LITHUANIAN ACADEMY OF MUSIC AND THEATRE

FACULTY OF MUSIC

CHAMBER ENSEMBLE DEPARTMENT

Ryhor Kharaneka

TECHNIQUES OF SPONTANEITY AND COMPOSITION

IN IMPROVISATIONAL MUSIC

Study Program: Contemporary and Improvisational Music Specialization (Saxophone)

Master's Thesis

<table>
<tr><td>**Author:**</td><td>**Ryhor Kharaneka**</td></tr>
<tr><td></td><td>(signature)</td></tr>
<tr><td>**Advisor:**</td><td>**Assoc. prof. dr. Ramūnas Motiekaitis**</td></tr>
<tr><td></td><td>(signature)</td></tr>
</table>

Vilnius, 2023

CONTENT

BAIGIAMOJO DARBO SĄŽININGUMO DEKLARACIJA

2023m. gegužės 8d.

Patvirtinu, kad mano baigiamasis darbas (tema) "Spontaniškumo ir kompozicijos technikos improvizuotoje muzikoje" yra parengtas savarankiškai.

1. Šiame darbe pateikta medžiaga nėra plagijuota, tyrimų duomenys yra autentiški ir nesuklastoti.

2. Tiesiogiai ar netiesiogiai panaudotos kitų šaltinių ir/ar autorių citatos ir/ar kita medžiaga pažymėta literatūros nuorodose arba įvardinta kitais būdais.

3. Kitų asmenų indėlio į parengtą baigiamąjį darbą nėra.

4. Jokių įstatymų nenumatytų piniginių sumų už šį darbą niekam nesu mokėjęs (-usi).

5. Su pasekmėmis, nustačius plagijavimo ar duomenų klastojimo atvejus, esu susipažinęs(usi) ir joms neprieštarauju.

RYHOR KHARANEKA (Parašas)   (Vardas, pavardė)

THESIS DECLARATION OF INTEGRITY

2023 May 8

I confirm that my thesis (theme) "Techniques of spontaneity and composition in

improvisational music" is prepared independently.

1. The material presented in this paper is not plagiarized, the research data is authentic and not falsified.

2. Directly or indirectly used quotes from other sources and/or authors and/or other material are marked in literature references or named in other ways.

3. There is no contribution of other persons to the prepared thesis.

4. I have not paid any sums of money not provided for by law to anyone for this work.

5. I am familiar with the consequences of identifying cases of plagiarism or data falsification and I do not object to them.

RYHOR KHARANEKA (Signature)   (First name, last name)

SUMMARY

This masterwork is devoted to the study of spontaneity and composition techniques that are used in performances of improvised music. The paper considers various principles and approaches to the current times genre of free improvisation music. We analyzed literature, various interviews, and articles of practicing musicians and improvisation researchers to get the most complete picture of the processes and methods used in real time music creation.

The work consists of an introduction, two parts, conclusions, and a list of references. The introduction refers to the relevance of the topic, the purpose of the research, the object, the tasks, and the methods used. In the first part, we analyze the origins of the free improvisation genre, its distinctive stylistic features and explore improvisation as a unique way of creating music.

In the second chapter, we define the role of cognitive processes involved in free improvisation; also, we offer methods for their practice and development. We explore the functions of timing, and characterize the types and methods of extended techniques application. We also define and explore the principles and techniques of interaction in solo and collective improvisational performances.

The free improvisation is revealed in the work as a complex network which corresponds to life activities and is based on spontaneity and interactions with surrounding.

SANTRAUKA

Šis magistro darbas skirtas spontaniškumo ir kompozicijos technikoms, kurios naudojamos laisvojoje improvizacinėje muzikoje. Darbe nagrinėjami principai ir požiūriai atskleidžiantys šių dienų improvizacinės muzikos specifiškumą. Pasitelkiant muzikantų interviu ir straipsnius, taip pat improvizacijos tyrinėtojų nuomones, mėginame kuo plačiau atskleisti improvizacinės muzikos pobūdį.

Darbą sudaro įvadas, dvi dalys, išvados ir literatūros sąrašas. Įvade pristatome temos aktualumą, tyrimo tikslą, objektą, užduotis ir naudojamus metodus. Pirmajame skyriuje aptariame laisvosios improvizacijos žanro ištakas, išskirtinius šio žanro bruožus ir stiliaus ypatybes, tyrinėjame improvizaciją kaip savitą muzikos kūrimo būdą.

Antroje dalyje tyrinėjame kognityvinių improvizacijos procesų vaidmenį, taip pat siūlome jų praktikavimo ir vystymo metodus. Nagrinėjame laiko struktūravimo vaidmenį improvizacijos procese, taip pat išplėstinių technikų pobūdį ir naudojimą.

Laisvoji improvizacija darbe atskleidžiama kaip sudėtingas ir daug kuo gyvenimiškas patirtis atliepiantis laisvės ir kooperacijos su aplinka tinklas.

THE IMPORTANCE OF THE TOPIC. Free improvisation, which appeared in the 60s of the 20th century in Europe, America, and other countries of the world, is developing and gaining more and more popularity in modern time. More and more professional musicians and composers with completely different backgrounds come to this genre, seeing in it a new musical language, freer in terms of traditions, forms, and self-expression, and thus bringing new techniques, approaches, and concepts. Free improvisation has roots in both jazz and Western European academic music. It was undoubtedly influenced by electronic music with all the advanced technologies. This is not a composer's or producer's activity.

The forms of improvisation are often very complex and even confusing due to the variety of possibilities that arise as a result of the interconnection of performers. It can be noted that while contemporary composition and reflection of its methods are rapidly developing and this area has established traditions, the area of free improvisation in terms of playing techniques, forms, approaches to sound and their organization is considered in a much more modest amount. This creates an open space for research and identifies research problems.

Research problem:

Investigating compositional and spontaneous techniques for performing free improvisation by referencing the experience of musicians, musical groups, and contemporary composers to determine the main technical and technological basis for the performance of free improvisation.

STUDY. Most of the works and studies related to this topic were written by improvisers themselves in the middle of the 20th century and quite widely reveal the phenomenon of free improvisation: K. Cardew "Scratch Music", D. Bailey "Improvisation – Its nature and practice in music", the history of the emergence of the genre and some of its features, while not touching in detail the technical methods and approaches to performance from the point of view of the performing musician, especially in the context of the development of modern technologies. Sources, like P. Berliner 1994, "Thinking in Jazz: The Infinite Art of Improvisation", I. Monson 1996 "Saying Something: Jazz Improvisation and Interaction" where free improvisation is considered in the general context of 20th-century music present a very superficial overview and most often present this genre as a derivative of jazz, free jazz music, and the avant-garde. We have to consider free improvisation as a self-sufficient direction in music and from a technical point of view, since one

of the objectives of my work is to give practicing musicians a deeper understanding of the technical methods of organizing and performing free improvisational music. It is important for practicing musicians to understand free improvisation from a technical point of view, to look at this process in more detail and in-depth.

GOALS AND OBJECTIVES. Improvisation is inherently inseparable from composition, but a closer look reveals that these two practices are as close as they are different. In my opinion, an interesting definition of the differences between free improvisation and composition is exemplified by Derek Bailey in his book: "In 1968 I ran into Steve Lacy on the street in Rome. I took out my pocket tape recorder and asked him to describe in fifteen seconds the difference between composition and improvisation. He answered: "In fifteen seconds the difference between composition and improvisation is that in composition you have all the time you want to decide what to say in fifteen seconds, while in improvisation you have fifteen seconds. His answer lasted exactly fifteen seconds and is still the best formulation of the question I know" (Bailey 1993:14).

Realizing that free improvisation is not just a specific type of composition, but also an aesthetic, psychological, and performance phenomenon, we turn to the analysis of the concepts and reflections of practicing musicians, as well as their musical samples. It can be assumed that both spontaneous, mobile performance techniques and compositional, more stable ones are involved in the process of improvisation, and therefore these techniques can be analyzed and systematized. I see these techniques as the **subject of my master work.**

Purpose of the study:

To identify and analyze as well as determine the aspects and the relationship between spontaneity and composition in free improvisation performance.

RESEARCH HYPOTHESIS. The study expects to reveal free improvisation as a multi-vector technical system of musical organization. We can say that free improvisation in its implementation, affects not only musical interaction but also reflects the complexities of human thinking, perception, communication, development. Our hypothesis leads us to the following **research tasks:**

1. To reveal the stylistic features of free musical improvisation

2. To present free improvisation as a method of creating music

3. To define and discuss the role of cognitive processes and their practice possibilities

4. To identify and discuss the possibilities of timing and extended techniques in free improvisation performance

5. To reveal aspects of spontaneity and composition in free improvisation performance

The thesis materials can be **adapted and used** as a practical guide for free improvisation performers, as well as for composers and people who are interested in different principles of creating music in real time

Research methods:

historical descriptive, comparative,

analysis of sources and documents

elements of empirical research methods: an interview (interview, survey questions)

WORK STRUCTURE. The research work consists of an introduction, two parts, a conclusion, and a list of references. The introduction describes the relevance of the research, the object, purpose, and objectives of the study, and highlights novelty, relevance of the topic, and the possibility of adapting the study

The first part consists of three chapters. They describe the formation of the genre of free improvisation, the main artistic and stylistic features, as well as various approaches to understanding this type of art. The second part consists of four chapters, which explore and define the technical, practical ways of performing free improvisation, based on literature, articles, interviews and musical samples of musicians and prominent representatives of this art form.

The conclusions summarize the tasks set in the research work.

Masterwork consists of 42 pages. In the bibliography the are 26 positions.

1. MAIN FEATURES OF THE GENRE OF MUSICAL IMPROVISATION

1.1 The main directions and trends in the development of free musical improvisation

In the 60s and 70s, after the appearance and development of free jazz tradition in England and America, the appearance of such outstanding musicians as Coltrane, Taylor, Colman, Davis, and also the evolution from serialism to aleatoric in Europe, the genre of free improvisation begins its formation. For the development of this genre, is also important the experience of the European avant-garde composers such as Boulez and Stockhausen. This fact is of great importance, since in the free jazz variant, development took place on a practical and experimental basis, while in the work of European composers, it was mainly of a theoretical nature.

In many cases, the practical application of aleatoric, and then improvisation, was preceded by its theoretical understanding (for example, in the articles by P. Boulez "Alea" (1957) and "Construction of Improvisation" (1986)). So, the work of Parker, Bailey can be attributed to the first wave of free improvisation. The main feature of their work and the beginning of the development of free improvisation is a complete or partial rejection of the established ideas and principles of free jazz and the standardization of the instrumental composition, the "theme, improvisation, theme" scheme, the "solo, accompaniment" formula, reliance on fret as on one of the main formative elements of improvisation. Moreover, polyrhythm and the mixing of various rhythmic structures become the basis of rhythmic thinking. Thus, we can say that the difference between free improvisation and free jazz lies in the desire for a complete departure from the context, the musical structure of jazz, and its traditions.

As a result, possible alternatives are being developed: variety and departure from traditional instrumental ensembles; many "individual" projects; final departure from the scheme "theme, improvisation, theme"; the totality of improvisation; richness and variety of forms; rethinking the functions of soloist and accompanist; rejection of harmony; the predominance of sonorism; rejection of virtuosity of the traditional type; the refusal of repetitions in any of their revelations; "anti-repetitiveness"; the predominance of "rhythmic heterophony". Thanks to the development by Evan Parker of the special method – multi-technique, which allows to desynchronize of the basic instrumental techniques for combining diverse unique techniques of playing the saxophones, a new type of virtuosity has appeared. Bailey developed the idea of total spontaneous improvisation, not based on any traditions and devoid of any pre-compositional task.

His perspective on improvisation is further removed from free jazz and anticipates the innovations of the next generations of improvisers, thanks to the musician's orthodox adherence to his own set of "non-idiomatic improvisation".

As Bailey wrote in his book: "Free improvisation has no stylistic or idiomatic obligations. Its sound doesn't have any idiomatic cliches or attachment" (1992: 89). The laws on free improvisation are made by each individual musician who performs it. So, for example, this statement can be noted in practice, when Bailey uses guitar strings as a percussion, sonorous instrument, when playing this way, the height of sounds plays a secondary role and the first step plan is occupied by rhythm, timbre, as well as irregularity in all its manifestations. In the 70-80s, a great contribution to the development of free improvisation was made by the creative activity and research approach of the members of the AMM group (K. Cardew, K. Rowe, J. Tilbury, E. Prevost). One of the participants, E. Prevost, introduces and describes in his works the concepts of "metamusic" and defines that as a kind of "pure" musical art, freed from possible cultural layers, having experimental nature and directed into itself. Of course, such a formulation in music goes beyond the historical context and looks like a manifesto, however, it is sometimes difficult for a practicing musician to formulate the feelings and experiences that he experiences while playing free improvisation. However, his statement: "[W]e are looking for sounds and answers that join them and for them, instead of inventing, preparing and producing them" (Prévost, 1995: 1), becomes his creed in creativity. At the same time, the goal of the "metamusician" becomes the study of the very phenomenon of sound in its time perspective and in the context of those structures which are created during it.

Thus, free improvisation is the embodiment of "metamusic", since musicians are deprived of the necessity to use language systems and use a range of different communication techniques. Prevost sees the meaning of creative initiative not in corresponding to any cultural system, but in adequately expressing these abstract values. This means going beyond habitual techniques of performing and perceiving music and enables the rethinking of music in general through free improvisation: "Historically, this predates all other music – mankind's first musical performance could not have been anything other than free improvisation – and I think it's reasonable to assume that in most cases since then there has been some kind of music creation most accurately described as free improvisation" (Bailey 1992:141).

So, the dialogue becomes one of the main directions in free improvisation – dialogue with your colleagues, with yourself, with the environment, and sound. E. Prevost compares this process with constant self-invention. Therefore, the process of improvisation is an adventure every time, a game in which the players themselves invent new rules.

One way that free improvisation continues to develop is through a practice known as "Intuitive Music". This term was originally introduced by Karlheinz Stockhausen in his works "*Aus den Sieben Tagen*" and *"Für Kommende Zeiten"*, which provide instructions for improvising musicians to perform intuitively. Markus Stockhausen, Karlheinz's son, also works within this genre and brings many innovative trends to it. In the 1980s, Markus Stockhausen performed the first "Intuitive" works as part of the group "*Ensemble für Intuitive Musik Weimar*" which helped him to refine his approach to free improvisation and intuitive music. Rather than adhering to established forms and traditions, Markus Stockhausen incorporates his experience with harmonic, melodic, and rhythmic improvisation to create a style that transcends all stylistic boundaries while still incorporating them. This approach allows for true intuitive freedom in music creation, taking into account all circumstances such as acoustics, quality of space, time of day, psychological readiness of other musicians, personal feelings, the audience, and instant inspiration, giving the musician the utmost freedom of expression. However, this also means that the musician is fully responsible for determining the material, structure, expression, and form of the music in real time, making it a strict discipline. Markus Stockhausen's goal is to create integrated music that touches people's emotions and creates a new space for interaction and music-making, and this is impossible without some level of musical experience and previous knowledge. This includes the study and recognition of intervals, scales, harmonies, and rhythms as the basis for improvisation, ear training, and knowledge of various musical forms – all of which are part of Markus Stockhausen's basic knowledge in free improvisation and intuitive music.

Electro-acoustic improvisation is also beginning to develop; this direction was taken by a new generation of improvising musicians and gained great popularity. The peculiarity of this trend is that the principles of electronic and acoustic sound are combined in a new and unexpected quality which gives rise to a new aesthetic. In this new context, it makes sense to talk about the preservation of the basic aesthetic principles of free improvisational music and about their consistent development and expansion. The main characteristics of electroacoustic improvisation which can be noted are: the creation of a single electroacoustic space; the consideration of sound as a special

unique phenomenon; the exploratory nature of creativity; an experimental approach to instrumentalism; stylistic and individual diversity of performance techniques; the expansion of timbre characteristics; the strongest influence of various types and directions of electronic music; the tendency to the use of electronics as a live acoustic phenomenon, in which we can see the tendency to abandon ready-made technological template; the individual inclusion of compositional elements in improvisational processes; the intersection of improvisational and composing practices; the general trend towards radical innovations in the field of pitch, timbre, and form. Tracing this line, leading us from the end of the 70s to the present day, we can be convinced of the true continuity of ideas, of which the most important are the following: sound as an object of study; musical instrument as an object of study; acoustic space as an object of study. So, in the work of musicians who include electro-acoustic improvisation, the revival and development of these principles begin.

1.2. Stylistic features of free musical improvisation

As mentioned above, free improvisation for each musician has its own style and form, however, we can still distinguish free improvisation from other genres of music, so we can highlight some of the features inherent in this genre and analyze them in a more detail way:

- Striving for independence away from any stylistic trends, traditions, and norms is an important aspect of free improvisational music. Free improvisation is a form of music that emphasizes spontaneity, experimentation, and exploration. It allows musicians to break away from traditional forms and structures, and create music that is unique and unpredictable. To achieve independence in free improvisational music, musicians need to develop a strong sense of individuality and a willingness to take risks. They should be open to new ideas and approaches, and be willing to challenge themselves and their audience. Additionally, they need to have a deep understanding of their instruments and their capabilities that allows them to push the boundaries of sound and expression. One way to achieve independence in free improvisational music is to avoid imitating or copying other musicians. Instead, musicians should focus on their own ideas and unique voice, using their creativity and imagination to create music that is truly original. They should also be willing to experiment with different techniques and approaches, exploring new sounds and textures in their music. Another way to achieve independence in free

improvisational music is to create a strong connection with fellow musicians. Collaboration and communication are essential in free improvisation that allows musicians to create music that is both responsive and cohesive.

Prevost says and summarizes it like this: "I was first alerted to the idea that 'free' or 'total' improvisation was different from all other music-making when told that what I did was not music! (In retrospect I am astounded by so impoverished a perspective: though it hardly discouraged me or my peers; quite the reverse) Later on, in addition to more remarks of the 'not music' variety, we learned that what we were playing wasn't even jazz. Though not offered helpfully, this was a more reasonable claim" (Prevost, 1995:1).

- The radicalization of democratic and collective processes is a key aspect of free improvisation. In free improvisation, musicians work together to create music spontaneously, without relying on pre-existing forms or structures. This requires a high level of collaboration and communication with each musician contributing their own ideas and responding to the ideas of others.

To radicalize democratic and collective processes in free improvisation, musicians need to embrace a number of principles:

1. Equality. Each musician should have an equal say in the creative process. This means that there are no hierarchies and every idea is given equal consideration.

2. Collaboration. Musicians should work together to create music. This means that they should be willing to listen to each other and respond to each other's ideas.

3. Openness. Musicians should be open to new ideas and approaches. This means that they should be willing to experiment and take risks and that they should be open to feedback and criticism.

4. Trust. Musicians should trust each other to contribute to the creative process in a meaningful way. This means that they should be willing to take risks and explore new ideas without fear of judgment or rejection.

5. Flexibility. Musicians should be flexible and adaptable, willing to change direction and respond to the unexpected. This means that they should be able to improvise on the spot and they should be able to adjust their playing to fit the changing dynamics of the group.

By embracing these principles, musicians can create a democratic and collective process in free improvisation that is truly radical. They can create music that is unpredictable, spontaneous, and free from the constraints of traditional forms and structures. This can lead to new and innovative forms of musical expression, and can help to push the boundaries of what is possible in music.

Stevens' example confirms what was said above: "[F]or example, when two people are talking while walking down the street, both must move at the same pace in order to communicate. Even if people use different step lengths, these steps must be synchronized rhythmically, to talk. In free improvise the best conversations are those where the participants say what they want to say while paying close attention to what the other person is saying. Rhythmic awareness allows a person to be dynamically creative in a group while remaining sensitive to other group members" (Stevens, 2007:1).

- The absolute spontaneity of creativity is a defining characteristic of free improvisation music. In this way, it allows for a high degree of creativity and freedom at the moment. In order to achieve absolute spontaneity in free improvisation, musicians must be able to let go of their preconceptions and allow their creativity to flow freely. This means that they need to be open to new ideas and approaches and be willing to take risks and explore new sounds and techniques. One important aspect of achieving absolute spontaneity in free improvisation is to cultivate a high level of listening and responsiveness.

In order to create a coherent and meaningful musical dialogue, musicians must be able to listen deeply to each other and their own intuition. This means that they need to be present at the moment and fully engaged with the music. Another important aspect of achieving absolute spontaneity in free improvisation is to let go of the need for control. Musicians must be willing to surrender to the moment and to the collective creative process, allowing the music to evolve and unfold organically. This means that they need to be willing to take risks and to embrace the unknown, without fear of failure or judgment. Ultimately, achieving absolute spontaneity in free improvisation requires a high degree of skill, creativity, and courage. It requires musicians to be fully present at the moment, to listen deeply to themselves and each other, and to surrender to the creative process. When these elements come together, free improvisation music can be truly transformative, creating a space for deep connection, exploration, and expression.

Such a metaphorical example is given by Cobussen: "The musical butterfly is a detail in the sound production that, when attended to or acknowledged by musicians, can generate alterations in the development of the music such that eventual outcomes are disproportionate to any initial causes. In other words, during an improvisation, each gesture can imaginably produce significant modifications in the total sound and musical development" (Cobussen, 2013:27).

- The use of new and non-traditional tools, and the rejection of typical, well-established timbres, is a crucial aspects of free improvisation music. Free improvisation is a form of music that emphasizes experimentation and exploration and encourages musicians to push the boundaries of what is possible in music. In free improvisation, musicians are encouraged to use a wide variety of tools and techniques to create new sounds and textures. This may include using non-traditional instruments or objects, such as found objects or electronics, or the use of traditional instruments in unconventional ways. At the same time, free improvisation often rejects typical, well-established timbres and sonorities, which can limit creative expression and stifle experimentation. One important aspect of using new and non-traditional tools in free improvisation is to embrace a spirit of curiosity and exploration. Musicians should be willing to try new things and to take risks without fear of failure or judgment. They should also be willing to listen deeply to the sounds they are creating and to respond to the unique characteristics of each tool or technique. Another important aspect of using new and non-traditional tools in free improvisation is to focus on the expressive potential of sound. Instead of relying on preconceived notions of what music should sound like, musicians should be willing to explore the full range of sounds and textures that are available to them. This may involve experimenting with unconventional techniques or finding new ways to manipulate and shape sound. Ultimately, the use of new and non-traditional tools, and the rejection of typical timbres and sonorities, is the essential part of free improvisation music. It allows musicians to explore new creative territories, and to push the boundaries of what is possible in music.

This is how saxophonist Peter Brötzmann describes his approach: "[O]f course, I play solo gigs a couple of times a year. Sometimes I go and I have some concept or a few ideas that I want to implement. Many times, I tried to feel, right after trying to do what I have in mind that the sound material or instrument or whatever told me: forget it. So, at that moment it's really out of my control.

Something tells me: forget about this shit, play it, improvise it, turn it all around" (Brötzmann, 2003:18).

- The natural environment can provide a rich source of inspiration and material for creating improvisational music. In free improvisation, musicians are encouraged to explore new and unconventional sounds and to draw inspiration from a wide variety of sources. The natural environment can be a particularly fertile ground for exploration and experimentation. One way in which the natural environment can be used as material for improvisational music is through the use of found objects and field recordings.

Musicians can collect a wide variety of objects from the natural environment, such as rocks, sticks, leaves, or shells, and use them to create unique sounds and textures. Similarly, field recordings of natural sounds, such as birdsong, wind, or water, can be used as a starting point for improvisation. Another way in which the natural environment can be used as material for improvisational music is through the use of improvisation in outdoor spaces. Musicians can take their instruments outside and use the natural environment as a backdrop for their improvisation. This can create an unique and immersive experience for both the musicians and the audience and can inspire new sounds and ideas. In addition to providing material for improvisation, the natural environment can also serve as a source of inspiration for musicians. The rhythms and patterns of nature, such as the sound of waves crashing on the shore or the rustling of leaves in the wind, can be used as a starting point for improvisation. Similarly, the beauty and complexity of the natural world can inspire musicians to create music that is both expressive and evocative.

Overall, the natural environment can provide a rich and varied source of inspiration and material for improvisational music. By exploring the sounds and rhythms of the natural world, musicians can push the boundaries of what is possible in music, and create unique and immersive experiences for themselves and their audiences.

Here is what Cardew says about this: "We are looking for sounds and the answers that are attached to them, instead of inventing them, preparing and producing them. The search is in the environment of sound, and the musician himself is at the center of the experiment" (Cardew, 1971: 127).

- The rejection of traditional instrumental skills is a common practice in free improvisational music. In this genre of music, musicians often seek to challenge traditional notions of virtuosity

and technical proficiency in order to create a more open and exploratory approach to music-making. In free improvisation, the focus is not on mastery of a particular instrument or technique, but rather on experimentation and exploration.

Musicians are encouraged to explore the full range of sounds and possibilities of their instruments and to push the boundaries of what is considered a traditional technique. One way in which free improvisation rejects traditional instrumental skills is by emphasizing the use of extended techniques. These are the techniques that go beyond the traditional techniques of an instrument and allow new and unconventional sounds. For example, a guitarist might use a bow or a slide to create new sounds, or a saxophonist might use circular breathing or multiphonics to create complex and layered sounds. Another way in which free improvisation rejects traditional instrumental skills is the emphasis on the importance of listening and responding to other musicians in the moment. Rather than relying on predetermined structures or compositions, free improvisation is a collaborative and interactive process where musicians must be able to listen deeply to each other and respond creatively to the sounds around them.

Overall, the rejection of traditional instrumental skills in free improvisational music is part of a larger emphasis on experimentation, exploration, and openness to new and unconventional sounds and approaches to music-making. By rejecting traditional notions of virtuosity and technical proficiency, musicians are free to explore new creative territories and push the boundaries of what is possible in music.

An example of the above can be seen in Alterhaug (2010: 116): "That's my way of preparation – not to be prepared. And that takes a lot of preparation!"

1.3. Free improvisation as a way of creating music

The concept of music-making can be analyzed from various perspectives, one of which is its method. Plato (2018: 230) believed that music was an "echo of the divine" and that it embodied all what is beautiful and sublime. His theory is rooted in the belief that the true beauty and knowledge come from a realm beyond the physical world. He believed that art was a form of imitation or representation of that realm and that the most beautiful art was the closest reflection of the divine. In this way, art was not created, but discovered by the artist who was able to tap this divine realm. In contrast, free improvisation is a form of music-making that depends on the spontaneous and creative input of the performer. The performer is not simply imitating or representing something that already exists, but is actively creating something new in the moment. Since free improvisation creates something that did not exist before, this goes against Plato's belief that true beauty and knowledge already exist and must be discovered. Furthermore, Plato saw the role of the artist as one which strict control and discipline. He believed that the artist should strive to imitate the divine as closely as possible, which required careful planning and execution. On the contrary, free improvisation is characterized by a lack of planning and structure and willingness of the performer to let go of control and let the music emerge organically.

John Cage's view of music was in line with Plato's philosophy, as he believed that his music echoed the anarchy of nature. His method of chance operations, which involved tossing coins or dice and consulting the I Ching ("The Book of Changes"), eliminated the need for personal choices by a musician, composer, and interpreter. Cage's method, as can be seen from the quotation below, was not congruent with the concept of free improvisation. When Earl Brown confronted Cage with his Folio, asking his opinion about his attempts to incorporate improvisation into his compositions, Cage stated: "Oh, you'll just find that everyone will play their own cliches" (Brown, 2017: 25)

Cornelius Cardew viewed improvisation and experimentalism as a social and collective method of music-making. His belief in the importance of collective music-making was reflected in his compositions, which often incorporated graphic scores and unconventional notations. These compositions were meant to be interpreted and realized collaboratively by performers and often left room for improvisation and experimentation. His specific phrase that reflects his emphasis on collective and socially-engaged music-making is "The central question is, who controls the music-making?" (Cardew, 1972:18).

This phrase is taken from his essay "Towards an Ethic of Improvisation", in which he argues that traditional music-making practices are often based on hierarchies and power structures that limit the creativity and participation of individual performers. Cardew believed that improvisation and experimentation were important methods for breaking down these hierarchies and creating music that was truly collective and democratic. He saw music-making as a social activity and believed that everyone should have something to say about how the music was created and performed. By asking "Who controls the music-making?", Cardew challenged the traditional roles of composer and performer and emphasized the importance of collaboration and collective decision-making in music. He believed that this approach could lead to music that was more relevant and meaningful to the people and could be used as a tool for social change.

Moreover, if you look at improvisation as a way to create music, then mistakes or failures are an integral and important part of the process. The musician may make a mistake, but this can be seen as a moment of spontaneity and the emergence of new ideas. Failure becomes a point for the development of a musical idea. According to Stevens (2007:2), "[W]e celebrate mistakes because they highlight innocent human flaws, slips in mental concentration or physical control. Our goal is to solve the near-impossible synchronization problem at the moment - the main ingredient of interaction. Spontaneous group improvisation will inevitably lead to divergence. "Mistakes" are the inevitable result of the improvisation process. The shapes are open (not having a fixed output) - so there is no perfect end result. The process of their playing is itself a product".

Failure or mistake becomes an integral and important part of improvisation, as it is a moment of unexpected result and a new point for the development of a musical idea: "Failure exists in relation to goals: Nature has no goals and so it can't fail, humans have goals and so they have to fail. Often the wonderful configurations produced by failure reveal the pettiness of the goals. Of course, we have to go on striving for success, otherwise, we could not genuinely fail. If Buster Keaton ("The Electric House" – is a 1922 American silent comedy film by Buster Keaton.) wasn't genuinely trying to put up his house, it wouldn't be funny when it falls down on him."

Creativity and improvisation are related concepts, however, Alterhaug pointed out such moments when describing the difference between creativity and improvisation: "Derived from the word *creare,* to create, the term creativity can be related directly to improvisation. In everyday language, though, improvisation covers a host of different meanings. Its various usages often cause confusion especially when used as a concept and phenomenon. Two main meanings of the word

spring to mind: First, improvisation as an emergency measure, as in "the plans failed and hence I had to improvise." Notably, such a statement presupposes that human action is normally based on rules and instructions. Second, improvisation as an acute state of readiness, internalized skills, and practice; a highly rated way of acting. Here this meaning is based on another important concept, namely one that involves tacit knowledge" (Alterhaug, 2004:97).

The ability to avoid failure and the risk of error or failure is one of the reasons for what we call improvisation in everyday life, it is a kind of organization of impermanent elements in real time and a kind of "dance with chaos." Such situations in life require a spontaneous reaction to problem-solving, which may even be a simple variation of a situation that we have already dealt with in life. Alterhaug explains the origin and meaning of improvisation etymologically: "[T]he term originates from the rhetoric of antiquity under the designation *improvisus*. If we attempt to translate this word, the Latin verb *videre* means "to see", in conjugated form *visus* translates to "seen", pro to "be-fore" and I'm means "not." Assembling the word parts should then impart the meaning "not before seen." I have reflected upon the meaning "not before seen" many times and found out that it works poorly as a description with regard to musical interaction, which in its truest sense is based on the auditive, on listening and hearing see (Furu, 2007: 136)

Composition and improvisation have similarities and differences. Both require creativity, which can often be spontaneous. The main difference between composition and improvisation is the possibility in composition to revisit and revise music and to make changes to the score or recording. This allows a greater degree of control and precision in shaping the final product, and the possibility to the composer to refine their ideas and explore new possibilities as they work.

From the point of view of composition, improvisation can be viewed as a concentrate of ideas and the possibility of finding new musical expressions that can be incorporated into a composition. Many composers have used improvisation as a method to generate musical material for their compositions. For example, Mozart was known to have improvised extensively (Solomon 2005: 528), and many of his improvisations were later developed into his compositions:

- Piano Sonata No. 11 in A major, K. 331. The famous third movement of this sonata, the "*Rondo alla Turca,*" is believed to have been based on a Turkish march that Mozart heard and improvised on during his travels (Solomon, 2005: 529)

- Piano Concerto No. 20 in D minor, K. 466. The cadenza in the first movement of this concerto was likely improvised by Mozart during performances and later written down by him (Solomon, 2005: 529)
- Similarly, Beethoven was also known to have improvised extensively, and he would often incorporate his improvisations into his compositions (Suchet, 2014: 317)

Of course, improvisation can take place within a set structure or can create its own structure as it evolves over time. Barrett, for example, defines composition as any musical creative process or its results. This means that composition can refer to any method of creating music, including improvisation, but also encompasses other creative processes such as writing, arranging, and producing: "I would like to define improvisation as a designation for the spontaneous element of a musical performance that either occurs within some implicit or explicit framework or (as in "free improvisation") creates and transforms these frameworks as it continues. I would define composition as any musical creative process or its results. Therefore, within this scheme, improvisation is a method of creating music, nothing more and nothing less" (Barrett 2016: 107).

In addition to being a method for generating musical material, improvisation can also be used as a tool for musical exploration and experimentation. By improvising freely and without any preconceived notions, musicians can explore different musical ideas and experiment with different sounds and textures. This can be especially useful for composers who are looking to expand their musical vocabulary or to break out of creative ruts.

2. LEARNING METHODS AND TECHNIQUES IN FREE IMPROVISATION PERFORMANCE

2.1. The role and training of cognitive processes in improvisation

Free improvisation involves a complex interplay of cognitive processes. Understanding these processes can help us to understand better the cognitive and neural basis of musical improvisation, as well as the broader cognitive and creative processes involved in artistic performance and expression.

The role of cognitive processes in improvisation has been studied extensively by researchers like Charles Limb, David Borgo, John Sloboda.

These studies have shown that musicians who are skilled in improvisation rely on a range of cognitive processes that enable them to create and respond to music. These processes include:

- Working memory. It is the ability to hold and manipulate the information in mind. Musicians who are skilled in improvisation have been shown to have greater working memory capacity, which enables them to hold multiple musical ideas in their minds and rapidly switch between them (cf. Limb 2008: 2 – 3).

- Attention is the ability to focus on relevant information while ignoring irrelevant information. Skilled improvisers can focus their attention on relevant musical cues, such as melody or rhythm of a song, while ignoring distracting cues (cf. Limb 2008: 6 – 8).

- Cognitive flexibility is the ability to adapt to changing situations and to switch between different modes of thinking. Improvisers can adapt to the changing musical environment and to switch between different musical ideas and styles as the situation demands (cf. Borgo 2018: 163 – 168).

- Prediction and anticipation. Skilled improvisers are able to predict and anticipate the musical ideas of their collaborators, which allows them to respond in real-time and create a coherent musical performance (cf. Limb 2009: 223 – 238).

- Improvisation is a creative process and skilled improvisers have been shown to have a greater ability to generate novel and innovative musical ideas (cf. Sloboda 2010: 113 – 120).

- Active perception. Free improvisation involves constant sensory processing of musical stimuli, such as pitch, rhythm, and timbre. Musicians must be able to perceive and interpret these stimuli in real time and use them to guide their own playing and responses to their collaborators (cf. Limb 2009: 60).

- Motor control. Free improvisation requires musicians to translate their musical ideas into physical actions on their instruments. This requires fine motor control and coordination as well as the ability to adjust playing in response to changes in the musical context. (cf. Borgo 2016: 34 – 41)

Training in improvisation typically involves developing these cognitive processes through a combination of practice, instruction, and feedback. Improvisers may also develop a set of heuristics or mental models that help them navigate the musical environment and generate new musical ideas. Overall, the role of cognitive processes in improvisation is crucial, and understanding these processes can help musicians to develop their improvisational skills and to become more skilled performers.

Improvisation exercises can help musicians to develop their improvisational skills and to improve their cognitive processes involved in improvisation. Here are some examples of exercises that can be helpful and that I use in my practice:

- Call and response. In this exercise, one musician plays a short musical phrase and the other musician responds with a related phrase. This exercise helps musicians to develop their ability to anticipate and respond to musical cues.
- Playing with constraints. In this exercise, musicians are given a set of constraints or limitations to work within, such as a specific key, tempo, or set of musical motifs. This exercise helps musicians to develop their creativity by forcing them to work within a specific set of parameters.
- Collective improvisation. In this exercise, a group of musicians improvises together, taking turns that contribute to the musical texture. This exercise helps musicians to develop their ability to listen and respond to their collaborators, and to create a coherent musical performance as a group.

- Solo improvisation. In this exercise, musicians are asked to improvise a solo over a given chord progression or musical motif. This exercise helps musicians to develop their ability to generate musical ideas spontaneously and to create coherent musical performances on their own.
- Listening exercises. Listening exercises can help musicians to develop their ability to perceive and interpret musical cues. For example, musicians may be asked to identify different musical elements, such as pitch, rhythm, or timbre, or to identify musical patterns or motifs in a piece of music.
- Transcription exercises. In transcription exercises, musicians transcribe a musical performance or solo by ear. This exercise helps musicians to develop their ability to perceive and interpret musical cues, as well as their ability to replicate musical ideas and motifs.

These exercises can be adapted and modified to suit the individual needs of musicians at different skill levels.

For active perception, hearing, attention, and focus training, I find interesting the concept of Pauline Oliveros. One of her key concepts was the idea of "deep listening," which involves listening to music and sounds with heightened awareness and sensitivity: "Deep listening is a practice. It is listening and giving attention to everything that is happening in the – whether it be a sound, a feeling, a thought, or an emotion – without judgment, distraction, or interruption" (Oliveros, 1999: 3).

Deep listening can be applied to free improvisation, and Oliveros developed a number of exercises to help musicians develop their listening skills in this context. These exercises can be used to develop deep listening skills in the context of free improvisation and can help musicians become more attuned to the sounds and interactions that occur during improvisation. These exercises involve:

- Toning. It is making sustained vocal sounds, either alone or in a group. The goal is to listen deeply to the sounds being produced and to tune into the subtle changes in tone and resonance that occur as the sounds are sustained.

- Sonic meditation. This exercise involves sitting in silence and listening to the sounds around you. The goal is to focus on the sounds themselves rather than the thoughts or distractions in your mind. This can help musicians develop a deeper sense of awareness and sensitivity to sound.

- Call and response. This exercise involves playing short musical phrases or sounds and having other musicians respond with their own sounds or phrases. The goal is to listen carefully to the sounds being produced and to respond in a way that creates a cohesive and expressive musical dialogue.

- Group improvisation. This exercise involves improvising as a group, with each musician contributing to the overall sound and direction of the music. The goal is to listen carefully to the sounds being produced by other musicians and to respond in a way that supports and enhances the overall improvisation.

- Sensory awareness. This exercise involves focusing on one specific sense (such as hearing, touch, or smell) and exploring the sensations that arise. For example, you might focus on the feeling of your instrument against your skin or the sound of your breathing as you play. The goal is to develop a deeper awareness of your own sensory experiences, which can help you to connect more fully with the sounds being produced by other musicians.

Also, musical meditation helps cognitive functions to be in good shape. This process involves using the sounds and rhythms of music as means of focusing the mind and cultivating a sense of inner awareness and presence. In the context of free improvisation, musical meditation can be a way of connecting with the music and with the other musicians more deeply and intuitively.

One more way to practice a musical meditation in free improvisation is to focus on a particular sound or musical idea and allow it to become an object of your meditation. For example, you might focus on the sound of a particular instrument, or a particular rhythm or melody that emerges during an improvisation session.

As you listen to the music, pay attention to the interplay between different instruments and performers and notice how the music changes and evolves over time. Stay present at the moment and allow the music to guide you into a deeper state of meditation. Another approach to musical meditation in free improvisation is to experiment with different approaches to improvisation while remaining grounded in your meditation practice.

Here are some suggestions for practicing musical meditation in a free improvisational context recommended by music psychologist Madeline Bruser in "The Art of Practicing: A Guide to Making Music from the Heart":

- Choose a simple musical idea or motif to focus on. This might be a particular melody or rhythm that emerges during an improvisation session. Focus your attention on this musical idea and allow it to become the object of your meditation.
- Practice active listening. As you focus on the chosen musical idea, listen to the sounds and nuances that emerge. Pay attention to the interplay between different instruments and performers and notice how the music changes and evolves over time.
- Stay present at the moment. As thoughts or distractions arise, gently bring your attention back to the music. Cultivate a sense of openness and curiosity and allow the music guide you into a deeper state of meditation.
- Experiment with different approaches to improvisation. Use the music as a way to connect with your innermost self and cultivate a sense of creative expression and flow.

2.2. The use of time in free improvisation performance

Time plays a crucial role in free improvisation performance, both as a structural element and as means of creative expression. There are some ways, noticed by authorities of this music, in which time is used in free improvisation:

- Rhythm is a fundamental aspect of music and is used to create a sense of pulse or groove in free improvisation. Musicians can use rhythmic patterns or subdivisions to create momentum and energy in their performance: "Time is a powerful tool for creating contrasts and surprises in the music. We can use sudden changes in tempo or rhythm to create unexpected twists and turns in the improvisation" (Crispell, 2022: interview).

- Rhythmic tension. Musicians can use rhythmic patterns and subdivisions to create tension and release within a performance. For example, a musician might play a repeated pattern that builds in intensity over time before resolving it into a more relaxed groove: "Time is a structure that we can use to guide the improvisation. We can create patterns and rhythms that establish a sense of time, and then play with those structures to create something new" (Halvorson, 2018: interview).

- Space refers to the amount of time between musical events and can be used to create tension or anticipation in free improvisation. Musicians can use silence or pauses strategically to create contrast and highlight particular musical ideas: "Time is like a landscape that we navigate through in free improvisation. We can explore its hills and valleys, its twists and turns, and discover new possibilities for expression and creativity" (Bailey, 1992: 48).

- Time-stretching. Musicians can stretch or compress the length of sounds and phrases to create unique textures and effects. For example, a musician might stretch the length of a note to create a sustained, atmospheric sound: "In free improvisation, time is a canvas that we can paint on. We can stretch it, compress it, or play with it in any way we want to create new sounds and textures" (Evans, 2015: interview).

- Musicians can use polyrhythms to create complex and layered rhythms that add depth and interest to the music. For example, a drummer might play a rhythm in 4/4 time while a bassist plays a different rhythm in 7/8 time: "Free improvisation is all about creating new rhythms, breaking down old ones, and discovering new possibilities in the music" (Parker, 1993: interview).

- Musicians can use time-based structures such as loops and ostinatos to create a sense of repetition and continuity within the music. For example, a musician might create a loop of a simple melody or rhythm that serves as a foundation for improvisation: "In free improvisation, rhythm is not just a tool, it's a collaborator, constantly pushing and pulling us in new and exciting directions" (Mori, 2017: interview).

- In free improvisation, timekeeping is often a collective responsibility shared by all musicians. For example, a group of musicians might use subtle gestures or cues to communicate changes in tempo or rhythm: "Collective timekeeping requires active listening, empathy, and a willingness to surrender individual ego for the good of the music" (Smith, 2011: 4).

- Time as a narrative element. Musicians can use the time to create a sense of story or narrative within a performance. For example, a performance might start slowly and build in intensity over time to create a sense of tension and release that follows a narrative arc: "Free improvisation is about being in the moment and responding to what's happening around you. Time is a big part of that – it's what makes the music feel alive and spontaneous" (Zorn, 2014: interview).

- Time as a source of inspiration. Musicians can draw inspiration from the passage of time and the natural rhythms of life. This can include the changing of the seasons, the cycles of day and night, or the rhythms of the human body: "Time is like a character in the music, always present and

always changing. It's something we can't control, but we can use it to our advantage" (Gustafsson, 2012: interview).

- Metrical and non-metrical time. Metrical time is time that is organized around a regular pulse or meter while non-metrical time is free of a regular pulse or meter. In free improvisation, musicians can use both metrical and non-metrical time to create a sense of structure and spontaneity in their performance: "Rhythm is a living thing, it's not a static thing" (Drake, 2018: interview).

2.3. Extended sound techniques and their function in improvisation

Extended sound techniques refer to any method or approach that involves the creation of unconventional sounds or noise using musical instruments or the human voice. These techniques may involve modifying the way an instrument is played by using non-traditional objects to make sound or exploring the acoustic properties of a space.

These techniques can be broadly categorized into three types: 1) instrumental techniques, 2) vocal techniques and 3) environmental techniques:

Instrumental techniques involve modification of the way an instrument is played or the use of certain objects to create sound. One example is the use of extended techniques on the guitar, such as string scraping, bowing and tapping. By using these techniques, guitarists can create a wide range of sounds – from percussive rhythms to ethereal textures. Another example of instrumental technique is the use of prepared piano. This involves placing objects such as screws, bolts, or rubber bands on the strings of a piano to alter the sound. By doing this, the pianist can create new timbres and textures that are not achievable with traditional piano sound. John Cage was one of the pioneers of prepared piano, and his piece "Sonatas and Interludes" is a classic example of this technique.

Vocal techniques involve exploring the limits of the human voice by creating multiple tones simultaneously or using non-traditional vocal sounds. One of the most well-known vocal techniques is harmonic overtone singing. This technique involves manipulating the resonances in the vocal tract to produce harmonic overtones above a fundamental tone. This can create a rich, complex sound that is often used in traditional music from Central Asia and Tuva. Other vocal techniques include using non-traditional sounds, such as clicks, pops and hisses and exploring the full range of the voice from high-pitched falsetto to deep, guttural tones. Vocal techniques can also

be combined with instrumental techniques, such as using the voice to create percussive sounds or to manipulate the sound of a wind instrument.

Environmental techniques involve the use of acoustic space properties or the sounds of the natural world to create new sounds and textures. This can involve the use of natural reverberation or echoes to create new sounds or incorporate sounds from the environment, such as bird calls, traffic noise, or water sounds. Environmental techniques can also involve the use of technology to manipulate sound, such as digital delay to create a repeating echo or use of a sampler to incorporate sounds from other sources. These techniques can add an extra dimension to free improvisation and create a sense of space and atmosphere that complements the music.

Many musicians have spoken about extended techniques in their interviews and articles. Certain opinions expressed below may reveal this aspect of free improvisation more fully:

- Extended sound techniques allow musicians to explore new and unconventional sounds that go beyond the traditional techniques of their instruments. This expands the sonic possibilities of the music and encourages experimentation and innovations: "I use microtonal intervals and non-traditional tunings to create complex harmonic structures that add depth and richness to my music" (Butcher, 2011: 9).

- By using extended sound techniques, free improvisers can create unique soundscapes that are distinct from conventional musical styles. This can help to establish a distinctive identity for the music and create a sense of individuality and innovation: "My approach to saxophone playing involves using circular breathing and multiphonics to create complex and expressive soundscapes that push the boundaries of the instrument" (Parker, 1993: interview).

- Extended sound techniques can be used to add texture and color to the music. By layering different sounds and textures, free improvisers can create a rich and complex sonic environment that engages the listener and creates a sense of depth and complexity: "I use prepared guitar techniques to create a range of unusual and unpredictable sounds that challenge traditional notions of what a guitar should sound like." (Frith, 2008: 27)

- By using extended sound techniques, free improvisers can challenge traditional musical concepts such as melody, harmony, and rhythm. This can create a sense of unpredictability and surprise, and can help to push the boundaries of what is considered to be "music": "I'm interested in using

feedback and other forms of amplification to create distorted and unpredictable sounds that challenge conventional notions of what is considered musical" (Derek Bailey, 1993: 51).

- Extended sound techniques can be used as a means of communication and interaction between musicians. By responding to each other's sounds and gestures, musicians can create a dialogue and build a shared musical language that allows them to communicate and collaborate in real time: "I use a range of extended percussion techniques, such as scraping, bowing, and using found objects, to create a rich and diverse sonic environment that complements the other instruments in the ensemble" (Prévost, 1995: 33).

- Self-expression and individuality. Extended techniques allow the musician to be more individual and recognizable. More often than not, a musician finds his own interesting musical techniques that become part of his personality as an artist: "I use a range of extended wind techniques, such as glissandi and harmonics, to create a range of different sounds and textures that are unique to my instrument" (Brötzmann, 2003: 13).

- Extended sound techniques can be used to express a wide range of emotions and intentions, from the aggressive and abrasive to the introspective and contemplative. This allows free improvisers to convey a sense of mood and feeling in their music and to communicate their personal experiences and perspectives through sound: "I'm fascinated by the possibilities of gestural control, using physical movements and gestures to manipulate sound in real-time and to create a dynamic and interactive musical dialogue" (Mori, 2017: interview).

2.4. Principles of interaction in improvisational performance

2.4.1. Techniques of musical interaction in solo performance

In a solo free improvisation performance, the musician must be able to adapt to the space they are playing in, whether it be a concert hall, a small room, or an outdoor venue. The acoustics of a space can affect the way sound travels and interacts with different surfaces, creating unique resonances and harmonics. Therefore, a musician must explore and experiment with the acoustics of the space to create new and exciting sounds.

Moreover, in this context, ambient sounds can serve as a source of inspiration providing a framework for the solo improviser to explore and develop musical ideas. Ambient sounds are the sounds that surround us in our environment, such as the sounds of nature, traffic, or people talking. These sounds can be both distracting and inspiring and they can influence the mood and direction of the improvisation.

For example, the sound of rain falling outside a musician's window could inspire them to play with a gentle, meditative style. The sound of traffic passing by could inspire a more chaotic, frenzied style of playing. Ambient sounds can also help to create a sense of atmosphere or mood in the improvisation. By incorporating sounds from the environment into the music, the improviser can create a sonic landscape that reflects the world around them. Furthermore, ambient sounds can serve as a guide for the improviser, providing a sense of structure and direction to the music. By listening to the sounds around them, the improviser can create a musical dialogue with the environment, responding to the sounds they hear and incorporating them into their playing. This is also reflected in the words of saxophonist Evan Parker: "The beauty of free improvisation is that it allows the musician to respond to the environment around them. Incorporating ambient sounds into the music can help create a sense of atmosphere and mood, and guide the direction of the improvisation" (Parker, 2013: interview).

Solo improvisation offers a unique opportunity for a musician to express themselves without the constraints of a pre-existing musical structure or the input of other musicians. This means that the musician can use the structure of the music to shape their narrative and create a cohesive and meaningful improvisation. In a sense, the musician becomes the composer and performer at the same time. By using composition techniques such as theme and variation, repetition, and development, the musician can create a structured improvisation that evolves over

time. For example, the musician might begin with a simple melody or motif and then use variations and development to build on that idea and create a complex and engaging improvisation. Another composition technique that can be used in solo free improvisation is the use of contrasting sections or themes. The musician can use changes in tempo, dynamics, and tonality to create different moods and emotions within the improvisation. This can be especially effective for creating a sense of narrative or story within the improvisation.

For example, saxophonist John Butcher creates a complex sonic world using his saxophone and exploring the full range of its timbral possibilities. He seamlessly blends extended techniques with more conventional techniques to create a unique sonic landscape. In an interview with "The Wire" magazine, John Butcher (2013: interview) stated: "In solo playing, you're the only one responsible for the structure of the music, so you have to create an arc that is not based on someone else's arc. You have to create your own journey, and that is a great challenge." This statement highlights the importance of structure in solo improvisation, and how the musician must create their narrative and trajectory without the input or influence of other musicians.

In solo improvisation important to single out such a concept as a musical object. According to Schaeffer, a sound object is a basic unit of sound that is perceived as a distinct and independent entity by the listener. It is a product of the interaction between the physical properties of the sound source and the perceptual and cognitive processes of the listener. A sound object can be made up of one or more sound events and can have various characteristics such as pitch, timbre, duration, and spatial location (1966: 219)

Moreover, John Butcher (2011: 5) voiced the importance of musical objects in improvisation: "The solo context allows me to concentrate fully on the exploration of a single idea or object, to create and transform it over time, rather than jumping around a lot." This quote highlights the importance of creating and developing musical objects in solo improvisation that allow musician to explore fully and expand upon their ideas without the influence of other musicians.

In my opinion, an object can be defined as a discrete unit or element of a musical composition, such as a melody, harmony, rhythm, timbre, or other musical aspect that can be distinguished and analyzed separately from the composition as a whole. Also, objects can be combined, transformed, or juxtaposed to create larger musical structures or narratives and can be

used to create a sense of coherence or continuity in a piece of music. The concept of objects is often used in contemporary music composition and improvisation, where the focus is on creating and developing sound objects rather than traditional musical themes or motifs.

2.4.2. Techniques of musical interaction in collective performance

Successful collective free improvisation performances depend heavily on musicians' ability to interact and communicate with one another by using a range of techniques and strategies to create a cohesive and engaging musical performance. My experience and some of the theses coincide with notions expressed in George E. Lewis and Benjamin Piekut "The Oxford Handbook of Critical Improvisation Studies". There are several basic methods of collective interaction, such as:

- Listening: It is a crucial technique for musicians to communicate and collaborate with each other. By actively listening to each other's musical ideas, musicians can respond and build upon each other's contributions in real time. According to Lewis and Piekut (2013: 163), "Effective listening involves not only hearing the sounds that other musicians are making but also understanding the context and intent behind those sounds. Musicians must be attentive to the musical ideas being communicated and respond in a way that supports and builds upon them".

- Reacting: "musicians may respond to each other's musical ideas by echoing them, developing them, or contrasting them" (2013: 168). This technique requires quick thinking and the ability to respond to musical cues in the moment

- Embracing silence: "in collective free improvisation performance, silence can be just as important as sound. Musicians may use silence to create tension, anticipation, or a sense of space in the music. This technique requires a willingness to let go of preconceived ideas about what music should sound like and to allow the music to unfold naturally" (2013: 173). Musicians may use silence to create tension, anticipation, or a sense of space in the music

- Dynamics: "musicians can use changes in volume and intensity to interact with each other and create a sense of dynamic tension and release" (2013: 175). For example, one musician might play softly while another plays loudly, or the whole group might gradually increase or decrease in volume over the course of a performance

- Nonverbal cues: "musicians can use nonverbal cues, such as eye contact or body language, to signal to each other during a performance" (2013: 177). This can help coordinate the timing of musical entrances and transitions as well as create a sense of shared focus and energy.

- Counterpoint: it involves interweaving of two or more melodic lines, each with its own distinctive shape and rhythm. Musicians can use counterpoint to create a sense of complexity and richness in their performance, as well as to interact with each other by playing off of each other's melodies

- Non-idiomatic playing: "non-idiomatic playing in collective free improvisation performance involves creating sounds and musical ideas that are not tied to any particular musical tradition or style" (2013: 187). This technique allows musicians to break free from the constraints of pre-existing musical language and create something truly original and unique

- Spatial awareness: "spatial awareness in collective free improvisation performance involves paying attention to the acoustics of the performance space and how different instruments and sounds interact with each other" (2013: 189). Musicians may move around the performance space, change their position in relation to other musicians, or alter their playing style to create different sonic perspectives.

- Developing themes: "developing themes in collective free improvisation performance involves creating musical ideas that are developed and expanded upon throughout the improvisation" (2013: 191). This technique allows musicians to create a sense of coherence and continuity in the music, even as it evolves and changes over time

- Collective decision-making: "collective decision-making in collective free improvisation performance involves musicians making decisions about the direction and focus of the music together" (2013: 198). Collective decision-making technique requires a high degree of trust and communication among the musicians, as well as a willingness to relinquish control and allow the music to emerge spontaneously

- Section leader. In larger ensembles such as orchestras or bands, individual musicians may take on leadership roles within their sections and in this way ensure that all members of the section are playing together and producing a cohesive sound. Section leaders may also help to

communicate with the conductor or bandleader, relay information or feedback to the other musicians, and provide support and guidance to less experienced players.

- In some ensembles leadership may be shared among the members with each musician contributing their own unique strengths and skills to the group. This collaborative leadership approach can help to foster a sense of teamwork and mutual respect among the musicians, and can lead to more creative and dynamic performances

In addition to the above-mentioned techniques, there are other strategies and methods used in collective free improvisation performance; these include graphic notation, conducting, object-based improvisation, chance operations, structural frameworks, collaborative composition, and time-based improvisation.

- Graphic notation: "this is a form of non-standard notation that uses graphic symbols, shapes, and diagrams to convey musical information. Graphic notation can be used to represent specific musical sounds or to suggest general musical concepts or ideas" (2013: 207). The use of graphic notation allows for a greater degree of flexibility and spontaneity in the improvisation while still providing a basic structure for the musicians to work within. Cornelius Cardew's book "Treatise" is a remarkable example of a graphic score that has had a significant impact on the field of free improvisation. By rejecting traditional notation and instead using a visual language of symbols, shapes, and lines, Cardew opened up new venues for musical interpretation and experimentation. The 193-page score presents a vast array of musical ideas and directions and each performer's interpretation can be entirely unique. The score encourages performers to explore different paths and to create their connections between the various elements of the score. This approach enables greater freedom and spontaneity in the creative process, since the performers are not restricted by a predetermined set of instructions. One of the examples from Cardew's "Treatise" (1967, page 183), can be seen below:
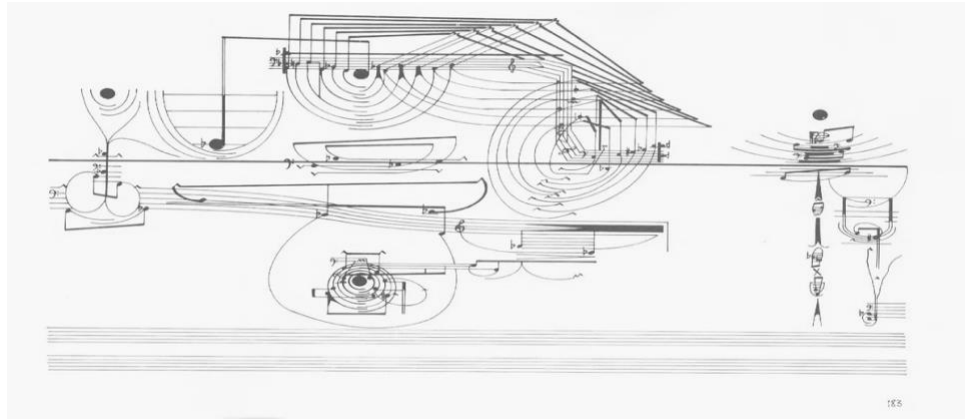
- Conducted improvisation: it "involves the use of a conductor or leader to guide the improvisation. The conductor may use various techniques, such as hand signals or verbal cues, to direct the musicians and shape the overall direction of the music" (2013: 211). Conducted improvisation can provide a sense of cohesion and structure to the performance while still allowing for creative input and spontaneity from the individual musicians.

- Groove. In many styles of music, particularly those with a strong rhythmic component such as funk, soul, or hip-hop, musicians create a sense of groove by locking into a common rhythmic feel or pulse. This requires close listening and precise timing, as each musician must be aware of the others' rhythms and syncopations. This is also the case in free improvisation.

- Repetition and variation. Musicians can use repetition and variation of musical ideas to create a sense of continuity and development in their performance. This technique involves repeating a musical phrase or motif multiple times while gradually varying it in subtle ways. Other musicians can then respond to these variations by creating a sense of dialogue and evolution.

- Text-based improvisation: this "involves the use of written or spoken language as a starting point for the improvisation. This can include using poetry, prose, or other literary texts as inspiration for the music, or incorporating spoken word elements into the improvisation" (2013: 216). Text-based improvisation can provide a framework for musicians to work within while also allowing for a degree of interpretive freedom and creativity.

- Circularity. It "involves the repetition and development of musical ideas throughout the improvisation. This can include the use of loops or repeating motifs, or the gradual

transformation of a musical idea over time" (2013: 219). Circularity can also provide a sense of continuity and structure to the improvisation while still allowing for creative exploration and variation.

- Interlocking rhythms and melodies. These "involve the creation of complex, layered textures through the combination of multiple musical ideas. Musicians may play contrasting or complementary rhythms and melodies, weaving together a tapestry of sound that evolves over time" (2013: 223). Interlocking rhythms and melodies require a high degree of coordination and communication between the musicians as well as a willingness to listen and respond to the contributions of others.

- In collective improvisation, some musical forms and structures can be used to provide a framework for the improvisation while still allowing for a high degree of creative freedom and interaction between the performers. Even simple forms and structures may provide a "roadmap" for the performers to navigate and explore their improvisation, while, at the same time also providing a sense of coherence and unity to the performance. It is interesting that the use of the form should not be mandatory. In free improvisation, at any time one can move away from the form, and combine forms and structures in real time. Some examples of forms that can be used are:

  1. A B A form is a three-part form, where the first and third sections are the same and the middle section is different.
  2. A B C A form is a four-part form, where the first and last sections are the same and the middle two sections are different.
  3. A B A C A, where the A section is the main theme and the B and C sections provide a contrast.
  4. A A B A form is a four-part form, where the first and second sections are the same and the third section is different. The final section repeats the first section.

CONCLUSIONS

As we can see from the first chapter, improvisation has undergone significant changes over the last decades. Free jazz and several European composers and musicians of the 20th century contributed to the starting point and the formation of free improvisation. The rejection of established principles, the departure from traditional instrumental groups, and the creation of individual approaches to music led to the development of a new type of music-making that is devoid of any pre-compositional task.

As can be seen from our discussion, free dialogue has become one of the main features of free improvisation with its emphasis on communication with colleagues, oneself, and the outside world. We have seen that the genre of free improvisation can be distinguished from other genres of music and that this genre has such stylistic features as striving for independence from any stylistic trends or norms, the radicalization of democratic and collective processes, the absolute spontaneity of creativity, and the importance of listening and responsiveness.

By developing a high level of listening, and responsiveness and getting rid of the need for control, musicians can create a democratic and collaborative process of improvisation that is truly radical. Collaboration and communication are also essential since each musician has an equal possibility to be heard in a creative process that is conditioned by flexibility and adaptability to dynamic changes within the group.

We analyzed from different points of view the assumption, that improvisation can be a way to create music and this way can be also considered as a goal of musical art.

Finally, the thesis argued that mistakes or failures are an integral and important part of improvisational music, as they are moments of spontaneity and new ideas and such failures become the point for the development of a musical idea. This proves that improvisation as a way of creating music can be a very useful tool for finding new musical ideas and creative development for musicians and composers.

In the second chapter, we reviewed several studies, that have identified that skilled improvisers rely on various cognitive processes such as working memory, attention, cognitive flexibility, prediction and anticipation, active perception, and motor control, which enable them to create and respond to music in real-time. Training in improvisation involves developing these

cognitive processes through practice, instruction, and feedback, as well as heuristics or mental models that help navigate the musical environment. Various exercises, including call and response, playing with constraints, collective and solo improvisation, listening, and transcription, can be helpful in this development. Overall, understanding the cognitive processes involved in improvisation can help musicians to develop their improvisational skills and become more skilled performers.

It has also been shown that timing and extended sound techniques play a crucial role in free improvisation performance. Timing is used as a structuring element. It can be also used to create rhythmic tension and momentum, space and anticipation as well as a source of inspiration and narrativity.

Moreover, in free improvisation timing is a shared responsibility among musicians. Extended sound techniques, on the other hand, involve creating unconventional sounds used in musical instruments or human voices. These techniques can be broadly categorized into instrumental, vocal, and environmental techniques. By using these techniques, musicians can explore the full sonic potential of their instruments and spaces and create unique textures and effects that add depth and interest to the music.

Similarly, by analyzing texts, books, and interviews of musicians, we explored the principles of interaction in playing improvisational music. Both solo and collective free improvisation performances require a range of techniques and strategies in order to create engaging and cohesive musical performances. In solo performances, the musician must adapt to the space they are playing in, incorporate ambient sounds, and use time models to create a structured improvisation. In collective performances, musicians rely on techniques such as listening, reacting, leading and following and communicating to create a cohesive musical performance. Furthermore, the concept of musical objects that can be perceived as separate entities within a larger musical context, is an important element of both solo and collective free improvisation and can be used to create a sense of coherence and continuity in music.

When discussing the role of composition and compositional techniques, we arrived at an interesting conclusion, that improvisation is a kind of anti-composition. Although improvisation and composition are two distinct approaches to creating music, the composition can also be seen as a form of improvisation, as the composer makes similar choices and decisions during the writing

process, albeit over a longer time frame. Thus, composition and improvisation are not necessarily in opposition but rather are complementary and interconnected aspects of the creative process.

The notion that having a plan can help to deviate from norms and plans in improvisation is an intriguing idea. However, it also complements the concept that mistakes in improvisation can lead to new and spontaneous ideas. Having a plan can provide a framework for experimentation and exploitation of new ideas. It can also offer a starting point for improvisation, providing a sense of direction and purpose. Without a plan, it can be challenging to know where to begin, and improvisation may become unfocused and aimless.

The concept of complete spontaneity in musical improvisation may seem abstract. Although improvisation is often associated with freedom, it is crucial to note that this freedom is not total. Improvising musicians are still limited by their instruments, technical abilities, and the context in which they perform. Additionally, the meaning of freedom can vary from person to person. For some, it may mean the ability to express themselves without restriction, while for others, it may mean the ability to break rules and conventions.

In free improvisation, each musician invents and uses their language and system, which is a fundamental characteristic of the genre. Professional improvising musicians use a complex practice of spontaneity and composition, continually adapting to the situation. Such musicians always carry a "backpack of instruments" for various situations that may arise during improvisation. Techniques such as listening, active listening, reacting, non-idiomatic playing, using space and ambient sounds, embracing silence, collective decision-making, and musical meditation, and all part of the cognitive processes that can be attributed to spontaneous techniques for creating improvisation. They often serve to generate ideas, guide the active interaction between musicians, and function as methods of emotional preparation for improvised performances. Techniques such as graphic notation, musical forms and structures, conducted improvisation, text-based improvisation, circularity, interlocking rhythms, groove, repetition and variation, and developing themes can be classified as composition. Such techniques are often used to develop musical ideas, organize processes, and shape improvisation.

BIBLIOGRAPHY:

1. Alterhaug, B. *Improvisation as Phenomenon and Tool for Communication*. In Santi, M. (Ed.), *Improvisation, Between Technique and Spontaneity*. Newcastle upon Tyne: Cambridge Scholars Publishing, 2010

2. Barret, T. *Collaborative Creative Thought and Practice in Music 1st Edition,* London, 2016

3. Berliner, P. *Thinking in jazz: The infinite art of improvisation*. Chicago: The University of Chicago Press, 1994

4. Bailey, D. *Improvisation - Its nature and practice in music*. New York: Da Capo Press, 1993

5. Borgo, D. *Negotiating Freedom: Values and Practices in Contemporary Improvised Music.* Illinois: University of Illinois Press/Black, 2004

6. Borgo, D. *The Oxford Handbook of Critical Improvisation Studies*. Oxford University Press, 2016

7. Borgo, D. *Cognitive flexibility and improvisation: strategies and tools in composition and improvisation.* London: ISTE press, 2018

8. Bruser, M. *The Art of Practicing: A guide to making music from the heart.* New York: Three Rivers Press, 2018

9. Brötzmann, P. *European free jazz. In M. Cooke, & D. Horn (Eds.)*, The Cambridge Companion to Jazz. Cambridge University Press, 2003

10. Brown, A. *Beyond Notation: The Music of Earle Brown*, University of Michigan Press; Illustrated edition, 2017

11. Cobussen, M & Nielsen, N. *Music and Ethics*, Routledge; 1st edition, 2013

12. Cardew, K. *Scratch Music.* London: Latimer New Dimensions limited 1972

13. Davidson, N. *Composition in improvisation: forms and otherwise. (PhD thesis),* University of Glasgow. Retrieved December 2014.

14. Frith, F. *In the Sound Studio: Visual arts the stages of contemporary music.* London: Ashgate Publishing, 2008

15. Limb, C. *Neural substrates of spontaneous musical performance: An fMRI study of jazz improvisation*. Ernest Greene, University of Southern California, USA, 2008

16. Limb, C. *Musical Predictions: From Expectation to Experience*. Memory & Cognition, University of Southern California, USA, 2009

17. Lewis, G. E., & Piekut, B. *The Oxford Handbook of Critical Improvisation Studies, Volume 1.* Oxford University Press, 2013

18. Nunn, T. *Wisdom of the Impulse. On the Nature of Musical Free Improvisation*. San Francisco, CA: 3016 - 25th Street, 1998

19. Oliveros, P. *Quantum Listening: From Practice to Theory (To Practice Practice).* New York: Deep Listening Publications, 1999

20. Plato. *The Republic of Plato, Book X: Edited as an Introduction to the Study of Plato's Philosophy (Classic Reprint),* Forgotten Books, 2018

21. Prévost, E. *No Sound Is Innocent*. Essex: Copula, 1995

22. Sloboda, J. A. *The role of practice in the development of performing musicians. In The Oxford Handbook of Music Psychology.* Oxford University Press, 2010

23. Stevens, J. (2007). *Search & Reflect.* Middlesex: Rockschool, 2007

24. Suchet. *J. Beethoven: The Man Revealed*, Grove Press, New York, 2014

25. Solomon, M. *Mozart: A Life.* Harper Collins Publishers, 195 Broadway New York, 2005

26. Schaeffer, P. *Traité des objets musicaux,* SEUIL, Paris, 1966

LINKS TO ONLINE SOURCES

1. Butcher, J. 2011, https://www.thewire.co.uk/news/18731/john-butcher-in-conversation-with-david-toop

2. Crispell, M. 2021, https://www.youtube.com/watch?v=vo5zVnVZvmE

3. Drake, N. 2018, https://robinfrederick.com/nick-drake-place-to-be/nick-drake-time-of-reply/

4. Evans, P. 2015, https://bombmagazine.org/articles/in-flow-peter-evans-interviewed/

5. Gustafsson, M. 2012, https://15questions.net/interview/fifteen-questions-interview-mats-gustafsson/page-1/

6. Halvorson, M. 2018, https://www.allaboutjazz.com/artlessly-falling-mary-halvorson-firehouse-12-records

7. Parker, E. 2013, https://thequietus.com/articles/12819-evan-parker-interview

8. Mori, I. 2017, https://daily.redbullmusicacademy.com/2014/10/mute-beat-feature

9. Smith, W. L. 2011, https://newmusicusa.org/nmbx/wadada-leo-smith-decoding-ankhrasmati/

10. Stockhausen, M. 2018, https://www.markusstockhausen.de/trompeter-musiker-komponist/25/intuitive-music-and-more/n

11. Zorn, J. 2014, https://www.rollingstone.com/music/music-features/john-zorn-jazz-metal-interview-naked-city-1015329/