin Moore:

> Reverence for the music of past eras is in itself an impediment to improvisation. Spontaneous innovations cannot occur in music which is intended to be more a replication from 1790 than a musical event of today. (…) Many of the problems facing modern musicians derive from a discrepancy between their own intuitive understandings of music, derived from cultural experience, and the aesthetic expectations they have of the music they create and play vocationally. Classical performers, bound both to the score and a desire to interpret it "correctly", feel constrained by a "tyranny of tradition".[112]

Gunther Schuller also pointed out the difficulty of finding performers who were schooled in both the jazz and classical traditions in the 1940s and 1950s, supporting Moore's argument:

> The harmonically limited style of jazz musicians of the 1940s and 1950s, which was then essentially still located in tonality, presented a performance problem in the early years of the third stream movement.[113]

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[111] Small, *Musicking,* 83.

[112] Moore, "The Decline of Improvisation in Western Art Music," 79.

[113] Schuller, *A Life in Pursuit of Music and Beauty,* 452.

As I discussed in the chapter "Improvisation," the reality described above changed quickly. In the next pages I attempt to shed light on the social, cultural and technological shifts that happened in the last decades, and how they influenced and shaped the musicians of today.

Rafael de Lima, in his doctoral dissertation, points out that "towards the end of the twentieth century a new profile of composer was emerging; usually trained in conservatories/universities in classical music and jazz, they had the tools to create a more natural fusion between those musical universes".[114] John T. Emche also stressed this tendency as early as 1980 in his doctoral thesis:

> It is not uncommon today to find musicians well-schooled in aspects of our Western European musical heritage and well versed in the jazz language. Most importantly, these musicians have had firsthand experiences with both idioms, which greatly increases the chances for a musically convincing fusion.[115]

New jazz-based university courses that accept classical players, such as the "Institute for Jazz and Improvised Music" at the Anton Bruckner University in Linz (Austria), and the appearance of books and methods on improvisation for classical trained musicians, are supporting this tendency toward broader education. Jazz musicians also experienced a major transformation in the last decades, largely a consequence of jazz education and its institutionalization: in the past, jazz musicians would learn by doing, transcribing solos from recordings in an autodidactic process. Nowadays "jazz students are motivated to master the music's lingua franca – the shared pool of styles and techniques to survive as professional musicians (…) Twenty-first-century jazz has unquestionably produced one of the best-equipped musical generations ever".[116]

The technical level of the instrumentalists improved tremendously in the last century, partially due to better instruments and more access to recorded material in form of albums, CDs, DVDs and – more recently – the internet. The development of technology contributed to the changes and has never been so fast in all of human history, changing our reality as musicians and composers drastically in the space of a few decades. Technology transformed our life and our relationships and the real implications of this technological development are still unclear; however, one result of having access to high-speed internet service is the wider contact of musicians with different kinds of music and cultures.

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[114] De Lima, "Blurred Distinctions," 3.

[115] Junior, "Dialogue for Jazz Piano," 4.

[116] Devaux and Giddins, *Jazz,* 540.

Today's musicians are diverse. I am not arguing that all musicians of today are both educated in jazz and classical music, but a big increase on the number of more versatile musicians can be seen nowadays. This is not only related to the reason cited above; they are fruit of a new professional world marked by stress, tough competition for musical work among musicians and a demand for technical perfection. One of the results is a huge pool of classically trained musicians who don't fit in, or see themselves, in orchestras. Many of them become teachers, change profession or explore other musical avenues, including producing, composing and theatre music.

Many musicians are looking for alternative approaches to making music for large ensembles; one interesting example is the Los Angeles-based Kaleidoscope Orchestra. It is a conductorless orchestra – in principle not a new idea; however, they rehearse and perform pieces from the orchestral repertoire that have traditionally had a conductor. Their website describes their approach to making music:

> We envision a world where our commitment to a collaborative artistic process results in profound orchestral performances that inspire people to pursue cooperation and artistry in their own creative, professional and personal lives.
>
> …each member has a voice worth hearing; that every person, given the chance and tools, can help to create great art.
>
> We believe that pursuing a democratic process within the orchestra will improve the quality of the performance, fulfill the collective vision of the ensemble, and create a unique experience not found in traditional orchestras.[117]

Kaleidoscope Chamber Orchestra performing in Los Angeles (Photo by Thea Lorentzen)

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[117] Kaleidoscope Chamber Orchestra. Accessed May 10, 2020. http://www.kco.la/about/.

As we see above, their discourse stresses the idea of collaboration and democracy in making Western classical orchestral music.

In 2019, I contacted the Stegreif Orchester, a German group composed of thirty musicians that re-arranges and re-composes pieces from the classical orchestra repertoire. They consider classical symphonies the starting point for performances combining free improvisation and choreographic elements with the classical material. They also perform without a conductor – and without sheet music.

Stegreif Orchester (photo by Moritz Esyot)

I do not argue that these examples are better than traditional orchestras, I simply wish to point out that it is important to acknowledge that orchestras and large jazz ensembles are looking for alternative ways to make music. Christopher Smalls notes that an orchestra can work without a conductor, but questions whether the conductor is "socially necessary" to the ritual that we understand as a modern symphony concert.[118] To this point, I argue that these young groups are not creating something that never existed before in the musical world, but rather questioning the relationships that are reinforced in our culture by our music-making experiences and rituals. It is very interesting to see how musicians explore interaction, collaboration and creativity in orchestral environments and how the barriers between classical and popular musicians continue to dissolve.

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[118] Small, *Musicking,* 86.

The changes in the profile of musicians is an ongoing process and was extremely amplified in the last decades by technology and by the institutionalization of music education, resulting in what I describe as "the musicians of today." This, of course, is a simplification of the infinite diversity found in the world of music, but this simplification suffices for the purposes of this research. The comprehension of social and historical contexts is essential to conduct this research, questioning how musicians can collaborate in a large ensemble context; and I hope I brought some light to better understand the musicians of today. Ultimately, I aimed to write and produce music requiring these musicians to flourish. I believe musicians – as well as our societies and our music educational system – also need this kind of music in order to fulfill artistic needs, to stimulate cooperation and to explore alternative organizational models.

III - Methodology

3.1 Methodology

Artistic research projects tend to be mostly interdisciplinary and combine methodologies from different fields. In addition to the artistic practice itself as methodology, artistic research can include methods from areas such as social or natural sciences. To suit the artistic research questions and their contexts, each research project has its own methodology and means for data collection:

> In artistic research data may be collected by doing art…, by personal embodiment…, scientific experimentation, by connecting seemingly distant analogies or by exploring discontinuities to create new contexts within and through the artwork. Additionally, data collection happens via participant observation (to a great part from an inner, native perspective), by analyzing case studies of one's own practice and that of other artists, and by any kind of qualitative or quantitative research that fits the inquiry.[119]

As artistic researcher in this work, I aimed to develop my artistic craft, creativity and conceptual thinking by doing and thinking about art. In addition, I hope to contribute to the academic discussion about artistic research in jazz; thirdly, I would like to communicate with practicing artists and the larger public.[120] Aiming to achieve all these goals, a clear methodology was developed and followed during four years of intensive artistic research. The methodology involved a fundamental reflexive dimension and two other distinct parts: "preliminary research" and "main artistic research in four parts", which have distinct characteristics and functions in the totality of the research, as we will see next.

3.2 Reflection

Artistic research is a specific artistic practice in which artistic practice itself is the main methodological vehicle of the research. In this research project, the artistic practice was complemented by social research, which provided essential information to the development of the artistic research. Tools from qualitative research were used to reflect on the extent to which the practical artistic experiments resulted in changes in group dynamics, by observing individual perspectives from both classical and jazz musicians, considered two distinct social groups with particular backgrounds.

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[119] Lüneburg, *TransCoding,* 159.

[120] Hannula, Vadén and Suoranta, *Artistic Research Methodology,* xi.

However, collecting data in the form of recordings, videos and interviews would not be enough in itself. The reflection on the process was the ultimate result, and involved putting the data in context, interpreting it, and connecting the discourses (present in interviews) with audio and video recordings (from rehearsals and performance). The result of this interpretative process helped me to refine and modify methods and composition and/or rehearsal strategies, aiming for improvement in each successive artistic endeavor.

To elaborate: the work was not carried out entirely alone. There were also moments of collective reflection, exchange and discussion with advisors and peers at regular colloquia and seminars at the University of Music and Performing Arts Graz. In addition, I participated in conferences such as the 1st International Artistic Jazz Research Symposium (2019), the 6th Rhythm Changes Conference (2019), Perth International Jazz Festival (2019) and the IASPM D-A-CH Collegium Musicum Populare (2018).

On these occasions, I had the chance to present and discuss the work in progress, including partially analysed interviews; I recieved questions, feedback and input that put me in contact with others' perspectives, different methods and a wider theoretical framework, which was fundamental for the development of my further reflection.

3.3 Preliminary research

The preliminary phase included archival research at the Metropole Orkest (Netherlands) and the Orquestra Jazz Sinfônica do Estado de São Paulo (Brazil), which gave birth to an ethnographic work focusing on my experiences with both orchestras.

I compiled a composition catalogue of original material written for both orchestras in the previous five years (from 2012 to 2017), ignoring adaptations and arrangements in order to limit the quantity of material. This archival work acquainted me with some of the newest works written for both JSOs. As we will see later in the chapter "Visiting the Archives of Two Jazz Symphonic Orchestras," the analyses and reflection on the material helped me find a starting point for my own artistic practice.

Besides the catalogue, my visits to the two archives gave me the opportunity to deepen my experience and develop an ethnographic work. Barbara Lüneburg has shown that for those who investigate their own creative process from inside, ethnography tools can help by counterbalancing personal and subjective aspects of the analysis and narratives, offering additional ways to address subjectivity and prior knowledge as a complex mixture.[121] Ethnography aims to document in-depth descriptions of, and reflections on, ephemeral social discourses. In so doing, these transient events are captured in a permanent, written report that can always be consulted.[122] Through the ethnographic work, I aimed to better comprehend both orchestras' social complexity, environment, work routines, hierarchical relations, institutional organization and other aspects relevant to my research and artistic practice.

3.4 Main artistic research

Each stage of the artistic research used different methods (e.g., archival and literature research, interviewing, participatory observation, group discussion); these are discussed in more detail below. In each phase, my methodological aim was to both use and challenge my pre-existing knowledge, combining it with the insights won in the preceding phase to come up with new compositional/ rehearsal strategies for each new case study. Thus, artistic and scientific progress were mutually supportive.

The main research was divided into four parts focusing on artistic practice. In four years of research, four intensive artistic experiences were reported and reflected upon in detail:

1. Preliminary Study – my participation in the Metropole Orkest's Arrangers' Workshop 2017 as a guest arranger

2. Case Study One – jazz nonet and string orchestra

3. Case Study Two – jazz nonet plus harp, oboe, french horn and classical percussion

4. Artistic Result – jazz symphonic orchestra

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[121] Lüneburg, *TransCoding,* 160.

[122] Geertz, *The Interpretation of Cultures,* 19.

The Arrangers' Workshop lasted one week; each case study – consisting of the planning and execution of a large ensemble performance and recording – took approximately one year. Each case study was begun anew, passing through the conception and composition processes, ensemble organization, rehearsals, concert, recording, documentation and qualitative research.

Conception

The conception of each case study was an intellectual process, preparation for the active compositional work. The conception process lasted from about two to four weeks per case study; it was during this time that general questions – such the type of notation to be used and the number and length of pieces to be written – were decided.

For example: the choice to work with traditional notation was not obvious. I could have used graphic notation, no notation at all, or mixed notation styles during the artistic process. However, I chose to use traditional Western music notation for both case studies: it is the system used by the JSOs researched in the preliminary studies and also by most classically and jazz-trained musicians, groups that are involved in my artistic practice. Keeping the same notation system throughout the research created cohesion and added clarity and objectivity to the comparison between the case studies: the reader will observe in this dissertation that the repeated, consistent and systematic exploration of this same tool gave more depth to the research and also tested the limits of the use of traditional notation in large ensembles, giving rise to new possibilities that were important discoveries of this research.

To give another example, it was during the conception phase of the first case study that I decided to make some reference to South American rhythms in all the pieces, aiming to explore the rhythmic character of the string orchestra. However, after composing three such pieces, I had the feeling that this constrained my work too much; it was this feeling that motivated me to compose a fourth piece titled "Relax", which (as we will see later) turned out to be fundamental for the case study discoveries.

The decisions made and thoughts developed during the conception periods guided the process of composing, but they could be revised or changed at any time according to new discoveries or insights won at each stage of the research.

Composition

Case studies one and two involved ensembles of between 14 and 27 people, reductions of a full-scale JSO, allowing me to focus on specific instrumental groups. A program of approximately one hour of music was composed exclusively for each case study; the core of both case study ensembles was my band Mereneu Project, a nonet (drums, bass, three woodwinds, three brass and me on guitar) of musicians with a jazz background. In addition to this nonet, I invited musicians with a classical background for each case study; the case studies will be described in detail further below.

This strategy enabled me to evaluate hypotheses and experiments (also discussed later) on a smaller scale, working with specific sections of the orchestra separately and building, step by step, the knowledge and experience to work with the full JSO, which is detailed in "artistic results".

I am aware that working with a complete JSO for a longer period of time would be the ideal situation, but the costs involved and the availability of the musicians made this impracticable. On the other hand, working from the small scale to the full orchestra helped me to understand the characteristics of each orchestra section in a more compact setting, which can be seen as an advantage.

Ensemble organization and rehearsals

Organizing the ensembles for the case studies was a complex undertaking, involving a good deal of logistic planning. Although I counted on my nonet Mereneu Project to be part of the case studies, I still had to look for classical trained musicians to form the full ensembles (18 extra musicians for case study one and 5 for case study two).

I looked for players who lived in Graz and were interested in jazz, contemporary music, folk music and improvisation. This search involved my previous knowledge of the regional, scene but I also asked my musician colleagues for suggestions. The majority of the participating musicians was relatively young (from 20 to 40 years old) and almost all of them worked as freelancers, and were not permanently employed by any orchestra. The first musicians to agree to take part in a case study provided me with further recommendations – in fact, each successive participant was recommended by a colleague already involved in the project.

All musicians were paid for the respective projects; although the fees were symbolic and not compatible with freelance market rates, this fact also played a role in the ensemble organization – only musicians to whom the project appealed, and who had the time, accepted the invitations. In interview, Katja Finsel (cellist from case study one) commented specifically on this aspect:

> …the music appealed to me a lot, so it was okay that the fee was relatively low for the amount of work. So the relationship was a bit […] difficult [at the beginning], time versus fee. But due to the commitment that you showed and the great way of working and the output, with very nice videos – and also the concert – it was very consistent at the end. So the balance was good.[123]

It is interesting to reflect on her interview because when she says that the "music appealed to me a lot", she meant the idea of the music when I initially described it to her on the telephone; we were not personally acquainted at the time. The music was not written, but I explained briefly that the project involved jazz and classical musicians, improvisation for the whole ensemble and dealt with questions of group hierarchy. As such, her interest was not in the music concretely, but in the concept behind it. Last but not least, she pointed out that her satisfaction after the project related not only to the money but to the big picture, including the "way of working" and artistic "output" in form of recordings, videos and concert.

Live concerts

After the composition process, the music was rehearsed (a process that varied in each case study and will be described separately in the respective chapters) and performed live before an audience. Case studies one and two were each performed once; the JSO presenting the artistic results will performe twice in October 2021. The venues changed for each occasion.

Recording

The artistic outcome of case studies one and two was recorded in two studio recording sessions which will be described later in detail. These recordings resulted in the production of the album *Music for Large Ensembles Vol. II*, released in 2020 by the Vienna label Session Work Records.

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[123] Interview translated by the author from German.

Both case studies served as preparation for the experience with the full JSO, discussed in the section "Artistic results". Because of the size of the JSO and the logistical issues involved, the JSO performances will be recorded live at the Mumuth Theater at the University of Music and Performing Arts in Graz in October 2021. An album release is currently being planned.

Documentation and analysis

Documentation was of fundamental importance to the research process; each artistic experience was documented according to the specific situation.

During the preliminary study in the Netherlands, the possibilities for documentation were limited – I was a participant in a structured workshop involving other arrangers. In this context, documentation was conducted in form of a field diary incorporating notes, pictures and audio and video recordings as allowed by the Metropole Orkest.

For the other three artistic experiences that are part of this research, I developed the following protocol: rehearsals and studio recording sessions were documented on video and audio. The video recordings were especially helpful; during my analysis they supported the understanding of social interaction in a detailed way, enabling the observation of people's reactions – including facial expressions and body language – during the work.

Qualitative research

The musicians' perspective in the case studies was also fundamental to my reflections during the research; in addition to audio and video documentation of rehearsals and recordings, I performed qualitative research in form of interviews with some of the participants.

The objective of the qualitative interviews was investigating a relatively small number of cases in depth, trying to comprehend meaningful systems and to analyze human thought patterns.[124]

> In the qualitative interviews, the researcher is actively involved in data collection, and because the interviews are not standardized, the researcher needs to assess the significant

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[124] Keuneke, "Qualitatives Interview", 254 (translated by the author).

parts of the data and interpret it intersubjectively, entering new empirical territory and investigating communicative phenomena with an expected high degree of complexity.[125]

I used semi-structured interviews to collect information from the musicians, which allowed space for the interviewees to answer on their own terms; some structure for comparison between interviewees was provided by covering the same topics.[126] The interviews had a very flexible character as to how and when questions were asked; and the interviewees were allowed to speak freely about their experiences. As suggested in the book *Artistic Research Methodology: Narrative, Power and the Public* (2014), narrative interview aims to dig deep into nuances, showing "how the content of a concept, image, symbol or act is defined in a very particular and specific case and why".[127]

As interviewer, I tried to pursue a line of discussion opened up by the interviewee, aiming for a continuous dialogue.[128] Below we can see the interview guidelines I used as starting point:

1. Thank you for the interview. We are talking about the project we rehearsed and recorded on (date). May I record the interview?

2. What is your music education background? (Classical music, composition, improvisation…)

3. Have you ever had contact with improvisation before?

4. What are your general thoughts on the project?

5. Did any aspect of the project attract your attention particularly?

6. How would you compare the feeling of playing this music with a classical (or jazz orchestra) experience?

7. How did you see your role in the ensemble?

8. How would you describe the group dynamic during rehearsal, recording, concert?

9. How would you describe the interaction between the musicians?

10. Did you play an improvised solo? If yes, how did you feel? If no, why not?

11. Did you improvise collectively with others? How did it feel?

12. Have you played in a jazz symphonic orchestra before? How was the experience?

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[125] Keuneke, "Qualitatives Interview", 256, 257 (translated by the author).

[126] Edwards and Holland, *What is Qualitative Interviewing?* 39.

[127] Hannula, Vadén and Suoranta, *Artistic Research Methodology,* 39.

[128] Edwards and Holland, *What is Qualitative Interviewing?* 39.

The interviews had a duration of between 35 minutes and one hour. This questionnaire had a spiral structure structure, going from general to specific questions; the questions were formulated to avoid "yes/no" answers and to stimulate the interviewee to connect their musical education and memories to the case study experience and their perceptions and feelings.

Although the interviews had a predetermined structure, they were very flexible; digression was common and interviewees were encouraged in follow-up questions to expand upon interesting points and lead the conversation into unanticipated areas. To get a richer sample of interviews, I avoided homogeneity in the social group of interviewees. Some were students, some professionals, and age and gender were varied:

- Case study one: 6 musicians interviewed (4 violinists, one cellist and one bassist). 4 were female, 5 were classically trained, 2 were students. 3 were Austrian, 1 Ukrainian, 1 Cuban and 1 Romanian.

- Case study two: 7 musicians were interviewed, (1 French hornist, 1 saxophonist, 1 clarinetist, 1 harpist, 1 drummer, and 2 classical percussionists[129]). 1 was female, 4 were classically trained, none were students. 5 were Austrian, 1 Brazilian, 1 Ukrainian.

I focused the interviews after case study one on the classically trained musicians, due to the fact that the jazz musicians were part of my nonet and performed in both case studies. Two of the interviewed musicians after case study two were part of both case studies: Patrick Dunst (woodwinds) and Luis Oliveira (drums). Their interviews reflected their experience in both case studies and were broader, also involving comparisons between both experiences.

The number of interviews to be conducted was decided during each stage of the research, according to the concept of saturation. That is, "qualitative interviewers should continue sampling and identifying cases until their interviewees are not telling them anything that they have not heard before".[130]

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[129] The two classical percussionists were interviewed in a group interview.

[130] Edwards and Holland, *What is Qualitative Interviewing?* 65.

3.5 My position in the field

My position in the field also needs to be addressed as a relevant factor during the development of the research. Both during the Arrangers Workshop and in conducting the case studies, my position in relation to the different contexts interfered in the way communication was established between musicians, interview partners, etc. and myself, which in turn affected the collected data.

In my first practical experience at the Arrangers Workshop, I was inserted into a group of ten invited arrangers selected from all over the world. All of the invitees saw the opportunity of working with Vince Mendoza and the Metropole Orkest as a major career opportunity. My position in this environment was that of a young arranger, who had nonetheless already achieved some recognition in the field of jazz arranging/composition. The conductor and musicians of the Metropole Orkest spoke to me from a more experienced position, not only because of my role as a student in that context but because I was younger than the average age of the orchestra musicians.

In contrast, while conducting the case studies, my position in relation to the ensembles was that of bandleader, manager, composer, conductor and performer. Additionally, I have known many of the musicians involved in the case studies for many years, and have collegial or friendly relationships with some of them. It is relevant to point out these social components because of their implications for the way the musicians related to me – not only as performers during the case studies, but also in the way their answers and reflections were formulated during interviews. The influence of my presence and relationship with the research field do not disqualify the data collected, but it must be acknowledged in order to show how reality is perceived and constructed subjectively. During my analysis of the qualitative data, I tried to acknowledge my "shadow in the field"[131] and paid special attention to what remained unsaid or was only hinted at (such as open criticism) due to my own presence in the interviews.

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[131] Barz, Gregory F. Cooley, Timothy J. *Shadows in the Field: New Perspectives for Fieldwork in Ethnomusicology*. Oxford University Press, New York, 2008.

IV - Process

4.1 Visiting the Archives of Two Jazz Symphonic Orchestras

At the beginning of my artistic research, I felt it necessary to explore recent musical works (composed between 2012 and 2017) and observe how composers were/are dealing with composition and improvisation in the JSO context. Instead of researching everywhere for works composed for this specific instrumentation, I contacted the only two professional JSOs currently in existence. Both are partially financed by government grants; both have been operating full-time for decades. Between 2017 and 2018 I conducted archival research at the homes of both orchestras, and not only catalogued the found material but also looked for insight as to whether my research questions were to some extent answered or problematized in these recent works.

About the orchestras

The Orquestra Jazz Sinfônica do Estado de São Paulo was established by the Brazilian state secretariat of culture on 3 October 1989 and is composed of 70 musicians. The orchestra is still active and has performed concerts on a monthly basis since then. It has been conducted by renowned Brazilian conductors/arrangers such as Cyro Pereira, Nelson Ayres, João Maurício Galindo and Fábio Prado.

Orquestra Jazz Sinfônica do Estado de São Paulo

The Metropole Orkest (Netherlands) was founded in 1945. It has produced more than 150 albums and thousands of radio and television broadcasts; it has been nominated 17 times for Grammy

Awards and won three. Their first chief conductor was the arranger and composer Dolf van der Linden. More recently, international arrangers such as Vince Mendoza (2005 – 2013) and Jules Buckley (2013 – 2020) have served in the position.

The debut of the Metropole Orkest on Dutch radio in 1945 (photo by M.A.J. Hanse)

The creation of both orchestras was directly connected to the end of difficult periods in the history of both countries. In the Netherlands, the end of the Second World War led the Dutch government and royal family to create the Metropole Orkest, with the intention (according to the former artistic producer and trumpeter Henk Heijink) to bring hope and cheer to the Dutch people. The ensemble's size changed over the years but it remained relatively small in comparison to a symphony orchestra. In 2020, its instrumentation consisted of:

Woodwinds (doubling instruments in parentheses):

2 flutes (alto flute/piccolo)

1 oboe (English horn)

2 alto saxophones (soprano saxophone/clarinet)

1 tenor saxophone (soprano saxophone/clarinet)

1 tenor saxophone (soprano saxophone/clarinet/bass clarinet)

1 baritone saxophone (clarinet/bass clarinet/contrabass clarinet)

Brass:

1 French horn

4 trumpets/flugelhorns

3 trombones

1 bass trombone/tenor trombone

Percussion:

2 players

Harp:

1 harp

Rhythm section:

1 electric guitar (acoustic guitar)

1 piano (electric piano)

1 contrabass (electric bass)

1 drum set

Strings:

8 violin 1

7 violin 2

5 violas

4 cellos

2 double bass[132]

In the case of the Brazilian orchestra, the end of a violent and oppressive dictatorship in 1984 led to the begin of the democratic period in Brazil. In 1988, Fernando Morais, a leftist writer and

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[132] Metropole Orkest. Accessed May 10, 2020. https://www.mo.nl/library/instruments.

journalist became Secretary of Culture and formed a group to administrate musical policy that included Arrigo Barnabé, a composer who navigates between a multitude of musical styles. In an interview, Barnabé told me that he suggested the creation of a new orchestra along the lines of the radio and television orchestras that had died out some years before, and were famous for performing symphonic treatments of Brazilian folk music. Initially, the Orquestra Jazz Sinfônica do Estado de São Paulo was planned to have a similar size of the Metropole Orkest, but during its formation in 1989, led by the conductor, composer and arranger Cyro Pereira, it became much larger, including four French horns, a full woodwind section and a large string orchestra.

Understanding the orchestras

Besides making a catalogue of recent works, the experience of visiting the orchestras, observing their working processes and working as a guest arranger/composer with the Metropole Orkest (an experience described in chapter 4.2 in detail) made the experience much more fruitful and brought me closer to the realities of such an orchestra. This ethnographic work contributed to the development of a reflection from the outside as well as from the inside perspective of the orchestras and consequently added to the evolution of my artistic experiments in course of this research. Before discussing the catalogue and talking about the material (scores and recordings), it is important to compare the structure of these institutions and their historical contexts in order to understand how the different realities of these two JSOs play a role in their artistic/aesthetic production. By doing this, we will be able to better comprehend the works that arise from these orchestras and why they are the way they are.

A major similarity in the functioning of both orchestras is the financial support of their governments. This support is essential to their survival but also places constraints on them, involving ticket sales, the satisfaction of their audiences and sponsors, and so on. In recent years, both orchestras have struggled with a shortage of financial support; the Brazilian orchestra was even threatened with extinction. This financial threat has led both orchestras to fight for their existence striving to attract more people and prove their relevance for the sponsors. The majority of their productions are conceived for large audiences and feature famous artists; they organize appearances on television, open air concerts and many other activities intended to attract audiences. As we see, this financial situation is directly connected to the artistic outcome and cannot be separated if we want to understand their work.

Besides this fundamental similarity, other aspects of the orchestras vary widely, related to their different cultural realities – one in the Netherlands, the other in Brazil. I believe the distinct cultural environments and institutional structures not only influence the organization of the orchestras but also have an impact on their music; this theory will be examined later by analyzing scores and recordings. My visits to the archives revealed strong differences in organization and infrastructure: the archive of the Metropole Orkest was perfectly digitally organized (see photo) and there was a huge library holding all the original scores.

Metropole Orkest library

Their rehearsal infrastructure was similarly well-appointed: the ensemble rehearses in a concert hall in Hilversum, in a building also including several recording studios; the orchestra can be recorded in high quality during rehearsals. The orchestra is microphoned during rehearsals and has access headphone monitoring if needed, essential, for example, for film soundtrack productions with a click track and additional, digitally programmed music.

Entrance of the music center in Hilversum

In Brazil, the reality is very different. The Orquestra Jazz Sinfônica do Estado de São Paulo rehearses in a large hall at the back of a public school. The hall is a beautiful room but lacks a studio infrastructure and monitoring; the orchestra plays mainly acoustically – one possible reason why their string section is larger than that of the Dutch orchestra: as in standard symphony orchestras, the strings have to compete in volume with the wind players. In contrast to a symphony orchestra, however, a JSO also incorporates drum set, electric guitar, electric bass and saxophones, all which are generally louder than strings. These observations led me to think about the role of monitoring technology in jazz symphonic contexts, an aspect that will be discussed in the case sections. In other words, a primarily acoustic ensemble must take the different volume ranges of the various instruments into account at every step: in the orchestration work as well as in amplification and monitoring, also involving the sound engineers in the process of musicking.

In comparison with the Metropole Orkest, the archive in Brazil is almost nonexistent and is catalogued in a Microsoft Excel spreadsheet. When I asked to see the scores it was recommended that I contact with the composers directly, since this would be easier than finding them in the physical archive.

Another difference between the orchestras is their repertoire. While the Orquestra Jazz Sinfônica do Estado de São Paulo focuses on Brazilian popular music, the Metropole Orkest plays mostly jazz,

film soundtracks, and pop music: for instance, their program in October/November 2020 consisted of three different concerts featuring music from Charles Mingus, Quincy Jones and James Bond movie soundtracks respectively.

I visited the orchestra archives in October 2017 (Hilversum) and September 2018 (São Paulo), seeking relevant material for my research: original compositions written specifically for JSO. Ideally, these works would deal with improvisation in different ways, informing my artistic research and providing me with ideas and inspiration. In the next pages, I will describe in detail the findings that resulted from this archival research.

Metropole Orkest archive – field report

In October 2017, I had the pleasure of visiting the Metropole Orkest archive during my residency as part of the Arrangers' Workshop[133]. In the next lines, I will present and discuss my findings and reflect on how this experience affected me and my own artistic practice with large ensembles. Below we see some pictures of my visit to the archive:

Copyist and archivist Embert-Jan

Metropole Orkest score archive

[133] I would like to thank copyist and chief archivist Embert-Jan, who was extremely helpful and cooperative, as well as Henk Heijink and Marjolein Fischer from the Metropole Orkest management for their support with authorizations and contact with the composers.

Table in the copyist's office

As expected, I found hundreds of arrangements in the archive, as compared with less than ten original compositions for the orchestra. Unfortunately, I was not allowed access to all original works – some composers could not be reached and their individual authorizations were necessary to access this material. Nevertheless, I was able to obtain the scores and recordings of three recent works:

1) *De Nieuwe Wildernis* by Bob Zimmerman (2013)

2) Compositions from *Appolon Project* by Katharina Thomsen (2013)

3) "Tabu" by Annie Tangberg, Vera Van der Bie and Isabella Petersen (2017)

1) *De Nieuwe Wildernis* ("The New Wilderness") is an instrumental work written by Bob Zimmerman for the Metropole Orkest. It is the soundtrack of a Dutch nature film from 2013, directed by Mark Verkerk and Ruben Smit. It consists of 25 short musical pieces exploring the full instrumentation of the orchestra. As to be expected from a soundtrack, all pieces are notated and synchronized to the film. There is no improvisation in the entire soundtrack, except in the piece "Blackie's Death," a solo piece for jazz trumpet. The composer, Bob Zimmerman, confirmed that this short piece was freely improvised by the performing musician, without

accompaniment or notation. The composer suggested that the musician watch the movie scene – the death of a bird – and use it as inspiration for the improvisation.

I found the idea of using an unaccompanied improvised solo as a connecting element of a long composed narrative (in this case a long movie soundtrack) intriguing. Later, I utilized this concept in the compositions "Naked Tree" (case study two), with an improvised introduction by the harpist:

After experiencing the very positive results, I used the same principle to construct interludes between the pieces written for the JSO (artistic results). Between the JSO pieces, I suggested solo or duet interludes to be improvised by the orchestra musicians; these had the function of connecting the composed material.

2) The *Appolon Project* was composed by Katharina Thomsen, Vladimir Karparov and Svetoslav Karparov, who drew inspirations from a hospital emergency room and processed them into 16 compositions. I had access to three pieces written by Katharina Thomsen. Besides standard jazz improvisation (over changes), she used textual notations in the pieces "Der Alkoholiker" ("The Alcoholic") and "Der Herzpatient" ("The Heart Patient") to evoke common hospital sounds, such as "breathe in and out loudly", "reanimation sounds", "breath sounds", "talk in one's sleep" and "solo snore". The integration of the musicians in the piece, in the form of their interpretation of textual notations (speaking or make specific noises) gave the pieces a theatrical character, but the compositions do not explore any further interaction between the musicians.

3) "Tabu" is an instrumental work written for the Metropole Orkest's string orchestra, as a soundtrack to the movie *Tabu* (1931). It is a reworking/arrangement of compositions by Robert Fripp, mixed with original material by the composers Annie Tangberg, Vera Van der Bie and Isabella Petersen. As we see below, the three composers were also featured soloists (placed at

the top of the score); this piece was very relevant concerning the use of improvisation and the collective composition process.

The first score page of "Tabu"

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The first interesting aspect of the piece is that the three string players of the Metropole Orkest composed it collectively – a rare event in composition, which is usually a solitary activity. Although I was not able to ask the composers more about their process, it showed their willingness and ability to cooperate. Secondly, many sections of the piece involved jazz improvisation, or the option of playing differently than notated in the score. There were many instructions encouraging the development of improvisation and variation, such as chord changes and the use of electronic effects (like delays and tremolos), as we can see below:

Excerpt from the "Tabu" score: bar 97 to 117

Translated from the Dutch:

- Measure 98: "this is an indication of what you could do. Pizz + fx"

- Measure 108: "from here a kind of upward movement. Think waterfall."

- Measure 116: "small jam" (improvise together)

In the next excerpt, we find other examples such as:

- measure 128: "improvise with this material"

- measure 140: clear indication about how to proceed.

Excerpt from the "Tabu" score: bar 125 to 152

These short excerpts give us an idea of the piece and the effort made to integrate improvisation in the composition. The way string soloists were juxtaposed with the string orchestra in the score influenced my compositions in case study one. However, the case studies presented two particular challenges: first, how to find the possible soloists in the string orchestra (already predetermined by the composers in "Tabu") and second, how to deal with the acoustic reality. In the case of "Tabu", the whole string orchestra was microphoned and mixed in the on-site studio to balance the soloists with the string orchestra. More importantly, there were no horns or rhythm section, making possible a very homogeneous string orchestra sound.

Orquestra Jazz Sinfônica do Estado de São Paulo archive – field report

In September 2018, I was invited by the chief conductor of the Orquestra Jazz Sinfônica do Estado de São Paulo, João Maurício Galindo, to visit their archive.[134] João sent me an Excel spreadsheet listing all works written for the orchestra; from this list I selected the original works composed recently for the orchestra. As with the Metropole Orkest and as expected, the number of original

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[134] I am very grateful for his invitation and help.

works in their archive was very small compared to the number of arrangements. After analyzing the scores of seven pieces, I observed that there were no long improvised solos at all, as detailed in the following table:

Title	Improvisational Content	Composer	Year
Blues for Jim	60 bars - tenor saxophone solo (5 12-bar blues choruses)	Fernando Corrêa	2012
Chorinho Pra Ela	64 bars - trumpet solo	Fernando Corrêa	2012
Festa em Nevoeiro	32 bars - tenor saxophone solo 32 bars - soprano saxophone solo	Rodrigo Morte	2013
Arismar Overture	No improvisation	Alexandre Mihanovich	2013
Pancho y Luna	36 bars - tenor saxophone solo	Yuri Prado	2015
Bailado	8 bars - soprano saxophone fills Solo over changes with instructions	Felipe Senna	2015
Impressões Brasileiras	No improvisation	Bruno Santos	2015

Besides these brief, highly structured improvised passages, there was no exploration of other ways of dealing with improvisation and no experimentation with interaction between popular/jazz and classical musicians. Although I enjoy and respect the Orquestra Jazz Sinfônica do Estado de São Paulo, the results of my archival research there did not contribute to my work on the research questions.

Additional research

During my research, I became aware of other works for JSO, which were very interesting but unfortunately could not be taken into account for this research: I focused on works written for the Metropole Orkest and Orquestra Jazz Sinfônica do Estado de São Paulo because both are

established institutions. Many independent orchestras, schools and universities around the world also undertake jazz symphonic orchestra projects, but these are special events and the orchestras do not work full-time. Additionally, time constraints required me to focus only on these two orchestras.

Nevertheless, I discovered a number of other relatively recent works along the way that bear mentioning. Doubtless many more works have been composed in recent years for JSO that I am not aware of; the ones I cite here are simply to exemplify that the JSO is still of great interest for composers.

I discovered the piece "Omnifenix" while reading Rafael Piccolotto De Lima's doctoral dissertation (2016), in which he analyzes the piece in detail. It was composed by John Psathas for the Orchestra Sinfonica dell Emilia Romagna Toscanini (Bologna, Italy) with Michael Brecker as featured soloist, is described as "a concerto for improvising saxophone, drum set and orchestra,"[135] and was premiered in 2000.

During my travels around Europe, I also met composers and musicians with whom I discussed my research, leading to the discovery of two other recent works for JSO: "Metropolitan Visions"[136] (2016), composed by Wolf Kerschek and performed by the NDR Bigband & Junge Norddeutsche Philharmonie and "And the Moon and the Stars and the World" (2018) composed by Gerd Hermann Ortler and performed by the Jazzorchester Vorarlberg and Symphonieorchester Vorarlberg.

All three works had some important similarities: all descriptions of the compositions that I found suggest that the music was not performed by a blended large ensemble, but instead, by the combination of jazz on one side and classical on the other. The first example, "Omnifenix," is described as a feature for saxophone and drums, and the symphony orchestra appears as a classical ensemble added to the work. The other two pieces were performed by a combination of big band and a symphony orchestra. The description of both works, in my view, stresses the separation of these groups in the large ensemble context. Again, the goal of my artistic research was to build a JSO work that does not separate these two worlds, but instead brings musicians with different backgrounds together to collaborate in making music.

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135 Psathas, John. "Omnifenix - Concerto for Improvising Saxophone, Drumset, and Orchestra (2000)." February 15, 2021. https://www.johnpsathas.com/catalogue-1/2018/4/10/omnifenix-2000.

136 Wolf Kerschek - Symphonic Jazz (Vol. 1): Metropolitan Visions - With NDR Bigband & Jnp. YouTube, 2016. http://www.youtube.com/watch?v=wrunIasMI1E.

Lastly, in listening to the works, I realized that generally speaking, each of them explores more techniques from contemporary classical music (for example orchestration techniques associated with spectral music, minimalism, and exploration of irregular meters) than jazz; they were also technically more demanding than the works found in the Metropole Orkest and Orquestra Jazz Sinfônica do Estado de São Paulo archives. It is important to realize that the support (and even protection) of universities and cultural institutions is crucial to the organization of such orchestras and the possibility of experimentation. Again, it is confirmed that my artistic research was only made possible by the support, security and protection of the University of Music and Performing Arts Graz.

Conclusion - Voices from the archives

After visiting two JSO archives and collecting and analyzing relevant material, I was able to observe how the JSOs work as institutions, and how improvisation has been incorporated in recent compositions, while looking for characteristics of the repertoire. As I had expected, improvisation was explored sparsely and when it was explored, it was commonly associated with jazz practices.[137]

In sum, my ethnography and archival research revealed three primary, intertwined aspects that are of great importance for my artistic research: 1) orchestra hierarchy, 2) aesthetic ideals imported from the Romantic era and 3) economic factors.

1) The hierarchy of a JSO reproduces the historical division between classical and jazz music. Composers and arrangers generally keep to the traditional roles of classical musicians as pure interpreters and jazz musicians as possible improvisers.

2) The aesthetic ideals from the Romantic era greatly influenced the creation of both JSOs; as we have seen, these ideals also continue to play a major role in their choice of repertoire. The majority of the repertoire is composed of arrangements of popular music with symphonic (Romantic) orchestration treatment and film music (soundtracks), with very little improvisation or experimentation.

3) Economic factors also proved highly relevant for the JSOs. Both orchestras require support from the government and sponsors to continue operating. Therefore, aesthetic choices are

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[137] Jazz practices relate to genres connected to the jazz mainstream, where the improvisatory element (collective or not) is developed over functional or modal harmony.

decided partially in terms of audience and sponsors' acceptance. Directly connected to the economic issues, time is an important factor. The maintenance of a JSO is very expensive and each project is prepared in only few rehearsals; as such, most of the pieces are completely notated, leaving little space for improvisation and the problems of coordination it can entail. Guest composers are generally invited for short periods for special projects; due to these time constraints, they generally choose to remain on the safe side, not trying to involve classical players in improvisation or to develop collective collaboration.

However, "Tabu," as mentioned previously, is an exception: a piece of music composed by the string players of the Metropole Orkest to perform themselves. When the classical musicians were empowered to compose, they deliberately chose to involve more improvisation in the composition, exploring it in different forms – jazz soloing, collective playing, motif development, etc. As Christopher Small wrote, "performance does not exist in order to present musical works, but rather, musical works exist in order to give performers something to perform".[138] In this sense, I truly believe that a large number of modern classical musicians are willing to be more active in making music together, collaborating as improvisers and co-composers.

The JSOs were created to celebrate "new beginnings" – the end of the Second World War and the advent of Brazilian democracy. The ensembles represented hope at their beginning; one might reflect now on how the JSO might be redefined to address the challenges of our time. In my personal view, one of the biggest challenges in the world now is developing global cooperation in order to fight problems such as inequality, global warming, and other 21st-century issues. I believe the JSO can be a tool for us to artistically explore cooperation and collective work, thinking about new ways of societal collaboration for the future.

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[138] Small, *Musicking,* 8.

4.2 Preliminary Study - exploring the field

In October 2017, I began my artistic research, simultaneously taking part in the Metropole Orkest (MO) Arrangers Workshop. I took advantage of this opportunity to make a preliminary study of my research object, not only observing the MO's work process both objectively and from the inside. This experience turned to be a relevant preliminary study in the field, and contributed to early reflections and hypotheses that were further developed in the case studies.

In the next pages, I make a detailed description of my one-week experience, leading to a discussion and reflection on this preliminary study. The chapter concludes with a few fundamental topics emerging from the workshop experience that will be examined in more depth in the section on the main research.

Description of the experience

The one-week Arrangers Workshop invited a group of ten arrangers from all over the world to work with the MO; Vince Mendoza[139] served as honorary conductor and advisor. During the week, I observed the MO's working process during rehearsals, a concert and a recording session. We also spent time in group classes with Mr. Mendoza and had the opportunity to speak to some of the musicians of the MO in informal meetings.

Each invited composer had two assignments: 1) to write an arrangement that would be sent in advance to the MO; these arrangements would be performed by the MO in concert with the American singer Kandace Springs, and 2) to write a two-minute arrangement during the week, to be recorded by the MO at the end of the week in a "one-hour session".

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[139] Vince Mendoza was chief conductor of the Metropole Orchestra from 2005 to 2013; he has written numerous arrangements and compositions for international pop and jazz artists.

The arrangement for the Metropole Orkest and Kandace Springs

Two months before the Arrangers Workshop began, I received my assignment via email from the MO production team: I was to write an arrangement of the piece "How Insensitive" by Antonio Carlos Jobim.

The reader can access a two-minute excerpt of my arrangement, recorded during the live concert, in the link below (for copyright reasons, the whole piece cannot be published):

The email from the MO office had clear instructions about the length, style and key of the arrangement. These criteria proved a major challenge: Kandace Springs' producer wanted the song "How Insensitive," originally a melancholy bossa nova song, rearranged as an energetic salsa with Latin rhythm. This aesthetic choice went against all my instincts of how this piece could or should be arranged, but it was a valuable lesson to learn: in the professional environment, the arranger is in the middle of a production chain and must accept the decisions of producers and managers. In this light, I accepted the challenge – even though it went against my own aesthetic ideals.

The MO office also provided a list of improvising musicians of the orchestra who were "allowed" to play improvised solos in new works written for the MO, in order to assist composers unfamiliar with the orchestra. This list included all of the big band musicians and two violin players (Federico Nathan and Herman van Haaren).

None of the other arrangers who took part in the workshop wrote a piece with an improvised solo for a non-big band player, but because of my special interest in the string section, I decided to feature Federico Nathan (violin) as soloist in the introduction of my arrangement. Including all the rehearsals and the concert, he played the solo four times in total. It was a relatively short solo over one static chord and all four performances had a similar structure. Federico sounded confident and seemed to be an experienced improviser of popular music. During the break in the first rehearsal, Federico came to me and said: "Thanks for the solo, it is very rare that we (string players) get something as improvisers from the arrangers, and it is very fun to play". In the following link, you can hear his live performance:

Federico played all rehearsals in a sitting position, though standing up for solos is a common practice in large jazz ensembles. At the soundcheck (hours before the concert), Vince Mendoza asked him to stand up for his solo; standing up helped both the acoustic balance[140] and the visual identification of the soloist by the audience, which could then see which violin player was soloing in the middle of a big section of string players.

At the end of the week of work with the MO, I asked some string players if I could see their sheet music in order to see what corrections and/or modifications they might have made during the rehearsal process. As we see in the picture below, the bowings (which I did not indicate in the original parts) were agreed upon during rehearsals, without any instruction by the conductor. As we can also see, some sections of my arrangement were cut during the rehearsals.

Cello part after one week of rehearsals

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[140] The string section was provided with overhead microphones in order to provide an overall sound picture of the strings. By standing up for his solo, Federico moved closer to his microphone and was consequently louder in the natural mix.

While bowing decisions were made by the concertmaster, decisions about formal modifications (such as cutting or extending parts of the arrangement) were made by the conductor and communicated to the orchestra. This practice is quite common in jazz but would be highly irregular in a classical setting – one can hardly imagine a conductor cutting out sections of a Mozart concerto, for example. This cultural difference highlights the openness and adaptive character of jazz compositions, where the performance (and the scores) are susceptible to change at any time by arrangers, composers and musicians during the process of rehearsing – or even during the performance.

Coming back to the specific issue of bow notation, I asked some of the string players if they would have preferred more detailed bowing notation. They said they prefer not to have bow notations unless the composer is absolutely sure, since the orchestra can decide what works better in each case; they find it easier to write the bowings in themselves rather than erasing the original ones and then correcting them, which would result in scratched or illegible sheet music. After their observation, I looked at the scores that I found in the MO archive again, confirming that there are no bow indications in any of their scores. However, this characteristic cannot be generalized for other jazz symphonic orchestras due to a lack of data.

Two-minute arrangement

Besides the piece featuring Kandace Springs, which was performed at the concert, the ten arrangers also worked on two-minute arrangements which were not performed at the concert; the piece assignments were distributed at random by Vince Mendoza on the first day of the workshop. The arrangement had to be done in three days and use the full instrumentation of the orchestra; it would be rehearsed and recorded in two takes by the MO during a morning recording session on the last day of the workshop. According to Mr. Mendoza, the objective was to create a stressful situation with a very short deadline, a situation that arrangers often experience. Though we had only three days to write the full score and individual parts for the entire orchestra, we had more stylistic freedom in this assignment. I was given a lead sheet of the Carla Bley composition "Fresh Impressions" (which I had never heard before); below, you can listen to the final recording of the piece (take 2), which I renamed "First Impressions".

During the recording, the arrangers had to remain in the room with the sound engineers who were recording the orchestra (photo below) and were forbidden to communicate with Vince Mendoza or the orchestra.

The group of arrangers during the MO recording in the control room with sound engineer and recording assistant

It simulated the situation in which arrangers send the written music to an orchestra, after which there is no further contact between the arranger and orchestra or conductor during the rehearsal and recording process. As Vince Mendoza said, all the relevant information for the performance should be notated; the score should be sufficient to transmit the arranger's ideas.

In writing this arrangement, I incorporate not only traditional music notation, but also textual notation to describe (verbally) how to interpret passages that incorporate improvisation to some extent. This was commonly found in older works written for the MO, as shown earlier in this chapter. The examples below show some of my individual parts with verbal instructions:

Violin I part excerpt

Tenor Saxophone part excerpt

Drums part excerpt

I was very impressed by the recording result as a whole after only two takes, however, I would like to emphasize the importance of rehearsal when incorporating improvisation in the compositions. Although the MO is a very experienced orchestra, I thought some of the textual instructions did not result in a very convincing performance. One can argue about the meaning of "convincing," and who is meant to be convinced: and in this case, it relates to my subjective judgement as arranger.

Discussion

After listening to the result of the two-minute arrangement, I would argue that playing only a few takes of a complex piece of music is insufficient time for an orchestra of 50 people to assimilate the musical notation and translate it into sound. I would like to point out two moments from the two-minute arrangement as evidence:

1) At 1:04, the violins play a B natural with the instructions "ad lib., a lot of activity and pizz." Although the instructions seem to offer little room for interpretation, it still could be seen in different ways by each player (different speeds, intentions, etc). Instead, it became a homogenous mass of the same pitch. To develop something more significant out of this simple textual instruction, it would be necessary to invest more time in rehearsal. Rehearsing improvisation would seem to be a contradiction in terms, but only if we understand it as the simple repetition of actions. As Figueroa-Dreher points out, practicing an improvised moment is actually working with the material[141] and exploring its possibilities. The repetition in this context is not intended to yield the "right" or "best" musical option; instead, one should explore as many ways as possible to deal with the material in question, whether it be chord changes, scales, a rhythmic figure, etc.

2) Another relevant aspect lies in the interpretation of the tenor saxophone solo, which "carries" the piece from beginning to end. As we can see in the excerpt of his individual part above, it is a combination of pre-composed and improvised solo passages. We can clearly hear to the moments where the player is reading the melody – bar 5 (at 0:13 sec) and bar 13 (0:39) – and observe the audible contrast to the moments where he improvises. In bar 21 (1:04), for example, the saxophonist did not incorporate the pitches suggested for the improvisation organically and we hear a clear break in his train of thought. The work of looking for cohesive and meaningful choices in improvisation is very complex, and the lack of rehearsal time is a fundamental problem. By repeating the same improvised music many times, musicians tend to discover new possibilities of working with the material, which can later be incorporated and transformed during the performance.

I also made a number of important observations during this experience, which served as a starting point for reflecting on my artistic work in the subsequent case studies:

1) This experience confirmed my initial findings: jazz composers (in recent works for JSO) did not involve trained classical musicians in improvised settings. The Arrangers Workshop confirmed my impression that jazz composers do not seem entirely convinced that classically trained players can improvise; however, I believe there are several reasons for this. I believe the main reason is the fact that working as a guest arranger with the MO is a major career opportunity. Especially in the case of the Arrangers Workshop, the arrangers

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[141] Figueroa-Dreher, *Improvisieren,* 184.

did not know the singer, the orchestra or Vince Mendoza; they avoided non-standard soloists or experimentation because they wanted that the arrangements to work and impress both the singer, orchestra and Mr. Mendoza. Although this experience did not lend itself to experimentation, it was very fruitful because I was able to listen to the music I wrote and receive feedback from different perspectives. This verification motivated me to later think about how to develop rehearsal and notation strategies that would encourage improvisational settings encouraging classically trained musicians (with and without improvising experience) to contribute as improvisers and collaborate in musicking.

2) Empowering musicians in a JSO context is intrinsically connected to questions about hierarchical organization. The MO working process involves a long "production chain," beginning with the manager and/or composer, passing to the arranger, the interpretative work of the conductor and finally to the orchestra – which itself has an internal hierarchy of section leaders and tutti players.[142] This hierarchical structure will be questioned and further discussed in the case studies, where I suggest alternative models of interaction, notation and working processes for JSO.

3) The question of "trust" proved to be an important element in the JSO working process. For example, the conductor and composer have to trust the concertmaster to decide on bowings for the string section that will yield the best possible interpretation. In case study one, I focused on the question of how we can build trust between a composer/conductor and a string orchestra during rehearsals and through musical notation.

4) During the Arrangers Workshop I achieved a new understanding of the acoustic complexity of a large ensemble, especially in improvisation settings. In an ideal situation, the audience needs to be able to hear the soloist – but they must also hear themselves while improvising. Additionally, the orchestra needs to hear the soloist if they want to develop communication. In most situations, only some of these three objectives are achieved and others are neglected. Questions of the physical arrangement of the orchestra, microphones, monitoring and other acoustic and technological aspects turned out to be very relevant in the case studies and seem fundamental to the JSO context generally. Thoughts and possible recommendations in this regard will be discussed in the respective case studies under the heading "Acoustic Particularities, Physical Disposition and Recording."

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[142] Here I focus only on the musical process, but the MO structure is much more complex and involves other departments – marketing, archive, building, ticketing, legal, etc.

These four aspects are interrelated and must be discussed accordingly. The JSO hierarchy, working process and musical output can change drastically if we modify some of aspects listed above. If, for instance, JSO composers were to begin writing challenging music that involves classical musicians in improvising settings, it would lead to changes in the working process. This would automatically change the power relation between composer, arranger and musicians, which in turn will reflect the development of trust in this complex work environment. Last but not least, if the music has a different hierarchy and other needs, we have also to question the orchestra stage setting and other technical issues: how should a JSO be miked? Why is the conductor in front of the orchestra and the orchestra's main object of attention? Why do the audience and orchestra face one other; for whom is it actually necessary?

Conclusion - My field

As we saw, jazz composers mostly explore improvisation in JSO by involving jazz musicians in improvised settings; classically trained musicians are seen as pure interpreters (as in traditional symphony orchestras). However, one fundamental difference between the MO and symphony orchestras is the presence of classically trained musicians who *are* improvisers (though they are unfortunately rarely called upon to improvise). This perception led me to focus (in case study one) on the question of how to incorporate the string section in the large jazz ensemble, opening possibilities for improvisation and collaboration.

It was a fortunate coincidence that I had this opportunity to work with the Metropol Orkest in Hilversum at the beginning of my research. I used this chance to gather experience as an arranger; although I had little freedom to experiment or time to retry things differently, it contributed to my understanding of the working process of the MO and the hierarchical relations between musicians, composer/arrangers and conductor. In the next chapters, I will reflect more deeply on the orchestra hierarchy in connection to my artistic work as composer/conductor/instrumentalist during two practical case studies conducted in 2018 and 2019, leading to the main artistic output of this research: the compositions for jazz symphony orchestra to be performed in 2021.

4.3 Case Study One – jazz nonet and string orchestra

In November 2017 I returned from the Netherlands, very inspired by the experience with the Metropole Orkest, and started to compose music for a large ensemble consisting of my own band, the nonet Mereneu Project – six horn players, bass, drums and me on guitar, which can be heard here:

To conduct this case study, a string orchestra was added to the nonet. This instrumentation was chosen based on my recent experience with the Metropole Orkest, which had increased my curiosity about how to involve a string orchestra (generally made up of classically trained musicians) in improvisational settings.

This chapter describes in detail the working process developed during the first ten-month composition phase (from November 2017 until August 2018), which resulted in four pieces, as well as the rehearsal, performance and recording of the pieces. It also includes the results of interviews with some of the musicians participants and reflection about the whole process. I will point out some of the characteristics, challenges and discoveries related to the use of improvisation with this specific instrumentation, and discuss the strategies that were explored to encourage collaboration between classical and jazz musicians in this large ensemble context.

Since scores are only distant representations of the musical experience, I recommend that the reader listen carefully to the four tracks discussed in this chapter, titled "I", "II", "III" and "Relax." All the music produced during this case study can be accessed via the link below; the videos referenced here are labeled "Mereneu Project & String Orchestra." [143]

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[143] Mereneu Project: Maximilian Ranzinger (Bass), Luis Andre (Drums), Nicolo Loro, Thomas Fröchl, Patrick Dunst (Woodwinds), Adam Ladanyi (Trombone), Jakob Helling, Dominic Pessl (Trumpet).

String Orchestra: Michi Leitner, Isabella Sedlaczek, Anna van der Merwe, Iulia Ioanas, Yanet Infanzón, Darja Vasović, Alyona Pynzenyk, Miona Vujovic, Nicolás José Sánchez Gilabert, Andreas Semlitsch (Violin), Anita Gnamuš, Cristina Arandes, Jao Kotaro, Meng Jung (Viola), Fernando Trigueros, Katja Finsel, Charlotte Hirschberg, Gustavo Rodriguez (Cello).

The ensemble after the recording session (photo by Simon Reithofer)

After composing the four pieces, I organized an initial sight-reading rehearsal in May 2018. Since my jazz nonet was the core of the band, I needed to look for string players willing to take part in the project. I looked for string players living in the area and – if available – people who had an interest in jazz, contemporary music, folk music, improvisation, etc. My search for string players led me to a violinist[144] who is familiar with jazz (especially Gypsy jazz) and popular music. After accepting my invitation to take part in the project, he provided me with further recommendations; in fact, each of the participating string players was recommended by a colleague of theirs already involved in the project. The group of 18 string players was composed of relatively young musicians (their ages ranged from 20 to 40 years old) with very diverse backgrounds, both with and without improvisation experience. Although all of them had a formal classical education, their backgrounds were diverse: some had more experience in popular music and others in contemporary music; one cellist was also a luthier and had even constructed his own cello. The musicians came from all over the world, including from Peru, Cuba, Ukraine, Austria, South Africa, Spain, Serbia, China, Japan and Germany.

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[144] Michael Leitner.

The size of the string orchestra was influenced by my previous experiences with jazz ensembles mixed with strings. One experience worth mentioning was with the group Franziskus, an ensemble with rhythm section, three horns, a singer and a string quartet, led by the German trombonist and composer Simon Kintopp. During the rehearsals and recording of this band's first album in 2017,[145] I often had often the feeling that the string quartet was not entirely comfortable with the musical situation. I suspect that this was largely due to the fact the string quartet was the quietest group in the band and was often obscured by the louder instruments, such as the horns, drums and electric guitar. In concert situations, the string quartet was amplified and other problems would emerge. For instance, the string players were not used to hearing themselves loudly in monitors and were often unhappy with their amplified sound; the volume of the band as a whole was often unbalanced.

Franziskus Ensemble (photo by Nuša Košar)

Based on this experience, I decided to write for a string orchestra in the case study instead of a string quartet. I believed a bigger string orchestra would have the power to balance the "jazz side" of the band; this proved not to be entirely true, as I will discuss later. In general, the number of string players in a JSO is smaller than in a regular symphony orchestras. A modern full-scale symphony orchestra string section consists of roughly 16–18 1st violins, 16 2nd violins, 12 violas,

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[145] "Sam Sung a Song, by Franziskus." Franziskus. Franziskus, July 9, 2018. https://franziskus.bandcamp.com/releases.

12 cellos and 8 double basses.[146] In JSOs and jazz projects involving strings, the number of string players can vary tremendously as Frans Absil shows in his work comparing the size of string orchestras in various recordings:[147]

Recording Artist	Arranger	1st Violin	2nd Violin	Viola	Cello	Bass
American Jazz Philarmonic	various	16	-	4	4	2
Clifford Brown	Neal Hefti	6	-	2	1	0
Stan Getz	Eddie Sauter	14	-	6	4	0
Stan Getz	Claus Ogerman	11	-	0	2	0
Steve Kuhn	Carlos Franzetti	9	-	3	3	1
Joni Mitchell	Vince Mendoza	29	-	12	11	6
Wes Montgomery	Don Sebesky	9	-	2	2	0
Elvis Costello	Burt Bacharach	22	-	8	5	0
Robbie Williams	Steve Sidwell	33	-	15	8	8

Size of the string section on various recordings (see the full table at https://www.fransabsil.nl/archpdf/strsize.pdf)

Some characteristics are worth mentioning specifically: 1) the size of the string section varies tremendously from project to project; 2) there is also no fixed division between 1st and 2nd violin – the arrangers split the violin section in as many voices as they want according to the situation; and 3) more than half of the projects have no double basses.

Based on my previous experience, in addition to the information above, I chose the size of the string orchestra for this case study with regard to the acoustic balance, organizational work and costs, deciding finally on a string section of five 1st violins, five 2nd violins, four violas and four cellos. As in many examples above, I did not include a double bass: the jazz nonet I already included a double bassist, who could switch to join the string orchestra. Additionally – and more importantly –

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[146] The Idiomatic Orchestra. Accessed May 10, 2020. http://theidiomaticorchestra.net/14-orchestra-size-and-setting/.

[147] See https://www.fransabsil.nl/archpdf/strsize.pdf

since my intention was to explore collective improvisation, I wanted to avoid an excess of low frequencies, which tends to result in muddy, unclear sonic results.[148]

Notation

The four pieces for the first case study were composed using traditional notation with the exception of "Relax," which was based on a combination of textual and traditional notation and used "conduction", a concept developed by Butch Morris and defined as:

> The practice of conveying and interpreting a lexicon of directives to construct or modify sonic arrangement or composition; a structure-content exchange between composer/ conductor and instrumentalists that provides the immediate possibility of initiating or altering harmony, melody, rhythm, tempo, progression, articulation, phrasing or form through the manipulation of pitch, dynamics, timbre, duration, silence, and organization in real-time.[149]

The notation in "Relax" was inspired by the method used by Bob Ostertag in his work "Say No More" (1993),[150] and analyzed in detail by Christopher Williams in his doctoral dissertation. At the time I was composing the music for this case study, I was looking for new music as inspiration; I became aware of this album because of my fondness for Joey Baron (drums and percussion) and Mark Dresser (bass), who both perform on this record.

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[148] "The reason why some chord voicings sound muddy and unfocussed often lies in the fact that they violate the so-called low interval limits. These limits are guidelines for every interval structure and the lowest possible position they can be played together without sounding muddy. They are not definitive rules but a good guide to avoid muddiness." See https://www.robin-hoffmann.com/dfsb/low-interval-limits

[149] Accessed May 10, 2020. http://www.conduction.us/.

[150] Full score available at http://www.tactilepaths.net/wp-content/uploads/2016/08/saynomore_comp.pdf

First page of the score of "Say No More"

For comparison, the next image shows one page from "Relax," illustrating how traditional notation was combined with verbal instructions, and its similarities to the example from Bob Ostertag:

Excerpt from the piece "Relax" score

As Williams points out, this kind of notation is at the same time "fluid in meaning and rigid in form, rich in suggestions and poor in details".[151] Although the notation is highly conventional, it can result in very unconventional sounds and ensemble dynamic. I explored this notation in a large ensemble context, which had many implications, including the fact that the individual parts of "Say No More" are each performed by a single musician, while in "Relax," each string orchestra part is played by at least four people simultaneously.

The string orchestra traditionally has a hierarchical structure: the concertmaster is the "boss," leading the string section and taking care of interpretative decisions. Involving improvisation in the compositions introduces two basic, distinct situations:

1. String orchestra plays as a section – the role of the concertmaster remains as in the traditional orchestra;

2. String orchestra performs improvisational elements, either as a collective (for a group of strings together) or individually (for only one string player) – in this case, there is no single "boss"; instead, leadership is shared and different string players assume different functions simultaneously (section player, soloist, concertmaster, etc).

How should the score and individual parts be notated in the second scenario? How can collective free improvisation be coordinated with so many string players? All these questions seemed very vague, but as I started writing the first sketches I arrived at some ideas that took shape later, in the final scores. Here we see a short excerpt from the string orchestra from piece "III":

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[151] Tactile Paths. Accessed May 10, 2020. http://www.tactilepaths.net/ostertag/.

String orchestra excerpt from piece "III"

As we see above, each section of the string orchestra was divided in two staves: a soloist and the main section. Where the first stave is empty (as with violin II above), all players are playing what is written in the section stave, as with a traditional string section. In the other sections (violin I, viola and cello), one instrumentalist from each section is separated from the string section and is integrated in collective improvisation. This kind of notation helped me to imagine and plan different improvisation settings in advance. Some concrete examples, with related reference recordings:

- One string player independent of the string orchestra:

  piece "III"

  piece "I"

- String quartet – collective improvisation, independent of the string orchestra:

  piece "I"

  piece "III"

- Full string orchestra – collective improvisation:

  piece "III"

  piece "Relax"

As we observe, the solution I found was to give each section of the string orchestra an extra stave ("soloist") where improvised parts were notated separately. The soloists' parts showed when the players were to play in the section and when they were not, making it possible to deal with the individual string players as both section musicians and improvisers at the same time. This solution proved very effective during the working process.

Finding potential improvisers in the string section

As mentioned, I did not know most of the string players I invited to the string section: even if I had precomposed music and imagined possible improvisation settings, I still did not know which players of the string section would be willing or able to take on the role of improviser. To solve this question, I decided to challenge the string players in their traditional roles, letting decide for themselves who would take the soloist parts, and also who would be the section leader. It is important to say again that the "solo part" in this context has nothing to do with the traditional role of "concertmaster"; each string section (first violin, second violin, viola and cello) also had a section leader and a separate improvising soloist.

Instead of deciding beforehand who would have improvised solos, I distributed the soloists' parts in the first rehearsal and asked: "Here I have one extra part for the first violin with some independent things to be played. Who would like an extra challenge?" I phrased the question carefully, avoiding the words "improvisation" and "solo" in order to avoid causing stress or discomfort for the string players in advance.

This procedure was repeated for each section for each of the pieces, which resulted in a different soloist for each piece. The musicians were still free to exchange parts if they felt uncomfortable later on. The system proved effective and acceptable to everyone involved. To an extent, this mirrors the process in small jazz ensembles, where the musicians themselves decide during rehearsals who will play the melody, who will improvise and other arrangement and coordination details.

The soloists' parts were not sent in advance, but I sent audio files generated by the notation software in order to give the players an idea of the sound the pieces and to help them prepare for the rehearsals. Because many parts were open for improvisation, the audio files were very far from the actual music; this gave rise to criticism from the violinist Andreas Semlitsch. He wrote me that he found the sheet music interesting at first, but after he listened to the audio files, he was not sure if he wanted to take part in the project anymore. During a telephone call, I was able to better explain what the project was about and what my intentions were; fortunately, he decided to take part in the project and gave me very positive feedback at the end. Sending the audio files may well have been a mistake; their lack of detail and distance from the intended result seems in fact to have frightened (some of) the string players. In the subsequent case studies, instead of sending the audio files to all musicians, I allowed the musicians to decide whether or not they wanted the audio files.

Acoustic particularities, physical disposition and recording

> [Having] everyone in the same room with the strings was exciting. I didn't think it would sound like anything.[152]

Although recording is a routine element of jazz practice, it is still an art full of mysteries, constantly developing and changing according to new technologies and necessities. Sound engineers generally work from fixed models of how to do things. However, ideally these models are adaptative and responsive during the work in progress; good engineers seek the best way to translate a live performance to a reproducible media.

On 3 May 2018, we spent one full day in the studio and recorded the four pieces live with all players in one room, arranged as in the graphic below.
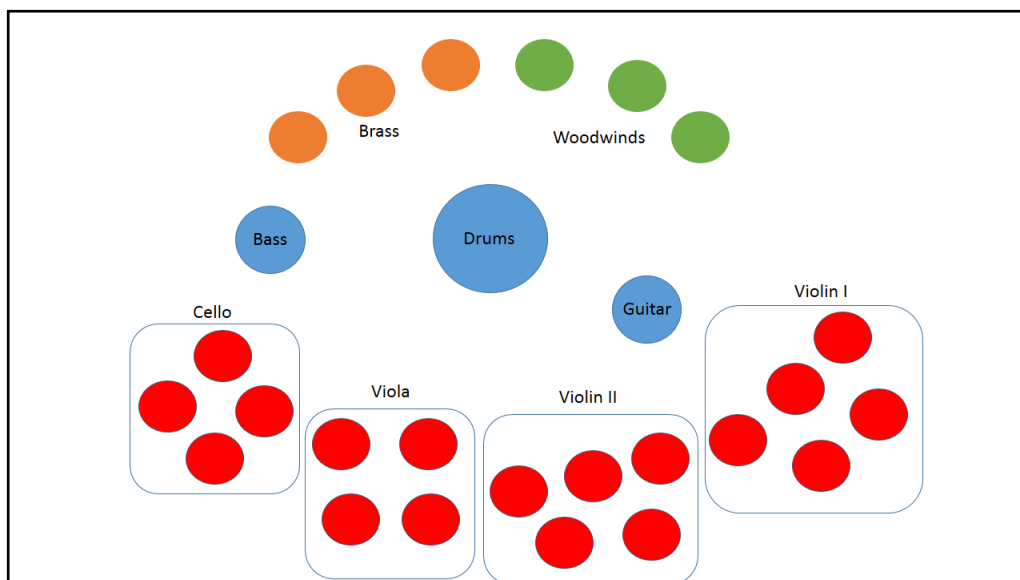
Disposition of the ensemble in the studio

Setting the ensemble up in a circle allowed eye contact and acoustic connection between the musicians. Initially, we wanted to avoid headphones and amplification for the string orchestra and the only two amplified instruments were bass and electric guitar.

Even with 18 string players arranged in a circle with the rest of the ensemble, the strings were still much softer than the horns and drums, making interaction between players very difficult. The drummer and horn players in particular made the point that they needed to hear the strings in order

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[152] Saxophonist Patrick Dunst in an interview about the recording session.

to play together. The drummer, Luis Oliveira, is capable of extremely soft playing and did his best to keep the volume low, but with six horn players behind him and a Plexiglas wall between the drums and string section it was extremely difficult for him to hear the strings.

The solution (which had to be arrived at very quickly on site) was to install monitor boxes for the horn players and an in-ear monitor for the drummer, in which the string section was amplified. Improvisation depends on interaction, and the larger the group is, the more difficult it is to ensure good acoustic conditions for interaction. Although they were able to hear the string section better as a whole after this change, the string soloists were still almost inaudible; no solution to this problem was found during the recording session.

This major challenge revealed the power relation intrinsic in the interaction between string players (or other softer instruments) with horns, drums and electric instruments. It became explicit when Patrick Dunst (bass clarinet) discussed his experience improvising freely with strings in the piece "Relax":

As a jazz player, when you play with strings or over strings, like in this example […] it's always great, string "pads" are always beautiful, no matter how dissonant they are.[153]

Although this improvisation setting was conceived as a collective interaction between bass clarinet and a group of strings, Patrick automatically took the initiative in the improvisation, becoming the featured soloist. I do not judge his decision and doubt that other musicians would have approached the situation differently. However, it is a clear example of how a volume discrepancy between instruments can interfere in the group dynamic. By listening and watching to the video, it is clear that Patrick leads the section not only because of his attitude, but also because of the volume, which automatically turns him into the lead voice. As we hear in the recording, some string players made efforts to react or bring new elements to the interaction, but Patrick is the dominant instrument through the section.

The Metropole Orkest, which has a relatively small string orchestra, solves the problem by always amplifying the strings,[154] making it much easier to mix the orchestra sound in live situations and find a balance between strings and the rest of the band. In this case study, however, my desire to explore potential soloists from inside the ensemble led to the discovery of this major issue during

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[153] Translated by the author from the German interview.

[154] Sometimes the string orchestra players become also headphones and some other times the don't depending on the situation.

the recording process. Traditionally, string orchestras are recorded with overhead microphones, aiming to result in a homogeneous sound; since the string orchestra included soloists, our sound engineer (Andreas Kapfer) used this overhead miking technique, plus four DPA[155] microphones for the soloists on each piece.

The presence of the four DPA microphones proved essential during the mixing process. They made the soloists audible and supported the string orchestra's overall sound, which was not ideal: the overhead microphones also picked up a lot sound from drums and horns. Collective improvisation by string players without DPAs was extremely difficult to hear. The sound of the string orchestra on the recording of "Relax" is a mixture between the overhead microphones and the DPAs; the latter are used to highlight specific passages. This was not an ideal solution, but it was a workable means of obtaining an acceptable string orchestra sound for the time being.

Aside from the less-than-ideal recording situation, exploring the string orchestra in improvisation settings created unexpected textures; these can be heard especially in the piece "Relax" at 0:22

and at 6:28

The string instruments blend with each other in a very distinctive way, generating very special sonorities from their free playing. Each player's sound blends with the string orchestra, almost independently of register, and this resulting in very widely spread voicings – audible at 8:56

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[155] DPA Microphones (originally Danish Pro Audio) is a Danish manufacturer of high-end studio microphones for recording and broadcast use.

and 10:31

As we observed, involving the string orchestra in an improvisation setting combined with a jazz ensemble presented diverse technical challenges, which could not be solved satisfactorily in this case study. This quasi-collective decision-making process to resolve technical problems "on the fly" is a common occurrence in studio recording. In terms of the artistic research process, this experience was documented as the first step in a systematic process, going back and forth between reflection and practice. That is the reason why the questions and considerations brought up here are further discussed in the next case study; this process resulted in a synthesis presented in section 5.1, where I discuss technical alternatives for strings in a JSO setting and propose another, improved approach for the string orchestra microphoning.

Interaction

a) In performance

As we have noted, all musicians in the ensemble were involved in improvisation scenarios during the rehearsal process at some point, and had to find a way of making music together while dealing with unfamiliar situations and the different backgrounds of their colleagues. Varying in both intensity and quality, interaction happened on several different levels: between the individual musicians, between the conductor and the ensemble and between various groups of musicians. Collective improvisation is not just a product of purely musical concepts, preferences and technical capabilities; it is also influenced by the various modes of interaction and power relations within the group, as well as individuals' predispositions with regard to collegiality and willingness to compromise.[156]

During this case study, questions about interaction were of great importance and arose not only in my analysis of the recordings but also during the interviews with the musicians. In interview, cellist Katja Finsel described her impressions of the interaction during rehearsals and recording:

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[156] Figueroa-Dreher, *Improvisieren,* 38.

> The communication in the orchestra [in case study one] was completely different, so for me it was completely new […] you were a conductor, but you were also a musician in the orchestra, so the attention wasn't only [on] you as a conductor, as I am used to with the symphony orchestra.[157]

Besides the altered focus due of the absence of a conductor, she also pointed out how the existence of improvisational elements stimulated her to be more aware of the music:

> […] but there was more which I found exciting, the interaction with the brass, with the soloists and with the percussion. For me, of course, that was new, that was the exciting thing. I was much more attentive in this project than I am in the classical orchestra […] You [the author] were the center, but the interaction in the group – especially with the improvised parts – was more important.[158]

Although large ensemble music without a conductor is nothing new, we can see that the absence of the conductor in this situation contributed to Katja's assuming a more responsible position in comparison to her experiences in classical orchestras; we can clearly see the connection between the change in power relationship occasioned by the non-existence of a conductor and the interaction. Interaction was "more important" and improved, since her attention could be directed towards other aspects besides a conductor. Three specific passages in "Relax" illustrate how improvisation settings were used to alter the power relationships in the large ensemble and promote unexpected interactions and sonic results:

1) At 00:20, the drummer was asked to conduct the brass players for a while, as shown in the following excerpt:

Excerpt from "Relax"

During the rehearsals and recording, Luis Oliveira (drummer) used his previous knowledge and experience to combine strategies allowing him to simultaneously conduct part of the orchestra and play; however, during the rehearsal process, he developed a specific vocabulary of signals for the purpose of conducting. Later, I asked him how he did it and which parameters he was controlling with his signs. He explained that there were three parameters in play: the number of hits, the interval between the hits (short or long) and the register (low or high).

2) The introduction of the piece was based on textual instructions; no specific pitches or rhythms were notated. The introduction was followed by a section of "free" improvisation with the instruction "Develop", in which I could improvise with the players as a conductor by using signals, influencing the direction of their improvisation. Below we can see how the "Develop" section appears in the score:

Excerpt from "Relax"

I would like to describe a specific moment to illustrate the role played by interaction in this "free improvisation" scenario.

At 2:00, a violinist begins improvising with sounds, using no definite pitches. At 2:10 – perhaps influenced by the first player's initiative – a violist begins using ricochet effects (a bouncing bow stroke in which the bow is dropped or thrown onto the string and allowed to rebound several times). At 2:13, in my role as conductor, I called the other string players' attention to this effect, which many of them began to imitate. Beginning at 2:30, we can hear at least three simultaneous, constantly mutating layers of improvisation: a melodic layer, a "noise" layer, and a rhythmic layer. This passage:

was the fruit of the creation and re-combination of new material and proved crucial to the overall development of the piece, since it was also referenced further. The rhythmic ricochet technique is echoed by the drummer beginning at 4:18. He uses it as a solo motive, developing it with brushes on the snare drum up to 7:16

In short, musical elements created in the moment repeatedly have a significant influence on the further development of the emergent music.

3) At 8:25, chord blocks are played by all instruments. The written music includes jazz-style chord symbols and encourages the musicians to choose what to play in each chord. Since most of the string players were unfamiliar with this style of notation, they were forced to find alternative solutions; several wrote the pitches of each chord in their parts, as we see in the image below from one of the cello parts:

"Relax" excerpt from cello part, with notations made by the cellist by pencil

In interview, I asked violinist Iulia Ionas how she chose her pitches during the performance and she said:

> Actually, I was considering the others when choosing [the pitch] because everyone was playing different things; you had to do something and I wanted to match them. And we were also changing pitches.

In other words, the other players' choice of pitches influenced her choice. As the recording shows, this dynamic led to extremely interesting harmonic structures, incorporating widely spread, colorful voicings (where violin 2 is above violin 1, for example, or the cellos are spread from very low to very high, crossing voices with all other the sections); these probably wouldn't exist if I had notated the voicings exactly.

These three examples show clearly how improvisation supported variations in the traditional orchestra power relationships, resulting in greater quantity and quality of musical interaction and unexpected, emergent music.

b) Beyond the performance

Analysis of musical interaction usually focuses on performance (live or recorded); however, there is an additional level, largely invisible but no less important: rehearsal and individual preparation. By empowering musicians to improvise in this large ensemble context, significant interaction took place beyond the performance. Research into improvisation must take into account these extra-musical actions: they prepare, reflect, critique and evaluate the performance and are hence part of a larger process of musicking.

This extra level of interaction is present in all kinds of music, whether they involve improvisation or not, but in this specific context I would argue that the improvisational character of the compositions and the rehearsal strategies improved the interaction between musicians on the whole, as they sought compromise, adjustment and cooperation. A few examples will reinforce this point.

At the outset, it was my impression that the musicians were fairly comfortable with the music. However, during separate interviews with the violinists Yanet and Iulia, I heard a story to the contrary which showed their cooperation: Iulia, having agreed to play the solo on piece "I", was to improvise over a vamp of indeterminate duration using a specific mode. The next image shows the instructions in her part for the passage:

Improvisation instructions in the violin 1 soloist part (piece I)

As she told me in an interview, she had no experience with improvisation and had received the soloist part by accident. After the initial rehearsal, very concerned about the solo, she asked Yanet (a more experienced improviser) for help. Yanet advised her to play the chords at home, write down some ideas she thought appropriate, and use them as material for her solo. In the interview, Iulia described her preparation:

> […] and then I wrote and I kept having more ideas […] I was trying to play and then figure out what to play, then write a little bit and replay it and then improve it better […] I wrote many versions and by the end, for the concert and also for the recording, I had a version but I do not remember keeping it. In the end, I played what I had in my mind.

In spite of the preparation, it proved a challenge to fit her ideas into the solo, especially since the duration of the open vamp was different in each performance. Listening to her various takes, one can hear some of the motives she had prepared and how they were applied in the moment of musicking. The challenge of improvising prompted the two violinists to interact outside of the rehearsal setting, exchanging information and discussing the piece in addition to performing together.

Katja, the cellist, also described her experience when asked about interaction in the cello section:

> It was very homogeneous in the group. We got on well and played well together. It took a while until everyone felt and saw what everyone was good at and what they were doing – who was leading and so on. One thing that worked very well was that we could say: 'No, I can't do this, you do that,' or someone said: 'I don't want to improvise, you'd better do it.' So there was really this freedom, and the communication was very good. […] And that is perhaps a big difference to the classical orchestra, where there are always very strong

> hierarchies. […] It was very pleasant, a relaxed atmosphere, and nobody knew that we had changed who was leading the section.[159]

The fact that there was an additional part for the soloist, together with the autonomy the strings were given during the rehearsals, gave the players the chance to structure the section as they saw fit. As a result, different hierarchies emerged than would normally take hold in a traditional string section: not only was the soloist chosen collectively, they also shared the role of leader, a rare occurrence in the classical environment. These exchanges led to an enjoyable experience, which Katja described as a "relaxed atmosphere".

Both the composition and the rehearsal methods challenged the musicians in ways going beyond practicing the notes on the paper; in order to deal with this situation they were obligated to communicate, to exchange personal experiences, to ask for suggestions or help and discuss strategies as a group. All these discussions happened before, during or after rehearsals; I only became aware of them in the interviews. For my further work, it became clear from this experience that the interviews were vital to better comprehending each case study as a social phenomenon.

In the last pages, we saw how composition and rehearsal strategies are intrinsically related to the quantity and quality of interactions developed in the music making. In case study two, I look for further confirmation of these two dimensions supporting the interaction of classical and jazz musicians in a collaborative large ensemble context.

Between idioms

> I heard things and adjusted to what I heard, and I tried to say something. Maybe…it is not what they would say, but I still think it is worthwhile.[160]

Having described some of the practical challenges encountered during this first case study and its implications for interaction, I now turn to a reflection stemming from my interviews with some of the string players about their perceptions of improvisation.

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[159] Translated by the author from the original interview in German.

[160] Roxanne Dykstra (viola player) in interview.

In 1980, Derek Bailey formulated the terms "idiomatic" and "non-idiomatic" to describe two important forms of improvisation[161]: idiomatic improvisation can be defined as playing according to the rules or conventions of an existing style (jazz, blues, bossa nova, etc.). Non-idiomatic improvisation, which is found mostly in so-called free improvisation, can also be highly stylized but is not linked to a specific idiomatic identity.[162] However, neither of these exist in a pure form: in practice, improvisation always lies somewhere on the spectrum between one and the other. Peter Elsdon argues that Bailey's distinction also reinforces a cultural hierarchy that tries to separate what is truly new and spontaneous (an idealization of improvisation) and what is not. Although idiomatic, genre-based improvisation is directly dependent on a musician's accumulated knowledge and experience of the material, repertoire and templates of the genre in question, non-idiomatic improvisation is also highly formulaic in different ways, and thus an idiom itself.[163]

One may well question the relevance of these two concepts, if we accept that free improvisation draws on familiar materials. After all, the improvisers cannot completely ignore their musical background, and "whatever seems new at first glance can be quickly solidify into a musical idiom".[164] However, these concepts are nonetheless important as abstract ideas: musicians with jazz and classical backgrounds understand improvisation differently, and these discourses are present on their musicality. What skills are necessary to be an improviser? What does it mean to improvise? Why and how does a musician improvise? These and other considerations appeared in the interviews and are worthy of discussion in order to understand how these views can influence the discourse on improvisation.

As I suspected before the rehearsals, some of the string players had experience with improvisation and were willing to participate in such musical scenarios. However, almost none of them considered themselves "improvisers" as such, a judgement that proved in interviews to be intrinsically connected to a lack of knowledge of specific musical idioms. Andreas Semlitsch (violin) shared his impression of the jazz musicians' performance during this case study:

> It's always great to observe […] what the jazz musicians take into [a] thing like that. Like what they give. […] they give their gift […] They just go there and it goes "boom" and you have to listen, because it's good stuff. It's real music.

[161] Bailey, *Improvisation,* Xi.

[162] Figueroa-Dreher, *Improvisieren,* 41.

[163] Elsdon, "Re-Imagining Improvisation," 6.

[164] Feißt, "Negotiating Freedom and Control in Composition," 219.

His description of jazz as "gift" and "real music" shows a high degree of respect – even reverence – for jazz and the musicians who play it. This shows that when it comes to improvisation, the cultural legitimacy of classical music as "high culture" is reversed, and putting jazz musicians in the position of specialists. Andreas went on to say that he was experienced in improvisation but didn't feel comfortable playing over more complex jazz harmonic progressions. In another interview, cellist Katja Finsel told me she was planning to study jazz cello in Linz beginning in October 2018 in order to learn how to improvise in the jazz idiom. The Cuban violinist Yanet Infanzón claimed to be unable to improvise over "gypsy swing" or Brazilian music due to their harmonic complexity, but said she could improvise with a "classical touch." When asked what she meant, she explained that she found the harmony and melody of tango and Cuban music similar to the classical repertoire with which she was already familiar, allowing her to use that melodic material when improvising.

The three interviewed string players seemed to understand the word "improviser" as a musician with the ability to improvise idiomatically in a specific genre, being directly dependent on a musician's accumulated knowledge and experience of the material, repertoire, templates and practice of that genre. As we saw in the initial quote, violist Roxanne Dykstra shared her experience as a classically trained musician participating in a jazz jam session in Konstanz: "what they would say" clearly refers to the idiom that a jazz musician would use when playing in a jam session; however, she emphasizes her willingness to be part of the musical experience in spite of her relative unfamiliarity with the idiom.

Playing in idiomatic contexts without having the accumulated knowledge and experience can lead to what we might call "mistakes"; here again, the concepts of idiomatic and non-idiomatic improvisation can support a discussion suggesting a further interpretation of the idea of a "mistake". We can define mistakes in idiomatic playing as deviations in the performance from what is expected in the context of a given genre, or as differences between a performer's intention and the realization or execution of that intention.[165] The difference between a "mistake" and a "non-mistake" in non-idiomatic music (if there is such a thing) is blurred; the templates and models are less concrete and the differences between musicians' intentions and their execution can also be incorporated in and developed as part of the music, no longer to be understood as mistakes. The discussion of the idea and understanding of "mistake" will be deepened in the section "4.4 - Between right and wrong".

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[165] Figueroa-Dreher, *Improvisieren,* 27.

Would non-idiomatic improvisation scenarios encourage jazz and classical musicians to improvise more freely and develop better interactions? As Derek Bailey points, non-idiomatic improvisation can be highly stylized but is not usually tied to the representation of an idiomatic identity.[166] However, Sabine Feißt points out that this idea is "more wishful thinking than reality. Every free and non-idiomatic improvisation draws on familiar materials, since the improvisers cannot completely ignore their musical baggage. And whatever seems new at first glance can be at risk of quickly solidifying into a musical idiom".[167]

Comparing the performance of the pieces in this case study helped me to understand to what extend idiomatic and non-idiomatic can serve this research as concepts. Three pieces made use of well-known groove and harmonic templates. In this sense, the compositions "I", "II" and "III" can be considered idiomatic pieces (related to *baião*, tango and *ijexá* respectively); the composition "Relax," however, can be understood as less idiomatic (since the term "non-idiomatic" only exists as an idea) in relation to jazz or Western music.

The collective improvisation in the piece "Relax," from 1:37 to 5:15 (non-idiomatic):

was more successful (in terms of resulting in unexpected sounds, how attentive the performers were while playing, and the musical looseness of the classically trained musicians) than the improvisation section at 4:05 in the piece "III" (idiomatic):

In piece "III", we find two different moments of collective improvisation performed by string players. At 4:05 it is strongly connected to *ijexá*; here, the string players improvise collectively over a specific mode and groove (predetermined in the composition). We can hear some of them playing

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[166] Bailey, *Improvisation,* p. xi, xii.

[167] Feißt, "Negotiating Freedom and Control in Composition," 219.

rather hesitantly and struggling to remain in the groove, suggesting discomfort with the musical situation. From 6:55 to the end, the setting is less idiomatic and non-groove-oriented:

The strings here sound significantly more involved in the music and more connected to the moment of collective playing.

Another moment that challenged the string players to work outside their comfort zone is from 9:30 to 10:30 in the piece "Relax."

Here, they were required to improvise in a modal context over mediant harmonic movement (Bbm – Dm – Gbm); their performance seems to reflect a certain lack of orientation in the harmony and a lack of confidence in the development of melodic lines. The harmonic sequence certainly presented a challenge for the soloists. Besides this, other elements turned this moment into a challenge: the length of the vamp (six bars instead of the more common four- or eight-bar cycle) and the rhythm section's accompaniment, which lacked the security of a clear pulse.

Through analyses of the recordings and interviews, I reflected on how the string players understood their relation to improvisation and in which improvising contexts they were able to play with more expressiveness and comfort. To generalize, the string players' improvised performances were much more convincing in less idiomatic scenarios, in modal contexts and without groove templates. More importantly, though, they were active improvisers during the case study and contributed immensely to the resulting music.

Activation and empowerment

It seems reasonable to assume that the string players were especially challenged during this case study and had to put more effort into the music (and their preparation) than if it were through-

composed, as is mostly expected in a JSO. However, the interviews showed that this extra effort also had positive side effects. Katja Finsel described her perception:

> "It was definitely demanding because I had never [collectively improvised] before. I needed a little bit, of course, to understand the pieces, and then especially with the drums and rhythm section and woodwinds. I listened to the recording […] the first 30 seconds weren't good (laughs). […] Then it got better. I needed to be aware of everything that was happening. You are used to it, I am not used to it […] But it was very exciting.[168]

When I asked Iulia Ionas (violin) about her experience as a whole, she answered:

> When we had the concert, I would have done it again. I would have played more solos; I would have feel more free to do it. So I would say I came out of my shell. […] I was not afraid anymore. Not that I was feeling good about myself, but before I was really stressed and afterwards I would have said, okay, I want to try also, why not? Because I saw people were very free and they were doing whatever they had in their minds and that gives you a lot of ideas, and I was thinking, "yeah, I think I can do more than this."

As we can observe above, words such as "demanding" and "stressful" appear, but also "exciting" and "free". By being forced to improvise, the classically trained musicians had to put much more effort into the music. I would argue that this extra effort – plus the responsibility of being not only the performer, but also soloist (improviser and co-composer) – resulted in a more meaningful individual and collective experience for the musicians and for myself.

Although this result seems logical, a study published in 2011 by Michael I. Norton (professor of business administration at Harvard Business School), Daniel Mochon (professor of marketing at Tulane University's A.B. Freeman School of Business) and Dan Ariely (professor of psychology and behavioral economics at Duke University), revealed what the authors term the "IKEA Effect".[169] The name refers to the Swedish manufacturer and furniture retailer IKEA, which sells many items of furniture that require assembly.

The study shows that when we are responsible for creating something – a piece of furniture, a garden, a piece of music, etc. – the more effort invested in the creation of this something, the more highly the creators themselves evaluate the outcome; particularly in comparison to external observers. They found, for example, that subjects were willing to pay 63% more for furniture they had assembled themselves than for equivalent pre-assembled items. More importantly in the context

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[168] Translated by the author from the original interview in German.

[169] Norton, Michael I., Mochon, Daniel and Dan Ariely. "The 'IKEA Effect': When Labor Leads to Love." Working paper. Harvard Business School, 2011.

of this research, the authors suggest that labor forges a more meaningful connection to created objects.

One can argue that the performer is always the creator of a piece of music in the moment of a performance, but throughout the interviews we can see that the increased challenge of the string players in co-creating their own parts led to a feeling of increased involvement and ownership of the music.

However, this requires the consideration of additional factors: the extent to which one's labor is successful and its successful completion are essential components for the link between labor and a meaningful experience[170]. In music, it is very difficult to evaluate if one's labor is successful or not; such an evaluation depends highly on the participant's self-image and expectations. However, completion is an element that is often ignored in musical practice – a factor that contributes to fulfillment. For a more meaningful experience, being involved in the process as co-composer/ improviser is not enough. It is very important that the experience has a beginning and an end. We can think about the perceived "completion" of a musical process on two different levels:

1. Macro: for example, when we started the case study, a clear plan with a beginning and end was fixed: rehearsing the four pieces, passing through recording and performing one concert as a conclusion. It is a process that can last days, months or even years, depending on the project.

2. Micro: on a smaller scale, we can think about the completion of the rehearsal process, for example. Rehearsing a piece of music often involves stopping in the middle of the performance or rehearsing only distinct parts of the pieces. I argue that the more we break the flow of the performance (in this case for rehearsal purposes), the less strong the feeling of completion. This argument made me rethink how to rehearse a large jazz ensemble from the bandleader/conductor's perspective; the practical outcome is discussed later, in chapter 5.1: "Artistic Results".

Other studies also suggest that improvisation provides an environment where the participants can communicate with each other in meaningful, non-verbal ways, allowing connection in ways that may be not possible using spoken language. "This communication feature of improvisation means that it has the capacity for expressing difficult or repressed emotions without the need to articulate

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[170] Ibid., p. 5; p. 17.

these verbally".[171] The authors also point out that improvisation can have a therapeutic effect because "speech requires turn taking, but in group improvising, many voices can be heard at once and people can express difficult and complex emotions in abstract ways and in unison".[172] Some health benefits of collective improvisation have been described in different music therapy studies (MacDonald and Wilson 2014, Pavlicevic 2000, Pavlicevic and Ansdell 2004, Procter 2016, Seabrook 2017). These studies point out that improvisation can lead to a reduction in stress and anxiety, improved communication and helps images and thoughts to emerge from the unconscious, providing a means for individuals to explore aspects of self and identity.

Bringing improvisation into large ensembles (with and without improvisers) not only opens new aesthetic possibilities, but also can improve the quality of the musicians' experience. Vijay Iyer points out that the experience of listening to improvised music differs significantly from that of listening to composed music.[173] As he argues, the difference lies in the imagination of the audience, which "experience[s] specific kinds of empathy for the performer when it is improvised music because there is the awareness of physicality and an understanding of the effort required to create the music".[174] However, "the perception of the relative presence or absence of improvisation is largely imagined and profoundly contextual, based on cultural factors and assumptions".[175] This means that most audiences cannot say if a performance is improvised in the moment or prepared and rehearsed in advance. We know that a classical orchestra is not improvising because we (in Western societies) have previous knowledge of this tradition, but it is easy to demonstrate Iyer's point by listening to Indian, Japanese, African music – any style with which we are not familiar. We can hardly understand its structure, form, and of course, we can often not tell whether there is improvisation or not, and – even if we know improvisation is present – which parts are improvised and which are not. This reflection relates to my research in two ways: 1) it is not only the audience that has a listening experience, but also the musicians while they perform themselves; the phenomenon experienced by audiences is also applicable to the performer's experience. This means that the musicians in a large ensemble can develop empathy for their ensemble colleagues through the awareness of the effort required to create music. Additionally, 2) if we compose music for JSO

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[171] MacDonald and Wilson, "Improvisation: What Is It Good for?" 383, 384.

[172] Ibid., p. 383, 384.

[173] Iyer, "Improvisation, Action Understanding," 80.

[174] Ibid., p. 80.

[175] Ibid., p. 80.

that involves improvisation, intending to arouse the "kinds of empathy" described by Vijay Iyer in the audience, it may not be enough to count on the listening perception of this audience: the improvisational content could be communicated to the audience in form of program notes or verbally during the concert, for example.

Conclusion - Case study one

Conducting this case study changed my perception of the artistic research as a whole. The initial idea before composing the music for this case study was to create pieces with the objective of integrating the musicians in the large ensemble to an unusual degree for large jazz ensembles, especially with strings – not only as interpreters of notes written on paper, but opening more space for collaboration. In an interview, Maximilian Ranzinger, a bass player who has played with me since 2012, compared this project with other shared musical experiences:

> It was less restrictive. What each individual played made a huge difference. For example […] if another drummer had played, [the music] would have sounded totally different. There were some parts with solo spots, it really made a difference in the musical outcome, how the soloist played, much more than in a big-band context.

Although these were my first, naïve composition efforts exploring the possibilities of incorporating improvisation in music for a large jazz ensemble, Maximilian confirmed a degree of success by stressing that the "solo spots made much more difference than in a big-band context".

To conclude this chapter, it is important that we acknowledge that improvisation in a large ensemble context can stimulate a sense of meaning and provided other psychological benefits for the musicians, in addition to its aesthetic and social implications. As we observed, involving improvisation in this case study automatically questioned the power relations intrinsic in the orchestra setting. The mix of jazz ensemble and string orchestra contributed to my thoughts on the power relationships and hierarchies created by the friction between the jazz and classical musical worlds. However, the power relationships present in an ensemble also involve other aspects, such as gender, age, social position and other factors. These were not approached in my work but were certainly mixed in the discourses.

Involving the string orchestra in improvisational settings was essential to question the hierarchy and at the same time explore the potential that the strings can have in a JSO. Andreas Semlitsch commented:

> Some of the things that were actually in the music were overlooked or discarded, maybe almost from the start. I found that strange […] I like to feel and to decide stuff […] and that didn't quite happen. And that leads to the next observation: I felt that neither the concertmaster nor anybody else really took the lead for the strings. There were several players speaking up for certain passages and such…but interaction in the group regarding the sound of the strings didn't really come up, because the concertmaster didn't really speak up for the strings.[176]

This is interesting because apparently, the compositional and rehearsal strategies actually had the effect of supporting collaboration in the string section, but as Andreas pointed out, "the concertmaster didn't really speak up for the strings". However, this can also be seen in a more positive light: it is possible that this kind of dynamic opens up new possibilities in terms of the social interactions and power relations in the string section; the statement "there were several players speaking up for some passages" clearly implies that the individual players were actively thinking for themselves and offering input on the music. In addition, different players took on the role of concertmaster in various moments, a sign of the increased autonomy[177] that is essential to shared leadership.

The relationship between conductor and musicians also supported changes in the power relationships within the ensemble. I was simultaneously conducting and playing guitar, initially for simple logistic reason that it meant one less person involved in the project. However, the absence of a dedicated conductor also challenged the musicians to focus more attention on the music and on interaction.

One important outcome of this case study is that I finished it unsatisfied with the fact that the conductor is generally the only person in the orchestra that has access to all the musical information: he or she views all the individual parts simultaneously, while the musicians see only their own parts, isolated from the whole. I argue that if we want to question power relations in the JSO, we have also to question the figure and function of the conductor. In this case study, I conducted (unintentionally) on part-time basis. In the next case study, I discuss alternative notation methods for the large ensemble, especially aiming to make the music score more accessible to the musicians, sharing (at least in part) the information which is generally held only by the conductor.

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[176] Translated by the author from the original interview in German.

[177] See the concept of "responsible autonomy" on Hesmondhalgh, David and Sarah Baker. "Part One. Theoretical synthesis." In *Creative Labour. Media work in three cultural industries*. New York: Routledge, 2011, p. 41–43.

Another issue related to the power relationships in the JSO was the acoustic situation that arose from the mixed instrumentation, combining very delicate, soft instruments with louder and amplified instruments. Technology proved to play an important role balancing different instruments' volume in order to enable softer instruments to perform as soloists. Although this case study did not yield answers as such, it did present me with many challenges when a string orchestra was again part of the large ensemble. These are further discussed in section 5.1.

In "Between idioms", I pointed out how certain improvisational settings encouraged (or discouraged) classically trained musicians' participation in improvisation. Working with JSO and improvisation makes it necessary that the different backgrounds and experiences of the musicians be taken into account. From the composer's perspective, it means the music should enable individual expression through improvisation while avoid the requirement of specific idiomatic knowledge (especially when working with unknown musicians): "a composer who wants the interpreters to improvise should start from the assumption that a contemporary interpreter does not have access to every desired musical vocabulary".[178] This sounds trivial, but it becomes a big challenge when writing music in a large jazz ensemble context. The discussion of the terminology "idiomatic" and "non-idiomatic" shows that these two poles are abstract ideas that in real life form a continuum. To better understand the music itself (which always exists between the two abstract poles), we can think in terms of "less" and "more" idiomatic.

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[178] Feißt, *Der Begriff "Improvisation" in der Neuen Musik,* 206 (translated from German by the author).

4.4 Case Study Two – jazz nonet & harp, oboe, french horn and classical percussion

In October 2018, I started composing new pieces for the second case study. As in the previous case study, the process involved rehearsals, performance, recording and interviews with participants, lasting until July 2019. In May 2019, we had four full rehearsals of three hours each and performed a concert at the Sonify! festival[179]; in June we spent one day recording at the University of Music and Performing Arts Graz.

As a reflective continuation of case study one, this study began with a more concrete objective: questioning the established hierarchical relations in large jazz ensembles, looking for alternative notation methods in order to make the musical score more accessible to the musicians, thus sharing information which is generally held only by the conductor.

As with the first case study, the ensemble for this study had my Mereneu Project as the core; this time, instead of a string orchestra, I worked with five additional classically trained musicians, playing French horn, oboe, harp and two classical percussionists[180]. These musicians had very different levels of familiarity with jazz and improvisation in general. Stas Zhukovskyy (oboe) is a very experienced improviser, while Florian Pöttler (percussion) had a formal classical education and had no previous experience with jazz or improvisation. The other instrumentalists' experience lay between these two poles.

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[179] A festival that presents artistic works by musicians and students of the Doctoral School for Artistic Research at the University of Music and Performing Arts Graz (https://sonify.at/).

[180] Complete personnel: Christian Pollheimer, Florian Pöttler – classical percussion, Karl Heinz Tapler - French horn, Stas Zhukovskyy - oboe, Sandra Macher – harp, Patrick Dunst, Cristina Martínes, Oleksandr Ryndenko – woodwinds, Dominic Pessl, Gerhard Ornig – trumpets, Adam Ladanyi – trombone, Luis Oliveira – drums, Maximilian Ranzinger – bass, Emiliano Sampaio – guitar.

Case study 2 ensemble after recording (photo by Simon Reithofer)

The reason for this instrumentation was a desire to involve representatives from various sections of the classical symphony orchestra. In contrast to case study one, where I worked with the string orchestra, I aimed to cover other instruments of the orchestra: brass, percussion, woodwinds and harp. Taken together, the two case studies allowed me to work with different sections of the JSO separately; this helped me to systematically approach each group of instruments/instrumentalists and understand particularities that had to be taken into account in the composition, rehearsal and recording processes.

Partially due to my previous thoughts on idiomatic and non-idiomatic improvisation, the four pieces composed for this case study focused on hybrid idioms. Although each piece drew from specific genres, none required knowledge of a specific idiomatic language for improvisation: this fact opened up countless possibilities for the improvisers. This was stressed by Oleksandr Ryndenko (baritone sax and bass clarinet) in an interview, when asked about his feeling about playing in a large jazz ensemble with classically trained musicians:

> Honestly, I didn't really notice whether [others] were trained in classical music or jazz; this project isn't really jazz or classical. I would say it's a mixture of both, with lots of different elements of different styles.[181]

During the composition process, I aimed to combine jazz and classical musicians in improvised settings as much as possible, in order to stimulate not only collaboration, but also to create the necessity for musical dialogue and compromise. Improvising can be demanding (especially for classically trained musicians), but improvising collectively in duo, trio, quartet or in larger groups of people makes the challenge harder for any musician – this may be one reason why we are generally fascinated by the idea of collective improvisation. Jazz-trained musicians had to adapt to various situations during this case study (especially when improvising together with classically trained musicians) and needed to be willing to compromise and cooperate, as will be exemplified and discussed next.

Before continuing, I recommend that the reader listen to the recordings of the four compositions written for this case study: "Naked Tree," "Pattern," "Mr. Tappler" and "Jet Lag," labeled as "Mereneu Project Extended" at:

In the next pages, I will describe the working process developed during this case study in detail, pointing out particularities, challenges and discoveries and leading to a discussion about the strategies that encouraged collaboration between classical and jazz musicians in this large ensemble context.

Notation issues

As mentioned in case study 1, I was dissatisfied with the fact that the conductor is generally the only one in the orchestra who holds the complete musical information, in the form of the score. In case study two, I attempted to develop methods to make this information more accessible to the musicians. The main goal in terms of notation was to adapt the traditional scoring for large-scale jazz compositions, resulting in individual parts supporting increased autonomy for the performers.

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[181] Translated by the author from the interview in German.

The quantity of predetermined elements in musical notation can vary drastically depending on music context, tradition, etc. Using notation to give autonomy to the musicians in a large ensemble is a complex undertaking; I took particular inspiration from small jazz ensemble practice in order to find alternative methods of notation. In general, small ensembles in jazz work from a lead sheet or without notated music entirely, playing by ear. In the case of a lead sheet, musicians are provided with basic elements of a piece – melody, lyrics and simplified harmony in the form of chord symbols. The lead sheet does not dictate chord voicings, voice leading, bass line or other aspects; it simply shows the basic structure of a piece of music. In jazz practice, the lead sheet is generally used as a point of departure for the interpretation of a piece of music: the creation and/or improvisation of voicings, melodic lines (including counterpoint and bass voices), improvised solos, etc. In contrast, the parts of a big band or orchestral piece generally lack harmonic information and any content that is not to be played specifically by the musician reading the part. In the four compositions written for this case study, I aimed to incorporate the "lead sheet" idea present in small ensemble practice and adapt it to the large ensemble context.

Finally, if other orchestras intend to perform this music, it would be necessary not only to send the parts and scores, but also to describe in detail what is expected from this music, how to use the scores, how to rehearse the ensemble, the physical disposition of the musicians, and stress the distance that can (and should) exist between the written score and performance, as I will discuss in the next pages.

Implications of individual parts

In order to share the knowledge of the score with the musicians, individual parts can contain more information than is traditional. Each individual part can show – in addition to traditional notation – harmonic reductions in the form of chord symbols and melodic passages played by other instruments, replacing rests as much as possible. Although cue notes are common in classical orchestral parts, they are less so in large jazz ensembles. Additionally, they are usually supplied for the purposed of orientation, which was not my intention here. The excerpts below illustrate my idea:

Excerpt, harp part from "Jetlag"

Excerpt, percussion 2 part from "Naked Tree"

As we can see above, the parts offer guidelines from other instruments and harmony reduction where it is relevant. Cristina Martínez (tenor sax), for example, told me that when she got the parts (about two weeks before the first rehearsal), she was not sure how to interpret them and wondered why there were chords throughout all the parts. Later, in the section on rehearsal strategies, I will discuss how the rehearsals were conducted and how this additional information was implemented.

In interview, I asked participants about their impressions of the individual parts. According to Sandra Macher (harp):

> It was very pleasant: when you come from the classical orchestra, there are rests everywhere – in the worst case, [you wait] 172 bars and then bam, at bar 173 you have to play. I have found it very pleasant to just follow the line…to know what's happening harmonically.[182]

Comparing it directly to her daily experience in symphony orchestras, she pointed out that she primarily employed the cues for orientation. This confirmed my suspicion that this style of notation by itself has no impact on the process of making music. In addition to better orientation, Patrick Dunst commented that the harmonic information resulted in a better understanding of his individual lines in relation to the harmony, positively affecting his intonation:

> […] there are chords everywhere, which mainly relates to intonation for me. It's always great to have changes, no matter what voice I am playing, because then I know what I am playing, even if the voicing is like that (he mimes a dense cluster with intertwined fingers).[183]

Christian Pollheimer (percussion) also commented on his approach to interpreting his parts during the rehearsal process:

> That was not so new to me, because contemporary music borrowed it from jazz…the free jazz scene basically handed it over to contemporary music. And of course they write a lot down, but it varies from composer to composer. Some give me very detailed parts but then they already know, okay, they can give me certain freedoms, which I then simply take. And then I sometimes play something very different from what it says in the parts.[184]

As I already pointed out, each instrumental section has very distinct characteristics and common practices that distinguish them from other sections. Above, Christian stressed that percussion individual parts have often a lot of guidelines, and that percussionists are used to a degree of autonomy, but then he commented the proportion of notated and non-notated music in my compositions:

> That was actually nice, because if it's too free, it's difficult again. And here there was a certain text. …You wrote the chords down, and then you said: "you can play them.., but you don't have to." And in one take I played what was written, and I thought, okay, I'm not

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[182] Translated by the author from the interview in German.

[183] Translated by the author from the interview in German.

[184] Translated by the author from the interview in German.

going to [do the same thing] again just because the first take was so cool and copy it, but do something completely new. [185]

It was up to him to decide on possible changes or improvements in the parts, according to his taste, intuition and preferences. This autonomy resulted not only from the notation method, as he pointed out; it was a product of the notation and rehearsal strategies.

Although macrocosmic structures of the pieces such as form and harmonic progressions remained as composed (as in the score), a high degree of unpredictability was present in every performance of the pieces; a good example of this notation's direct result is the introduction of the piece "Naked Tree," an improvised harp solo. Below we see her individual part:

Excerpt, harp part from "Naked Tree"

Since Sandra was performing this music for the first time, in the first rehearsal we played it beginning at the second bar. The first rehearsal was used for her to listen to the music and familiarize herself with the melodic, harmonic and rhythmic material of the composition in order to be able to improvise a suitable introduction to the piece, creating and manipulating material that relates to the piece. In an interview, Sandra talked about her preparation:

> I tried over and over again…to somehow **link the material that comes later with the beginning**. […] And so, first of all…**I took the source material**, because it fits the harp

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[185] Translated by the author from the interview in German.

very well, **and developed it**…and then I completely freed myself from the whole thing and
just played what happened in the moment.[186]

Coming back to Figueroa's improvisational model, we see how the musical material is pointed out as a fundamental element of improvisation. It is a combination of perceptible dimensions (sounds, scales, chord progressions, etc.) and immaterial knowledge, including social and a subjective dimensions. During improvisation processes, the updating, transmission, invention and modification of material take place.[187] As we can observe in Sandra's interview, the material was not only the scale suggested by the composition per se, but also the way the pitches were organized later in the composition. It was her artistic decision to take certain ideas from the musical text and use them as inspiration for her solo introduction, which created a personal relationship between her and the piece of music.

To conclude, it is important to understand that the individual parts offered the musicians much more information about the music text than usual, but they did not obligate the musicians to react to it. I argue that this notation supported the musicians' autonomy and improved their relationship with the musical text during the working process, resulting in better performances and increased satisfaction with the experience. Even if a musician did not engage in changing or developing their part, I still believe they related differently and much more actively to the composition, due to their greater understanding of the music and their relationship to the piece as a whole.

Implications of the score

The notation method described above not only affected the individual parts; it also had implications in the score, used by me, in my role as conductor, and sound engineer Ulrich Katzenberger during the mixing process. In comparison to a traditional big band or orchestra score, the scores of the four compositions assumed another function, working more as a tool to give Ulrich and me an overview of the composed music. I would compare the scores to bigger lead sheets representing the large ensemble pieces.

Notated pitches, chords and other score specifications were that starting points for the performance, and during rehearsals, live performance and recording. Musicians could change their parts (and,

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[186] Translated by the author from the original interview in German. Emphasis added.

[187] Figueroa-Dreher, *Improvisieren,* 172, 173, 193.

consequently, the score) in ways that could not be predicted. The degree to which each score was altered depended on the openness of the composition per se, but also on the rehearsal process, available time for rehearsals, willingness and engagement of the musicians.

If a new conductor unfamiliar with the music and the methods used to rehearse it were to receive the scores, they would likely be confused by the excess of "useless" information, such as harmony in all staves and so many cue notes for all instruments. Below, two copies of page 16 from the score of "Naked Three" are shown for comparison: the first is the original score used during rehearsals (which I call a "virtual score"); the second shows the same page in traditional notation, only showing the essential information and without cues or harmonic reductions:

Excerpt, "Naked Tree" virtual score

Excerpt, "Naked Tree" score (traditional notation)

As we see, the difference in the amount of information is immense. As a result, the virtual scores used in rehearsal were messy and less than ideal from a conductor's perspective. In the end, this led to a new approach in my work with the full orchestra, which will be discussed in section 5.1, "Artistic Results".

The scores also resulted in a peculiar experience during the mixing process: the sound engineer frequently asked me what certain instruments should be playing at specific moments: "What does the harp play here?" or "What should trumpet two play here?" His questions were pertinent to the mixing process, and are usually answered by looking at the score. (Un)fortunately, for most of his questions, I had no answer; we were forced to listen to what the musicians did on the recording. A good example occurred while mixing the percussion parts: the two percussionists had a lot of freedom to decide which instrument they would use in many sections. Below we see three excerpts of their individual parts:

Excerpt, "Naked Tree," Perc.

Excerpt, "Naked Tree," Perc.

Excerpt, "Pattern," Perc.   131

Besides the freedom to choose which instrument to use, the percussionists could also decide not to play, add elements or change their parts in any way they desired, making the scores almost useless during the mixing process. I want to stress that I don't see this as a negative effect, but it is important to acknowledge that this working style involves challenges in the mixing process as well.

Rehearsal strategies

To explore the potential of the notation system described above, the rehearsals had to incorporate novel strategies, intrinsically connected with the notation methods.

In my work with the Metropole Orkest and in case study one, the rehearsals were conducted in a traditional manner. Briefly, the information in the score was communicated to the musicians via notation, with the guidance of a conductor. However, in this case study, the individual parts contained extra information intended to disseminate the score information (and consequently the knowledge and authority of the conductor) through the orchestra. However, the notation itself would have had little effect in the orchestra dynamic, since the musicians (both jazz and classically trained) were used playing what is notated in their parts by the composer and following the instructions of a conductor.

In order to support the engagement of the musicians in collaborating with each other and with the conductor/composer, it seemed necessary to explain how the notation should be interpreted during the performances before starting rehearsing. At the beginning of the first rehearsal, I told the musicians what the compositions were about and how they should interpret the musical text:

> These pieces are pretty open…you are free to make suggestions for the music. If you feel you should play something that is not written, play it. If you feel you should leave something out, simply do it. You are free to change your parts; you don't have to ask me. These rehearsals a chance for us to experiment and see what works and what doesn't.[188]

This first speech was intended to welcome everyone to the project and to encourage the active autonomous exploration of their creativity. This approach can also be compared to the jazz practice present in small groups, where musicians usually have much more autonomy than in larger ensembles. Trained jazz musicians are used to take on different roles, according to the instrumental setting in which they find themselves. In small ensembles, they are more proactive, quicker to modify the musical text and experiment; in larger ensembles (like big bands), they play their parts

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[188] Transcribed from my speech at the beginning of the first rehearsal.

and stay more attached to the musical text. The behavior of both jazz and classical musicians is not likely to change automatically simply by using more open notation and saying "you have more freedom." The experience in this case study shows it had to be explicitly said and re-emphasized at every rehearsal. In addition, I had to support this new setting through my actions (or inaction) as conductor. These included: 1) only conducting when necessary (which is difficult to judge in the course of a rehearsal); 2) not remaining in front of the band the whole time, the center of attention; and finally, 3) trusting the musicians' instincts and waiting for them to explore for themselves before giving them feedback from my perspective. In short, I had to actively give musicians autonomy and trust them.

In her interview, Sandra (harp) discussed her perception during the case study:

> I tried again and again. The way that you give the musicians so much freedom…t was completely new to me, and a little strange in the beginning, because I come from the classical orchestra, where everything has to be perfectly prepared. And then you come here and say, "Ah, just play differently than written if you feel like it fits." And that was very positive for me. [But] at the same time a bit confusing, because I'm not used to it. On the other hand, it opens up a lot of space.[189]

There was certainly more freedom available to the musicians than in a symphony orchestra or big band, but each musician explored it differently. In addition, one cannot be so naïve as to imagine that hierarchy did not play a role anymore. Power relationships still existed inside the ensemble, between the musicians and between the ensemble and myself in my role as composer/conductor. The role of each musician and their relationship to the others depended not only on the rehearsal method, notation and their own personality, but also on their instrument and its function in certain musical contexts (soft or loud, soloist or accompaniment, low or high) and on their sociocultural position (young or old, jazz or classical musician, male or female).

Acoustic particularities, physical disposition and recording

As in the first recording session, the ensemble was set up in a semicircle, providing good visual contact between all the musicians and below we can see the exact disposition of the ensemble and the way sections were grouped:

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[189] Translated by the author from the interview in German.
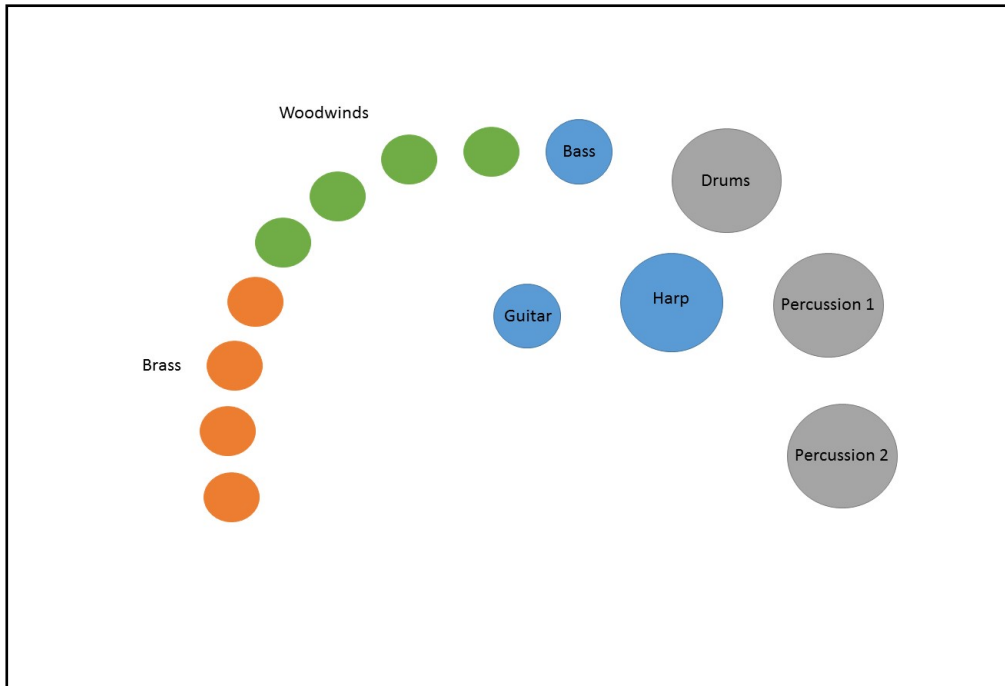
Physical disposition of the ensemble during rehearsals and concert

Disposition at the general rehearsal (photo by Simon Reithofer)

Arranging the ensemble in a semicircle not only supported better visual communication but also better sonic communication between the musicians. The traditional setting in big bands, for

example, has the horns organized in three rows, with the trumpet section at the back – this results in an unbalanced perception of the sonic result for the trumpet players themselves, for example. In quiet passages they can hear the woodwinds, especially when they are not playing themselves, but they generally listen much more to the rhythm section and themselves. There are advantages to the traditional big band set-up, but I believe these advantages are much more in favor of the audience and conductor. I believe this set up is reproduced based more on convention, habit and lack of questioning than due to any real practicality for modern big band music, which often takes very different aesthetic directions than traditional swing music. The large ensemble used in my case study is very distinct from the big band. I am not directly comparing the ensembles; instead I am questioning and learning from the big band convention (which strongly reinforces its hierarchy and is organized based on vertical leadership. An excellent example is the video:

Here, the The United States Army Field Band explains the reasons for the traditional big band set-up. According to sound engineer Ulrich Katzenberger,[190] a semicircular set-up allows the trumpet section to hear the other instruments far better, leading to better intonation and communication between the musicians during performance.

Besides the semicircular set-up, other technical factors also contributed to better communication in this large ensemble. Each type of instrumentation has acoustic characteristics which should be taken into account; the proper technical requirements are fundamental for the exploration of improvisation in a large ensemble setting. As in case study one, the volume difference between instruments was again a crucial challenge in case study two. In a big band, for example, all the instruments play at a similar volume; this is not the case when mixing instruments from the big band tradition (e.g. trumpet, saxophone, etc.) with traditionally orchestral instruments (e.g. harp, oboe, etc.). Although the problem of balance occurs with all kinds of ensembles, it occurs more frequently when instruments from the classical and jazz traditions are combined; therefore, the conductor, composer, musicians and sound engineers have to pay more attention to it.

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[190] Mereneu Project (2013), Mega Mereneu Project "Tourists" (2015), Mereneu Project "The Forbidden Dance" (2016), Mega Mereneu Project "Music for Small and Large Ensembles" (2019) and Emiliano Sampaio "Music for Large Ensembles Vol. II" (2020).

For instance, the harp is much softer and more delicate than brass instruments and drums, which forced us to give some thought to possible solutions for the live concert and recording. During the live concert, almost the whole orchestra performed acoustically; the only amplified instruments were electric bass, electric guitar and harp, which was an easy and obvious solution. During the recording, however, the situation was more complex. The harpist was placed in a separate room where she could play simultaneously with the orchestra, while keeping the harp microphones from picking up loud instruments. During the recording, she needed several hours to adapt to the recording situation; she told me it was a little bit uncomfortable in the beginning. She was alone in a room and could hear the ensemble only through the headphones. Visual contact was possible only with me and with a small part of the band via a closed-circuit television monitor. Although this physical separation made the recording quality much better, Sandra and Oleksandr (bass clarinet) both complained about the lack of visual contact, especially on the piece "Jetlag," where they improvised collectively. Although this is a typical issue in every jazz band recording and not a specific problem of mixing jazz and classical musicians, the issue becomes even more problematic in scenarios like this one. Comparing the live recording

with the studio recording

I would not say that the physical separation resulted in a worse performance – but as both performers pointed out, it demanded more effort from them, since they could no longer count on visual cues but had to rely solely on their hearing.

Large jazz ensembles that involve improvisation require a lot of technical support in order to provide the musicians, conductor and audience with a balanced sonic result. This balanced sound is a requirement for interaction and collaboration between the musicians during performance; in both case studies, different challenges arose, resulting in reflection and possible solutions, especially

concerning stage setting and amplification. In section 5.1, "Artistic Results", I will present the results of this complex process with three large jazz ensembles, offering musicians, conductor and technicians some possible solutions to deal with these challenges.

Interaction - in and beyond the performance

The discussion of interaction was of great importance to my research and illustrated how new hierarchical arrangements and the exploration of improvisation affected the musicians and the music in the large ensemble context. In case study one, I divided the understanding of interaction into two dimensions ("in performance" and "beyond the performance"), with different characteristics and taking place in distinct contexts. Now, in case study two, I aimed to see how these two categories are interrelated, and how they seem to constitute a cyclical feedback system.

By analyzing the video and audio recordings from the rehearsals, the concert and the studio recording, I was able observe the musical outcome at different stages (this was not possible in case study one, since only one full rehearsal took place and the concert was unfortunately not documented) and see how the musicians' performance developed from the first to the last rehearsal, and on to the concert and studio recording. In the next lines, I offer some examples to illustrate this cyclical process.

In this case study, the percussion section included a jazz drummer (Luis Oliveira), a classical percussionist who often works in crossover projects (Christian Pollheimer) and a classical percussionist who specializes in classical music (Florian Pöttler). During the process, they added instruments and created new parts for themselves based on mutual exploration and dialogue, seeking my approval after some larger change. In an interview, Florian and Christian described their impressions of the rehearsal process:

> Florian: We discovered what to do by experimenting together. You stimulated us to experiment during the rehearsals and we had this freedom. I thought, "cool, I can try something on my own; I felt I could find my own musical path," because there was freedom and not everything was notated – what, when, with which stick, etc…I had the chance to try things out.
>
> Christian: For example, the percussion trio [in] the piece "Pattern" worked really well…it was a classical musician who plays some jazz, a classical musician [who doesn't play jazz] and a musician who plays more jazz. We met and it worked great.[191]

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[191] Translated by the author from the interview in German.

The piece cited by Christian, "Pattern," is a good an example of the three percussionists' cooperation, and the way these open percussion parts developed over time. By comparing the video recordings from the first rehearsal and the concert, we can observe some crucial differences in their performance.

First rehearsal excerpt:

• Improvisation with pulse, but no fixed meter

• Florian plays triangle throughout

• Luis (drums) makes a "mistake," failing to stop playing at the end of the solo as notated for all three musicians. (he says "sorry" and raises his hand to apologize)

The same passage in live performance:

• The collective solo is now clearly over a 7/8 meter

• Florian and Christian play multiple instruments

• Together, they create a transition at the end of the percussion solo based on an accelerando and decrescendo effect (they coordinate the passage with visual contact)

After each rehearsal, the three percussionists spoke to one another and discussed possible changes and new ideas for the next performance. The comparison shows major changes in their approach over time, the result of a process that can be described as a feedback loop: rehearsal—discussion—rehearsal—discussion… I believe this process supported the development of the musical outcome throughout the whole experience, amplifying the novelty of the notation and rehearsal strategies.

To exemplify how "interaction beyond the performance" took place in this dynamic, I now turn to the development of the improvised duo by Oleksandr Ryndenko (bass clarinet) and Sandra Macher (harp) in the piece "Jetlag". The solo was notated thus in the score:

Excerpt from the piece "Jetlag"

As we see, the notation is pretty vague and open for the musicians. Although I gave Oleksandr a point of departure for the improvisation, Sandra was completely free to create; she had neither a starting point nor even pedal suggestions. Sandra described her individual preparation for this event:

> I noticed in the rehearsals that I was not entirely happy with the solo as it sounded. And then I tried different keys at home and decided on certain systems, I would say. And then I tried it out in the rehearsal and was then completely free. So I didn't commit myself to these pedals, and it worked.[192]

When I asked Oleksandr about the process, he began by describing the difficulty of recording an improvised solo without eye contact with Sandra (who was in another room):

> [It was] difficult because you have to hear the harp while simultaneously building [an improvisational structure] without disturbing the harp […] The recording was very difficult because I couldn't see Sandra's eyes, what they were saying. It was much easier at the concert because at least I could react to what she wanted.[193]

In addition, Oleksandr told me they had decided together that the harp would guide, and the bass clarinet would follow her gestures, working more as an accompaniment instrument (which was anyway already suggested in the score). The resultant music was not only the result of interaction in real time during the performance, it was part of a process of dialogue and agreement between the musicians that took place before and after each performance. The improvement from first rehearsal to the recording was impressive and could only be achieved with a great deal of engagement on the part of the musicians – the fruit of interaction in both dimensions. For comparison, we can watch the relevant excerpt from each rehearsal:

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[192] Translated by the author from the interview in German.

[193] Translated by the author from the interview in German.

- First rehearsal, 16 May 2019: sight-reading rehearsal; the duo was not rehearsed. However, they briefly discussed it.

- Second rehearsal, 26 May 2019

First attempt at the improvised duo. I give them initial instructions while they are playing. Oleksandr and Sandra explorating the situation cautiously.

- Third rehearsal, 28 May 2019

We can clearly observe more confidence and more organized musical ideas.

- Fourth rehearsal, 29 May 2019

Final rehearsal before the concert. I offer feedback early on, when I realize that the bass clarinet is obscuring the harp. After 35 seconds, the musicians are working together; we observe not only a connection between harp and bass clarinet, but also more band interaction (observe especially the drums and percussion in relation to the soloists) and the clear production of new material during the duo development.

- Studio recording:

After watching the four videos, the progress in terms of interaction and musical coherence is very clear, showing how the challenge of improvising collectively in the context of the composition "Jetlag" created the situation where individual preparation and interaction both during and beyond the performance were necessary parts of the process. After these two examples from case study two, I hope I have demonstrated that the two interactive dimensions ("in performance" and "beyond the performance") work cyclically, involving rehearsal, individual preparation, dialogue and compromise.

Between right and wrong

As a result of the previous discussion in section 4.3, "Between idioms" on how the string players understood their relationship to improvisation, how their discourse is connected to the concepts of idiomatic and non-idiomatic improvisation and how blurred the difference between a mistake and a non-mistake can be in non-idiomatic music, I deliberately avoided using templates from the jazz idiom in my compositions in this case study. Even if "non-idiomatic" is only a utopian ideal, working without focusing on a clear idiom directed the compositional concept to avoid clichés of jazz composition – 32-bar phrases, II-V-I cadences, blues forms, etc. Whether or not these pieces can be described as jazz is not important; however, it is relevant that their influences come from various sources – sometimes identifiable and sometimes not – and in this context, differences between musicians' intentions and actions was often incorporated into the music during the working process, instead of being treated as mistakes.

Besides their blurred position between idiomatic and non-idiomatic, the improvisatory character of the compositions involved a high degree of spontaneity and risk, characteristics that help transform our view of "mistakes."

> There is a certain playfulness in improvisation: the ephemerality of performance may
> suggest it does not "matter" too much, it may encourage greater adventurousness and risk-

> taking in exploratory venture… The immediate failure in improvisation can be turned around; an accident, an error, can be made musically meaningful… chance occurrences enrich the process of musical improvisation – perhaps even to the extent that it forms a major justification of improvisation for the musician: it is a self-enforced opportunity for extension of musical resource.[194]

Various figures have commented on this discourse: in the words of Kenny Barron, "if you do not make mistakes, you do not play jazz".[195] "Part of being an experimenter is to create conditions where you can make mistakes".[196] Alessandro Bertinetto argues that a characteristic of improvisation is the acceptance of mistakes as invitations for creative invention; each emergent, unforeseen event can be used by the performer as material for shaping new, aesthetically normative orders.[197]

> Considering a certain note as a mistake is to make it a mistake; conversely, taking something unexpected no more as a mistake but rather as a resource, as a stimulus to creativity, changes it into a resource, while reshaping the normative framework that is being built during the process.[198]

During this case study, I had various opportunities to observe how musicians dealt with "mistakes" in this context (less idiomatic, involving improvisation and open for collaborative participation of the musicians in the process of musicking). I would like to describe one experience in detail to illustrate how the idea of a "mistake" was questioned during the case study.

The example occurs in the piece "Pattern" at 1:45, where an "A" is notated for the timpani:

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[194] Orton, "From Improvisation to Composition," 764, 766.

[195] Rüedi, "Jenseits des Denkens," 53.

[196] Zimmermann, *Desert Plants,* 317.

[197] Bertinetto, "Do not fear mistakes," 95.

[198] Ibid., p. 97.

As we see in the score, the timpani attack is composed to coincide with the band on beat 6 of the second-to-last bar. During the first rehearsal (on 16 May 2019), the percussionist Florian accidentally played it one beat later.

On the video recording, we can see his lack of confidence and his chagrin at playing what he saw as a "mistake". However, in jazz or free improvisation for example, a "mistake" does not have to exist, – or more accurately, it can belong to the process of musicking.

In the next two rehearsals (26 and 28 May 2019) he played it as written in the score ("correctly"). Curiously, some of the musicians in the band had the first reading in their memory (and liked it more the "wrong way"), and suggested that he play it as he had the first time. As often happens in jazz, a "mistake" was thus incorporated into the music, becoming instead a reinterpretation, as we can hear in the final recordings (rehearsal on 29 May and studio recording on 12 June). Here we see the video from the 29 May rehearsal:

Florian's body language is clearly confident – the opposite of the first rehearsal, though he plays the same note on the same beat. Additionally, we can see his section partner's supportive reaction. In a group interview, the two percussionists spoke about their understanding of this specific event:

> Christian: We made something right out of the mistake!
>
> Florian: It was exciting, to make something right out of the mistake.
>
> C: This happens all the time in jazz solos.
>
> F: Yes, of course. But in this case it happened out of the notated music.
>
> C: But it also happens in jazz. When you play a line of a standard piece, you can change things and make it better. In classical music it's impossible.[199]

Florian's understanding of "mistakes" is clearly grounded in his personal classical experience, illustrated by his pointing out that it "happened out of the notated music," not in a jazz solo. In his perception, jazz solos permit mistakes where notated music does not. By living this experience, Florian's perception of music making changed positively:

> That was very pleasant for me…it's definitely something I want to take with me, even in the classical arena, because I think [people] play very conservatively…But we should try it out,; maybe it will sound better if you play it differently or with another mallet. And why not take this risk in a rehearsal? I mean, the worst that can happen is that the conductor will say "hey, I don't like that".[200]

Sandra (harp) also commented on Florian's experience:

> I think he also had to free himself from this classical rigidity. Not everything has to sound beautiful. It is not about this ideal classical sound; other parameters were more important.[201]

As Sandra recognized, other parameters were more relevant than the perfect execution of the precomposed piece, begging the question: what were these parameters? What was this music about?

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[199] Translated by the author from the interview in German.

[200] Translated by the author from the interview in German.

[201] Translated by the author from the interview in German.

Conclusion - Case study two

This case study focused mainly on the exploration of alternative notation, combined with rehearsal strategies suiting the notation and vice versa. It attempted to question the established hierarchical relationships (composer→score→conductor→performers) present in large jazz ensembles. The discourse focused on the process, challenges and achieved results; it became clear that less vertical hierarchical relations in large jazz ensembles are possible, and were achieved through modifications in the process of making music: 1) a less idiomatic compositional approach 2) alternative notation methods sharing the information in the score 3) trust-based rehearsal methods giving more autonomy to the musicians 4) alternative physical set-up and 5) the application of technology in order to create optimal acoustic situations. However, I would like to stress that I focused on my own personal artistic approach; numerous other possibilities remain open for inquiry.

Rigorous analysis of interviews with thirteen participants of case studies one and two (as detailed at "methodology") revealed that the changes in the five areas cited above stimulated qualitative interaction and collaboration in the large ensemble experience, allowing (but not compelling) the performers to be improvisers and co-composers. This collaboration not only affected the musical outcome aesthetically, it also contributed to a meaningful experience for the musicians themselves. This perception was pointed out in interviews in both case studies, related to situations that demanded extra effort in the act of musicking. In case study one, this extra effort was required more from the classical trained musicians (especially when they were involved in improvisation); however, in case study two, the modifications in the rehearsal process and notation required more effort from both classically and jazz-trained musicians, which made their musicking experience more challenging – and consequently more meaningful.

4.5 Reflection

Reflecting resonances from case studies one and two

The composition, rehearsal, recording and performance processes in case studies one and two affected both the aesthetics of the musical outcome and the social dynamic in the ensembles. After discussing particularities related to the response of the musicians in each case study as isolated experiments, I now reflect on more global responses, looking at them as one big picture, and at how their resonance with me and my external work contributed to my reflection.

Resonance, as defined by the sociologist Harmut Rosa,[202] can be seen as a way of encountering the world: people, things, history, nature and life as a whole. In the process of being touched and affected by something, and of reacting and responding to it, we are transformed during our life experiences. "Whenever someone has an experience of resonance – with a person, a book, an idea, a melody, a landscape, etc. – he appears as a different person".[203] In the next pages, I reflect on the resonances built during this artistic research on two different levels: the ones described and expressed by the musicians who took part in the case studies (2018 and 2019), and resonances from the external world relating to my artistic work. In both levels, these resonances stimulated a transformation and development of my artistic work during the research process.

The coexistence of classical and jazz musicians in the large ensemble context during case studies one and two offered space for exchange, but also for self-criticism and admiration of others' qualities. Artistically questioning the established hierarchy of large ensembles not only affected the aesthetics of the musical output, it also permeated the interviews with the musicians. Below, we see a few excerpts expressing this more clearly.

Christian Pollheimer, speaking to Florian Pöttler about Florian's performance:

> Really – hats off, Florian, for being only twenty years old you did a really good job. It's even more impressive because, as you said, you never had jazz or improvised music experience. I don't know if I could have done this when I was twenty with your coolness.

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[202] Rosa, Hartmut. *Resonanz: eine Soziologie der Weltbeziehung*. Suhrkamp, 2016.

[203] Schiermer, Bjørn. "Aceleração e Ressonância: entrevista com Hartmut Rosa," n.d. https://blogdolabemus.com/wp-content/uploads/2019/06/Aceleração-e-ressonância_Entrevista-com-Hartmut-Rosa_PDF.pdf. p. 6.

> And I hope I supported you in that too, and if I ever criticized anything, it is of course from
> the position of being older and more experienced.[204]

This confirms that although hierarchy was reframed in the large ensembles to some extent during the case studies, the power relations are much more complex and always present in social relationships – as with Christian's pointing out that he is "older" and "more experienced" than Florian. However, he also acknowledges the challenges they both faced during case study two, regarding improvisation and collaboration in the act of musicking: "I don't know if I could have done this when I was twenty".

Admiration appeared in many interviews, not only between section mates but also between jazz and classically trained musicians. Sandra Macher shared her impressions about working with the jazz musicians:

> I've noticed that the jazz musicians can't hide the fact that they have this experience in
> improvising and this easy handling of the sound material. Classical musicians have to check
> things out. I had to figure out which pedals to use, how do I deal with key changes to make
> it sound cool. So for me it was like "uhh, okay" at the beginning. It was very exciting. And
> I had respect for the whole.

On the other side, jazz musicians also shared their perceptions of the classical musicians. Oleksandr Ryndenko (woodwinds) complimented their preparation during case study two:

> They were fully involved. […] they come much more prepared than jazz musicians in my
> opinion. Because it's super cool for them. Because they don't have that experience as often
> as we jazz musicians have…and in my opinion they really give a hundred percent.

Maximilian Ranzinger (bass) offered his thoughts on the differences in attitude between jazz and classical players during rehearsals:

> I felt it was nice and I liked the classical guys, they had this really nice rehearsal attitude
> when you said "people (let's get started)." It wasn't quite like with us, where you say
> "people" and we say "yeah, five minutes."

According to Maximilian, while classical musicians tend to respond very quickly to the conductor's direction to start or continue a rehearsal, jazz musicians in a large ensemble will say "OK, I'll be there in five minutes" or "OK, I'll just grab a coffee first". As we see in Maximilian's interview, he complimented the attitude of the classical trained musicians while criticized himself and his jazz-trained colleagues. This self-reflection and criticism of one's own peers also appeared in Luis

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[204] Translated by the author.

Oliveira's (drums) interview, when he criticized the approach of jazz players when they play "free music" and find themselves outside of familiar contexts:

> I think the jazz musicians were more stiff when there was supposed to be free interaction. This "freedom" becomes dangerous…people tend to think less when they play "free", but actually it should be the opposite […] It seems that [jazz horn players] have less consciousness, there is no phrase, no motive, just noises or everybody playing at the same time – there's no dialogue.

The statements above show how the artistic process involving more autonomy and shared leadership supported performers' critical thinking about their own roles and attitudes in musicking. The observations, criticisms and dialogue between the musicians from both cultures were clearly stimulated by the space created for exchange, where different social dynamics and hierarchies could be perceived during the interviews and aesthetically experienced via the recordings thoroughout the research.

The participants weren't the only ones to provide reflection: the release of the album *Music for Large Ensembles Vol. II*, featuring recordings of both case studies, and my own active position in the field as musician also generated resonances in the research world, supporting my reflection.

Resonances from the field

Reflection on external feedback became an important element of my work: it allowed me to reposition my work in a larger context after the two case studies. Listening to other voices – from the media, from colleagues in the field and from my own advisors – played a major role in my artistic research. The constant exchange with the field in the form of conferences, presentations, colloquia, and even informal conversations with friends also played a role in my own thoughts.

The release of an album with the music produced in case studies one and two was undoubtedly a great help in generating feedback about the artistic research. In 2020, the music produced in both case studies was released on the album *Music for Large Ensembles Vol. II*[205] (Session Work Records). By releasing an album, I could reach a broader audience including radio, magazines and specialized media. The album generated reviews from magazines, specialized websites and people from the musical field.

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[205] https://emilianosampaio.bandcamp.com/album/music-for-large-ensembles-vol-ii-2

I was pleased to see that the critics perceived and commented on some of the aspects that were fundamental for the musical works – for example, the review from Wolfgang Giese ("*Musik an Sich*"):[206]

> Bereits nach drei Songs bemerkt man die fast schon unglaubliche Kunst dieser Arrangements, die voller Lebendigkeit sprühen, Themen und Elemente verschiedener Kulturen fliessen wie selbstverständlich ineinander und ergeben einen wirklich einzigartigen Sound, einen Sound, nach dem man lange in dieser Form suchen muss. Folk, Big Band Jazz und Klassik fusionieren auf exzellente Weise, das ist schier umwerfend und betörend, was Emiliano Sampaio gelungen ist. Man verabschiedet sich mit einer Kollektiv-Improvisation, mit "Relax", das für Viele so gar nicht entspannend sein mag, weil das Wort Improvisation wird groß geschrieben.

> After just three songs, you notice the almost unbelievable artfulness of these arrangements, full of liveliness, themes and elements from different cultures which flow naturally into one another, resulting in a truly unique sound, a sound that is rare in this form. Folk, big band jazz and classical music fuse in an excellent manner; Emiliano Sampaio's accomplishment is sheerly stunning and beguiling. The album ends with a collective improvisation called "Relax" – though the emphasis on improvisation may mean that many people don't find it relaxing at all.[207]

I was naturally glad to receive a positive validation from specialized jazz media, but I am aware that art critics aim to evaluate art from a specialized point of view, which should by no means be understood as the truth. Business interests and specific aesthetic criteria play an important role in defining what is "good" and what is "bad". However, these reviews were the first feedback from outside our group of participants about the music produced during this research. Other reviews came from the Swiss magazines *Jazz'N'More* and *Jazzthetik*:

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[206] Redaktion Musik an sich. "Musik an Sich - Magazin Über Rock, Pop, Metal, Klassik, Country." Emiliano Sampaio - Music For Large Ensembles Vol. II - Musik an sich. Accessed May 10, 2021. https://www.musikansich.de/review.php?id=21263.

[207] Translated by the author.

Jazz'N'More Review by Luca D´Alessandro, July 2020

Emiliano Sampaio
Music for Large Ensembles Vol. II
Emiliano Sampaio (g), Michael Lagger (p), Adam Ladanyi (tb), Gerhard Ornig (tp), Patrick Dunst (cl), Florian Pöttler (perc) etc.
(CD – Session Work Records/Austromechana)

Es ist eine aufwendige symphonisch-jazzige Arbeit, die der in Graz lebende brasilianische Gitarrist Emiliano Sampaio mit "Music for Large Ensembles" vorlegt. Hierbei handelt es sich um die Fortsetzung seines 2019 publizierten "Music for Small & Large Ensembles". Dieses hatte er ursprünglich für sein Basisnonett "Mereneu-Projekt" komponiert und nun mit Stücken ergänzt. Und auch diese haben es in sich: "String Orchestra" ist für 18 Streicher geschrieben, "Mega Mereneu Project" erfordert die Mitwirkung von mehr als zwanzig Mitgliedern und in "Extended" klingen Instrumente, die man für gewöhnlich im Jazz nicht antrifft, darunter Oboe, Waldhorn und verschiedene klassische Schlaginstrumente. Die acht Titel auf dem aktuellen Album nehmen Bezug auf unterschiedliche Themen. Und jeder Titel hat eine ganz eigene Färbung. Während "For Astor" von der Musik von Astor Piazzolla inspiriert ist, kehrt "Afrika" zum Ausgangspunkt der brasilianischen Musik zurück. Und "Balada para Brumadinho" ist den 270 Menschen gewidmet, die im Januar 2019 beim Bruch des Damms eines Abraumbeckens in der brasilianischen Stadt Brumadinho ihr Leben verloren haben. "Music for Large Ensembles Vol. II" ist anspruchsvoll und verlangt daher in jedem Moment ungeteilte Aufmerksamkeit. *Luca D'Alessandro*

Emiliano Sampaio
Music for Large Ensembles Vol. II
Session Work / Harmonia Mundi
★★★★★

Er ist erst 36, aber schon auf beinahe 50 Alben zu hören, davon fast 20 unter eigenem Namen. Der Brasilianer mit Aktionsbasis Graz spielt staunenswert Gitarre und Posaune und komponiert obendrein Sensationelles für kleine und große Ensembles. Sein gewaltiges Talent als Arrangeur schätzt man bei der hr-Bigband inzwischen ebenso wie bei Jazzorchestern in Hilversum, Kopenhagen oder Zagreb.

Sein Mereneu Project (mit neun oder zehn Musikern) ist Emiliano Sampaios Kernformation, die er bei Gelegenheit gerne noch vergrößert – das Grazer Studentenreservoir macht's möglich. Auf dem neuen Album stellt der Brasilianer gleich drei solche Erweiterungen seines Projects vor: 1) ergänzt um 18 Streicher, 2) ergänzt durch andere „klassische" Instrumente (z.B. Oboe, Harfe), 3) vergrößert zur 17-köpfigen Bigband. Sampaio greift hier also in die Vollen – er nutzt, wie er sagt, den historischen Moment der „verwischten Grenzen zwischen den Genres". Die ganze Welt der Musik scheint er in diese acht Stücke zu packen, die im Durchschnitt über acht Minuten lang sind. Sie verbeugen sich vor Piazzolla und Bernstein, grüßen Afrika und Brasilien, bieten Solisten-Features, geschichtete Klangereignisse, kollektive Improvisationen und harmonische Breitwand-Schwelgerei. Schon der Opener „For Astor" durchwandert sehr gegensätzliche Stationen zwischen Sentiment, Furioso und Groteske – letztlich kennt man Sampaios Stücke eben erst, wenn man sie wirklich zu Ende gehört hat. Kaum jemand sonst bringt so viele neue Ideen in den Jazz.
Hans-Jürgen Schaal

Jazzthetik Review by Hans-Jürgen Schaal in July 2020.

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In addition to the specialized press, Renate Wolter-Seevers, a Grammy Award-winning music producer from Radio Bremen (Germany) with decades of experience recording classical orchestras, wrote me the following impressions via email:

> Ganz eigenständig in der musikalischen Sprache. Ein superschönes Projekt. [...] Die Streicher waren offensichtlich dankbar, musikalisch einmal "losgelassen" zu werden, wobei die Mischung der Nationalitäten in dem Apparat natürlich perfekt für so etwas ist. [...] Wie hat sich die Probenphase abgespielt? Das habe ich mich beim Hören immer wieder gefragt, denn Patterns und Abläufe müssen doch von Dir vorgegeben sein, dazu bestimmte Ranges für die Improvisationen, oder wie machst Du das? Und wieviel Proben ist denn sinnvoll, wenn man die Spontaneität nicht verlieren will?

> Very unique in the musical language. A very beautiful project. [...] The strings were obviously grateful to be "let off their leash"; of course the the mixture of nationalities in the group is perfect for something like that. [...] How did the rehearsal phase go? I kept asking myself that while I was listening, because patterns and processes have to be determined by you, plus certain situation for the improvisations – how did you do that? And how many rehearsals make sense if you don't want to lose spontaneity?[208]

Because of her experience with classical orchestras, she quickly observed how the strings in case study one were treated differently; some of her questions were also interesting. The questions of how much was notated and how much improvised, as well as the consideration of rehearsal as a process that loses spontaneity, were issues that already appeared in case study one (and are reflected in the respective chapter).

On the contrary, my artistic advisor Ed Partyka had very different questions and comments, because he was aware of the compositional process involved in both case studies and supervised the writing process. His observations during the composition of both case studies almost always stressed the "danger" involved in allowing the performers too much freedom, and how this freedom could distance the composition from my ideals. However, his remarks were always constructive and not discouraging, and made sense: his musical world is very connected to his experiences as big band trombonist and student of Bob Brookmeyer, who has had a profound influence on his work. Nonetheless, my interest lay in embracing this risk and seeing how musicians would react to the music, what solutions they would find, to what degree they would change or develop their own parts, how they would interact, how would the music sound, etc. The process of composing was a

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[208] Translated by the author.

preliminary step toward the part which I considered the most relevant to observe these nuances: rehearsal.

After the recording and mixing of each case study, Ed Partyka and I met to listen to the recorded material in informal meetings; it was interesting to listen to his impressions on the work and reflect together. I felt the music written for case study one did not appeal to his taste or expectations, but the long, occasionally noisy sections of amorphous collective improvisation in the piece "Relax," which was fundamental to case study one (see section 4.3: Case Study One, Between idioms), seemed to bother him especially. His reception of case study two, on the other hand, was much more positive: on hearing this particular passage of the piece "Naked Tree" he commented that it sounded great and unique:

One could posit that Ed Partyka's preference for the results of case study two was a matter of taste, but a similar sentiment came from Professor Dr. Deniz Peters, the head of the artistic doctoral school and one of the few people present at the concerts of both case studies (2018 and 2019). After the concert in May 2019, I met Professor Peters informally, and he told me that he thought that I had found something special, that the research was going in the right direction. Although his words were very general and did not go into specifics of the work, they encouraged me to continue developing and refining certain strategies, while avoiding others.

In conclusion, the resonance of case studies one and two gleaned from the field were very important for my reflection – especially since after their completion, I began composing the piece which was the ultimate artistic result of this research, and the subject of the next chapter.

V - Artistic Results and Conclusion

5.1 Artistic Results – Jazz Symphonic Orchestra (JSO)

> In artistic research the 'native', the artist him- or herself, claims to unearth and shape the knowledge embodied in the artwork, in the practice of art and in the reflection on it. The artworks themselves and their presentation constitute an indispensable component of the research outcome.[209]

The presentation of results and outcomes in artistic research is still under debate. There is little consensus about how it can be done properly in order to communicate the knowledge produced and gained by the artists to their peers, and to the field and community as a whole. While some artists defend the pure art object itself as a result, others "propose an additional verbalization of their artistic research as a tool to systemize and deepen their artistic investigation as a matter of self-reflectivity and scientific rigor".[210] Since the core of this artistic research was the exploration of alternative hierarchical relations in large jazz ensembles through systematic artistic experimentation combined with social research, it seemed suitable to present the results in both forms – as an artistic work and as a research report, a traditional product in ethnography.

During this artistic research, I built an argumentation that opened room for discussion on hierarchical relations in JSOs, involving the relationships between classically trained and jazz musicians and the complex social dynamics involving conductor, composer and performers during the process of creating music together. After experiencing and exploring fundamental aspects of the JSO in two preliminary, smaller-scale case studies, I now organized a full-scale jazz symphony orchestra. Here, I present the results of three years of artistic research in two forms: 1) this dissertation and 2) as an artistic product in the form of scores, which can be accessed and downloaded at:

In this chapter, I discuss in detail the composition and preparation process involved in this artistic project, synthesizing the insights of previous case studies in the form of results which – ideally – would also present a reflection about the performance of it, the live experience. However, life

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[209] Lüneburg, *TransCoding,* 165.

[210] Ibid., p. 165-166.

always surprises us with adversity, requiring improvisation: as I have argued in this work, this music resonates with our society and is directly influenced by the events of today's world – such as the COVID-19 pandemic, which reached Europe in March 2020, when I was in the process of composing the music that was meant to be the artistic output of this research. Although the pandemic was responsible for my inability to live my musical life on stage and exchange with other musicians (especially in a large ensemble context), a huge amount of time suddenly became free – time for reflection, composition and to finalize this dissertation.

The program composed for JSO was to be performed in March 2021 at Mumuth, the theater of the University of Music and Performing Arts Graz, in two concerts. The event would include the production of a live album and subsequent reflection; however, all of this has now been postponed to October 2021. The pandemic created a very specific condition for the completion of this dissertation, which was finished before the recording (in April 2021). That is why this chapter presents a reflection on the preparation process, but cannot yet reflect on the artistic output: ideally, the chapter would include an account of the rehearsal process and the live performances as well. Nonetheless, the dissertation does discuss the artistic results as far as possible, supported by the previous knowledge gained during the research process. The final artistic result, in the form of two live concerts and an album, will hopefully take place in October 2021 and 2022 respectively. I plan to subsequently review and reflect on this dissertation in a final chapter, based on the experiences that will come in the future.

Conception and composition

After the experiences that took place between October 2017 and October 2019, I started applying the concepts and strategies that were developed during that period to the composition of a new program for JSO. In total, the process lasted a year and a half of composing, reading, reflecting on the whole work and writing this dissertation simultaneously.

As described in the methodology, case studies one and two were preparation for writing the work for the JSO, consisting of five woodwinds, five brass, rhythm section (drums, bass, piano), harp, two classical percussionists, and a string orchestra consisting of four first violins, four second violins, four violas and four cellos – in short very nearly the groups from case study one and two combined into one large orchestra.

Besides decisions about instrumentation, the concept behind the compositions linked the work to important world events in 2020. In March 2020, the COVID virus became omnipresent; on 25 May 2020, the murder of George Floyd in the United States triggered a series of protests against racism all around the world. As a native of Brazil, I have seen the structural social problems of racism and poverty close-up – problems that became evident as never before when the COVID pandemic struck Brazil. In Brazil, 56% of the population is black;[211] this is historically the poorest population, with less access to education, health care, etc. As a result, it is also the group most affected by the pandemic.

I, a white male from a middle-class family, have always had a privileged position. At this point in my life, I felt compelled to use the power of this position to acknowledge my historical responsibility, calling attention to a subject that is still so present in the world – even in Austria. These thoughts inspired me to dedicate this large work, divided into eight parts, to the fight against racism and poverty, interconnected problems that still seem far from solved. It is my hope that if more artists call attention to this problem, we can achieve significant changes for our future. This fight against racism and poverty was translated into the musical process in different ways, in a conceptual, compositional and rehearsal process that will be discussed in the following pages.

Musically speaking, the artistic work synthesized the discourse on hierarchy in large jazz ensembles by exploring improvisation and collaborative processes. As Christopher Small points out, "the relationships created during a musical performance (…) are more the ideal, as imagined by the participants, than the present reality,"[212] but only by imagining can we create the possibility for real change. Creating a space of musical and social collaboration aimed ultimately to stimulate the musicians, the audience and myself to rethink our relationships with the world; and translates directly to the fight against racism and poverty in itself. Rethinking one's relationship with the world involves recognizing one's mistakes and injustices in the history into which we are inserted, which can be the first step in changing the reality.

Concretely, the composition process consisted of pre-planning the improvisation settings; then, when the pieces were sketched out I generated the sketch map that we can see below.

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[211] According to the Brazilian National Household Sample Survey (Pesquisa Nacional por Amostra de Domicílios - Pnad, from IBGE).

[212] Small, *Musicking,* 49.
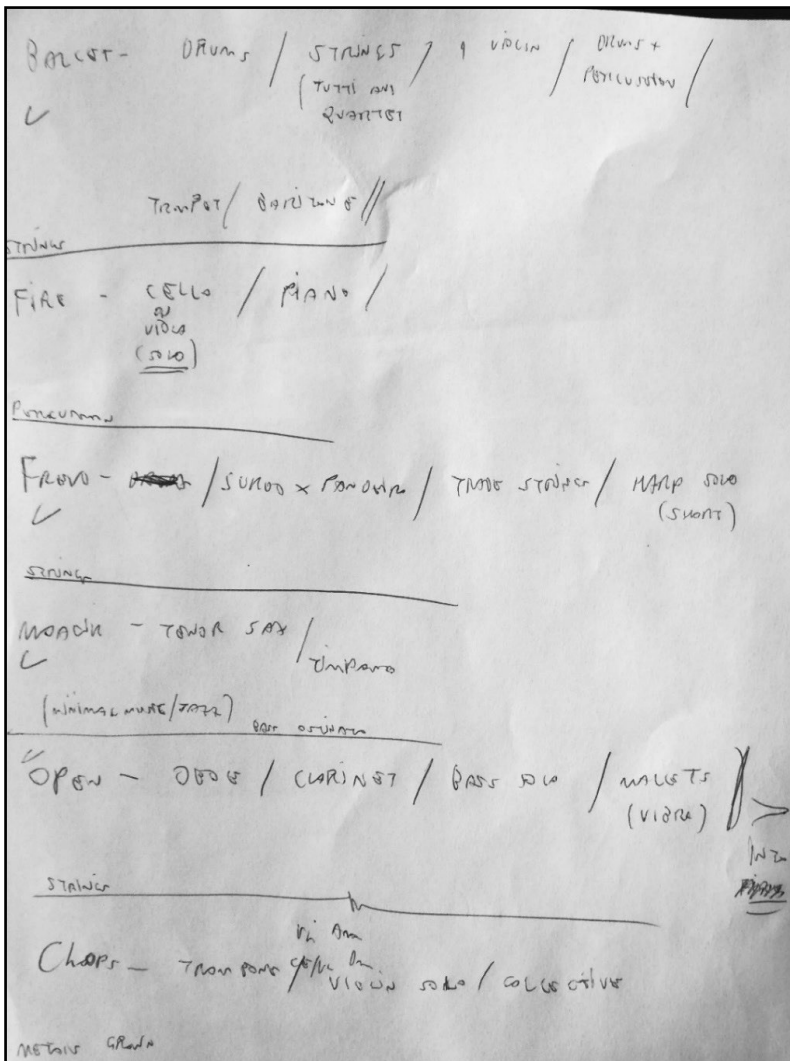
Overview of the piece's structure with possible soloists (photo by the author on 31 May 2020)

This overview was a way of mapping the improvisation settings beforehand – if only as suggestions that could be modified during the composition and rehearsal process, or even during the concerts (which relates strongly to an Eurological view of improvisation). In the list above, the pieces were still out of order; during the development of the sketches into final scores, I reorganized the pieces and connected them with transitional passages exploring improvisation in smaller settings: between each of the eight pieces, I suggested an improvisational setting to be developed by a small group of musicians or by a soloist. The scores suggested generally "how" and "who" should create these bridges between the pieces; the soloists received a general indication as to the starting points for their improvisations. The composed material for the pieces before and after the improvisations functioned as stimuli and inspiration for the improvisers.

Using improvisation with different approaches in the same artistic work built a connection to concepts of both Eurological and Afrological improvisation, as developed by George Lewis. As he

argues, "a more widespread view that has evolved in Eurological music circles with regard to improvisation is the notion that, to be musically coherent, improvisation cannot be left as 'free', but must instead be 'controlled' or 'structured' in some way".[213] In this regard, improvisation in this work incorporated different degrees of control and structure (I believe there is always some degree of control and structure). However, my focus was mainly on the framing of the improvisation in the compositions, exploring possibilities from micro-improvisation (relating to interpretative possibilities) to "controlled" or "structured" improvisation (solos framed in the compositions) and extending to what Lewis calls Afrological improvisation:

> One important aspect of Afrological improvisation is the notion of the importance of personal narrative, of "telling your own story." […] Part of telling your own story is developing your own "sound." […] Moreover, for an improviser working in Afrological forms, "sound," sensibility, personality, and intelligence cannot be separated from an improviser's phenomenal (as distinct from formal) definition of music. Notions of personhood are transmitted via sounds, and sounds become signs for deeper levels of meaning beyond pitches and intervals.[214]

These aspects of Afrological improvisation permeated the piece at two levels: in the rehearsal process I attempted to let the performers express themselves and their personhood through their own sound and in the freedom to co-create and co-compose the work, rather than constraining them. Additionally, in a macrocosmic dimension, Afrological improvisation was the soul of the freely improvised "bridges" between the eight compositions, allowing performers to "tell their own story" without control or structure (actually with a minimum of control and structure, since these improvised moments were part of a larger whole).

To practically develop the "bridges", the first rehearsal had two main objectives: 1) to read through the whole program, giving the orchestra an an overview of the music; and 2) to make a preliminary selection of soloists for the eight composed pieces, and survey which musicians were interested in building the improvisational bridges between the pieces. After reading each piece, the orchestra was asked who would want to play the improvised bridges; the musicians who showed interest would receive these roles – though that could change in subsequent rehearsals. The improvisational transitions were planned to be rehearsed in the second, third and fourth rehearsals.

To give a concrete example, at the end of the first piece, the score suggests a "cello solo as a transition to the next piece" (this information is visible in all parts). The cello parts also include this

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[213] Lewis, "Improvised Music after 1950: Afrological and Eurological Perspectives," 115.

[214] Ibid., p. 117.

additional indication: "only one cello from the section (?) / from Dm to Gm". Practically, it suggests a harmonic movement and asks the cello section whether one player is going to improvise the bridge alone, or if multiple players want to improvise it collectively. All of this information can be used or ignored by the performer. There are no stipulations concerning duration, style, technique or any other parameter.

Since I have touched on notation, I will continue to discuss how the notation strategies developed during case studies one and two were of fundamental importance in supporting the collaborative process and exploration of improvisation in the JSO context.

Notation

In case study two, I looked for ways to share the knowledge in the conductor's score, which is the basis of the notation applied in this final work. It resulted in notation where individual parts functioned as points of departure for the rehearsal/performance, while scores offered an overview for the conductor. The conductor's scores showed the detailed, precomposed sequence of sonic combinations, but they by no means aimed to represent the sonic outcome. In the literature, for example, we find reference to conductors who can "listen" to music in their heads by reading the score. This would be possible only to a very limited extent for these works, since the sonic result depends heavily on decisions taken by the performers and conductor during performance.

As in case study one, the involvement of string players in improvisation settings created the need to organize the notation – both in the score and the individual parts – in a way that made it clear how the string section was split in each situation. The strategies discussed in case study one ("Notation") had proved effective and were applied again in this case study.

In case study two ("Implications of the score"), however, I pointed out how problematic it was for the conductor when the scores contained the composed material plus the cues and harmony reduction for all players. This difficulty led me to create two different scores for each piece during this JSO project, which I considered the most effective way of dealing with this question:

1. The first score, used by the conductor looked like a traditional score and contained only the precomposed information.

2. The second score was used only as a generator of the individual parts. It did not need to be printed and was not used during rehearsals/concerts by the conductor. It held the same information as the first score, plus cues and harmony reductions.

As a result, I had both the individual parts (with all the desired extra information) and the cleaner scores to be used during this final work. I need to acknowledge that the amount of time invested in the formatting of the second score and individual parts with extra information was immense. After the composition process, when a composer would normally generate the individual parts, I needed days of extra work to format the second score. The individual parts also took much more time for their layout, since they had almost no rests – the majority of the space normally taken up by rests was used to include musical information relevant to each player, making each individual part much longer than usual. However, these notation modifications were effective in promoting interaction and collaboration.

Acoustic particularities, physical disposition

I now return to the initial questions proposed in the chapter "Preliminary study". Back then, I suggested that looking for modifications in the JSO hierarchy would have implications for the stage setting and other technical issues, leading to questions such as: how should we microphone a JSO? Why is the conductor in front of the orchestra and the orchestra's main object of attention? Why do the audience and orchestra face each other (for whom is it actually necessary)? After two case studies and discussion on these aspects, I proposed solutions that were applied in this project. However, this is an extremely complex area: "when it comes to handling internal orchestral balance and dynamics in practical terms we must…avail ourselves of accumulated knowledge, craftsmanship and many centuries of surviving experience. Plainly, such knowledge cannot be substantiated by well-tested theoretical, let alone scientific arguments, but this is partially due to the absence of anything resembling a general theory of the orchestra in the theoretical literature on music".[215]

Based on my accumulated experience leading bands of different sizes, I argue that we generally underestimate the influence of physical disposition and monitoring in the transformation of the music-making experience in large ensembles. The traditional set-up of most ensembles (such as

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[215] https://theidiomaticorchestra.net/dynamics-and-balance/

symphony orchestras or big bands) serves different purposes than the experience of the musicians themselves. The symphony orchestra, for example, has a traditional set-up that aims to give the audience a well-balanced mix of the acoustic instruments[216]; for this reason, louder instruments (like the brass) are placed at the back of the stage. Although it is difficult to affirm that a brass instrument is louder than a violin (because a trombone can play softly and a violin can be extremely loud in its high register, in addition to other factors – projection, room acoustics and the harmonics produced by each instrument, for example), we can generally categorize instruments as "louder" and "softer" by measuring their average decibel values. By doing so, we can affirm that brass are generally louder than woodwind and string instruments, as we can see in the table below:[217]

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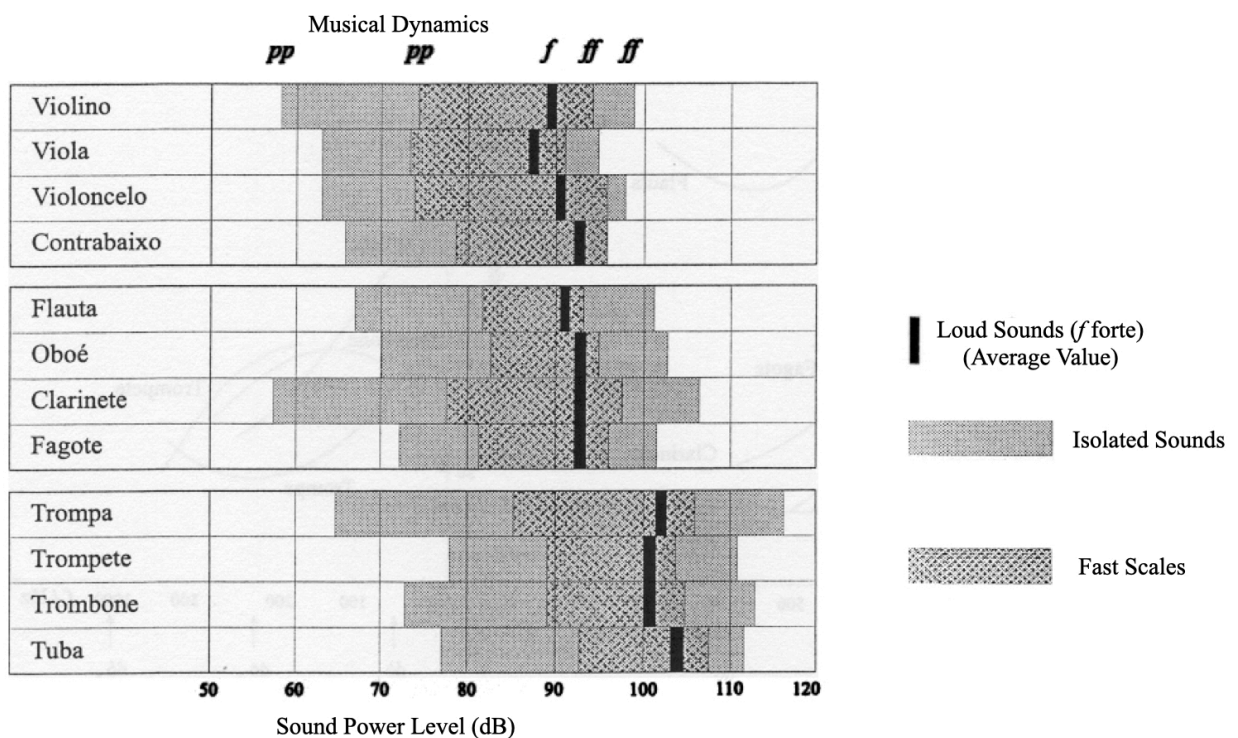
[216] Although an orchestra set-up can vary depending on the orchestra, the most common orchestral set-up today places "the first violins at the front left of the stage, and the cellos on the front right. The conductor stands at the front edge of the stage. (…) Second violins are also on the left side but farther from the front of the stage, and violas are in a similar position behind the cellos on the right. Double basses are arrayed along the back of the cellos and violas. In the centre, there are flutes to the left and oboes to the right; behind them are clarinets to the left and bassoons to the right. (…) Horns are often centered, behind the woodwinds. Trumpets are generally located at right rear, with trombones further to the right and the tuba at the right of that line of three, close to the double basses. The timpanist is usually at the centre back of the orchestra for a classical symphony, with horns and trumpets on either side; however, in a major Romantic or 20th century work, the timpanist will likely be either to the right near to the trumpets and trombones or to the left of the horns and woodwinds, behind the second violins. The percussion section – the "kitchen department" of the orchestra – will normally be arrayed behind the timpanist; the harp or harps will be in front of them, tucked in behind the second violins. The displacement of "troops" may depend upon the shape of the stage and whether or not there are fixed raised platforms." See Knight, David B. "Geographies of the Orchestra." In *GeoJournal*. Springer, 2006 , p. 41.

[217] Inácio, Octávio. "Fundamentals of Room Acoustics." IACMA – International Advanced Course on Musical Acoustics, 2005, p. 7. https://www.researchgate.net/publication/228446442

The idea of experimenting with new ways of arranging an orchestra on stage is not new. Different composers have always looked for specific seating arrangements, some of which are markedly different from the standard. Some interesting early experiments were done by the conductor of the Philadelphia Orchestra, Leopold Stokowski (1882 – 1977). "Some of his arrangements were far from usual. He tried several possibilities, including an interesting curve to the distribution of violas in the middle of the orchestral layout (…) trying layouts that would be to the advantage of the music"[218], as we can see in the two figures below:
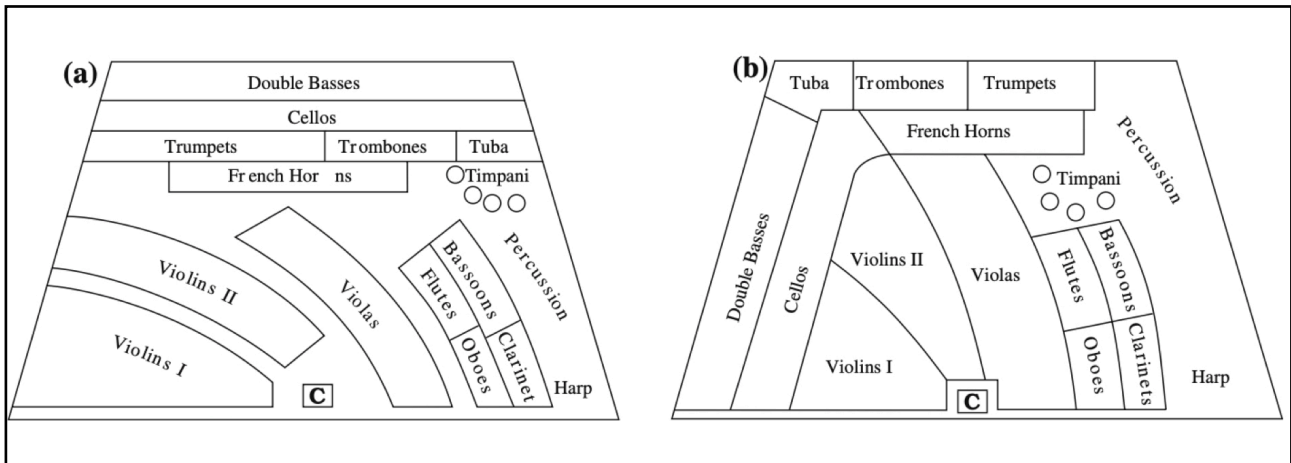
In the 20th century, works from contemporary composers such as Karlheinz Stockhausen, Henry Brant, Iannis Xenakis, Béla Bartók, Harrison Birtwhistle and others experimented with a wide range of different set-ups for the orchestra.[219]

In addition to many other roles, the conductor in large ensembles generally helps to adjust acoustic problems that can exist in larger groups of musicians; that is why the conductor is generally positioned in front of the ensemble. In this position, the conductor listens to the sonic result from (almost) the audience's perspective and is able to better rehearse and coordinate the ensemble. Briefly, the stage disposition of large ensembles generally favors the audience's and conductor's experiences over that of the performers.

To return to my central argument, we are (both in jazz and classical music) immersed in a tradition that values an acoustic sound. Orchestras and small jazz groups both value the ability to play acoustically in balance; concerts are often performed with very little or no amplification. Both

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[218] Knight, "Geographies of the Orchestra," 43, 44.

[219] Knight, "Geographies of the Orchestra," 45.

orchestras and jazz groups also often recorded with all of the musicians in one room, which makes orchestration – in which the individual characteristics of each instrument are carefully taken into account – of fundamental importance. In the JSO contexts, where we mix strings, horns and rhythm section and aim to explore improvisation and interaction between solo instruments, orchestral balance is also an important issue.

We observed, both in case study one and two, that good acoustic and visual communication and monitoring played an important role and were essential for musical interaction and collaborative work in musicking. In case study one, I discussed the negative experience at the recording when the horn players could not hear the strings and needed extra monitoring. In case study two, Oleksandr (bass clarinet) commented on the difficulty of improvising together with Sandra (harp) in a separate room during the studio recording, as compared to the concert situation with the whole band sitting in a semicircle:

> At the concert it was much easier for me, because I at least felt the reaction to what she wanted, and I could see whether she was going with me or not. The recording was quite exhausting for me because I couldn't see her, I could only listen to her.

Technological development is part of jazz history and is constantly changing the way we make music. The guitar, for example, was mostly an accompaniment instrument during the big band era due to its low volume, but its role changed drastically with the invention and modernization of amplifiers and electronic effects. I can also cite the historical change in how soloists are incorporated in big band music, and how this practice was transformed by technological developments. In most modern big bands, the soloists are amplified separately and move to a separated position on the stage for their solos, allowing them to play more softly but still compete in volume with the full band. These are just two examples of the aesthetic impact of technology on music practice.

After this short introduction, I would like to address issues related to microphoning and monitoring large jazz ensembles that may improve the musicians' situations. In the next pages, I will suggest strategies that were incorporated in order to promote good acoustic and visual communication in this JSO context: specific modifications in stage setting, monitoring and microphoning for horns, strings and rhythm section separately.

The winds

Instead of having the horn players organized in rows, the use of semicircles in the previous case studies was very effective. The semicircle is often applied in studio recording situations: it improves the sonic separation of the horn microphones, which allows for a more controlled mixing process (though different audio engineers have different approaches, depending on the situation and especially on the kind of music that is being recorded).

Although many big bands record in the traditional set-up, it is during recordings that we see the majority of experiments with positioning the musicians; many big band recording sessions are done with a semicircular disposition of the horns. Besides microphone separation, this disposition improves visual contact and a better acoustic understanding of the musical "big picture", as previously noted. I would argue that this common studio practice could also be incorporated in live situations. A few large ensembles already use this disposition; the example below shows the Jazz Big Band Graz on stage with the horns arranged in a semicircle:

Jazz Big Band Graz (photo by Erich Reismann).

The strings

The string section is traditionally placed in front of the orchestra for a number of reasons;. Their softer character in relation to brass and percussion is certainly a factor, and the sweeping motion of the many bows moving together is visually impressive when we watch a concert – this probably also plays a role. Placing the strings in front tends to yield a more balanced orchestra sound for the audience and overhead microphones (in case of a recording) .

When we involve improvisation and soloists from the string section, it becomes necessary to microphone the particular soloists closely in order to mix them loud enough to compete with the orchestra. Additionally, the string section microphones need to be protected from louder instruments. If we microphone a violin closely – but with a trumpet player behind it, for example, the microphone signal from the violinist will be full of trumpet and will be of little use.

One possible solution can be seen in the Metropole Orkest's disposition below. The string section is protected by its position behind the orchestra, and also by the use of Plexiglas (yellow arrow) used to protect the cellos from the loud percussion instruments on the right side.

The Metropole Orkest (photo by Reinout Bos)

To microphone the string section, I suggest two main possibilities:

1. All string players use clip microphones (as in the picture above): this yields a better close sound and less interference from other instruments, but the sound engineer must mix the strings in real time during the concert, making them louder for solos and important passages. Besides that, it is difficult to get the rich, warm, blended acoustic sound that is characteristic of the string orchestra.

2. The string section is microphoned using several overhead microphones: in this situation, the sound engineer has no control of the individual levels inside the string section. For solo passages, violin and viola players have the option of standing up to get closer to the microphones, making them automatically louder. This microphone disposition was discussed in section 4.2, "Preliminary Study," with the Metropole Orkest, as we can see in the picture below (microphones marked):


The Metropole Orkest during rehearsal (photo by the author)

Rhythm section and conductor

In JSOs, the leader in terms of pulse and tempo is usually the rhythm section, rather than the conductor. Thus, both of them should be visible for the whole band. Since I worked with semicircles, the best place to place conductor and rhythm section was in the middle of the ensemble. This gives a sense of groove to all the musicians, and helps musical interaction during improvised solos. It also brings horns and strings closer to the rhythm section.

Summary

In this project, I worked with a JSO with 36 musicians and applied the strategies suggested above, which involved a lot of technical planning and discussions with the sound engineers involved in the concert and recording. One year before, I met the sound engineer, Ulrich Katzenberger, to talk about my ideas; this conversation resulted in the stage plan used for rehearsals, concert and recording, which we see below in a sketch made in March 2020:
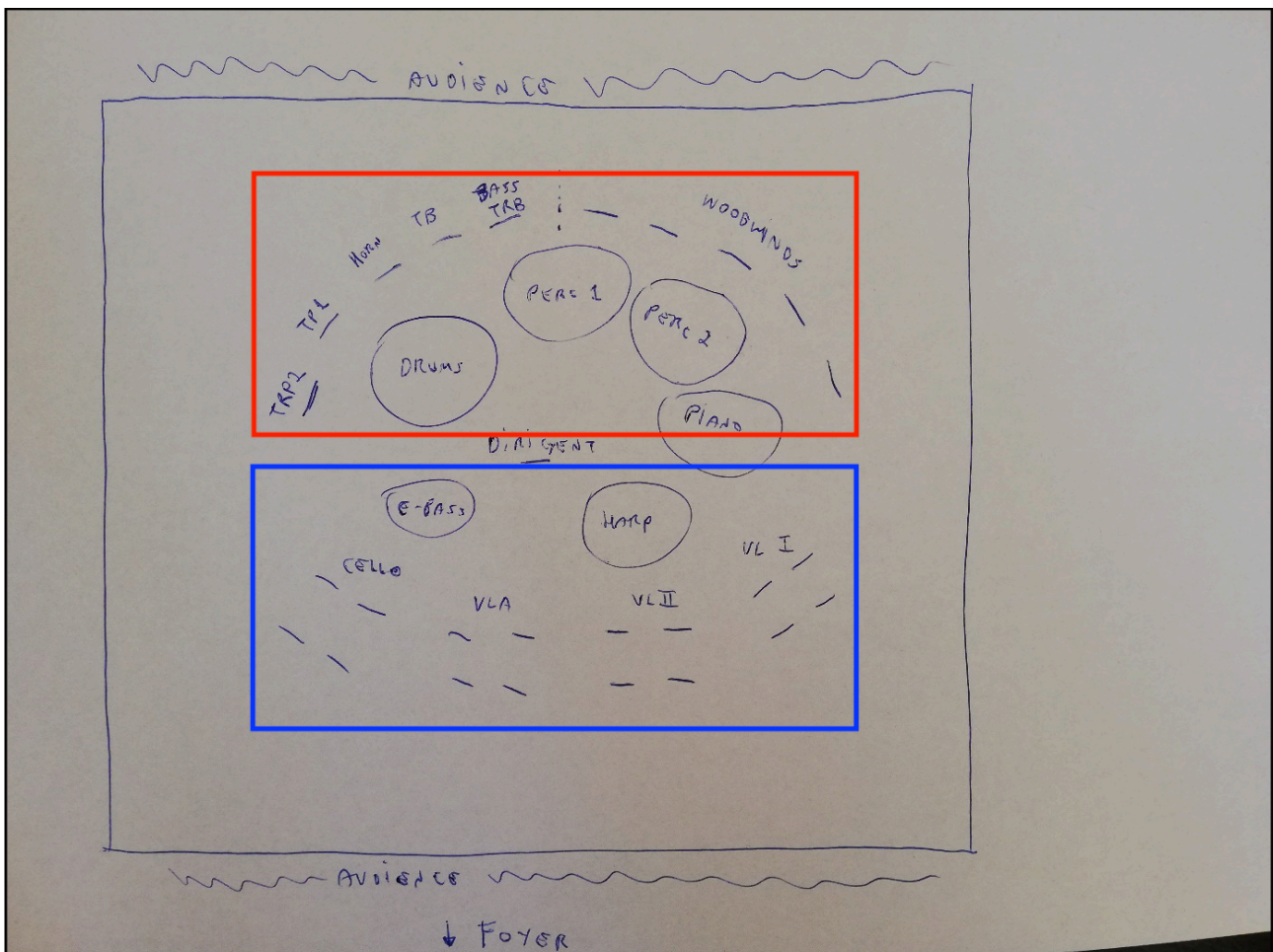
Stage plan developed by Ulrich Katzenberger and the author

As we can observe, the conductor and rhythm section are placed in the middle to improve visual contact with the whole orchestra. As you can imagine, the conductor is always showing their back to some part of the ensemble; however, this is not a serious problem, since the conductor rarely needs to be seen by all musicians at the same moment. It does mean, however, that the conductor has to turn to have eye contact with specific musicians during the performance.

Woodwinds and brass form one semicircle, allowing them to see each other. On the opposite side, the string orchestra forms another semicircle, allowing visual contact with winds and rhythm section and among the strings themselves. As we can see above, the JSO could be divided on stage in two parts: a louder group (marked in red) and a softer group (marked in blue). This separation aimed to shield their microphones and assist the mixing process, both live and in the studio.

The disposition of large ensembles is the result of a historical development that has often privileged the audience, conductor or composer (which is also the case in my work). My work aimed to mitigate this, creating better conditions for the musicians. As a side effect, these changes also modify the sonic result somewhat from the audience's perspective: since the ensemble forms a circle and the audience can be placed on both sides of the band (or around it), each section of the audience will have a distinct sonic experience. If a homogenous sonic effect is desired for the audience (as is traditional), the sound engineer will face additional challenges, and technology will play an important role. The circlular disposition and the close microphoning makes the task of mixing this orchestra in a live concert very demanding. Differently than in case studies one and two, where the ensembles played almost acoustically in live situations, this JSO was completely microphoned, also a necessity to record the live concerts.

To turn the live mixing into a manageable task, I invited a colleague to assist the sound engineer during the performances. This assistant studied the scores in advance and was present at the rehearsals, where he made a note of passages where certain instruments should be mixed louder or softer (from the audience's perspective) during the performance. Individual string players' improvisations and softer instruments such as oboe, harp, flute and French horn needed additional support to be audible from the audience perspective, and required even more amplification during their improvised solos. During the live performances, the assistant communicated this informations in real time to the sound engineer – with so many factors to take into account, this proved essential to the live mixing process.

To summarize, physical disposition and modern monitoring are complementary and essential elements when working with a large jazz ensemble today. Above, I have proposed interrelated suggestions for both areas. It should be said that these strategies are only possible because of technological developments in sound engineering in recent decade – the development of better monitors, clip microphones, etc. – and we have to acknowledge the fundamental role of the sound engineer and assistant in this context: they are an integral part of the performance process.

Copyright issues

As mentioned, an album of the live recordings from the JSO concerts is planned for release in 2021/22. It is important to acknowledge that the recording process crystallizes not one performance, but rather a selection of moments where the composer/conductor (or producer) assumes the power of editing, cutting and reassembling a performance that never existed on stage. This is common practice in both popular and classical music, turning to enormous proportions with internet. The recording is a mere idealization of the real performance; because of this, it has its own methods of production. In this respect, the recording is one thing and the performance another.

Since albums are products that generate financial income, it is important to discuss the implications that the collaborative process of music-making can have for copyrights. As we saw, the background concept of these compositions for JSO draws attention to the problems of poverty and racism; as we know, the pandemic has been not only a humanitarian tragedy, but has also had strong economic effects – several social strata, among them artists, have experienced a severe reduction in income. This dark reality however, was a good opportunity to start a discussion that seems to be necessary if we want to promote cooperation, collaboration and fairness in large ensemble contexts, especially where the hierarchy is different from the traditional top-down model. How should we deal with copyright income in a large jazz ensembles in order to fight poverty?

During this research, I intended to involve performers as improvisers, even as co-composers. However, I am aware that the initial compositional ideas were product of my solitary work as a composer. During the rehearsal process and performances, musicians were invited to be part of the creation of the work and questions about copyrights and authorship that I did not address during the research emerged and are certainly worthy of discussion: to what degree can I be considered the composer? How are the musicians registered in the copyright (as performers or composers)?

This is a discussion complex enough to serve as the subject for another doctoral dissertation. However, I had to make practical decisions about the registration and release of the album. Because I truly believe that the achieved results are only possible due to the contribution of the musicians involved in the process (where my precomposed work was further developed, edited, processed, revised and/or adapted), I asked myself what I could do to show my acknowledgment and appreciation to the musicians for their contribution, sharing the financial profit generated by the album (especially royalties for radio play) as fairly as possible.

I decided to split the copyrights: 50% for me and 50% to be shared by the musicians. This solution has two main results: it offers 1) a symbolic recognition of the cooperation and 2) a monetary compensation through the division of royalties. This was a symbolic act; I did not claim that I composed half of the music and that each performer contributed equally with 1/50 of the final result. It would be impossible and absurd to try to calculate the exact percentage that each musician should earn based on their participation. Nevertheless, it was important to acknowledge that artists should reflect on this question, especially when involving the performers in collaborative creative processes where the lines between composer, conductor, producer, performer and improviser are indistinct. This was a small but essential step to open the discussion of how shared leadership in music can lead to shared profit as well.

The conductor's role

In case studies one and two, I worked actively as composer, conductor and instrumentalist. This mixed role was cited in more than one interview as being positive from the musician's perspective.[220] As Florian (percussion) commented:

> I grew up completely in the classical field. Sure, I've played in a band, but not much; I hadn't had much close experience with jazz. And so this fusion was exciting for me. Also in the rehearsals…that the quasi-conductor is the composer and also a performer…this creates a completely different relationship.[221]

The search for "a different relationship" was the core of this artistic research. The conductor's role comes into discussion only now because it was only in this last phase that I assumed the

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[220] See for example Katja (cello) in interview in section 4.3

[221] Translated by the author from the original interview in German.

conductor's role exclusively, no longer working as a co-performer. During this research, I aimed to challenge the traditional hierarchy present in large ensembles; this also involved reflection on the relationship between the conductor and the orchestra, which I would like to address in the next pages.

The conductor's task is basically to guide the musicians; this task has been accomplished in very different ways throughout history. Until the 19th century, the composer and conductor were generally the same person (almost always the case in the jazz history up to the present), and although the figure of the conductor is not essential for coordination in large ensembles, 19th century Romanticism gave birth to the profession of conducting. The cult of the "great conductor" was consolidated in the 20th century, supported by radio broadcasts, recordings, music critics and other writers.[222] A good example can be found in the beautiful book from Haruki Murakami *Absolutely on Music: Conversations with Seiji Ozawa*, which I coincidentally read while writing this dissertation. The power relations and friction that exist between orchestra musicians and conductors is famous and present in many reports and anecdotes through music history: In this context, I would like to reflect on the figure of the conductor, present both in the big band and symphony orchestra traditions – and which this research aimed to question.

As Niina Koivunen points out, "conductors may be among the most undemocratic leaders in the world".[223] They have the power to make interpretation decisions about all aspects of performance – and are almost never questioned. Christopher Small also points out that the role of the conductor is not only to coordinate the orchestra, but it also reinforces the idea of the "powerful and dependable autocrats" who decide on every detail of the orchestra's work – not only related to interpretation, but also to repertoire, the hiring and firing of musicians and "imposing their personalities and their ideas on their orchestras…molding the orchestra's composite personality and its sound in their own image".[224] I would argue that this description of the conductor's work is already old-fashioned but it still resonates today, in both jazz and classical cultures.

During this research, the notation methods aimed to share the information of the scores with the performers; the rehearsal strategies aimed to give more autonomy to the performers – and following the same line of reasoning, the conducting approach incorporated the idea of shared leadership. The

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[222] Koivunen, "Leadership in Symphony Orchestras," 65-66.

[223] Koivunen, "Leadership in Symphony Orchestras," 67.

[224] Small, *Musicking,* 84.

concept of shared leadership emerged in the 1990s[225] and criticized the leadership discourses present until then, which focused on heroic leaders, leadership at high echelons and on individuals rather than teams. Shared leadership emphasizes empowerment and teamwork, where members take responsibility for the outcome and the leader is more like a facilitator.[226] As other studies point out, shared leadership can "influence team affective responses such as commitment, satisfaction, potency, and cohesiveness, as well as team behavioral responses such as effort, communication, and citizenship behaviors".[227] Leadership, in this context, is viewed as a sequence of multi-directional, reciprocal influence processes among many individuals in different positions, resulting in knowledge created through the relational process.

Notions of shared leadership are present in the discourses of free jazz and improvised music and many composers/improvisers have already called the figure of the conductor and vertical leadership into question with their works. We can cite Butch Morris's "Conduction" or John Zorn's "Game Pieces"[228] as good examples. In both cases, the conductors exercise leadership and are improvisers at the same time, sharing (to some extent) their responsibility in the act of creating music with the performers.

Barry Guy points out that the art of writing for improvisers:

> …lies not in guessing what they'll do or drawing on their gimmicks, but in composing music that inspires them to do something you couldn't imagine. This practice thus requires the humility not to know; it means you have to believe in something unknown, in something as fragile as improvisation.[229]

I argue this is not only true for composers but also for the conductor's work, when the music aims to involve improvisation, collaboration and shared leadership. By acknowledging the unknown, the conductor, often seen as the possessor of the musical knowledge in the score, shows their

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[225] See Bryman, 1996; Spillane, Halverson, &Diamond, 1999; Pearce & Sims, 2000; Scully & Segal, 1997; Senge, 1997; Yukl, 1998.

[226] Koivunen, "Leadership in Symphony Orchestras," 143.

[227] Houghton, Neck and Manz, "Self-Leadership and SuperLeadership," 125.

[228] The most famous "Game Piece" written by John Zorn was "Cobra" (1984), which was a score format in which Zorn aimed to provoke interaction in a large group of musicians through "controlled improvisation". The score presents no pitches, rhythms, motives, etc.; instead, it offers a series of playing situations to be chosen during the performance by the conductor and performers. Zorn points out that the conductor still works as a communicator in this setting: the players signal if they want to move to section A or B, and the conductor, using big paper signs, can transmit the change to the ensemble.

[229] Intakt records - Barry Guy. London Jazz Composers Orchestra. Ode. Accessed May 10, 2021. http://www.intaktrec.ch/ljcoode-a.htm.

vulnerability, their acknowledgement of the necessity of cooperation and their willingness to make music together.

My artistic work throughout this project was focused on enabling shared leadership discourse in the jazz symphonic ensemble. To do so, it was necessary to reframe the relationships in a JSO, which also included a new way of thinking about the relationship between conductor and musicians. I suggest that the creation of music can occur in a trusting, open relationship, where the conductor has a strong but humble conviction about the music, is responsive to the orchestra, respects and nurtures musicality without imposing their own views on the musicians.[230]

> In a shared leadership culture, trust and respect for others are crucial…and creating warm and caring relationships between the members of an organization enables them to tap into their creativity to the fullest.[231]

I am not so naïve as to claim that a conductor can exercise his/her function without any coercive authority. However, the conductor – as a leader – has several important roles in the shared leadership process. The conductor should listen more and talk less, ask more questions and provide fewer answers, encourage individual and team problem-solving and decision-making. The conductor should strive to replace conformity and dependence with initiative, creativity and independence, and "engage in the facilitating roles of selecting team members, developing team member skills, filling in for lacking skills, managing boundaries, and empowering team members".[232]

As we see, the conductor's function in a shared leadership context is extremely complex and presents many challenges, posing concrete questions about implementation in practical situations. During the analyses of case studies one and two, I detailed some of the approaches used to promote shared leadership during the rehearsals. However, some more global elements have not yet been addressed, requiring awareness from the conductor's perspective and a set of working conditions, which I discuss next.

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[230] Koivunen, "Leadership in Symphony Orchestras," 141.

[231] Koivunen, "Leadership in Symphony Orchestras," 144.

[232] Houghton, Neck and Manz, "Self-Leadership and SuperLeadership," 133, 134.

Rehearsal strategies: some conditions for shared leadership

In this section, I will continue to reflect on the relationship between conductor and JSO, and connect this relationship to some of the rehearsal strategies developed during this research. I focus on conditions that can be created by the attitudes of the conductor to support musical exchange, collaboration and shared leadership in large ensemble contexts. I argue that these strategies are not only valuable in the JSO environment, but also in other large ensemble contexts.

Figueroa-Dreher points out that contexts that involve improvisation depend on an open attitude on the part of the participants, which in turn depends on a certain acceptance of loss of action-control in favor of the music interaction.[233] The same open attitude can be observed as a requirement in shared leadership, where team members must be able and willing to engage in the process.[234] I suggest that this "open attitude of acting" is connected to certain circumstances of the workflow and its environment; in the next paragraphs, I discuss some factors that proved supportive of an environment that nurtured the musicians' open attitude in case studies one and two, and that will be applied in this orchestra project as well.

The rehearsal strategies developed during case studies one and two were created and adapted almost by instinct during the rehearsal process; only through the analyses of interviews and rehearsal videos was I able to realize the importance of the environment and workflow aspects of the process. Concerning the first case study, Katja (cello) pointed out how pleasant she had found "the **relaxed** atmosphere".[235] In case study two, both percussionists reinforced her perception:

> Christian: …and the recording and the rehearsal situation I found…very pleasant, because you have **peace**, which you need for this kind of thing, with such a bunch of individualists.
>
> Florian: Yes, and also what Grilli [Christian] said, with this **peace** – that's not always obvious. Especially in large orchestra projects, it's often very hectic, with only a few rehearsals. And you always managed everything in a **calm** and **serene** way, and you very very encouraging, and I think that's great. Because often in the orchestra, conductors cross the line and get very abusive, which shouldn't be necessary – and it often makes the music sound forced as well.[236]

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[233] Figueroa-Dreher, *Improvisieren,* 268, 269.

[234] Houghton, Neck and Manz, "Self-Leadership and SuperLeadership," 126.

[235] Translated by the author, emphasis added.

[236] Translated by the author, emphasis added.

A relaxed atmosphere, peace, and serenity were pointed out by the interviewed musicians as ingredients for the success of the rehearsals and the development of collective work. As Niina Koivunen points out, the mood of the musicians can change very quickly in stress situations in a large ensemble context:

> As individuals the musicians can think and act as rationally as anybody else, but as a community its reactions can be unexpected and intense. A symphony orchestra as an artistic community is very sensitive and emotional.[237]

The same can be said of a JSO: a tense collective mood creates an environment where communication and interaction cannot happen properly. I have experienced this personally with diverse groups: the bigger the ensemble, the more difficult it is to keep the musicians relaxed, willing to cooperate and challenged.

I would like to suggest some practical approaches that conductors and bandleaders can take during rehearsals in order to promote a calm atmosphere, which – as we have seen – is a requirement for the maintenance of the "open attitude" required for shared leadership and improvisation:

1. If possible, rehearse all parts of the planned program in every rehearsal. One might argue that this will result in a superficial rehearsal but I defend this strategy based on my accumulated experience through the years and on evidence from cognitive research:

> Sleep supports learning in important ways. First, it is not only organizing the learning of the prior hours we have spent awake, it is also preparing us for future learning. We can, therefore, say that sleep optimizes learning by making sure that we don't forget what we need to remember and setting ourselves up related learning later on. [238]

All rehearsals I conducted during the case studies were three hours long. Between rehearsals, the musicians had time to relax and sleep, and – consciously or not – they reflected on what had been played and had time to internalize the music and come up with new input for the next rehearsals. Besides the benefits to the learning process, performing the whole program in every rehearsal also supports the feeling of accomplishment.

2. The feeling of accomplishment has already been discussed in section 4.3, "Case Study One - activation and empowerment." In short a more meaningful experience for the musicians

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[237] Koivunen, "Leadership in Symphony Orchestras," 73.

[238] Schön, Natasha. "Can You Learn While Sleeping? The Relationship between Studying and Sleep." Brainscape Academy. Brainscape Academy, February 18, 2021. https://www.brainscape.com/academy/can-you-learn-while-sleeping/.

seems to be dependent on the conclusion of the work that is being currently done. Translating it to the rehearsal process, each piece that is being performed needs attention, concentration and a lot of physical energy. When the performance of a piece begins, a whole different energy takes place and the collective objective as a group in the moment is to make music together. Ideally, this performance will go from beginning to end, which gets more difficult the bigger the ensemble gets. This is the main reason why I made an effort to play the pieces from beginning to the end already in the first reading session during rehearsals, even if many mistakes happened. Playing the whole piece as often as possible was essential for the musicians to achieve an overview of the pieces and have the feeling of accomplishment, supporting an enjoyable experience and a sense of progress. I stopped performances in the middle on occasion, because they were completely falling apart – but a conductors should develop a keen sense of when it is possible to put the orchestra back on track during a performance, and when it is not. Summarizing, I would argue that we should stop the performance of the pieces during rehearsal as few times as possible.

3. To avoid interruptions during the performance of the pieces during the rehearsals, I suggest the conductor can and should communicate with the musicians during the performance. I talked and/or gesticulated during the execution of the pieces, giving advice or suggestions (to a specific musician or to a section). In the flow of the performance, I communicated corrections related to articulations, dynamics, blending, etc. In addition to retaining the flow of the piece, talking to the musicians immediately after the moment when a musical action happened helps them remember their state of mind and the feeling at that exact moment.

4. After the first performance of a given piece in the rehearsal, I suggest that conductors should have already noted problematic passages (I make notes in the score during the performance). At this point, before making corrections, I suggest asking the ensemble if there are questions about the piece, giving the musicians a chance to remember what has just happened and to verbalize any doubts or unclear points. After answering questions, I suggest making large-scale corrections first: there is little point in going into great detail when the musicians are still getting to know the piece. Additionally, I believe that many things become clear during the rehearsal process, allowing the musicians to adjust things such as balance, intonation and phrasing for themselves, in a cooperative process involving verbal and non-verbal communication (interaction "in" and "beyond" the performance). I acknowledge that the

composer and/or conductor must make an effort to remain cool-headed after the first reading of a piece: normally, they have already invested a lot of time in the piece; it can be very frustrating to listen to a first reading that is very far from the ideal version.

5. After some rehearsal, the performances (improvised or not) tend to begin crystallizing and gestures tend to repeat more often and can be recognized. At this point, it is productive to go into detail, suggest changes or offer new input to look for different approaches in a section or improvised solo. Sandra (harp) pointed out a major difference in the rehearsal process between case study two and how a symphony orchestra normally works, related to the moment when the ensemble's idea of the performance coalesces:

> In the classical orchestra, I think there is much more work done on subtleties, timbres. I believe that the decision is made in the second rehearsal at the latest: "Okay, that's how it should sound." And from then on, [they] work on that perfect sound, and [the ideal] doesn't change. You actually left the freedom to change things right up to the end.[239]

During the rehearsals, I encouraged the exploration of other nuances every time we played a piece, using the rehearsal time to discover the performative possibilities of each piece until the moment of a live performance.

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[239] Translated by the author from the interview in German.

Conclusion

> I think the audience should feel relaxed and happy when they go to see an orchestra play, because it's a miracle, it's a miracle that you can get a hundred people to do anything together, let alone play music.[240]

Though this dissertation has reached its conclusion, my artistic research will continue throughout my artistic life. In these last pages, I reconstruct the development of this research from its conception, summarizing the main findings presented in the archival research, preliminary studies, case studies one and two, and finally offering perspectives and questions that remain open.

After four years of intensive artistic research and almost 200 pages of dissertation, I believe the opposite of what Frank Zappa said in 1983. By adopting a different approach to working with large jazz orchestras, we can create a musical and social context which deals differently with hierarchy, acknowledges the work of the individuals, and results in other aesthetic ideals. An orchestra playing should not be a miracle; it should be an inspiring example of people working together.

This work began by asking how we can establish communication between jazz and classical musicians, empowering them to engage in collaboration in large ensemble contexts. This main question led my artistic work to examine and explore the hierarchical organization that is present and reproduced in large jazz ensembles. As Christopher Small points out, relationships and traditions in making music are a "matter of choices and there is nothing inevitable about the arrangements we make, it is not ordained by nature but is a social arrangement".[241] To better understand the social arrangements in large jazz ensembles, the introductory chapters discussed the establishment of the JSO tradition in their historical context, linking it with the development of the third stream. It showed the aesthetic and social implications that this cultural establishment reproduces up to the present, using the two most active JSOs in the world – the Metropole Orkest (Netherlands) and the Orquestra Jazz Sinfônica do Estado de São Paulo (Brazil) – as examples.

Seeking alternative hierarchical social organizations for large jazz ensembles in my artistic practice, I focused my exploration on two main, interrelated strategies: first, creating mechanisms to change the social dynamic in large ensembles, which explored a multi-directional relationship between

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[240] "To Be Perfectly Frank." Frank Zappa in an interview with Edwin Poucey, January 23, 1983. https://www.afka.net/Articles/1983-01_Sounds.htm

[241] Small, *Musicking,* 36.

musicians, composer, conductor and notated music; and second, exploring the possibilities of incorporating improvisation in a large ensemble context.

Shared leadership proved to play a fundamental role in the implementation of improvisation in large ensembles, as well as in the exploration of new hierarchical organizations within large ensembles. However, the development of a shared leadership environment within large jazz ensembles showed to depend on a chain of requirements which have been pointed out and discussed through this research. Briefly:

1) In the literature, works have pointed out that improvisation depends on a social environment that encourages the musicians to engage in qualitative improvisation. What Silvana Figueroa-Dreher summarizes as an "open attitude"[242], Jared Burrows and Clyde Reed describe as "open communication", which they connect with the necessity of trust, the ability to make selfless choices, introspection based on internal responses to musical stimuli, courage to play with intention and vulnerability, and listening skills.[243] At first glance, the list of necessities above seems to relate to the individual attitude and psychological setting of each musician, but although this is true in a sense, I observed (from the inside perspective, in the process of rehearsing, conducting and performing) that the states described above are supported in practical situations by the maintenance of a calm, relaxed atmosphere. In section 5.1, "Artistic Results", I reflected on how the promotion of a relaxed atmosphere in a large ensemble context requires delicacy and efficiency on the part of the conductor. I suggested a series of rehearsal strategies and attitudes to be implemented by the conductor that proved effective in the promotion of a proper atmosphere, which in turn supports the ensemble's engagement in qualitative improvisation and collaborative work.

2) Besides a relaxed atmosphere, trust is an important component in shared leadership:

> Trust enables and facilitates interaction, collaboration, risk taking, experimentation, interpretative leaps, and all kinds of phenomena that are frequently associated with 'wonderful' performance.[244]

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242 Figueroa-Dreher, *Improvisieren,* 268, 269.

243 Burrows and Reed, "Free Improvisation as a Path-Dependent Process," 408.

244 Gritten, "Developing Trust in Others," 259.

In case studies one and two, I explored the question of building trust between the composer/conductor and musicians, and among the musicians, by exploring two elements: first, a notation system that shared the knowledge of the conductor's score with the musicians; and second, rehearsal techniques which encouraged participation, cooperation, decision making, autonomy and risk taking. The notation system, associated with suitable rehearsal strategies, stimulated the emergence and maintenance of trust between the participants in the large ensemble projects.

3) Shared leadership further requires effective communication. Good sonic and visual communication in large ensembles were supported by the application of technology (including monitoring and microphoning techniques) and through a readjustment of the traditional stage setting established historically by orchestras and big bands. As I have pointed out, the musicians need to hear what both they and others play in order to develop communication. Recommendations in this regard were discussed in the subchapters "Acoustic particularities", but it is worth noting that I reported only one possible alternative to improve communication; many other ways remain open for further inquiry. It is important to stress that proper sonic and visual communication is extremely relevant for musicking in other contexts as well; musicians in other contexts can profit from these ideas as well.

Besides the achievements during the course of the research, some challenges arose that remain open for future research and discussion. A first open question relates to the size of the ensembles explored in this research: the size of a group seems to influence how shared leadership works within it; a group can increase in size until a saturation point is reached. After this point, a further increase in the number of participants is unfavorable to the development of shared leadership[245]. The two case studies conducted in this research dealt with groups of 27 and 14 musicians respectively; the JSO project experience could unfortunately not be evaluated retrospectively; for now, we can only speculate about the results on the basis of the scores. This uncertainty must be the subject of future research, but the majority of topics addressed in this research are applicable to big band-sized bands and chamber orchestras – in other words, the majority of large jazz ensemble projects – making this research of great value to the field.

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[245] Pearce and Sims, "Shared leadership," 130.

Another challenge faced by my artistic research relates to the rich spectrum of approaches to improvisation in music (discussed in section 2.3, "Improvisation"). During this artistic research, I brought distinct improvisation concepts (such as conducting, jazz and free improvisation) together, but barely scratched the surface of the possibilities of large-ensemble improvisation. I imagine that many other approaches could be successfully explored (involving graphic notation, electronics, etc.) and I hope that my research can contribute to the development of jazz composition in this regard. In this research, the use of improvisation was limited by the background of the musicians involved, and by my own background as composer.

Nevertheless, this research shows how improvisation and composition can fertilize each other reciprocally, and how the exploration of improvisation coming from different sources, and shared leadership tools, can open new aesthetic and hierarchical possibilities in a JSO context.

Involving jazz and classically trained musicians in this research contributed not only to comprehend the extent to which musicians coming from jazz and classical traditions can cooperate in large ensembles; it also showed that the timeworn institutional division between the disciplines no longer seems to reflect what the musicians of today seek in their musical lives, and that we should rethink how music is taught at universities and conservatories. A new model for musicking in a large jazz ensemble seems to demand a new curriculum that takes our reality of today into account; this research signals the need for institutions to think about their priorities, objectives and methods for the future. How can a course in conducting, composition or instrument be improved? What are the requirements for the new generation of conductors or jazz composers? This research suggests a possible direction, which is already being explored at institutions such as the UMO Helsinki Jazz Orchestra in Finland: the ensemble works regularly with a psychologist to improve its working environment and satisfaction level, stimulating collaboration between musicians, conductor and management.

The value of this work, with its focus on the mixture of jazz and classical musicians, makes me believe that there should be more JSO projects in the future, and that more energy should be invested in the creation of ensembles fusing contrasting cultures. As we saw in this research, this working approach provides musicians from different cultures with an experience of collaboration based on a less vertical hierarchy, leading to new aesthetic and social experiences.

I happily finish this dissertation after four years of challenges and discoveries about music, the world and myself. Musicking in large ensemble contexts deals intimately with hierarchy and power

relations, and is a powerful tool to question the ways we relate to each other and organize our world. As I showed in this work, it can result in new aesthetic experiences, and not just for the audiences. More importantly, though, it can improve the artists' individual and group experiences and ideally change the way they relate to one another and to the external world, creating relationships based on trust, collaboration and serenity.

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