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EDITOR'S NOTE

Belgrade Centre for Music and Dance (BCMD) is a founder and publisher of *Accelerando: Belgrade Journal of Music and Dance*. BCMD is founded to establish cooperation and communication between local artistic and scholarly scene and the world’s. In order to achieve that goal BCMD launched *Accelerando: Belgrade Journal of Music and Dance* as an open access, double-peer-reviewed online journal. This journal allows Serbian scholars, artists, and educators to have permanent scholarly communication and interchanging of knowledge and information with the world’s renown artists, scholars, schools and universities.

Since knowledge is fluid and dynamic in nature, and transmitted through discourse, it is important for those who have a stake in advancing the knowledge base to participate in the discourse. Writing, as a form of communication, and publishing are ways of participating in the discourse. Research article is the end product of an investigation that has focused on a specific set of research questions. Research must be carefully planned, conceptually grounded, and methodologically sound, and must provide answers or possible answers and implications for further investigations.

Accordingly, the effort of editorial board members and reviewers of *Accelerando: BJMD* is dedicated to help authors reach the goal and craft the articles in a way that successfully, effectively and persuasively communicates the importance of the study. Through this mutual effort, work, and cooperation we hope that our journal promote values, expanding the base of knowledge and contribute to the discourse.

*With best regards,*

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Music Related Issues
Control and Chance in Music and Art: 
A Survey of Philosophies

Shuang Cai

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ABSTRACT

This article is a survey and review of several writings on the philosophies and compositional techniques involving control and chance in the creation of modern art and music. The purpose of discussing and comparing these writings is to trace different understandings, reactions, and interpretations of these philosophies in order to offer a more informed perspective on these oft misunderstood techniques. The first article analyzed is Robert Charles Clark’s "Total Control and Chance in Music: A Philosophical Analysis," which discusses fundamental issues regarding both total control and chance music. The second article, Stephanie Ross’s "Chance, Constraint, and Creativity: The Awfulness of Modern Music," presents some of the adverse reactions to these methods of composition. The third and fourth articles, Roland Barthes’ "The Death of the Author" and "From Work to Text," offer a broader philosophical viewpoint on the different roles of the author and their product when creating art. The final article, Jeongwon Joe and S. Hoon Song’s "Roland Barthes’ ‘Text’ and Aleatoric Music: Is the ‘Birth of the Reader’ the Birth of the Listener?" concludes this survey by tying Barthes’s concepts back to music.

Keywords: chance music, modern art, aleatoric music, methods of composition, serialism, determinism

Robert Charles Clark: "Total Control and Chance in Music. A Philosophical Analysis."

Robert Charles Clark begins his article "Total Control and Chance in Music: A Philosophical Analysis" (Clark 1970, 356) by discussing control versus freedom in music, and then introduces the main topic of his article, the methods of Karlheinz Stockhausen and John Cage. His discussion of Stockhausen begins with an analysis of the elements of control one can have over a musical tone. They are pitch, overtone structure, duration, loudness, and morphology. Clark focuses in on the issue of overtone control. Traditional composers have had some general control over this through selection of instruments and textures. Stockhausen, however, aimed to break through this...
restriction on tone: "What does an architect do when he wants to build a single-span bridge or a skyscraper or an airplane hangar? Does he still use clay, wood, and brick?" (Ibid.) For Stockhausen, all of the elements of tone were ultimately controllable through electronic means. With the introduction of electronic manipulation, as Clark states, "the full range of sounds that man can hear will then have become the readily manipulative musical resources of the composer" (Ibid.). He uses the phrase "total control" for this type of music, and discusses the "exact foreknowledge" that this provides for the final production.

Clark then mentions John Cage and his philosophy of "letting things be themselves" (Ibid.), as well as the importance of being in harmony with nature. As Cage states, "we discipline the ego because it alone stands between us and experience…a measuring mind can never finally measure nature…let sounds be themselves rather than vehicles for man-made theories or expressions of human sentiments" (Idem., 357).

Clark then alludes to his main argument: "the theories of composition behind total-control and chance music do not determine any differences in sound-products of the two types of composer" (Ibid.). In other words, although the methods may be different, the end result is not necessarily unique to each respective compositional style. Both compositional styles may utilize a full range of sounds, and neither is bound to a definitive method of composing. Thus, there is no guarantee that the musical product will provide a clear representation of its original philosophy. A total-control composition may, in fact, sound like and be mistaken for chance music, and vice versa.

The author’s response to most of Clark’s arguments and thoughts in his article is that they are sensible, particularly the idea that total-control music provides a form of guarantee during a performance. Clark does not mention, however, the idea that chance is ultimately involved in all forms of performance. Even if the music, equipment, and performance elements are entirely predetermined, there is always the possibility of the unexpected, such as a failure of technology, a fire in the concert hall, etc. His comment that total-control music makes the performer unnecessary is interesting, although perhaps not entirely accurate. It is true that if the composition is completely electronic, you might not experience living performers on stage. Someone, however, still has to set up the equipment and "perform" the work, even if behind the scenes. His ultimate argument is interesting, but it is hard to escape the fact that many compositions of this type still represent themselves quite clearly. John Cage’s "Water Walk" for example, obviously
involves chance, whereas a prerecorded electronic piece like Stockhausen’s "Electronic Studies" is likely to be understood as predetermined.

**Stephanie Ross: "Chance, Constraint, and Creativity. The Awfulness of Modern Music."**

Stephanie Ross’s "Chance, Constraint, and Creativity: The Awfulness of Modern Music" (Ross 1985, 22) is partly an analysis of Stanley Cavell’s article "Music Discomposed" (1967, 88-89), as well as her own examination of the nature and challenges of modern music. She opens the discussion on a classic issue concerning much of "modern" art: it seems like anyone could do it and thus the artist’s work has no merit. She states that there are two lines of defense against this. This first is that one could claim that artistry is indeed there, but it is just difficult to understand. Secondly, perhaps the lack of traditional artistry should not be a concern at all. She proposes that music in particular suffers from this criticism and disassociation from its audience. She then proceeds to talking about Cavell’s claim that much of modern art and music is fraudulent.

One of Cavell’s main viewpoints is that the composer, in an effort to make his art more unique and personal, effectively creates a composition that is incomprehensible for the audience. Cavell conceives this issue as definitive of modernism, where composers are "somehow forced to write music that cannot find an audience" (Ibid.). He is particularly concerned with the potential fraudulence of this art, and argues that "audiences today cannot tell whether contemporary musical works are genuine or fraudulent, art or non-art" (Ibid.). Ross goes into detail about the origin of this sort of music, being a result of the second Viennese School and related to the serialism of "totally organized" music. She then brings up Ernst Krenek’s 1957 composition "Sestina" for voice and instrumental ensemble, which Cavell examines in his paper. Evidently, "the overall feel of the piece is strident and clanging" and "yields not engaging melody or energizing rhythm, but a seemingly anomalous succession of sounds, textures, and timbres" (Ibid., 23). Krenek’s serialism was based off of a sestina poem that he wrote, where the words follow a specific pattern of rotation and repetition. He then created his musical composition based on these patterns. What was particularly interesting for Krenek, however, was not the total control of text and musical elements, but rather the unpredictable chance that was brought about by these initial intentions. Krenek states: "So complete a determination by serial rule of a sufficient number of parameters will make control of the remaining ones impossible. …what happens in this remaining sector is well-nigh unpredictable (except perhaps by electronic computation) and although intentionally brought about by the composer, it is not consciously planned by him...Therefore these happenings may be considered chance results" (Ibid., 24). This creates an interesting paradox, "that ultimate necessity causes unpredictable chance" (Ibid.).

Ross further examines Cavell’s belief of fraudulence in art. Cavell argues that the experience of fraudulence and trust are inherent to the experience of art, that there is no definitive method of identifying fraudulence in art, and that even the artist or composer or critic may not even know when they have created or

witnessed fraudulent work. Thus, the argument "Art is anything produced as art by an artist" (Idem., 25) is evidently unsubstantial due to the very possible situation of producing fraudulence. So the question arises: where does this fraudulence initiate? Ross begins a discussion on the method and merit of serial composition. She states that "serial composers have apparently taken one of three views on this matter. Some declare flatly that 'serial procedures are not to be perceived by the listener'; others that they 'are not perceived consciously but the music gives an effect of coherence which the listener cannot explain'; still others that 'serial procedures can be perceived, given the listener's cooperation in learning" (Idem., 26). One argument that Ross proposes to counter these ideas is that music is ultimately an aural art form, and any composition that circumvents the listener is merely sabotaging its ultimate purpose. Cavell also argues that "the problem with post-serial composition is composition...that fraudulence resides not in the end product but in the process through which it comes about" (Ibid.). He also suggests that chance and improvisation are "a way of artists' relinquishing responsibility for their work, of in fact not composing at all" (Ibid.).

Krenek, however, believes that the unpredictability he gains from his initial serial means in "Sestina" is the only way to guarantee genuine inspiration. The impersonal result of these mathematical means ensures that the composer’s conscious or subconscious knowledge and experience of past music does not interfere with genuinely fresh creativity. Cavell merely sees this as a "wish to preserve choice by foregoing responsibility" (Idem., 27), and that Krenek becomes so far-removed from his inspiration that there is no connection to the original artist’s desires, experiences, and creativity, which results in a fraudulent composition. Ross counters part of this by reiterating that the creation of works such as this do ultimately arise from choice and intent. But another problem, as Cavell states, is that "often one does not know whether interest is elicited and sustained primarily by the object or by what can be said about the object." (Ibid.) He argues that the work is not based on aesthetics or even knowledge of the outcome, so it is inherently impossible to satisfy artistic means. This leads to his statement that "compositions that were not created to satisfy their composers are not likely to satisfy us either" (Idem., 28). Even if the original material was chosen with intent, the end result is ultimately "chosen, but hardly composed" (Ibid.). Ross argues that because Cavell’s issues with modern music are based on the compositional process, but ultimately without grounds on which to judge the outcome, his charges against new music are at a stalemate.

Ross then provides her own viewpoint about the nature of music and composition. Although it is common knowledge that most artists strive to do what has never been done before, she claims that it is actually impossible to do what has been done before, particularly in the world of music. She states that "composers today cannot even compose in the style of their predecessors" (Idem., 30). She puts forth the idea that "return to an earlier style is always conditioned by and filtered through the styles, attitudes, and experiences of the intervening years...for we would hear it against the background of all that has happened in
the music world since” (Ibid.). This could make it possible for an artist to compose in an old style and still have a fresh edge. But her focus, however, is on the idea that music has no intrinsic meaning. Whereas visual arts have pictures, colors and visible style, novels and plays have text, etc., music is ultimately an abstract art form. She states that "music has syntax, but no semantics" (Idem., 32). Without this meaning, she believes that it is ultimately impossible to recompose in traditional forms while bringing something truly new to the table. The methods of modern music, such as aleatory and determinism, are the natural evolution of a need to strive for novelty in music.

The author’s response to Ross article is that the fact may stand that the drive for novelty indeed pushes many composers to write for a specialized "university" audience, often resulting in an artistic product that cannot succeed in finding a general audience. As Cavell discusses (op. cit. 1967a, b), composers will often use methods that help separate them from their desires, experiences, and creativity. Unfortunately, the result is sometimes so extreme that it can seem disconnected from knowledge, thought and humanity altogether, which certainly calls into question the artistic value of the work. Another issue, as Cavell states, is whether the interest should lie more in the object or what is said about the object. Cavell puts it well when he writes "compositions that were not created to satisfy their composers are not likely to satisfy us either" (Idem., 28).

Krenek’s philosophy that the act of serial control provides humanly incalculable ends and thus results in a degree of chance is fascinating. The effort to control everything ultimately ends in unpredictability. Although when expanding the philosophical argument to this point, one could also bring in the larger concepts of determinism and free will, calling everything into question and ultimately being left with no tangible answers. Ross’s final argument that modern music springs from a need for novelty that cannot be found in revisiting old styles is sensible. But again, bringing larger philosophical disputes into play, we may ask: does everything really have to be novel?

Roland Barthes: "The Death of the Author"

Roland Barthes’ "The Death of the Author" (Barthes 1978a) is an examination of two concepts of writing: one where the text takes precedence and the author is no longer in the foreground, and one where the author is the focus and his product is a direct result and reflection of himself. Barthes explains that the death of the author occurs when the voice loses its origin and the text loses its function, becoming merely symbols that no longer act directly on reality. He distinguishes between two styles or eras of writing. One is from ethnographic societies (like Greek aural tradition) where the focus is on the story itself and no ownership is placed on the performer of the work. The other is a product of the development of literature since the Middle Ages, where greater importance is attached to the individual. It seems that in this phase of art and literature "the explanation of a work is always sought in the man or woman who produced it" (Idem., 143).

Barthes then introduces the work of Mallarme, who he claims was the first to again put language above the
The language itself is what is speaking, which in effect restores the place of the reader by disempowering the author. He then mentions Proust, who not only blurred the relation between the writer and characters, but made "the narrator not he who has seen and felt nor even he who is writing, but he who is going to write…instead of putting his life into his novel, as is so often maintained, he made of his very life a work for which his own book was the model" (Idem., 144). He then mentions how surrealism contributed to this displacing of the author by engaging in "the abrupt disappointment of expectations of meaning" and employing the method of "automatic writings" (Ibid.). Barthes further discusses his distinctions of writing; when the author is the focus, he stands with his work on a timeline of before and after, nourishes, and creates the work. The modern writer, however, is "born simultaneously with the text" (Idem., 145), and thus is freed of the delays in polishing the work, creating a language which "has no other origin than language itself, language which ceaselessly calls into question all origins" (Idem., 146).

Barthes then describes text as a multi-dimensional space and "tissue of quotations" that indefinitely draws on itself and ultimately does not express origins from the author. When this author is gone, it becomes futile to decipher the text or critique it in the traditional sense, and without ultimate meaning, it is liberated from "what may be called an anti-theological activity, an activity that is truly revolutionary since to refuse to fix meaning is, in the end, to refuse God and his hypostases – reason, science, law" (Idem., 147). Barthes wraps up his arguments by presenting the reader as "the space on which all the quotations that make up a writing are inscribed without any of them being lost; a text’s unity lies not in its origin but in its destination" (Idem., 148).

**Roland Barthes: "From Work to Text"**

Barthes’ "From Work to Text" (1978b) is an in-depth examination of what constitutes a "Work" and what is meant by "Text." He introduces the article by discussing changes in the fundamental concepts of literature and language due to linguistics, anthropology, Marxism and psychoanalysis, specifically how they relate to objects and ideas that are outside of their usual scope. He mentions that there was a "break" in the last century due to Marxism and Freudianism, but since then the ideas and concepts regarding literature and linguistics have merely been shifting. In particular, one of these shifts has occurred where the notion of a "Work" has produced a new object – "Text."

Barthes then embarks on a description of seven different traits that distinguish "Work" and "Text." The first is method. He describes the Work as "a fragment of substance, occupying a part of the space of books," and the Text as "a methodological field…one is displayed, the other demonstrated;" furthermore, "the Text is experienced only in an activity of production…the Text cannot stop" (Ibid., 157). The next category is genre. He states that the Text goes beyond literature, a hierarchy, or a division of genres. Essentially, it defies classification or boundary restrictions. Third, he discusses "signs" or symbols. "The Text can be approached, experienced, in reaction to the..."
Whereas the Work is somewhat constricted to specific symbolism, the Text "practices the infinite deferment of the signified" (Ibid.). The Work is "moderately symbolic" and the Text is "radically symbolic...a work conceived, perceived and received in its integrally symbolic nature" (Idem., 158-159). The Text is more liberated from the restriction of specific signs/symbols that are such an integral part of a Work. His next point is the plurality of Text. It is "irreducible" and "is a tissue, a woven fabric" (Ibid.) that defies specific categorization. The Text is a complex embodiment of many sources, and "the citations which go to make up a text are anonymous, untraceable, and yet already read" (Idem., 160). Barthes fifth point examines the process of filiation. A Work has a traceable lineage of the author as the father, whereas the Text is separate from this quality. A Work is similar to an "organism" which grows in a chain of related causes, and the Text is like a "network" which results in the "abolishing of any legacy" (Idem., 161). The author may appear in a Text, but only as a guest.

Barthes next topic is the categorization of the reader and the writer. For Text, the distance between reading and writing closes in and becomes a "single signifying practice" (Idem., 162). He discusses the division of these two concepts through history; we are taught how to read, but not how to write as one holistic activity. Regarding music, whereas playing and listening were intertwined in the past, we have become victims of specialization that divides the activities of music. The text, however, "asks of the reader a practical collaboration," but the reduction of reading to a consumption is clearly responsible for the 'boredom' experienced by many in the face of the modern text" (Idem., 163). Barthes final point is that the approach to Text is ultimately a "pleasure of consumption" and that it is bound to "a pleasure without separation" (Idem., 164). In conclusion, it seems that Barthes views Text as "that space where no language has a hold over any other" and that "Text should itself be nothing other than text" (Ibid.).

The author’s response to Barthes’ pursuit of a distinction between Work and Text is a courageous one and has its merit, but ultimately it is very difficult, if not impossible, to lock down the two ideas into distinct categories. Particularly when he attempts to describe the Text, the vastness of such a concept is hard to nail down, especially when he tries to put the frame of history around it. Regarding aleatoric music, we may borrow his idea that the reader must become empowered in order to fully understand the Text. For eclectic music such as John Cage’s "Europeras," it is also helpful to think of Barthes’ "tissue of quotations" as a definition of Text. Much of the philosophy behind aleatoric music, particularly with Cage, is letting sounds exist as themselves. Or, as Barthes puts it, Text should be nothing other than Text. It is also important to allow the audience and the environment to become a part of the composition, giving a metaphorical birth to the listener/performer/reader in addition to the work.

There is, however, a weak point in Barthes’ argument. Much of art which proposes to have a true "Text" often, in fact, draws the most attention to the composer/author/creator instead of their work. In music,
there are numerous classical themes that people may be able to recognize without knowing the composer. But a work like 4’33” is merely an expression of time without the image and philosophy of John Cage attached to it. Seven white panels might as well be a projector screen without Rauschenberg accompanying the title. The philosophy of the creator becomes the centerpiece in so much of this type of work that to tear it apart and give it its own life becomes a maze of pitfalls. Barthes states that Text abolishes any legacy or filiation, but it is in our nature to assign an author to any art, work, or text. Quotes become much more meaningful when it comes from an important person. The ancient stories of aural tradition may or may not have specific authors, but are still designated with labels of "Greek" or "Native American" to color their meaning. Overall, Barthes is on to an interesting concept, but the dance he has to do with these ambiguous terms makes for an uncertain conclusion.

**Jeongwon Joe and S. Hoon Song**

"Roland Barthes' ‘Text’ and Aleatoric Music: Is the ‘Birth of the Reader’ the Birth of the Listener?"

Jeongwon Joe and S. Hoon Song’s article "Roland Barthes’ ‘Text’ and Aleatoric Music: Is the ‘Birth of the Reader’ the Birth of the Listener?” (2002) begins by describing the trends of control and chance in Western music. Through its development, composers have attempted to increase control in composition, with serialism representing its height. The emergence of chance music is an interesting counter to this trend. Joe and Song mention that chance is a part of all music, but the act of introducing chance intentionally is what defines aleatoric music. They then discuss post-structuralism’s critique of the author as creator, as well as Barthes’ philosophies on "Text" and "Work." Then they present their argument that Barthes’ comparison of the listener to the reader is problematic because of the additional factor of the performer in live music. A deeper explanation of post-structuralism is given, from the origins of Nietzsche and Heidegger’s mistrust of human reason and objectivity, to Focault’s idea that human knowledge and reality cannot be ultimate truth because we work through the lens of linguistic conventions. This leads into a discussion of Barthes’ concept of "Text" and "Work," and how his "Text" parallels Cage’s philosophy that musical composition is mostly about the process. They also reference his propensity for pulling material from existing sounds or various quotations. Joe and Song then further clarify their argument that Barthes’ comparison of aleatoric music to text is problematic since "unlike literary readers, listeners do not have direct access to a ‘text’ but need to be mediated by the performer" *(Ibid., 268).*

Their next section discusses three types of aleatoric composition: chance in composition, chance in performance, and chance with graphic notation. They present an interesting examination of the last two types. They tend to liberate the performer, but they do not necessarily liberate the listener, as Barthes originally intended in his analogy. The last section is a critique of Barthes’ analysis of "Work" and "Text," and the flaws inherent in relating this to music. This includes the problem of historical placement and using names for supposedly nameless text. Barthes borrows the musical
comparison for convenience, but ultimately collapses the listener onto the performer to make his point work.

The author’s response to Joe and Song’s critiques and arguments bring up valid points against Barthes. There are other issues as well, such as Barthes’ lack of clarity. He describes the reader as becoming an “active co-producer of the Text” (Idem., 267). This can literally happen if the audience is involved in a musical piece or directly influences a piece of art, but in regard to a literary writer like Mallarme, Barthes is not clear exactly how the reader is involved. Perhaps it is more of a poetic statement that the reader is challenged to become more actively a part of the experience rather than a passive consumer.

There is another problem regarding his analogy to music. For written "Texts" that we literally read, or artwork that we can see, there is no need for a performer, and it is clearly a dichotomy of "Text" and "Reader." In music, however, if the "Text" is interpreted as the musical score, then we are left with two more factors—the performer and the listener—creating a total of three categories, and undermining Barthes’ division into two categories of Text and Reader. There is one possible solution to this, aside from condensing the listener and performer together into one unit. We may define the Text as the performance itself, including not only the score but both the score and performer. The overall product then becomes the Text, and the listener may indeed assume the role of the Reader. Instead of "a substitution of authors" (Idem., 271), in aleatoric music we could have a merging of composer and performer. A parallel to this is Barthes’ description of ethnographic societies, where emphasis is placed on the story itself rather than the author, pre-written words, or performer. Essentially, the performer and author become the means to an end, and the "Text" is literally the end product of the story that is heard.

If we took the philosophy a step further, we could also argue that for literature a performance still does, in fact, take place. The dance of light off the page, the weather outside affecting your feelings about a certain passage, the different enzymes that release throughout your body and alter your mood; the artist’s text must go through a process of transference to reach one’s mind, and it does so in a different way every time, much like the chance involved in all performance. As suggested by Joe and Song, Barthes’ articles address valid points, but ultimately open up many more doors of uncertainty and unanswered questions.

**Conclusion**

When dealing with broad concepts such as chance and control, as well as trying to define the roles of the artist and his or her work, we inevitably encounter wide variances in the interpretation of their meanings. As we can see from this selection of articles, there are no clear and simple answers, and often the search for those answers can become circular. Perhaps the most important aspect of these philosophies is that the discussion remains alive and active. Despite Barthes’ attempt to argue that Text stands on its own, he still must put his commentary and his lens in front of the artist’s work before we understand this point. It is thus important to cross-examine different ideas and pursue further insight in order to be better armed to
discuss with others and ultimately make our own decisions regarding modern music and art.

References


"Junction +4": A Foray into the Intersection of Minimalism and Indeterminacy
Matthew Glenn Quick

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ABSTRACT
The main purpose of this article is to examine the methods and philosophies behind a work that the author composed for piano, "Junction +4." The piece incorporates elements of both minimalism and indeterminacy. The author has made an effort to ascertain whether these seemingly contradictory methods can successfully coexist in a single piece of music. That way he challenges the fact that minimalism inherently involves a careful regulation of predetermined elements, whereas indeterminacy by definition relinquishes control. In addition to addressing this paradox, "Junction +4" also serves as a representation and critique of technology in society. This article also talks about prominent composers and works that represent the categories of futurism, minimalism, and indeterminacy.

Keywords: futurism, minimalism, indeterminacy, piano music, composition

Introduction
"Junction +4" is a piano work which the author composed that incorporates elements of both minimalism and indeterminacy in an effort to ascertain whether these seemingly contradictory methods can successfully coexist in a single piece of music. The challenge lies in the fact that minimalism inherently involves a careful regulation of predetermined elements, whereas indeterminacy by definition relinquishes control. In addition to addressing this paradox, "Junction +4" also serves as a representation and critique of technology in society. The title was chosen for several reasons. Firstly, this piece is an attempt at finding the "junction" where minimalism and indeterminacy can meet in a musical composition.

Secondly, the title is a bit of word play, partly on Morton Feldman’s "Intersection" compositions which also utilize indeterminacy, as well as on the image of a railway junction since the piece incorporates "train" chords. Lastly,
"+4" is an indication of the frequent use of tritones in the musical texture.

**The Structure of "Junction +4"**

The music itself progresses in a minimalist fashion, beginning with a simple idea and gradually building upon it, with the intent to mimic the swell of technological noise in the world. It is written for one piano four hands, which allows for more material to be compiled as the piece progresses than if it were merely a solo piano work. The rhythmic elements are strong throughout the piece to reflect the driving nature of a technological society. Technology is an inorganic concept, and in many ways causes a fragmentation from naturally human and direct interaction. To reflect this, the fundamental chords and rhythms are disconnected from any sense of longer melodic line or traditional harmonic progression. On the other hand, technology has also served to strengthen communication and broaden networks. Because of this, the motivic ideas are still musically sensible and aurally satisfying so as to maintain a sense of musical cohesion.

The piece begins with a single repeating note in the bass register (Example 1), which soon forms a steady motor rhythm as it builds in complexity. This bass-line forms the atmosphere of the composition, creating a sense of inescapable churning that sets the backdrop of an unyieldingly technology-driven culture.

After the bass-line is established, chords are gradually interjected and layered on top of each other, adding to the rhythmic and harmonic intricacy (see Example 2).

These harmonies form the sound of "train" chords. These are essentially chords or note clusters that often incorporate dissonance (particularly the interval of a tritone) and are frequently syncopated, creating an effect similar to that of a train horn.

This style of chord can clearly be heard in Big Band era music, such as "Take the ‘A’ Train."

Philosophically, this sound was chosen for "Junction +4" because the invention of the train has served as one of the greatest catalysts for the progress of technology. Musically, these chords are very effective when utilized in syncopation, allowing for more rhythmic complexity in the piece without sacrificing aural continuity or musical satisfaction.
The other prominent musical material is drawn directly from the theme songs and tunes of major cell phone companies, particularly Nokia, T-Mobile, and AT&T.

\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{nokia_tmobile_att_tunes.png}
\caption{Theme songs of the major cell companies.}
\end{figure}

These are introduced one at a time and layered on top of each other, culminating in the final section which combines all tunes with the train theme.

\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{junction_plus4_score.png}
\caption{"Junction +4", measures 33-34}
\end{figure}

One reason these particular melodies were used is because mobile phones have become one of the most influential elements of modern technology. In the piece, this creates a stark but appropriate juxtaposition with the "train" elements, as past and present use of technology are combined and set against each other. The other important reason for using cell phone themes pertains to the aleatoric nature of the work, which will be discussed later.

**Music and Technology – Futurism**

Admittedly, the use of music as a means for commentary on the nature of technology is not a novel concept. Neither is the incorporation of sounds that mimic technology, or even the use of technology itself in the place of traditional musical instruments. The category of music pertaining to the incorporation of and commentary on technology is often labeled Futurism. Futurism originated in the early 20th century and manifested itself largely in literature, graphic arts, and music. In music, there is a particular fascination with machines, speed, everyday noise in the world, and artificial man-made environments. The most prominent musical figures from the early Italian Futurist movement include Pratella, Fiorda, Casavola, and in particular Luigi Russolo (Redice 2003, 3). Russolo is credited for developing the concept of intonarumori (an "art of noises") where mechanical devices, percussive noises, and the human voice substitute conventional instrumentation (Ibid.). In music that sprang from this movement, repetitive figures are often employed to evoke the effect of droning machines and the ongoing hum of technology. This fundamental concept of repetition was utilized for "Junction +4," as it appropriately contextualizes the music for its commentary on technology, and it lends itself well to the aesthetics of minimalism.

An example of the use of non-conventional and mechanical instrumentation can be found in George Antheil’s 1925 "Ballet Mecanique." Antheil’s first version had a score for sixteen player pianos, intended to accompany a movie by Fernand Leger. After difficulties
with synchronization of the pianos and timing with the movie, he decided to orchestrate the ballet, and included air-plane propellers, sirens, and electric bells ( Bijsterveld 2002, 129). According to Antheil’s autobiography Bad Boy of Music (Antheil 1945), he was not content with being grouped in with the Italian Futurists. He felt that their use of machines "had no mathematical dimension at all, nor claimed space, but just improvised noise…which is ridiculous and had nothing to do with music" (Bijsterveld op. cit., 129). He considered time, rather than tone, to be the most crucial feature of music. Some important elements in his music include the use of both silence and repetition to make 'loops.' Antheil himself describes "Ballet Mecanique" as the first work on earth composed out of and for machines, tonal nor atonal, just made of time and sound, without the traditional contrasts of piano and forte (Idem., 128). Indeed, we can hear this fascination with time, effectively bringing the listener into a precise and mechanically mesmerizing world.

Another composer interested in technology, albeit expressed through more traditional means, was Arthur Honegger. His symphonic movement entitled "Pacific 231" is particularly relevant for placing the context of "Junction +4." Although he used more conventional orchestral scoring, his music utilizes a similar method of using repetitive figures and loops to reflect machinery, specifically the direct representation of a train. The piece was named after one of the fastest American locomotives of its time, but Honegger insisted that it was no mere program music. His goal was to translate not only the visual impression of a train, but also the physical sensations of train travel and its joy into music (Braun 2002, 107). It is not a reflection of something lifeless and cold, but has an organic quality as it gradually builds to full speed and back down again. While "Junction +4" has no alterations in tempo, the sound of a train permeates its initial building blocks. Its repetitive bass-line starts not unlike the churning of train wheels, and then "train" chords are added to set up the technological context of the music.

The next composer to mention is Frederic Rzewski, who effectively commented on the perils of technology in his "Winnsboro Cotton Mill Blues." Written for piano, the piece conveys the environment of a North Carolina cotton mill and the brutal working conditions created by the factory. It begins with a simple repetitive ‘looping’ figure that gradually builds in a minimalist fashion, creating the effect of droning machines in a strenuous environment. Later in the piece, Rzewski interjects a section of blues music, perhaps as a recollection of more traditional means for expressing suffering. According to Jack Sullivan, "a kind of non-tonal allegro barbaro suggestive of cotton mill cacophony is gradually subverted by a blues tune that turns terrifying dissonance into melancholy serenity." (Sullivan 1998, 189). This serenity, however, eventually devolves yet again into cacophony as the soulful blues music is distorted and dehumanized in the midst of the inescapable factory machines. 

**Music as a Perceptible Process - Minimalism**

Although the music of these composers such as Antheil, Honegger, and Rzewski employ minimalist techniques, they are generally not categorized in this way. Some of the most recognized names in minimalism include LaMonte Young, Terry Riley, Steve Reich, and Philip Glass. The
concept behind minimalism, as stated by LaMonte Young, is essentially "that which is created with a minimum of means." (Schwarz 1997, 2). Generally speaking, the interests of minimalist composers lie in the process of music rather than its complexity. Minimalist music often begins with a simple motivic idea, and then very gradually builds upon that idea, allowing even the slightest changes to be perceived by the listener.

From the writings of Steve Reich, we can glean the true intentions of a minimalist: "I am interested in perceptible processes. I want to be able to hear the process happening throughout the sounding music. To facilitate closely detailed listening, a musical process should happen extremely gradually" (Reich 1997, 55). He also comments on diverging paths with one of his contemporaries: "John Cage has used processes and has certainly accepted their results, but the processes he used were compositional ones that could not be heard when the piece was performed....What I’m interested in is a compositional process and a sounding music that are one and the same thing" (Idem, 56-57). Much of Reich’s music is focused on aural effects and the progression of sound, but he has also ventured into social commentary. His opera Three Tales, for instance, is a response to technology, specifically concerning the explosion of the Hindenburg, nuclear testing on Bikini Atoll, and the cloning of Dolly the sheep.

Philip Glass is another important minimalist, having intended much of his work to reach beyond the concert hall. His music encompasses mediums such as opera and film, and often serves as a larger commentary on history and society. As stated by the musicologist Mark Radice, "Glass has demonstrated a remarkable ability to touch the psyche of his audience. He has identified issues and topics that are of the time, and he has addressed them through art – not just music" (Radice op. cit., 290). One of Glass’s most famous collaborations in film is the Qatsi trio, which depicts the impact of technology, globalization, and the war on human culture (Maycock 2002, 138). The first film Koyaanisqatsi, a Hopi word meaning "life out of balance," begins with scenes of nature, and then gradually introduces humanity and the development of technology. The film exaggerates the overwhelming transformation of human life and the environment through image juxtaposition and time-lapse footage. The musical score utilizes many looping effects and repeated figures that seem to spin endlessly as the world is frantically caught up in the rush of modern humanity. Director Godfrey Reggio stated that "these films have never been about the effect of technology, of industry, on people. It's been that everyone: politics, education, things of the financial structure, the nation state structure, language, the culture, religion, all of that exists within the host of technology. So it's not the effect of, it's that everything exists within [technology]. It's not that we use technology, we live technology. Technology has become as ubiquitous as the air we breathe..." (Essence of Life 2002).

Incorporating Indeterminacy
"Junction +4" reflects some of the musical styles mentioned above, particularly the use of minimalist elements with the aim of commenting on technology. Much of this music, however, is either a portrayal of technology’s function (like "Pacific 213") or a representation of the negative impact of technology (like
"Winnsboro Cotton Mill Blues"). One goal of "Junction +4," however, is to subvert some of this negativity, showing how certain technology which at first may seem problematic can be used in a creatively positive way.

The use of cell phones, in particular texting, can be a notorious distraction. We often regard texting as an important method of communication; it can also, however, have the opposite effect of isolating us and disrupting our connection to the people and environment directly around us. It can be obnoxious and disrespectful, such as texting during a lecture, meeting, concert, or during personal time with friends and family. It can even be dangerous, such as when driving. The idea with "Junction +4" is to reverse this situation, shedding a positive light on texting by making cell phone use a necessary and productive component during a musical performance. Texting ultimately becomes a creative element of the concert, and in effect it strengthens the sense of community in the room as the audience members use texting to work toward the same goal.

This is where the aleatoric component of the piece is introduced. Each step in the minimalist evolution of the piece is divided into separate segments encapsulated by repeat signs. The performers repeat each measure indefinitely, but the control of when to move forward to the next segment is guided by the listeners and their use of texting. Before beginning, one of the performers offers the audience their cell phone number and invites them to send texts during the piece, preferably describing their thoughts that arise during the performance. Also, a phone alarm should be set to go off after 5 minutes and 55 seconds to ensure that the piece stays within a reasonable time limit.

The playing should begin when the first text is received. Whenever anyone in the audience wants to move the piece forward, they can send a text, and the performers must move ahead to the next segment. If multiple texts are received close together, that would be considered a joint desire for just one move ahead. With each successive text ‘disruption,’ the music reflects the added noise by incorporating an additional compositional element to the progression of the piece. If the performers reach the end of the material before time is up, then they should loop the last measure, gradually decreasing the dynamics with each text until it fades away. Afterwards, it would be appropriate to read the text messages to the audience and share the audience members’ thoughts that came to mind during the performance.

The choice of minimalism in the composition, as described earlier, was chosen in part because it works so well to characterize the hum of unrelenting machines. In addition, the way that minimalism gradually shifts and gains in complexity is perfect for the representation of how technology builds on itself over time. "Junction +4" could have, in fact, represented technology through minimalism alone without introducing chance elements. One reason to include chance is to stimulate participation from the listeners. One can argue that a true representation of technology must not be static, completely predetermined, or frozen in time. By incorporating active participation using cell phones, the piece is stimulated by technology as it is being played, and the sounds of current technology as the texts are received actually become a part of the performance. One advantage of the particular technology chosen (trains and cell phones) is that they already have
their own form of musical sound, which proved helpful to ensure that the composition doesn’t abandon the listener.

**Relationship between Minimalism and Indeterminacy**

As mentioned, one important purpose of "Junction +4" is to take what at first seem to be very opposite schools of composition and philosophy, and then push them together to work in conjunction. Minimalism could be defined as an attempt to increase the control of a composition and its effect on listeners, since it slowly feeds the audience in minuscule changes regulated by the composer. The musicologist Simon Shaw-Miller in his *Visible Deeds of Music* (Shaw-Miller 2002) states that in minimalism, "because the material itself is simplified and the formal constraints to which it is subjected are considerable, the end results remain focused within a relatively narrow range of possibilities" (*Ibid.*, 194). Philosophically, however, minimalism and aleatoric music do share certain aspects. In both schools of composition, temporality is often altered from traditionally goal-oriented linear writing to something that celebrates the present moment. The use of repetition in minimalism often results in the loss of the ability to track time, blurring any sense of standard meter and form. It is more about the process of change rather than how long it takes, how fast it moves, or where it arrives. Aleatoric music by nature often leaves timing up to chance. Without predictable beginnings and endings, the present moment becomes the focus, and in a sense forms the only part of identifiable existence. Both of these schools of composition in effect draw the listener’s attention away from concerns about direction, and into the current and immediate instant in time.

Admittedly, "Junction +4" is not the first composition to explore the intersection of minimalism and aleatoric music. Terry Riley's "In C" is based on minimalist elements, but also involves chance since the performers may select any segment of the music to play at any time. It could be argued, however, that although "In C" may use minimalist elements, it doesn’t quite fall into the category of minimalism as defined by someone like Steve Reich. One can certainly hear the repetition and loops created with simple material, but because the order and phrase lengths are mostly left to chance, the result is not true minimalism in the sense of gradually altering small elements to allow the listener to follow a clear evolution. When listening to an audio recording of "In C" without seeing the individual performers activate their part, one may be able to hear a general sense of the piece’s evolution, but it would be difficult to tell exactly how the texture is changing. In "Junction +4," although control of when to move forward is left to chance, the compositional progression is ultimately very clear, one step at a time. In addition, there is no set duration for Riley’s work, whereas "Junction +4" has a determined cutoff.

**Chance Music and "Junction +4" - Audience Control Over the Predetermined Music Progresses**

The most unique feature of "Junction +4" has to do with where the chance elements originate. In many aleatoric pieces such as "In C," Morton Feldman’s "Intersections," or Earle Brown’s "December 1952," the chance elements
are left in the hands of the performers (see Examples 6 and 7). The use of graphic notation in particular opens up many worlds of possibility from whoever interprets the work.

In a work like John Cage’s "Music of Changes," conversely, chance is employed by the composer in the process of creating the music rather than in its performance (see Example 8). Cage utilized the Chinese *I Ching* to select different aspects of the composition, including sound, duration, dynamics, tempo, and densities. The final result is determined on the page, although the ambiguity and complexity of the score is still fertile ground for chance elements for the performer.

"Junction +4" is different in that the chance elements are not decided by the composer or performer, but rather put in the hands of the audience. It is, of course, not the first piece to do this. John Cage is renowned for giving the audience a role in the creation of his 4'33", which is solely based on what can be heard in the atmosphere of the performance space during that duration of time. In this way, it is similar to "Junction +4," especially the time limit. But Cage’s 4'33" is about the audience creating new music each time the piece is performed, and the results are entirely unpredictable.

What is fascinating about "Junction +4" is not only the idea of having the audience’s technological noise become part of the composition, but also giving the audience control over how the predetermined music progresses. This is an idea that at first may seem to be more or less impossible. After all, how could a performance of something predetermined possibly hold together if the numerous audience members are interjecting their own wishes for the piece? Minimalism serves as the aid, since each segment can be repeated...
indeinitely without losing the aural effect of the music or the sense of forward progression and evolution. Also, the chance elements are fairly limited so as not to disrupt the essential functions of harmony, rhythm, voicing, etc.

One requirement for this piece would be that the audience is of a manageable size, ideally less than twenty. It is possible that if the number of people texting became overwhelming, then there wouldn’t be time to enjoy any of the repetitive material before moving forward, and the piece would be quite short. Another requirement, of course, is that they actually have cell phones with the ability to text, but this is certainly common enough that it would be an unlikely problem.

**Conclusion**

Naturally, there are inherent challenges with coordinating minimalism and indeterminacy to work in conjunction. If common threads can be discovered and harnessed, however, we may find that they can complement each other in unexpected ways. Finding those threads with "Junction +4" (Attachment 1) was only the beginning, and the piece opened up many other avenues of discovery. It was a fascinating route to explore, and hopefully it can stimulate new thought and insight while contributing to the discussion and understanding of these compositional styles.

**References**


Attachment 1

Junction +4

Matthew Glenn Quick

This piece is ideally performed in a setting with less than 20 audience members. First, give the audience your phone number, and set your phone alarm for 5 minutes and 55 seconds. Ask them to text you whenever they would like you to progress forward in the piece. Texts may say anything, preferably thoughts that arise during the performance. When you receive the first text, start the piece. Repeat each segment until you hear a new text message or group of text messages, then move to the next segment. To finish, either stop when the alarm goes off, or if you reach the end before that, gradually fade into nothing with each additional text.
The Categorical Perception of the Music Scale: A Challenge before the Microtonal Music

Ivan Kostadinov Yanakiev

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Abstract
The text examines the phenomenon of categorical perception of musical pitch as defined by John Sloboda (1999), Jane A. and William Siegel (1977), Stefan Koelsch (2012), and William Yost (2013), in their researches in the field of music psychology. The paper states the hypothesis that the current system of dividing the octave in twelve equal semitones do not employ the human physical capabilities for defining pitch to their full extend. On the contrary, the reviewed literature testify for the existence of a strong tendency to categorically label and perceive non equally tempered intervals with different but close to each other magnitudes (widths) as the same. This tendency is stronger in professionally trained musicians than in non-musicians. A short historical excursion to the 21 tone 1/6 syntonic coma meantone temperament, recommended by both Leopold (1856) and Wolfgang Amadeus Mozart (1965), is included as an example for better utilization of the musicians’ potential to distinguish pitch and intervals, which had been employed in practice. The text continues with a brief overview of the theory behind generating intonations and temperaments, based on the Equal Division of the Octave (EDO) method. Finally, a short exemplary reference to Kyle Ganns’ cycle "Hyperchromatica" (2015) is made alongside with quoting his personal attitude and commentary towards the performers’ general interest for microtonal music. The paper concludes that the categorical perception of pitch in the context of the twelve-tone equal temperament may be regarded as the main challenge, which the microtonal music is facing.

Keywords: categorical perception, microtonal music, musical pitch, psychology of music, musical temperament, edo, kyle gann
Introduction

What we refer to as music is generally an invariant of the result of about a thousand years of theoretical and aesthetic research. The general understanding of music as Music is to a very high degree related to the attitude towards one of its innate qualities – the pitch – and whether it is or is not in tune. For the purpose of this text we will not be referring to the 1950 onwards post-war avant-garde’s examples and the ventures into expanding the understanding of what musical objet sonore (Schaeffer 1966) can be. For a pitch to be perceived as being in tune the listener has to be able to compare it to some previous knowledge of the right one. In Western European tradition, this previous knowledge is in a direct relation to a handful of well-established systems for "properly" dividing the octave.

Usually in our contemporary conditions, the twelve-tone equal temperament is tacitly accepted to be the norm. There is no explicit document where the 12 tone Equal temperament is officially (i.e. by any officials, standardization institute etc.) accepted as the norm for establishing the frequencies of the individual tone. Contrary to that ISO16:1975 officially defines the value of the an above middle c to 440 Hz ± 0,5Hz. (see ISO16:1975). More to this, any deviations from the chosen system for dividing the octave, especially during the educational period of any aspiring musician, are considered to be erroneous and even in some cases, like during competitions, auditions, final examinations etc., punishable. In other words, the process of indoctrinating the right intonation is in fact a forceful enculturation methodic. This is valid not only to nowadays ear training, which represents the diatonic scale (pure fifths) as a mapping of the twelve-tone equal tempered scale (tempered fifths), but also during earlier periods. Leopold Mozart’s XVIII century treaty Versuch einer gründlichen Violinschule (1756) read as follows: „Auf dem Clavier sind Gis und As, Des und Cis, Fis und Ges, u. f. f. eins. Das macht die Temperatur. Nach dem richtigen Verhältnisse aber sind alle die durch das (b) erniedrigten Tone um ein Komma hoher als die durch das (#) erhöhten Noten.” , (... "das (b) erniedrigten Tone um ein Komma hoher als die durch das (#) erhöhten Noten. Z.B. Des ist hoher als Cis; As hoher als Gis, Ges hoher als Fis, u.s.w. Hier muss das gute Gehör Richter seyn: Und es ware freilich gut, wenn man die Lehrlinge zu dem Klangmasser (Monochordon) führte" (Mozart 1756, 66, note). In this sense Leopold Mozart was advising his students to develop a deeper understanding for the difference between the enharmonic flats and sharps (Db and C#) in the context of the 1/6-comma meantone temperament.

Hearing limitations

William Yost (2013) described in detail the complete physical, physiological and neural aspects of hearing in his book "Fundamentals of Hearing. An Introduction". For frequency discrimination he gave a figure where the value of $\Delta f$ required to just discriminate between two different frequencies (Ibid., 150-151). The data were shown for five different sensational levels (in dB) and his general
conclusion was that over significant range of frequencies the Weber fraction \( \frac{\Delta f}{f} \) had a constant value of about 0.002. Therefore, if we need to calculate what the minimal difference in frequency \( \Delta f \) of two adjacent tones would be in order the tones to be distinguished from one another, we can use the given formula. Yost gave an example with 500 Hz: \( \frac{\Delta f}{500} = 0.002 \Delta f = 1 \text{ Hz} \). Of course, he was talking about pure tones (sine waves) at sensation level of 40 dB (the average distraction point of concentration). In term of music interval, this 1 Hz difference from the 500 Hz tone will be 3,459 cents of a twelve-tone equally tempered semitone (Ibid.).

This observation of Yost’s confirms that our physical sensors are capable of recognizing very subtle differences in pitch. The current musical practice, however, does not employ this capability to the full extend. This raises an important question – what could possibly be the reason for labeling everything not compliant with the twelve tone equal temperament as "out of tune" but not measuring how much out of tune it is? This attitude of limiting the hearing to the pitch categories of the twelve tone equal temperament’s scale does not expand the musicians’ capabilities of pitch discrimination towards their limits. This has an effect later in the aesthetic domain (see section "The categorical perception as a challenge").

Categorical perception of the musical scale

The idea of defining the perception in the musical domain as categorical comes by analogy from the linguistic domain. Siegel and Siegel (1977) write that "[…] speech processor consists of specialized linguistic feature detectors that are "tuned" to the phonemic distinction of a language […], and as a result, acoustic variations of the auditory stimulus irrelevant to meaning are filtered out. […] categorical perception, [is] a process whereby continuous acoustic variation is transformed into a discrete set of auditory events […].” The study described in the above-mentioned Siegel and Siegel article "Categorical perception of tonal intervals: musicians can't tell sharp from flat" is a pioneering one, which suggests that the categorical perception extends beyond the limits of the linguistic continuum.

The authors empirically demonstrated that among musicians with top rated relative pitch a well-established tendency to categorically perceive and discriminate intervals was observed. The subjects were asked to grade 13 different intervals (from 480 c to 720 c with step of 20 cents – see Example 1 [video]). The results suggested that both the perception of the magnitude of the interval (its width – the qualitative characteristic) and the interval labeling (fourth, triton, fifth – the quantitative characteristic) exhibited strong categorical tendencies. The standard deviation was at its peak on the intervals, which fell in-between the "standardized" twelve tone equal temperament scale. However, the magnitude evaluation
had not shown intracategorical discrimination of the width, but it supported the categorization tendency. (Ibid.).

The categorical perception of musical pitch has been discussed also by John Sloboda in his book "The Musical Mind" (1999). He supported the thesis that the categorical perception of pitch was strongly influenced by the culture, which formed the musical understanding of a person. He gave an example of the incapability of some representatives of one culture to apprehend the other culture’s musical scale with the jazz music. "[T]he ‘blue notes’ in the jazz scale came about through the efforts of African musicians (from a culture using pentatonic scale) to assimilate the diatonic scale of North American culture. [...] the proposed diatonic scale would be C, D, F, G, and A. Users of the pentatonic scale would have no normal representation for the diatonic E and B [...] Africans would have heard them as ‘mistuned’ notes falling somewhere between D and F or A and C [...] producing something that would sound unstable and mistuned to the Western ears." (Ibid., 25).

Sloboda also quoted another study dealing with the categorical perception in musicians and non-musicians by Simeon Locke and Lucia Kellar ("Categorical perception in a non-linguistic mode." Cortex 9, December 1973 (4): 355-369, quoted in Sloboda 2011, 25-27). It examined whether an A major chord would be categorized as minor or major when varying the frequency for the C/C#. The frequencies of the tones were – A = 440 Hz, E = 659 Hz; the frequencies for the C were between 523 Hz (300 ¢) and 554 Hz (400 ¢) (see Example 2 [video]). The results were that "[a]lmost all chords with middle notes above 546 Hz were heard as A major. Almost all chords with middle notes under 540 Hz were heard as A minor. The evidence suggests a categorical boundary at about 543 Hz" (Ibid., 25). (The 543 Hz boundary position between the major and the minor third (300 ¢ – 400 ¢) is at 0,52, provided that we accept that the minor third is at position 0 and the major at 1. The third at this position has a width of 364,1 cents). The non-musician results differed a little but also showed traits of categorical perception. As a reflection on this study, Sloboda (Idem., 27) pointed out the three milestones of the categorical perception of pitch:

1) Nevertheless the existence of categorical perception, the listeners could operate both inside and outside the categories – i.e. the listeners could have access to uncategorized frequencies (as opposed to the lack of this access in speech perception). The main argument in favour of this statement could be that, if not true – no chord could ever sound badly tuned, because it would be mapped to the closest category.

2) Categorical perception could not exist without context. Sloboda explicitly stated that "[t]here is no evidence of discontinuity in the discrimination functions for single frequencies" (Ibid.). Only intervals could be perceived categorically. What really enhances categorical perception is a framework, which defines a musical scale. The framework is underlined by the tacit knowledge of
the procedures for generating scales from any tonic. In this sense, the notes are not defined absolutely but rather relatively, which enables one to construct a scale – to categorize discrete pitch categories form any base frequency.

3) Results of formal musical training, when compared to results of just bare exposure to tonal music (analogy to the positive results of just bare exposure to language), show that training enhances the categorical perception. Sloboda argued that perhaps "this is due to either the assigning the pitches names and processing them also on a linguistic level or the fixed reference frequency of A = 440 Hz, which unfolds as a certain prototype band frequencies which serve as categorical gravitational points for other pitches" (Ibid.).

A practical example of those milestones would be an attempt of a violinist, trained in the classic tradition, to dive into the representation of micro chromatic Arabic or Eastern Asian music (Raga, Gamelan). The search on the fingerboard of the fretless instrument of some Maqams’ subdivisions (Bayati, Husam, Saba) would be a difficult task for the chromatically trained player. However, the both existence of the diatonic scale in relation to the pentatonic musical paradigm of the African musicians and the existence of an irregular subsemitonic scale in comparison to the twelve-tone equal temperament, is enough to testify that the human hearing apparatus is capable of perceiving and reproducing microchromatically subdivided sound systems.

In the above studies on the categorical perception of musical pitch the results of the researches that were carried out with participants who were professional musicians confirmed that classically trained musicians were taught to perceive music in the categories of the twelve tone equal temperament. The existence of divisions of the octave different from the twelve tone equal temperament suggested a hypothesis that the introducing a reference interval will after time generate a new category which has a certain qualitative magnitude around its central element. At the end of the next section this hypothesis will be further reviewed.

**Pitch and the Brain**

In the Stefan Koelsch’s section "Towards a New Theory of Musical Psychology" and especially the chapters "Musical Syntax" and "Musical semantics" of his book Brain and Music (2012), we can find very well organized theory of how our previous knowledge affects our perception. According to his research the processing of musical content was divided into eight hierarchically stacked layers. These layers were further subdivided into specialized procedures, which were required to transform physical stimuli into psychological effects. The first three layers were "Music perception", "Syntactic processing" and "Musical meaning”. The “interval analysis” and “structure building” processes were parts of the "Music perception" layer, which generated potentials used as
source for the next layer of "Syntactic processing". Here the processes of "formation of musical expectancy" and "structure building" (now on a syntactic level) define the essential proportions of and the relations within the scale – the modal structure. The results of the analysis of the syntactic structures were transferred onwards to the next level of "Musical meaning" analysis for processing "symbolic meaning" and "intra-musical meaning" of the stimuli. Koelsch explained that each level and its processes were characterized with specific brain activity in specific region. When he examined Event Related Potentials (ERP) with Electroencephalography (EEG) the tendency was to find correlates in the electric potentials of the brain cortex. "Music perception" level processes at the fastest rate of lower than 9 ms for the FFR (Frequency-Following Response – a number of studies have recently investigated decoding of frequency information in the auditory brainstem using the FFR; the FFR can be elicited preattentively, and is thought to originate mainly from the inferior colliculus. The research findings confirmed that the correlation between the FFRs and the properties of the acoustic information is modulated by musical training.), ERAN (Early Right Anterior Negativity) with about 220 ms latency for not complying the expectancy in harmony, and at about 100 ms for not complying melodic line expectancies, and N5 (500 ms) for processing intra-musical meaning (Koelsch 2012, 89-185).

If we agree that it is reasonable to follow Stepahn Koelsch’s theory we can read further to find that the data he presents for the first three layers of processes completely underlines the empirical studies presented to us in Sloboda’s book. In his chapter 9.8 "Effects on musical training" (Koelsch 2013), Koelsch even says "Both long term and short term training modulate music-syntactic processing, as shown by effect of musical training on the ERAN, the LPC/P600 and the P3. […] ERAN is larger in musicians […] and in amateur musicians compared to non-musicians." He continues in the next paragraph "This is in line with behavioral studies showing that musicians respond faster and more acutely to music-structural irregularities […] The ERAN is presumably larger in musicians because musicians have (as an effect of the musical training) more specific representations of music-syntactic regularities and are, therefore, more sensitive to violation of these regularities […]" (Ibid., 149-151).

In the spirit of Koelsh’s theory we may then briefly review the goals of the pitch recognition training as an attempt to refine the boundaries between the single discrete tone and especially interval categories. Its final destination would be to tune the pitch recognition matrix of a musician to the modern phenomenon of the twelve-tone equal tempered scale.

In this sense any division of the scale is learned. If we take for example the 1/6-comma meantone temperament in its 21 tone version (suggested both by Leopold Mozart (1756) and Wolfgang Mozart (1965, 1-11), which intonation was highly praised by the XVIII century musicians, we could see that they did not only master the different intervals, but also taught students into recognizing them. Nowadays this interest has declined and
the general acceptance of the twelve-tone equal temperament has become sufficient. (When all the intervals are equally out of tune compared to the perfect Pythagorean ones and the sound environment is overtaken by this general sonority, the result is that the reference of the pure sounding fifth is to a great extent lost gradually in the sounds of the past.)

Those conclusions based on the above excerpts from Stefan Koelsch’s book confirm the previously expressed hypothesis that in order to generate a new category in the pitch perception domain a new reference interval should be introduced. The 21 tone 1/6 comma meantone temperament, to which Mozart was an advocate, is a practical example of the validness of this hypothesis.

The current microtonal State-of-Art
In the second half of the XX century the microtonal music has been revived. Harry Partch, Kyle Gann, Lou Harrison, Joseph Monzo, to mention just some of the names of the composers and theorists, who employed microtonal intervals in their compositions and also gave plenty of theoretical background for how differently they treated the subject of musical pitch. Most of them developed their own scales and even own instruments (like Partch).

Scales and divisions of the octave in use
There are two general types of scales which are being used in the contemporary microtonal domain. They are distinguished by the method by which they are derived. The first one is the Equal Division of the Octave or generally Equal Division of an Interval. There are scales, which use the equal divisions of the perfect fifth, the sixths, the sevenths, the octave, the ninths, the tenths, the elevenths and even beyond. This is easily calculated by extracting the n-th root from the starting interval (n is the foreseen number of divisions) and thus the result gives the width of the smallest interval which can fit perfectly n times in the starting interval. For example the 55 EDO (Equal Division of the Octave) would have 55 equal steps within the span of one octave, with the width of $55\sqrt[55]{2}$ which is around 21,818 cents. 21,818 cents is 1.6418 cents narrower than the diatonic comma and 0.3119 cents wider than the syntonic comma. The 7 EDF (Equal Divisions of the Fifth) would have 7 primes with width of $7\sqrt[7]{3^2}$, which is around 21,818 cents. The 7 EDF (Equal Divisions of the Fifth) would have 7 primes with width of $7\sqrt[7]{3^2}$, which is around 100,279 cents – this EDF results in octaves stretched with 3.4 cents. (see Example 3 [audio] – Sound of chromatic and diatonic mapping of 55 EDO, 31 EDO, 7 EDF and comparison overlapping of their diatonic mapping)

The second type of scales are the intonations. An intonation is based on either extended Just intonation – in this case only intervals, which are found in the overtone series (the ratios of the row of the Natural numbers) are used or Pythagorean intonation (rarely used). Intonations usually use more than twelve tones per octave and the microtonal tones are derived by extending the circle of the fifths towards double sharps and double flats and beyond and shifting the resultant tones the required numbers of octaves up or down until they fit in one. Intonations are
not temperaments, because they do not temper any comas; they just give the outlines of how to in-tone the scale.

The difference between the two types of microtonal scales is that by the Extended just intonations one gets only naturally occurring intervals from the overtone series and the EDO divides the octave in equal intervals and each step is governed by the same irrational function (twelve-tone equal temperament is governed by the $\sqrt[12]{2}$, 31 EDO is governed by the $\sqrt[31]{2}$ etc.) Those intervals are never to be found as exact ratios in the overtone series. (Although some approximations may be available using combinations of higher than 16th overtones.) EDO up to 106 are in use in electroacoustic instruments (example the 106 EDO "Linnstrument") and its smallest element’s width is 11.32 cents.

The categorical perception as a challenge

As we reviewed the psychophysiological background of the categorical perception and also the general outlines of the theory underlying the modern ventures into the field of microtonal music, we can safely say that the main issue, which stands before composers, performers and to some extend before the listeners, is the subject of categorical perception. The main problem which arises is that the intervals in most of the used microtonal system do not correspond to the widths of the intervals in the 12EDO (twelve-tone equal temperament) scale. Here a general concept of three levels of understanding will be defined:

1) In order a listener to perceive and to evaluate a certain non-standard interval they must at least have a prototype for what that interval sounds.

2) To be able to interpret an interval, which by the tacitly reigning scale standardization is considered to be "out of tune", special efforts in the direction of defining new categorical boundaries are required.

3) In order for composers to incorporate any microtonal element into their creative endeavors they have to possess a profound and innate understanding of the element and its contextual relations (function); a more extensive theoretical and empirical research is also required.

As we previously understood from Siegel and Siegel (op. cit.) and Sloboda (op. cit.), even the trained ear of the musician will not mind the intracategorical differences, so what we should say about untrained ears, as they do not even show strong categorical discrimination of intervals. We may state that we are perfectly safe with presenting microtonal music to the general audience – although they might not notice its special features in the way they are intended to sound.

For a player to step into the realm of microtonal music, he must be able to produce such intervals. Electronic keyboard instruments makes this possible to some extend by mapping the new intervals to existing keys. However, this generates new issues related to the technical side of music performance. For acoustic fretless
instrument and to some extend for some wind instruments it would require additional ear training and also sometimes developing of additional techniques for playing those instruments. In this sense there are numerous reported instrument extensions and modifications. Jeff, Smith’s fluid piano, Fokker’s Organ, Hary Partsh’s 43 EDO sintuments (diamond marimba, cloud-chamber bowls, eucal blossom, bamboo marimbas "Boo I" and "Boo II", quadrangularis reversum etc.) microchromatic quitar by Tolgahan Çoğulu, electroinc: 106 EDO Linnstrument, Tonal Plexus’ microtonal H-Pi Instruments, Roli’s Seaboard, Willson’s Microzone u-648. Nevertheless, in all cases a deliberate period of both ear training and instrumental practice would be required.

For composers the subject becomes even more complicated because not only a period of intensive ear training would be required but also a deeper theoretical and empirical submerging into different microtonal scales, which on its side requires a wider set of knowledge in music theory, music acoustics and mathematics.

A short example from the music of the microtonal composer Kyle Gann (USA) will be introduced. If we intend to listen, review or research any of the seventeen parts from his cycle Hyperchromatica (Gann 2015-17), a piece for 3 microtonally tuned pianos, which use 13 limit just intonation with 33 notes per octave, we will soon be facing the challenge of the categorical perception of pitch. Perhaps this is the reason why Gann chose to specifically denote his piece "for three microtonally tuned Disklavers (computer-driven pianos)" (Ibid.). By eliminating the human factor of the interpreter he had the freedom to treat music according to his understanding. The dedication of the piece speaks for its own "Dedicated to all those musical performers who have ignored my music and inspired me to become self-sufficient" (Ibid.).

**Conclusion**

The categorical perception of pitch in our contemporary 12 tone equal temperament modality is for sure the main challenge which the microtonal music is facing. In sense of physical limits of perception, generally we possess the required apparatus in order to discriminate very narrow intervals up to about 3,459 cents (this is 346 EDO). However, the psychological studies confirmed that there is a strong tendency by the musicians not to use their discrimination ability to its full limits, due to training in the context of the twelve tone equal temperament. Accordingly, the most important difficulty which stands as a challenge before the microtonal music, is the one of a categorical level: to find a proper way to refine the boundaries of the intervals and to define new ones. This will make sure the idea of microchromatics get out of its current functional and even mystical status of barely refining the expressive traits of one’s intonation during performance. However, a deeper research into establishing whether a specially devised ear training methodic would enhance the perception of intervals or at least the reception of microtonal music as general is required.
NOTE: This text outlines the starting point of the author’s project “Intonation and Temperament Systems in the XX-XXI century – Theory and Practice” which foresees a more extensive research in this section of the musical domain.

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The Perception and Organization of Time in Music

Maja Marijan

Abstract

In this article the author approached to musical time as complex phenomena using terms such as absolute and relative time. Author defined time as an objective time of the musical composition and the subjective time as psychological experience. Accordingly, absolute time is organized within the composition – it is objective and defined, thus can be expressed in size by the properties, values and symbols of musical elements, notation and timing. Musical time as the psychological phenomena is relative referring to the organization of time in performer's mind, as well as how the performance is perceived and experienced by listeners. The nature of organization of elements of musical time in the performer's mind lies in the conception of the structure of the temporal organization generated by the performer's subjective expression, knowledge of the musical form, and motor/kinesthetic ability. Furthermore, the idea of the temporal structure also incorporates experience and practice, as well as intuition and aesthetic valuations. Thus, the structure of time is not independent – it interacts and relies upon other structures, building performer's conception of the whole. Author concluded that understanding the time structure in music, i.e. how to recognize its symbols, how to organize it for the performance and while performing, is very important aspect of the musical expertise. Furthermore, in music education the special emphasis has to be laid on the musical time through learning and understanding its symbols, because perception and recognition of temporal structure would deepen student's interpretation and knowledge of the form, and develop expressive and qualitative performance.

Keywords: musical time, mental structures, articulation, tempo, rhythm, meter, temporal organization

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Introduction

Sound is a mechanical energy that is created by vibration of an object. These vibrations, spread through the air, oscillate forming sound waves. A sound is also considered as a pressure wave which creates sound energy (Brownell 1997). How is sound perceived? Hermann von Helmholtz and Georg von Békésy suggested that ears are ingenious device which transform sound waves or mechanical energy into the electrical signals perceived by the brain (Ibid.). However, this electric signal or its original primitive form, a mechanical wave, is not a simple kind of data. The sound wave has many properties such are pitch, timbre, loudness, and timing. Each property can be recognized separately, because it has been shown that these elicit different brain regions (Thaut et al. 2014; Samson 2003; Allen et al. 2017), although tight interactions between these properties exist (Krumhansl et al. 1992).

Perception of sound is a complex neurological, cognitive, and psychological activity (Iakovides et al. 2004). To perceive a sound means to perceive loudness, timbre, pitch, and duration, all at the same time, but also we can follow each property separately (Jerde et al. 2011). All four aspects of sound have an impact on perception, memory, and completeness of the mental image. The completeness of an image of an auditory stimulus depends on our auditory mechanisms and how an auditory stimulus is encoded by our auditory system (McDermott et al 2008). The perception of pitch, loudness, timbre and duration is dependent on many factors: 1) the nature of the sound source and acoustic medium (Frissen et al. 2010), 2) how the sound is moving through the medium and around us, 3) our physical location relative to the sound source, 4) our auditory system, cognitive abilities, attention, and also 5) musical experience (Pantev et al. 1998; Takashi et al. 2001). In this article we will focus on one important element of the sound, the musical time, and explore its structure, organization and perception.

I

The listener's perception and organization of musical time

In this section the author tries to answer the question: how musical time is perceived by the listeners? The author will start with the hypotheses that perception of time and representation of the temporal organization of the music depends on the representation and understanding of the structural properties of the musical form (Clarke and Krumhansl 1990). Musical form is organized as hierarchical structure of elements which listeners perceive in a time span, creating a mental image of the form (Lerdahl 1983). If the boundaries of the sections are clearly perceived, the timing structure will be also clearly represented within the mental image. On the other hand, the temporal structure will allow the listeners to evoke the sections of the form in their mind and relocate the segments (Halpern 1988a) or to imagine the melody in the accustomed tempo (Halpern 1988b). Therefore, the author presupposes that the temporal structure is built upon the intuitive knowledge and familiarity with the musical syntax (in non-musicians) and theoretical knowledge, motor structure, intuition and aesthetic analysis of the form (in musicians).
Time is the ambiguous feature. It has two dimensions. The first dimension of the time is *objective time*, meaning that the time has computational property expressed by numbers and terms such as hours, minutes, years, months, etc. In music, we count measures and note durations. Second dimension of time is *subjective time*, which refers to the inner experience of time that cannot be measured: it belongs to subjective category, although time remains the objective feature. The subjective perception of time can be defined as a *psychological time* where the listener's emotions (Asutay 2014), as well as stimuli of the outer world, play a great deal in our experience of time.

Music is expressed in time. Unlike sculpture and painting which exist in space and are approachable by sight, music, like poetry, is expressed by sound which takes place in space and time. It is suggested that the perception of music is a complex cognitive process employing ability to create temporally ordered architecture of sound sequences in rapid successions (Thaut et al. 2014). All elements of the form such as harmonic flow, melody, meter, rhythms, motives, themes, and phrases are organized in time, and while listening to the music, we do not count time, we *hear* time. Thus, it can be said that the music is *time in sound*, and also, a *sound in time*. While listening to music in real-time, humans are constructing musical knowledge through sensation and representation (Reybrouck 2017). Musicians build a mental map of the form due to developed auditory imaginary ability (Alleman et al. 2000). Through experience, listeners build structures of musical syntax and develop expectations and judgements.

Familiarity with the musical syntax and type of music allows listeners to understand how the elements are connected and related to one another (Burkholder 2006). Thus, listeners can tell if the musical phrase is correct/complete or incomplete or wrong. Incompleteness will make the listeners uncertain about the form of the musical sentence. For example, if a melodic phrase is played completely, listeners will have the feeling that the phrase has not been finished yet, because the phrase does not give satisfaction of the completeness. The time span of the phrase, to which the listeners were accustomed to, would be shorten and because of this, the phrase would sound unfinished. Therefore, this example shows that it is not just the rules of harmony that govern the completeness of the phrase, but the listener's experience of the musical time is also incorporated in the mental structure of musical knowledge.

Music can alter the listener's experience of time and space (Schäfer et al. 2013). Some slow pieces will produce the feeling that the music lasts for a very long time, although the piece of music is short. Accordingly, the music which sounds pleasant will be judged shorter than the unpleasant (Droit-Violet et al 2013). Also, the judgements over the time span of the musical segments and listener's expectancies of the musical time depend on the familiarity with the time structure of the form. The common classical phrase consists of two sentences which share similar motivic structure and the same number of bars, and the only difference between them lies in the endings of each phrase – the first one's cadenza is on the
dominant (half cadenza) and the second sentence usually has the authentic cadenza (V-I) – see Example 1a. If the musical sentence of the Example 1a is played, the ordinary music listener, accustomed to this "common" classical structure, will "feel" the overall temporal organization of the phrase, and according to this, the expectations of the temporal organization of the musical sentence will be satisfied in listener, i.e. the listener will find this music idea to be organized properly. In another words, the judgement over the formal structure will be made according to the feeling of the time, assuming that no theoretical knowledge is used.

If we apply some modifications in the formal structure of the phrase, we will break the listener's expectations. This modification will produce very strange effect on the listener who expects the phrase to have the "standard" timing structure. Harmonically, nothing is changed, the modified phrase ends with the authentic cadence, but the time expectancy is changed. Let's assume that we have not changed the first sentence of the phrase, instead we made some modifications to the second sentence (see Example 1b).
This modified version of the second sentence sounds very strange and unnatural due to:

1) unusual melodic flow: the jump of the fourth (marked with the arrow) breaking the flow which is supposed to move upwards;
2) the metrical deviation: ending is on the weak metrical accent;
3) the form deviation: modification of the structure of the form is sized to the non-standard three bars.
4) the impossible continuation: after this phrase, the new section is introduced with the upbeat, therefore this modified structure destroys the laws of the good temporal organization of the structure.

From this example we can learn that it is not only important to organize the harmony or melody of the phrase for the music to be judged as good, but also temporal organization is something that underlies these properties. If harmonic or melodic structure is not properly organized in time, the music would be perceived to be out of order, hard to follow, and the listener's expectancies would be confused.

Therefore, we can assume that listeners and musicians have developed the sensation for the time of the standard musical phrase that serves as a guide mark for judgements of form completeness. However, great composers often find different paths to break the rules of the classical form, thus modeling the musical time of the form. They are playing with our sensation of the standard/learned timing by 1) applying various compositional techniques which shorten or prolong the phrases and sections, 2) introducing motive modifications and/or adding new material, or 3) creating free-form structures thus modifying our expectancies of the standard phrase duration in a masterly way. These modifications we can find anywhere, but those are emphasized especially in many free-form structures such as Preludes, short Fantasies, development sections or the introductions of the Symphonies (see Example 2).

These forms are like improvisations where the composers express their imagination and take on the freedom to play with the elements of the form and break the standard rules. The free-form structures musicians often describe as to be "in one breath", because the musical time is represented as one unit, without easily noticeable endings or the boundaries between the segments. The music material is often fragmented and the phrases do not represent accomplished/complete units, but "flow" one into another. In the Example 2, the harmonic progression in the beginning of the introduction (the first four bars) has the ambiguous structure as well as the cadence, which is on the tonic of the G Major or on the dominant of the C major? Further, in the 8th bar there is a weak resolution, yet this does not establish the tonal center. The further postponement of the main key is shown again in the form of the deceptive cadence V-vi (bar 10). Finally, in the last two bars of the introduction, there is a clear preparation for the resolution (dominant is preparing the tonic of the main key, C Major, with which the Exposition begins). The resolution is also marked with the change of the tempo (Adagio molto – Allegro con brio) and with the change of the character of the music (from slow, dignified and cantabile mood, to the fast, playful /
Example 2. L. van Beethoven, Introduction from the Symphony No.1 in C Major op. 21
Ludwig van Beethovens Werke, Serie 1: Symphonien, Nr.1
https://imslp.org/wiki/Special:ReverseLookup/440381
[additional Audio 1]
excited expression). The temporal organization of the segments in the introduction can be defined if the listeners can recognize the boundaries, i.e. the endings/cadences of the parts. Although the sections inside the introduction can be determined by less stable cadences, the time span of the introduction is perceived from the beginning to the last bar of the introduction, as the close unit. This is due to the final cadence which has clear preparation and stable resolution. Therefore, the listeners will perceive the time of the introduction as "in one breath", i.e. from the beginning to the first stable ending without being aware of the time span of the sections.

Thus, the experience of the time of the musical form arises from the harmonic organization of the phrase and perception of boundaries between the phrases. However, the boundaries between the phrases/sections, from which the attention is relaxed and aroused again, can be expressed not only by the harmonic properties such as cadences, but also these could be longer pauses, changes of the tempo between the sections, changes of the meter, or changes of the rhythmic profiles of the sections. The more the distinction between the boundaries is delayed, the more the perception of time of the segments will be experienced as prolonged.

In the next example, J. S. Bach's Prelude in C Major, although there are harmonic markers which indicate the borders between the sections, the rhythmic monotony hinders the judgement of the borders of the sections, so that the time of the Prelude is perceived as "in one breath" (Example 3). This Prelude is like many other Preludes in the opus of J. S. Bach. They are in the improvisational manner, where the melody is constantly in the movement (perpetum mobile) and where the composer performs his artistic freedom. The perception of time of the Preludes is achieved not by sections, but as the whole. The perception of these Preludes can be compared with the perception of the bronze figures of Giovanni Bologna:

"They [bronze figures (author's remark)] are made to be looked at long, and also closely, for those that are autograph are wonderfully delicate in technique, and sometimes gilt. They are meant to be turned round in the hand, and then they give an aesthetic stimulus of that involuntary kind that sometimes comes from listening of music." (Shearman 1967)

Furthermore, although the form of the Prelude is small (35 bars), the experience of time is not in the agreement with the size of the form. This experience is the same as we have with the Bologna's miniature figure, such as The Mercury, in our hands:

"The raised arm, which, in the front view, soars like a rocket from the weight-bearing foot, is melodiously curved into the lowered left arm in the side view, and sprung against two other curves, from head to the right foot, and from the left elbow to the left foot; turn it a little more and the raised arm flows into the right leg and the line from the left foot runs through the body to the head." (Ibid.)

Therefore, the perception of formal structure of the phrase has impact on our experience of the time. The listeners can organize the inner time of the composition if they can perceive clearly the boundaries of the phrases and, consequently, develop the mental image of the musical
form and its elements. Accordingly, if the listeners can separate one phrase or section from the other, they can experience the timing structure of the sections as well as the global time of the piece. But, if the musical piece has rhythmic or formal monotony or there are no opposite characters/moods and defined endings, as shown in the Example 3, listeners cannot perceive the clear boundaries between the phrases, so their attention is constantly delayed, and their experience of the time is continuously prolonged.

This type of music structures requires constant attention, and will produce fatigue in the listeners if the form is quite long. For this reason, these structures are often short or belong to the introductory or development sections. Therefore, the composer has to adjust all the elements of the form to the time structure of the form very thoughtfully.

Moreover, classical composers often break standard 4+4 or eight-bar structure of the sections on the places where this structure is expected. Here deviations are made for several reasons: firstly, to break monotony of the formal structure, secondly, to introduce the complexity of the musical idea, and lastly, to break the listener's expectations of time. Modifications of the structure often underlies the developing sections, but not uncommonly there are many examples where the main themes have developing form bounded very tightly with the rest of the structure, so that the listeners can hardly perceive the boundaries and time span of the sections [see Audio 2].

Or, there are examples where the theme is expanded and elaborated through registers (see Example 4). In the example Example 4, the Rondo's Theme A is continuously expanded from the bar 31, where the first boundary could be recognized, up to the bar 62, where the final cadence conclude the theme. Thus, the attention is hold for the 62 bars, from which new material of the bridge appears.
However, composers of 20th century have found new ways to express the form, so the approach, experience and perception of time are different. In their works, time is not the simple component of the harmonic progression of the sections as in the traditional works. The elements of the temporal structure, such as rhythm, tempo, meter, are the main builders of the expression. In another words, the modern music does not express *charming* melodies in a classical sense, but exposes the complex temporal structure that constructs the form.

How can the listeners orient themselves in these compositions and perct the time structure? Compositions of the modern music, like piano pieces of John Cage or Karlheinz Stockhausen, have many pauses
which are treated as the musical ideas that build the composition. It seems that these pauses are the time poles on which the global time structure resides (the duration of the form). These pauses are like "the resting points" (author's term) in which listeners can feel the time structure. These "resting points" i.e. pauses, enable the listeners to feel the boundaries of the sections (Deliege 1989) and perceive the time span of the sections. Whereas the music of the minimalists (Example 5) has constant flow with the same rhythmic pattern, thus, it will hold the attention of the listeners, and expanding their perception of time.

The other possible approach to define the boundaries of the segments of the modern music, thus developing possible temporal idea of the segments, comes from the listener's predictability and surprise produced by constructive elements of the music: dynamics, articulation, note groupings, texture of the chords, changing the meter (Stockhausen 1958). Clarke and Krumhansl (1990) showed that perception of boundaries of the musical segments relied on the all constructive elements: pauses/silence, dynamics, textures, rhythms, changes in pitches and registers, changes of the contour of the melody, and similarities/repetitions. They showed that listeners could determine the position of the sections according to their temporal organization, especially those at the beginnings and endings, whereas the sections positioned in the middle were harder to determine.

According to the author, as she has stated before, this is due to the perception of boundaries of the segments. If the sections are perceived as closed forms, than their temporal organization is clearly perceived. On the contrary, the time span of the segments of the developing sections is perceived as long as the clear closing cadence appears.

However, above researchers examined the perception of musical time and perception of the boundaries of the segments after the listeners had heard the composition. But what if the listeners have never heard the piece before, i.e. how will listeners organize their perception for the very first time they hear the piece? If the composition is heard from the beginning to the end, the listeners will develop the image of the composition and will have the idea about the time organization/time span of the sections within the whole. On the contrary, listening to
the musical piece for the first time will result in the ambiguous perception of the temporal organization of the whole. Every time after a longer pause, listeners will think that the composition is finished, although it is not. Although inner timings are precise, like rhythmic patterns, meter and tempo, overall time of the complete form remains ambiguous to the listener. How will one know if the piece comes to an end? Well, only after the (last) performer bows and goes off the stage. Thus, the performer is indeed the part of the time structure of the music and serves as a final "bar" in the score of the indeterminate form. This suggests that if the form is indeterminate to the listeners, the perception of the time span of the form and its sections will be uncertain. Therefore, in contrast to the classic form where the time structure is perceived as a result of harmonic and melodic flow and it is predictable due to listener's exposure and experience, in compositions of the modern era, time is an active structural part that guide the listeners from motive to motive, from phrase to phrase, changing their attention from sound to silence, makes the listeners to wonder if the sound will appear again, thus the composition will be continued, or the composition will come to an end. However, only after the composition has been heard fully, the listener will create an image about the time structure of the piece and, accordingly, the structure of the form will be clearly presented in the listener's mind.

II
The organization of time of the form

In the music composition, temporal structure is organized and represented through:

- Rhythmic structure
- Metrical structure
- Temporal structure of the segments
- Organization of the tempo

Rhythmic structures, metrical structures, and time span of the segments belong to the absolute category of the temporal structure. The properties of these structures are objective, determent, and cannot be changed. They are written in the score, they have their own symbols and are set as frame for the melodies and harmonies.

Rhythmic structure refers to the temporal organization of the sound. It can be the inner temporal organization within one sound or the temporal organization of the sound groups. The inner temporal organization of the sound refers to the time span of the rhythmic unit: whole note, half note, quarter note, eighth note, sixteenth note, etc. The time span of the rhythmic unit is experienced as pulses which occur periodically within the unit. The perception of these pulses has important role in the performer's organization of the rhythmic structure. Each pulse is evenly distributed and counted within the unit, but their number depends on the established tempo, meter and type of the unit (weather it is whole note, half or quarter note, etc). For example, if the
meter is $\frac{2}{4}$ and the tempo is fast, then each of the quarter note will have only one pulse (counted as "one" - "two"). But at the same meter and at slower tempo, the inner pulse of the main unit (quarter note in this case) has to be divided into two pulses or even four pulses, i.e. the quarter note is now divided into smaller units. This division of the inner pulse of the rhythmic unit is important for the performer in order to keep the accuracy of execution of the rhythmical patterns (see Figure 1). This is important when dealing with the long values, such as brevis, whole note or prolonged whole note. If the performer does not feel or count the inner pulses, so divides note values into equally positioned smaller units within the time span of the note value, the rhythm will not be precise and the performer will be lost in the temporal structure of the phrase. The disposition of inner pulses is also important when we deal with rhythmic patterns or sound groups, which consist of dotted and tide values (see Figure 1).

While rhythmic structure gives the flow and motion to the form, metrical structure organizes the temporal elements within the form. Metrical structure is the organizational unit of the temporal structure of the composition. It establishes the main rhythmic unit, and determines how many units are per bar/measure. Furthermore, as the inner pulses are equally organized within the rhythmic unit, the beats are the properties of the meter that are organized within the bars. In another words, the properties of the metrical structure are the tempo markings and periodically placed beats within the bar. The beats are, in fact, regularly arranged rhythmic values which occur at the same positions from the first to the last measure. The beats are expressed as strong and weak pulses equally arranged in the measures. Depending on the meter, in the bar can be one or two strong beats, while the rest are weak, even beats (see Figure 2). This division on the strong/underlined and weak/relaxed beats underlies rhythmic and harmonic structures and enables the listener to perceive the structure of the inner time of the measures (Palmer and Krumhansl 1990).

Any irregularity in the placement of the beats can lead to confusion in the perception of the musical meter (Bouwer et al. 2018). Also, this notion of beats, as strong and weak, has implication for the harmonic rules (modulations, endings, and voice shifting are placed usually on the strong rather than the weak place in the bar).
The beats are perceived as accents. In $\frac{2}{4}$ meter the strong and weak accents will be perceived as shown in Figure 3:

![Figure 3. Presentation of the beats](image)

This “imaginative” accentuation is not emphasized in the performance and it is not suggested to underline the beats, because the music would become uniform and mechanical. Melody, articulation and harmony are placed in the way that the beats are felt as periodical pulses shown above. But the accent on the first beat is emphasized only when it is indicated in the score, as the part of the articulation, or when the upbeat is introduced (Example 6).

**Temporal structure** or the time span of the segments is expressed by the properties that are characteristic for each segment or section. These properties are:

- the rhythmic patterns
- the melodic idea
- motivic treatment
- harmonic progression
- established tempo

All these properties build the structural idea of the sections. Every change in tempo, in motivic treatment, voicing, texture, flow and structure of the melody, harmony, and rhythm indicates that the new segment is introduced. Every delayed harmonic cadence expands the time span of the segment.

![Example 6. Robert Schumann, Faschingsschwank aus Wien, Op.26](image)

Tempo has also impact on the perception of the duration of the segments: in slow tempo sections are perceived longer than in fast tempo.

Therefore, time structure of the segments depends on all these properties of the form. As the author has stated, the first three categories of the temporal structure of the form are *absolute*, which means that their properties are constant, and unchangeable. Meter, rhythms, metrical beats and the number of bars cannot be changed, and any deviation or any significant alternation of these properties written in the score is considered false, and confuses the listener's expectancies. Neither performer nor the listener can by any means perform modification to these properties of the temporal structure. However, *tempo* is the property of the time structure that is set in the composition, thus it is *absolute*, but at the same time it can be considered *relative*, that is, tempo alters the listener's as well as the performer's perception of the form and accordingly can be differently interpreted by the performer. There are obvious differences between the performance speed of the same composition.

Every performer interprets tempo according to subjective artistic image that is built on the knowledge and intuition. In this sections, the author will present the complexity of the temporal structure that refers to the organization of the tempo.

*Absolute tempo* is the composer's tempo, i.e. the one which existed in the composer's mind while composing the piece. Some authors discuss that the composer is obligated to have "correct feeling for the natural tempo of every meter, or what is called *tempo giusto..."* (Kirnberger 1776). The given tempo determines the note values: in fast tempo composers choose small note values, while in slow tempo chosen note values are long. Furthermore, time signature and rhythmic units determine the tempo (Beck 1954). Tempo modifies the time span of note values during performance – in fast tempo sound durations will be as short as possible often articulate with *leggiero* and *staccatissimo*, while in slow tempo note values will be sustained through the vary last pulse often articulate with *legato* or *sostenuto/tenuto*. However, baroque composers, like Bach, did not put indications for the tempo. It is suggested that the notation and the rhythmic character of the music evoke in the performer the right kind of tempo (Marshall 2008). But, through musical practice, the form and harmonic progressions have expanded and become more complex and thus the composers wanted to express their ideas more clearly. One of the many solutions for this problem was to precisely indicate tempo markings whenever it was needed. Although these markings directed performers on the right path, tempo still remains ambiguous feature of the time structure. How to distinguish terms such as *Allegro* from *Allegro con brio*, or *Moderato* from *Adagio* seems to relay upon the performer's experience, judgement, taste and interjection of the form and structure. This *feeling* of the tempo, author recognizes as *relative tempo*.

*Relative tempo* refers to the performer's or listener's judgements over the tempo of the composition. In listeners, tempo builds parallel time from which listeners create their judgements (Berger 2014). The judgements over the tempo as "too slow" or "two fast", as well as the modulations of tempo, depend on the listener's experience and the musical practice level (Sheldon and Gregory 1997). Further, listeners of different age levels have
different preferences for the certain type of tempo (LeBlank et al 1988). But, what about the differences in the perception of an *Adagio, Moderato* or *Allegro*? It is suggested that the character of the music has influence on the perception of the tempo: if the music is played fast and filled with strong events, the tempo will be perceived as "too fast", and on the contrary, if the music is slow, filled with weak events, it will be judged as "too slow" (Quinn and Watt 2006).

The problem of tempo markings is set before the performer who would wonder and ask: "What is the exact/absolute speed of the tempo markings which the composer had in his 'inner ear', and how to interpret all the changes of the tempo within the form without breaking the inner pulse of the structure?" It seemed that Beethoven tried to facilitate this problem for the performer. Setting instructions to the performer, he set his metronome markings in his works, but he did not overestimate the value of the metronome (Marx 1895). There are articles which explore this metronome phenomena, and which suggest that metronomic tempo and metronomic playing in modern world is something that is expected, desired, and seldom criticized (Bonus 2018). The musical idea cannot be expressed in a metronomic way, because "keeping of absolutely strict time is thoroughly unmusical and deathlike" (Hoffman 1920). Therefore, Beethoven's metronome markings are questioned and cannot be taken for granted, because from the writings of his contemporaries, we learn that "he played his compositions differently every time" (Marx *op.cit*). Furthermore, Beethoven, in his Ninth Symphony, hesitated over metronomic mark that he would choose, but finally he wrote "No metronome at all! Those who have a right feeling do not need it, and those who have not, will not be helped by it" (*Ibid*). Phrases and melodies have their own expression and breathing, and cannot be expressed as mechanical beats especially in the *cantabile* and long melodic phrases. Therefore, metronome markings can be regarded as an absolute and objective backbone which will guide the performer's conception of the organization of the tempo and its modifications. Relative or interpretative tempo, that is part of the performer's conception, is a possible solution to the absolute tempo of the form.

III

**The representation of the time structure in the performer's mind:**

**the performer's approach**

The temporal structure of the form is mapped in the performer's mind. The *absolute* values of the temporal structure transform into live, multidimensional and complex mental image. The ability to structure time elements of the form is very important for the understanding of the piece and quality of interpretation. The temporal structure does not exist *per se*, but corresponds with other knowledge structures and intuitive structures that live in mental space. Performer's temporal structure of the form is represented in three stages:

- Organization of the rhythmic structure
- Organization of the articulation
- Organization of the tempo of the segments and form
Organization of the rhythm. The perception and execution of the rhythmic patterns are important features in the interpretation of every musician. Without rhythmic cultivation one would be prevented to express the music. To be able to percept, memorize, recognize and execute rhythmic structures of the form, performer has to go through following processes:

- **perception of the meter** – at the first glance, performer recognizes the metric values, i.e. perceives what type of note value is established as the main unit and how many units there are per measure (tempo markings). This will help performer to have an overview of the temporal structure of the form, how beats are placed within the measures, and accordingly, this will help performer to organize his/her ideas and expectations on the time structure.

- **perception and recognition of the rhythmic structures** – this refers to the perception of the rhythmic figures and rhythmic patterns, as well as perception of the characteristic figures and patterns for each section, and how the transitions between these patterns are made.

- **execution** – to be able to precisely execute rhythms, performer has to master his/her kinesthetic movements and has to have control over the motor apparatus. Without developed motor ability, the execution of the rhythm will sound clumsy, out of time, and without clear pulse.

Organization of the articulation. Articulation refers to the specific touch which transforms the timbre and duration of the sound. Articulation is also considered a type of touch that allows the performer to express the timing and expressibility in music. Markings for articulation modify the "normal" duration of note values. Without articulation, the notes values would sound equal in duration, and no changes in character and expression will be made. Articulation can be defined and distributed into several categories, based on how the sound durations and timbres are manipulated:

- **articulation which holds the absolute durations of note values** – this articulation is marked as legato, tenuto, portato with its augmentative and diminutive forms. This type of articulation does not shorten the timing values, instead, it holds and even shortly prolong the timing property of the note value. Legato, tenuto, and portato have their own symbols which enable the performer to recognize those in the score. Also, it has to be noted that legato can be misunderstood for phrasing, because both are symbolized similarly with long sinusoid bow above or under the notation. Only through experience and musical practice, the performer will be able to distinguish these different features. The technique for execution this type of articulation includes whole arm, forearm, the finger movement and cantabile touch.

- **articulation which shorten the duration of the note values** – it refers to staccato, saccatissimo, and
The durations of the note values are shorter than in "normal" mode. Performer has to have specific finger technique and light touch to be able to clearly execute this type of articulation.

- articulation which change the volume of the tone – the notes are articulated with symbols for marcato, sforzato, martelato, and accents. Different kind of touch is applied when performing these expressions. The strength of the arm and fingers are important as well as performer's experience and the sound imagination, because unexperienced musicians often produce hard and even unpleasant sounds when dealing with the articulation of this type.

- articulation which manipulate timbre of the sound – symbols for this kind of touch are referred as con sordina, apagato, and muted. The subtle technique is needed in the performer's pallet of touch.

Each type of articulation has its own symbolic representation, weather the markings are dots, arcs, different types of accents, or simply written text above or below the notation. All the above mentioned articulations require trained technique, subtle ear, and aesthetic approach to the musical form. To be able to percept, recognize, memorize and execute articulation, the performer has to have skills and knowledge such as: 1) theoretical knowledge about the type and value of each type of articulation, 2) kinesthetic knowledge about how certain type of articulation has to be played, 3) physical control and 4) auditive control. Every performer has to be able to describe how certain type of articulation is performed, where it is applied, and why he/she uses it, if no original articulation is written in the score. Further, developed motor skills allow precise physical control over execution of articulation. The subtle nuances between, for example, staccato and staccatissimo, will be clear to listener, if the finger technique of the performer is mastered. The legato markings are often written within the long, singing melodies and phrases, thus this touch requires fine cantabile tone and aesthetic feeling for the quality of sound. Performer has to listen every note value to its very end, and connect it with next one without any pause or sound gap. Performer's auditive control has to be very intense and concentrated.

Therefore, in music education, from the early beginnings, learning signs and symbols of articulation has to be one of the primary concern of the teachers, because the quality and expressivity of the performance depends on the articulation. All the finesse and delicateness in performance spring out from the performer's sense for articulation. This is similar to poetry or acting. What a pleasure we gain when actor or orator speaks with all kinds of nuances that speech can have: he/she can shout, narrate, rustle, whisper, using all kinds of accents and sounds, changing his/her voice suddenly or gradually. Weather it is music or speech, to articulate the sound is the ground of qualitative interpretation. If educators introduce this idea to the students, the students will gradually realize how this concept is important, and thus their auditory abilities and sense for the meter, tempo, timing, would be trained. Furthermore, expression and articulation are very tightly bounded. The signs for expression and signs for articulation are often used together, so it is not rare that
certain kind of expression awakes specific touch. For example, terms such as cantabile, dolce, triste, and dolore are used within long phrases and usually are associated with markings such as legato, portato, portamento and tenuto; pesnate is connected with tenuto; skerzo with staccato, staccatissimo, and pizzicato; furioso with marcato, martellato, and sforzando. Therefore, terms for expression can help performer to execute articulation in accordance with marked expressions. However, exemption of articulation signs would leave performer to find the solution of how to employ the correct articulation to the music. Only analysis of the structure will help performer to understand the meaning of these symbolic signs, because melodic/interval motion, meter, tempo, and even harmony are the elements that suggest the possible articulation of the phrase.

Organization of the tempo of the segments and form. In the composition there is, usually, one marking for the main tempo of the whole piece or movement. However, often we can find two or more main sections, like in the Sonata form, or in the pieces where several parts are connected without pauses (like in Symphonies of the romantics). If this is the case, there are several main markings for the tempo in the form slow-fast: Adagio-Allegro or similar. But, within the piece there are many alternations and modification of the main, constant tempo: sometimes those changes are perceived as accelerations, sometimes as retardations. According to this, the performer has to deal with the complex temporal structure. This process of organization of tempo is built through two phases: organization of tempo on a local plane, and organization of global tempo on a large scale.

Organization of tempo on a local plane refers to the perception and understanding of the markings for the tempo changing. The rules of harmony, melody and motivic development impose the course of the tempo. For example, in romantic pieces, motivic development often gradually accelerates the tempo between the culmination and the resolution. In these sections we can find tempo marking such as accelerando, poco a poco, stringendo, but, ritenuto as well, because sometimes the volume of the sound would gradually become more intensive and full, so acceleration would not be possible any more at this point. Thus, ritenuto can be written at the end of culmination, between the sections or movements, or at the end of a piece. For the last, ritardando and rallentando are more commonly used. However, performer has to carefully study the piece, because it is not always the case that in the endings retardations are used. Also, the attention has to be concentrated on an idea that these deviations of the tempo within the sections have to be studied carefully, in order to keep the absolute tempo of the whole. If the performer use too much freedom to emphasize the temporal changes in sections, the musical flow would be broken and stylistic and aesthetic properties of the music would be spoiled. In another words, every deviation from the tempo, within the sections, has to be precisely studied and computed, and in harmony with the global tempo of the whole. Therefore, before the performer approaches the accelerations and retardations of the parts, he/she must first thoroughly learn the structure of the form and create a mental picture about the main tempo/tempos of the whole, and then study the temporal changes of the parts, always comparing each deviation with the main tempo. Only this way, inner
temporal changes will be adjusted to the global tempo of the form, and the musical idea would be clearly presented to the listeners.

Organization of the global tempo refers to performer's understanding of the main tempo markings. These are often written at the beginnings of the main parts of the form, sections and movements. How the performer would interpret the tempo of the first movement, understand its flow and speed? One possible approach is to compare it with the tempo of the rest of the movements. Nevertheless, tempo of a composition can be understood in regard to the character of the music. If the music is moving, gay, imbued with short note values, the tempo, presumably Allegro, will get the attributes such as lively, joyfully or hastily, more adequate than simply "fast". Thus, the character of the music will give the tempo marking the "colorful" meaning, embedding the purport in raw words. Furthermore, tempo can be interpreted in accordance with the style. Some musicians and critiques are against the interpretations which employ too fast executions of the pieces of baroque and classic composers, because of the imperfection of the instruments of those times on which these extravagant executions would not be possible, or simply these fast tempos do not match the style. And lastly, every musician would interpret the same tempo marking differently. This is due the expertise, experience, knowledge and intuition. Even the same musician cannot repeat the same composition at the same speed every time. Thus, psychological, physical condition of the performer, as well as external social and natural factors, can greatly influence the performance and make changes to performer's experience of tempo. However, the deviations from the absolute tempo must not be too far away from the conventional idealized speed. Performer must not sacrifice the marked tempo and its general speed for his/her poor motor abilities or misunderstanding of the musical idea. Allegro cannot become Allegretto, or, in the worse case, Andante. The performer's abilities have to be adjusted always to the composition and its ideas, but not vice versa (Neuhaus 1973).

The most ambiguous feature of the tempo modification in the performing practice is rubato, or tempo rubato. Understanding the tempo rubato requires aesthetic approach to the form, musician's experience, intuition and musical knowledge. Rubato means "to steal" or "rob" (Latham 2011) the time. The performer's approach to rubato is the following: for how much he/she shortens the time in one place of the phrase, for the same amount has to be extended (the time) at the other place. Rubato quite often imposes before the musician the variety of problems over the tempo. It is regarded as the problem of temporal synchronization between the leading voice and accompaniment, but also as the performer's modifications of the tempo of the whole piece during performance (Hudson 1996, Hudson 1997). Rubato or tempo rubato is written within the phrase or section, and its flow is often interrupted with the marking a tempo, which means that the tempo which was established before the rubato has to be applied. But, what exactly is rubato? It cannot be either precisely defined through exercise, or be carried from teacher to pupil. It is not constant feature of the temporal structure. It is a modification of the tempo in the process of the live performance, in front of the audience. This modification can be regarded as the improvisation of the
tempo, thus, it is very tightly connected with the aesthetic feeling and intuition, the musical taste, cleverness and intellect of the performer. To be executed with the taste, the performer has to define the global and inner tempos of the form, as well as to have an idea about the overall structure of the whole. Having this image, the performer can successfully deal with rubato. Furthermore, the structure of the music and the different aspects of the context could prompt the performer to play with rubato even if the term is not written (Timmers et al. 2000).

Therefore, rubato can be considered as a special technique for modifying the temporal structure of the form. Flexibility and intuition with which the performer changes the tempo, or deal with tempo rubato, must not deform the musical idea, its character and flow, and have to be always within the boundaries of the global tempo of the form. Dealing with tempo rubato still remains unspecified, i.e. how the musical time would be modified at the given moment in live performance. Using rubato, the performer has to be conscious about every temporal change he/she makes. This consciousness means that the performer has to instantly make evaluations, in real-time, for every change he/she has made and to think in advance about how the modifications of the tempo have to be executed in accordance with the context of the form. This process requires great control over the thoughts and emotions while playing.

It is worth mentioning one more element of the form that belongs to the time structure and with which performers often deal: fermata. Fermata is one of the relative properties of the temporal structure. It is a musical symbol that indicates the extension of the duration of the note value. Often, it is considered to prolong the note value up to half of the value duration or so (Kennedy 1994). Fermata is used usually at the end of a section, between the movements, or it is written at the end of a phrase which expresses the logic of the words and sentences of the text of the vocal music. How long the performer will hold note values below the fermata depends on the musical context in which the fermata is introduced, and on the artistic and aesthetic expression of the musical idea. (Neuhaus, op.cit.)

Conclusion

In this article the author has made a short discourse on the temporal structure, on its properties and elements, and examined how this structure is perceived by listeners, as well as how it is presented in composition and how it is structured in the performer's mental space. It is shown that the temporal structure is a complex structure of the form, as well as the important and underlying organizational unit of the composition.

Without time and timing, the music itself could not exist, because timing is indivisible property of the sound. Generally speaking, the composition itself is, in fact, a time structure. The temporal structure corresponds with the other structures and elements of music: pitches, timbres, dynamics, harmonic rules, and melodic flow. Moreover, the temporal structure gives the motion, character, expressivity and an aesthetic idea to all these elements. To be able to perceive the temporal structure, listeners and performers have to recognize the boundaries within the form, but on the other hand, the perception of the temporal structure will allow them to comprehend the boundaries of the form. Flexibility in organization and realization of the
musical time depends on the motor, auditive and cognitive skills and abilities, on experience and practice of the performer, but nevertheless, the intuition, imagination and aesthetic deliberation are the features to consider in dealing with the time structure. The performer's aesthetic approach is bounded with the conception of the temporal organization of the elements within the form. It can be said that the musical piece is the time in form, and the interpretation of music, or the concert performance is the form in time. Through analysis of the temporal structure, the performer would grasp the image of the musical idea and thus, his/her performance would be clear and expressive. This is why the author suggests that in music education teachers have to emphasize the importance of the temporal structure, because the conception, clarity, accuracy and expression will be developed in students. Through perception and understanding the temporal structure of the form, the music would reveal herself as live, organic unit.

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ABSTRACT
The practice of music in societies with oral tradition, in general, and particularly in black Africa, was rooted in the mythological beliefs, concerning the body of myth stories retold among people in those societies and interdictions/taboo and totems, which do not have grounds in logic and reason, that attempt to explain the nature of the human beings and their surrounding. Being the crucial elements that structure and regulate all spheres of life, as well as the manifestations and consequences of religious beliefs, those were the attempts to describe and explain the origins and fundamental values of a given culture and/or religious considerations of the people in the given society. If those extra-musical features were influential and inspiring enough, then that made it possible to establish the relations, i.e. the allusions to mythology and rituals which could be expressed in the music. When thinking about this particular fact, then it must be allowed that the music is likely to provide a primary document for understanding the systems of thoughts and for teaching us lessons on certain facets of the life of those societies/cultures. In particular, it can be used as a means to learn about their relationship to the environmental, natural occurrences and the humanity, the fact the researchers have not been sufficiently focused on when research about the music. This research aims to reflect on how well musical art has contributed to addressing that goal, namely, based on the concrete examples drawn from the music of Lobi peoples/tribes, the author is trying to shine a light on how these peoples, consciously or instinctively, convey an often complex set of problems, and communicate with an immediacy and universality that often sit outside of common language, particularly the environmental problems they encounter in their existence.

Keywords: music, myths, taboos and totems, environment, Lobi people

Résumé:
La pratique de la musique dans les sociétés de tradition orale, en général, et particulièrement en Afrique noire, est entournée de divers mythes et interdits dont les fondements et raisons relèvent souvent des considérations d’ordre culturel et/ou religieux des peuples. Si ces dimensions extra musicales permettent d’établir les relations que chaque peuple entretient avec ses musiques, il n’en demeure pas moins qu’elles sont susceptibles de fournir des enseignements sur certaines facettes de la vie de ces peuples, notamment leur relation à l’environnement, que les recherches n’ont guère suffisamment abordé sur le terrain musical. Cette communication est une réflexion qui vise, à partir d’exemples concrets tirés de l’art musical lobi, à montrer comment ce peuple règle, de façon conscience ou tacite, les problèmes environnementaux qu’il rencontre dans son existence.

Mots-clés: musique, mythes, interdits, environnement, Peuple Lobi.

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**Introduction**

La musique, produit de société est surtout un art environnemental. L’Homme puise dans son environnement immédiat et souvent lointain les matériaux et ressources nécessaires à la production musicale, d’où la diversité de comportements musicaux que l’on constate à travers le monde. En Afrique, cette réalité se veut caractéristique de la vie musicale des différents peuples. Et si la plupart des chercheurs qui s’intéressent au domaine musical, en se fondant sur les diversités géographiques n’hésitent pas à classer la musique de ce continent par rapport aux spécificités géo spatiales des peuples du continent, c’est que l’environnement est devenu un élément, voire un indicateur de l’identité des musiques. Et ce n’est pas par hasard que certains travaux sur la musique africaine insistent sur la démarcation entre par exemple la musique de l’Afrique de l’ouest et l’Afrique centrale, entre l’Afrique centrale et de l’est, entre l’Afrique de l’est et australe, quand ils évoquent la musique de l’Afrique noire. De même, la distinction entre la musique au sud du Sahara et celle du Maghreb répond à ce souci de prise en compte de la dimension environnementale dans la création et consommation de la musique africaine.

De ce qui précède, on peut constater que l’être humain étant en étroite relation avec son environnement, toute modification ou altération de ce dernier ne peut qu’avoir des incidences sur le comportement de l’homme. En clair, l’Homme en tant qu’acteur transformateur, destructeur ou développeur de l’environnement agit de facto sur les attributs et les effets que son environnement immédiat lui offre pour sa vie. Qu’elles soient positives ou négatives les actions de l’Homme sur l’environnement influent sur la vie musicale des peuples. Il est donc nécessaire de se saisir de cette question de l’environnement pour mener des réflexions sur les rapports de l’homme à l’environnement pour voir comment les producteurs et acteurs musicaux dans nos différentes sociétés traditionnelles pensent et réorganisent leur vie artistique voire musicale en tenant compte de la problématique de l’environnement dont les conséquences semblent exposer l’Humain à des limites irréversibles.

C’est dans cette perspective de compréhension des moyens que s’offre l’Homme pour continuer à bénéficier des privilèges de l’environnement au sens générique du terme, que nous avons décidé d’observer de près le comportement musical d’un peuple, les Lobi, pour voir si cette question les préoccupe, mais surtout comment ils la résolvent. La communauté Lobi, à l’instar de nombre de sociétés africaines, étant moins bavarde sur le contenu et la théorie qui sous-tendent ses pratiques musicales, on ne s’attendra pas à avoir des réponses, voire des vérités données par les acteurs eux-mêmes. Nous questionnerons certains comportements socioculturels et religieux observés dans la pratique musicale de ce peuple et essayerons d’en tirer des conclusions en regard de la problématique de l’environnement qui nous intéresse ici. Pour nous, le rapport dialectique que ce peuple établit entre la musique et son univers d’existence, peut être une contribution à la protection de l’environnement.
En effet, les mythes et les interdits sont légions dans l’art musical lobi. Et si l’on peut penser que l’objectif premier visé par les défenseurs de ces valeurs n’est pas la protection ou la sauvegarde de leur environnement, des arguments tendant à leur conférer un véritable impact sur la pérennisation de l’environnement dans lequel ce peuple vit semblent plausibles.

La réflexion que nous menons ici est le résultat d’une observation participante mais aussi d’une série de questionnements sur la musique lobi. Elle se veut une contribution à la compréhension des valeurs tacites qui se dégagent de l’analyse de la relation musique et environnement au sein de cette communauté, comparable à celle de bien d’autres sociétés traditionnelles en Afrique. En s’inscrivant dans les perspectives de l’Unesco citées par M. P. Ballarin, et S. Blanchy (2016, 11) sur les savoirs écologiques et les modes de gestion de l’environnement, il semble possible de trouver matière à justification des nombreux interdits et mythes que l’on rencontre dans la musique lobi.

**Clarification des concepts clés**

**La musique**

Selon Fela Sowande (1970, 60) qui définit la musique traditionnelle africaine en ces termes: «La musique est l’organisation du son, matériau brut, en systèmes structurés et codifiés qui parlent et plaisent à l’ensemble de la société dans laquelle cette structuration a eu lieu; systèmes qui concernent directement et intimement l’image du monde de l’expérience vécue de cette société considérée comme un ensemble homogène, et qui sont acceptés comme tels par cette société». Christophe Wondji (1986, 11), quant à lui estime qu’en Afrique, la chanson est à la fois littérature et musique, parole et danse, discours et rythme, pensée et expression corporelle. Développant son idée sur les dimensions de la chanson et donc de la musique en général, dans la société africaine, Wondji va hisser la chanson au rang des médias les plus sûrs de connaissance des peuples africains. Car «elle témoigne des préoccupations, des idées et sentiments en cours dans la société». En clair, la musique reflète la vie de nos peuples.

Cette idée sera d’ailleurs corroborée par François Bensignor (2005, 125-134) qui affirme que «La musique joue un rôle déterminant dans les civilisations africaines où l’oralité fait figure de pilier fondateur. Héritiers de traditions souvent très raffinées, les musiciens africains créateurs d’aujourd’hui sont de ce fait parmi les détenteurs d’éléments essentiels constitutifs de leurs cultures respectives». Parmi ces éléments constitutifs de la culture africaine, on trouve en position centrale, les mythes et les interdits.

**Les mythes**

Concept polysémique, le mythe peut être abordé sous diverses acceptions. En littérature, Egbuna Modum (1977), citant Andre Dabezies ("In mythe comme forme de l’imaginaire") précise que celui-ci «que le mythe est récit qui a pris valeur de symbole pour une collectivité donnée, c’est-à-dire, un récit qui a assuré une valeur mythique; qu’en littérature le mythe est déifié de tout rite, ce qui fait que le mythe littéraire est par définition un mythe repensé
individuellement; que toutes les versions du mythe en littérature ne sont pas a priori égales: elles sont en effet plus ou moins privilégiées selon la profondeur de l’émotion éprouvée par le poète». Malgré cette définition, Egbuno, pense «au contraire, qu’il a acquis désormais un sens plus positif, se présentant comme ce qui ‘‘fournit des modèles pour la communauté humaine et confère par là même, signification et valeur à l’existence’’. (Ibid.)

Pour Luc Benoist (2004, 100-101) le mythe se caractérise par sa polysémie et la multiplicité de ses applications. Mythe et rite sont en effet les expressions complémentaires d’une même destinée, le rituel étant son aspect liturgique et le mythe sa réalisation à travers les épisodes d’une histoire vécue.»

Toute activité humaine essentielle et qui répond à des besoins devient ainsi thématique et itérative. Le mythe se présente comme un exemple logique d’action, de passion ou de spiritualité, dont les buts poursuivis permettent de distinguer les trois voies de réalisation métaphysique que sont l’action, l’amour et la connaissance(…) Dans tous les cas, la logique des mythes est dominée par une mentalité archaïque qui persiste dans l’attitude et la conscience des civilisés, heureux de pouvoir projeter leurs espoirs, leurs craintes ou leurs passions dans le personne d’un héros.»

**Les interdits**

Laura Levi Makarius (1974, 10) estime que «Le système d’interdits mis en place dans les sociétés tribales par la médiation des représentations subjectives de leurs membres fournit, sur le plan objectif, la réglementation nécessaire à assurer la cohésion sociale. En vertu de la dialectique même de son développement, il engendre son contraire, la violation d’interdit qui s’imposera à la pratique quand les avantages qu’elle promet pèseront d’un poids plus lourd que les dangers qu’elle représente. Elle ne peut être le fait de l’ensemble des membres de la société sans que le système d’interdits et par voie de conséquence l’ordre qu’il soutient, ne s'effondrent, entraînant la dispersion du groupe. Elle doit être l’acte exceptionnel accompli par un individu ou un nombre restreint d'individus qui, par cela, deviennent eux-mêmes exceptionnels.»

Sur les interdits dans la société lobi Amazone (Faso culture: Totems et interdits en pays lobi. 17, Février 2017.) nous précise que,

«Comme dans la plupart des sociétés africaines, les totems et les interdits font partie des éléments fondamentaux qui structurent et régulent toutes les sphères de la vie, dans la société traditionnelle Lobi. Ils sont les manifestations ou les conséquences d’une croyance religieuse, celle de la religion traditionnelle Lobi. En effet, les interdits sont les éléments médiateurs entre le sacré et le profane ; ils sont liés à une mise en œuvre particulière du monde, et visent à éviter des conséquences néfastes temporaires ou permanentes. Ils énoncent ce qu’il ne faut pas faire, mais pas ce qu’il faut faire. La transgression d’un interdit est censée déclencher des conséquences néfastes. Dans cette logique, si une ‘conséquence néfaste’ se produit, c’est qu’à priori, un interdit a été transgressé. Toutefois certains interdits sont considérés plus graves que d’autres car ils conduisent inévitablesment à la mort. Il s’agit par exemple, du vol, de l’adultère ou d’un meurtre commis au sein de la communauté villageoise par un membre.
C’est pourquoi pendant la célébration des funérailles d’un adulte, on procède à l’interrogatoire de celui-ci principalement sur ces trois éléments. Il existe d’autres interdits considérés comme gravissimes tels la désobéissance au père, l’inceste ou plus largement, les unions entre les personnes ayant des liens de consanguinité, etc.

En fin de compte, qu’elle soit commise de façon délibérée ou pas, qu’elle soit dénoncée directement par l’auteur lui-même ou par une tierce personne (devin ou témoin oculaire), que l’auteur soit vivant ou déjà décédé, la transgression d’un interdit ou d’un totem doit, d’une manière ou d’une autre, être réparée. C’est la loi traditionnelle et tout le monde est tenu d’obéir.» (Faso culture: Totems et interdits en pays lobi. 17, Février 2017.)

**L’environnement**

Selon *Les définitions* «L’environnement est un système formé par des éléments naturels et artificiels interdépendants, lesquels ont tendance à être modifiés par l’action humaine. Il s’agit du milieu qui conditionne le mode de vie de la société et qui englobe les valeurs naturelles, sociales et culturelles qui existent dans un lieu et à un moment donné. Les êtres vivants, le sol, l’eau, l’air, les objets physiques fabriqués par l’homme et les éléments symboliques (tels que les traditions, par exemple) composent l’environnement. La préservation de l’environnement est primordiale pour le développement durable des générations actuelles et celles de l’avenir. Il y a lieu de mentionner que l’environnement renferme des facteurs physiques (tels que le climat et la géologie), biologiques (la population humaine, la flore, la faune, l’eau) et socio-économiques (le travail, l’urbanisation, les conflits sociaux)» (lesdefinitions.fr/environnement).

Akila Nedjar-Guir (2005) dans son article intitulé "L’environnement, une notion polysémique”, en donne les précisions suivantes:

«Le terme environnement regroupe une telle multitude de significations qu’il est difficile de l’aborder sous une unique facette. S’il désignait au début du siècle le milieu naturel pour les biologistes, il a profondément évolué, et ce depuis les années 50, période à partir de laquelle les sciences naturelles ont accepté le paradigme des sociétés dans la notion d’écosystème. Cette double notion, l’une ancienne et scientifique et l’autre, récente et sociale, contribue à la complexité d’une analyse des formes que revêt le concept d’environnement dans nos sociétés occidentales.

- D’une part, parce que l’environnement en tant que science est confronté à la difficulté d’évaluer le statut de l’homme par rapport aux autres êtres vivants ainsi que sa part de responsabilité dans les fluctuations des écosystèmes.

—D’autre part, parce que ce concept d’environnement est appréhendé selon les représentations sociales des individus fortement dépendantes de leurs caractéristiques culturelles, sociales et géographiques.»

Les travaux de recherche sur les forêts sacrés, bois sacrés et les sites naturels qui ont fait l’objet du Journal des Africanistes Tome 86 de 2016 s’appuient sur la relation entre ces entités spécifiques et l’environnement dans les sociétés traditionnelles. Environnement entendu ici au sens de patrimoine socio-politique, religieux et culturels qui permet entre autres de retracer l’histoire des migrations humaines, car elles sont des lieux de

Présentation du peuple Lobi


Retenons que certaines collines et grottes ainsi que des bosquets ou ruisseaux sont, au sein de cette population, l’objet d’interdits divers et des lieux sacrés (nosopar). En tant qu’espaces votifs, ils sont fréquentés momentanément par le groupe des initiés. Par exemple, l’immersion dans les eaux du fleuve Poni au cours des moments de dévotion est interprétée par les Lobi comme une séance de purification. Au cours des cérémonies funéraires, les veuves ou veufs subissent cette épreuve qui marque la fin du deuil. La parenté chez les Lobi n’a pas seulement une connotation biologique mais elle est surtout sociale. Cette société est constituée des principaux matriclans suivants, appelés caar : Hien, Kambou, Da, Palé, Som.

Chacun de ces matriclans possède des sous-matriclans dont le nombre peut atteindre la centaine. Les membres des différents matriclans entretiennent entre eux des relations d’alliance, d’entraide, de plaisanterie, de coopération mutuelle et de solidarité qui déterminent la vie sociale. La structure politique de la société lobi est dite acéphale. Toutefois, l’autorité y est assurée par des instances d’intervention diversifiées." (Yamba 2008). Ces clarifications faites, comment les mythes et interdits s’établissent-ils dans la musique lobi?
Les interdits et les mythes dans la musique lobi

Nous nous appuierons sur la musique de l’instrument identitaire des Lobi, le xylophone yolon bo (Figure 1), pour voir comment ces mythes et interdits se manifestent au sein de cette communauté dont la vie musicale est multiforme.

Au niveau de la flore

Le choix de l’arbre et son abattage. Les informations recueillies disent que le djë, l’arbre utilisé pour la fabrication du yolon bo, le balafon des Lobi, ne peut être abattu que si l’on a la certitude qu’il mort, il y a environ une dizaine d’année et que si en plus, les génies en ont donné l’autorisation. Par ailleurs, cet arbre est interdit dans divers clans lobi comme bois de chauffe à usage donc familial.

Au niveau socioculturel

Le biir, genre musical très prisé par les Lobi est interdit pendant quelques mois de l’année et pendant l’initiation au djoro.

Le djoro, genre musical sacré: son exécution du djoro est exclusivement réservée à la sortie des néophytes et aux funérailles d’un initié. D’ailleurs, lorsque cette musique est pratiquée, les non-initiés sont obligés de se tenir à l’écart.


Le mythe du musicien : en contact permanent avec les génies, le musicien est l’intermédiaire entre les membres de la société et les génies lors des funérailles d’un défunt. Pour ce faire, il est craint par la communauté.

L’impact des mythes et interdits dans la gestion et protection de l’environnement

Avant de préciser la place des interdits dans la protection de l’environnement chez les Lobi, inspirons-nous de ce récit de Laura Levi Makarius (1974):

«Ce récit nous mène au cœur d’une de ces contradictions dans lesquelles s’enfume la pensée sous l’emprise de ses conceptions magiques. On craint le forgeron, porteur de danger sanglant et par conséquent on craint aussi le lien d’interdépendance avec

lui. Mais quelque forme d'interdépendance devant nécessairement s'installer du moment qu'il y a échange entre le forgeron et la communauté, on s'avise qu'en fin de compte l'alliance de sang, sous la forme la plus complète et contraignante possible, tout en créant la redoutable interdépendance, offre une protection, un refuge, contre le danger que l'on craint, puisque ceux qui sont interdépendants ne doivent pas verser le sang les uns des autres. Ainsi le mythe souligne l'irrévocabilité de l'engagement pris par les deux parties: éviter à tout prix que le sang des uns ou des autres ne coule, pour quelque raison que ce soit. Le danger qui menace le contrevenant, comme le mythe le souligne, est bien de saigner coule, pour quelque raison que ce soit. Le danger qui menace le contrevenant, comme le mythe le souligne, est bien de saigner incoerciblement jusqu'à ce que la mort s'ensuive. Paradoxalement, l'alliance, qui crée artificiellement le lien d'interdépendance, apparaît comme la sauvegarde contre le danger qui fait précisément craindre l'interdépendance."

Abondant dans le même sens, et justifiant le rapport que l’Homme Africain entretient avec son environnement, Gadou M. (2011, 186) affirme que «Par ses activités économiques l’Africain traditionnel a exercé et exerce encore une violence sur la nature. Mais conscient de ce que des dieux immanents vivent dans la nature, les montagnes, les forêts, les eaux, il a mis en place des stratégies permettant d’éviter ou de prévenir les désordres qui pourraient résulter de cette violence nécessaire. En fait, l’Africain a le souci d’éviter la rupture entre lui et la nature, son partenaire divin et géniteur»

Ces réalités décrites sus-évoquées, peuvent concerner étroitement le domaine musical. En effet, la musique en tant que fait social, se conçoit comme une pratique qui intègre les activités dont l’homme a besoin pour son vécu quotidien. Il est démontré que dans les sociétés de tradition orale, il n’existe quasiment pas d’activité qui ne donne lieu à une manifestation musicale. Toute la vie de l’être humain, de la naissance à la mort, en passant par le mariage, les baptêmes, les initiations, est marquée par la production musicale. La création musicale, sa consommation et ses effets socioculturels n’est pas sans conséquences sur l’environnement dans lequel l’homme vit. En effet, au regard du lien étroit qui existe entre cet environnement et les croyances religieuses, l’on comprend aisément que la vie artistique, notamment musicale, soit assujettie à la diversité de mythes, d’interdits et de totems facteurs de régulation de la vie des Lobi. Selon Gadou (2011, 186), «Sacrifices, prières, obéissances aux interdits constituent ces stratégies. Il s’agit en somme de rites visant à conforter l’action ou la violence humaine à un ordre normatif que sont censés régir les dieux et les ancêtres, afin d’assurer la vie éternelle des sociétés et des humains.» Mais ainsi dit, comment ces restrictions dans le domaine musical participent-elles à la sauvegarde et à la pérennisation de l’environnement lobi?

A première vue, le respect ou l’obéissance aux mythes et interdits concourent à la manifestation de la reconnaissance des Lobi à leurs divinités, propriétaires des talents et puissances qu’elles inculquent aux artistes, de telle sorte à toujours bénéficier de leur bienveillance. Cependant, un autre regard peut nous faire admettre que le respect que les Lobi vouent à ces réalités mystiques vise à
sauvegarder leur environnement multiforme. Et cela à plusieurs titres.

**Au niveau de la religion**

Les génies, les ancêtres, le sacré sont constamment présentés comme ceux-là qui accordent tel ou tel droit à un musicien lui donnant l’autorisation ou non de jouer tel genre ou tel répertoire musical. Le renvoi à ses esprits conforte le Lobi à la croyance à religion incarnée par ces esprits. Même si les Lobi croient en un Dieu unique, ils pensent que les génies et autres esprits sont les intermédiaires entre eux et ce Dieu. Le respect de ces forces occultes par les Lobi, n’est rien d’autre que l’expression de leur déférence envers ce Dieu qui est le garant de leur existence sur terra. Par conséquent, toute désobéissance à ces puissances entrainant le péril des contrevenants, c’est toute la communauté qui en prend un coup.

**Au niveau de la flore**

Le respect des rites liés au choix de l’arbre et à son abattage, permet de protéger et sauvegarder cette espèce d’arbre de plus en plus rare. Les informations recueillies disent que le dijè, l’arbre utilisé pour la fabrication du yolon bo le balafon de Lobi, ne peut être abattu que si l’on a la certitude qu’il mort il y a environ une dizaine d’année et que si en plus les génies en ont donné l’autorisation. De plus, cet arbre est interdit dans divers clans lobi comme bois de chauffe à usage donc familial. Que pouvons-nous en déduire, sinon que cette interdiction permet d’éviter la destruction massive de cet arbre. En effet, quand on considère le fait que dans le processus de fabrication de l’instrument, le facteur a recours à un haut fourneau pour fumer et sécher les billes de bois, on peut encore se demander pourquoi cette précaution de dix ans. L’usage de feu permet d’accélérer le séchage du bois et, de ce fait, cette balise temporelle, semble avoir ses fondements ailleurs. De fait, en poussant plus loin la réflexion, il semble qu’en imposant cette mesure aux fabricants, cela permet de s’assurer que l’arbre ne peut plus fleurir et être utile à l’écosystème. Son abattage ne pourra en rien être préjudiciable à l’environnement. Toutes choses qui participent des stratégies des Lobi pour la protection des espèces végétales essentielles à leur existence.

**Au niveau socioculturel**

Le biir ([Example 1](audio)), genre musical très prisé par les Lobi est interdit pendant quelques mois de l’année et pendant l’initiation au djoro. Cela traduit le souci de ce peuple de grands cultivateurs d’éviter de tomber dans la distraction et d’oublier l’essentiel, c’est-à-dire, la culture du mil qui permet à la communauté de vivre. Le mil intervient dans diverses cérémonies et rites sacrés lobi. Et selon nos sources, lorsque la musique du biir est exécutée pendant sa culture, les plantes ne fécondent (produisent) pas ou se volatilisent

Le djoro, rite initiatique septennal ne doit pas être désorganisé par cette musique dont la danse captive l’intérêt de tous les Lobi, lorsque sa période d’exécution est ouverte. En interdisant son exécution pendant la période d’initiation, cela permet à toute la communauté Lobi de se consacrer à ce rituel essentiel dans la formation
religieuse et socioculturelle du Lobi adulte.

**Le djoro, genre musical**
Musique sacrée, l’exécution du *djoro* est exclusivement réservée à la sortie des néophytes et aux funérailles d’un initié ([Example 2](audio)). Cette restriction permet de préserver le caractère sacré de cette musique qui donne non seulement l’occasion aux danseurs d’exécuter les rythmes appris pendant la période d’initiation, mais aussi et surtout de revivre les péripéties de ce rite à travers la communication en langue secrète. D’ailleurs, lorsque cette musique est pratiquée, les non-initiés sont obligés de se tenir à l’écart. L’observation de cette interdiction permet au peuple lobi de préserver leur lien avec ce pilier essentiel de leur organisation socioculturelle et religieuse. C’est aussi par cet acte que les Lobi renforcent leur attachement à leur tradition et leur refus de se laisser influencer par la modernité qui caractérise les Etats modernes dans les Lobi sont contraints de vivre de nos jours.

**Le mythe de l’instrument**
Instruments identitaire des Lobi, on lui un culte presque divin. Propriété des génies et des ancêtres, réceptacle des pouvoirs mystiques, sa manipulation fait l’objet de divers interdits : ne pas verser de la bière de mil sur l’instrument, ne pas l’enjamber, ne pas le porter sur la tête d’un homme, entre autres. Toutes ces mesures appellent à entourer cet instrument de précautions pour ne pas le détériorer, vu l’importance de son rôle dans les rites funéraires et même dans le quotidien des Lobi. D’ailleurs pour renforcer ces interdits qui entourent l’instrument, il est dit que les calebasses servant de résonateurs servent de protection contre les sorciers qui errent dans les rayons de lieu où il est exécuté. Elles servent aussi de rempart pour les musiciens et danseurs contre tous ceux qui voudraient attenter à leur vie par des pratiques mystiques. Par toutes ces dispositions, les Lobi garantissent non seulement la sauvegarde de leur instrument et confortent le lien qui existe eux et les esprits (génies), essentiels dans leur cosmovision.

**Le mythe du musicien**
Selon François Bensignor (2005, 125), «Dans la société africaine traditionnelle, schématiquement, la musique accompagne chaque étape de la vie. Elle est le lien de tout acte social. Elle est indissociable des fêtes profanes. Et dans les rituels, elle tient lieu de véhicule de communication entre le monde des vivants et le monde des ancêtres. Le musicien traditionnel initié sert d’intercesseur entre ces deux univers intimement liés. De ce fait, il entretient nécessairement une relation particulière avec les détenteurs des pouvoirs politiques et sociaux.»

En contact permanent avec les génies, le musicien (Figure 2) est l’intermédiaire entre les membres de la société et les génies lors des funérailles d’un défunt. Dans ce sens, respecter ou craindre le musicien c’est respecter les génies, condition nécessaire pour bénéficier de l’accord des esprits susceptible de permettre aux musiciens de bénéficier d’un environnement favorable pour des prestations musicales réussies. De fait, la réussite des funérailles chez les Lobi se mesure par la qualité de la performance des musiciens. Il se raconte que lorsque les
génes ne sont pas avec un musicien, non seulement il n’est pas inspiré, mais surtout il est vulnérable car dans le cadre de leur activité les tentations malveillantes des adversaires sont fréquentes.

Conclusion

Les Lobi vivent dans un environnement profondément ancré dans leur vision cosmogonique. Toutes les pratiques et comportements sont entourés de nombreux interdits et restrictions dont le sens et les justifications sont en rapport avec leur religion. Et l’art musical, en tant qu’activité essentielle dans la dynamique socioculturelle de ce peuple, épouse les traits des éléments caractéristiques de la relation que les Lobi entretiennent avec leur environnement. L’exemple du yolon bo le xylophone et instrument leader de ce peuple dont ’existence est entouré de mythes et de nombreux interdits traduit la volonté des dépositaires de la tradition lobi de ne faire de cet instrument, un outil de désagrégation de leur espace vital. En réalité, la musique se présente comme un vecteur de consolidation de cet environnement et par conséquent, sa pratique doit se faire en respect des conditions qui concourent à la pérennisation des valeurs cardinales de cet environnement, c’est-à-dire de la culture lobi dans sa globalité. D’où les nombreux mythes et interdits que l’on rencontre dans l’art musical de ce peuple. Mais au-delà de

Figure 2. Un joueur du yolon bo
Photo de Sie Hien
la dimension purement artistique, l’on peut trouver en ces restrictions, des mesures voire des stratégies mises en œuvre par les Lobi pour protéger et sauvegarder leur environnement bio-diversifié. Au total, même si l’absence de théorisation sur la musique ne facilite pas le décryptage de certains comportements musicaux dans la société lobi, on ne peut s’empêcher de penser que les interdits, mythes et autres tabous qui entourent la pratique de la musique, renvoient de fait à tout l’environnement où les Lobi vivent et montrent donc comment par cette théorie de la loi du silence développée par Niangoran (1981, 28) ce peuple à travers sa musique œuvre à la protection et à la sauvegarde de son environnement multiforme. La concentration de l’essentiel des interdits sur cet instrument, en particulier, sur ses répertoires funéraires, dénote de ce que les Lobi savent le rôle des funérailles dans la célébration et l’exaltation des valeurs fondamentales de leur organisation socioculturelle et religieuse. Entourer cet instrument de tant d’attention, servirait de moyen de sauvegarde et de transmission de leur environnement et donc de leur vie.

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Gender and Identity in Music and Dance
ABSTRACT

Drawing on research of contemporary dance music this study analyzes how practices of, and discourse about, contemporary dance music contribute to the performance and embodiment of gender, and national identities. This article examines the articulation of gender and national identity in performance in the specific context of Russian contemporary male national dance. Dance in particular is a very interesting research setting for a subject as identity. Dance is located mostly outside of the daily life setting, therefore it enables another social framework with different social norms and rules than the ones applicable in daily life. Especially the identity axes of gender and national identity are provoked by national dances. To create insight and to understand the background and discourse of her research, the author presents the theoretical framework at first. Next her argument will be elucidated by the empirical chapters, which represent her findings in the field. At the end the author answers her research questions, as well as evaluating some existing theories on the topic, in her conclusion. The conclusion is that the bodies of dancers are cultural bodies and dance movements can be seen as scripts, which are culturally encoded and part of daily life. The body is the materialization of cultural definitions of femininity and masculinity, maleness and femaleness, and also materializes the dancer’s interpretation of them, as was stated by Aalten (1997). Namely, dancers create and recreate their gender and national identity inter-subjectively while dancing. Dance allow people to reclaim their humanity and is inscribed within the realm of feeling and emotion, The dancing body is a symbolic expression that may embody many notions of desire, hate, romance, anger, sexual climax. Dance, dance music and culture are intrinsically connected. Dancers and their dance practices reflect what exist in a society and culture, like how sexuality and gender are perceived.

Keywords: Gender, Dance, Dance music, Identity, Embodiment, Performance
Проблема национальной идентичности и гендерной устойчивости в результате утраты содержания и смысла танцевальной культуры в России, является комплексной по характеру междисциплинарных объектов, включенных в реестр знаний, составляющих понятие – культура в целом, и более узкие понятия объектов – культуры танца, затрагивающие значительный массив логически взаимосвязанных факторов.

Такими факторами являются: суть или идея и механизмы её воплощения: тождество, константность и изоморфизм танцевальной культуры. Не случайно в старославянском и некоторых славянских языках танец назывался - «ликование» и до сих пор в сербском языке называется «игрой».


Теперь соединим ликование с игрой. Игра предполагает наличие правил. Но каждая игра имеет свое название или имя, в танце имя Бога, героя, явления или сюита процесса игры по определённым правилам, обозначенным в названии танца. Это направленное, закономерное изменение на основе причинно-следственных связей. То есть единство: музыки, диктующей образ-характер лика или его состояния и слова, формирующего поэтический образ и движения, формирующего пластический и динамический образ, на основе изоморфизма, тождества и константности, как внутреннего взаимодействия энергий, так и внешнего их проявления, продиктованного внутренней логикой причинно-следственных связей. Это главный принцип национальных танцев.

Следовательно, ЛИКОВАНИЕ религиозный славянский образный танец, прославляющий богов и формирующий образ бога в человеке, относится к славянской культуре культа Ра (Соковикова 2007). П.П. Горяев считает, что:
«Язык религии славян, благодаря особенностям молекулы ДНК, позволяют ей хранить и передавать наследственную информацию от клетки к клетке, от поколения к поколению, обеспечивать новые комбициирий признаков у потомства или блокировать «вредную» или избыточную информацию.»
Что касается индивидуальной изменчивости, то она основана на различиях в последовательности оснований в кодирующих и особенно в не кодирующих участках генома» (Гаряев и Горяев. 1997, 108).

«Генетическая программа, закодированная в ДНК и такие свойства: как стабильность, способность к репликации, является особенною генома R1a1, который является биологическим маркером русского этноса. Набор нуклеотидов в R1a1, и есть «русскость» с точки зрения генетики», пишет проф. А.А Клёсов (Клёсов и Тюняев 2010). Эта «русскость» наиболее стабильно и устойчиво проявляется в национальных музыкальных ритмах танцевальной музыки, соответствующими ей ритмогенетическими кодами, музыкальном коде, выраженном в танцевально движении и пластике, третий компонент слово, увы, уже, на нашей памяти подвергается искажению, влекущему за собой подмену смыслов. Однако, П.П. Горяев считает, что: «Свойство восстанавливать повреждения в результате воздействия мутантных факторов, а в повседневной жизни восстанавливать СТАБИЛЬНОСТЬ в гармонии души, разума обеспечивается связью определённых химических элементов. То есть эта способность к генетической рекомбинации на биохимическом уровне, обеспечивается наличием гена РН-с.

Это и было законом НЕ ПИСАННЫМ». А точнее записано в генетической памяти (Гаряев и Горяев оп. цит.). Эта связь осуществляется виде информационного потока. Создатель посылает через Солнце, как и через любое матеральное образование, в период наиболее солнечной активности. Информационный поток, проходя гигантский вселенский путь, идущий через Сварога, преобразовывается в оформленные идеи как вербальные, так и музыкальные. Не случайно, бытует мнение, что Великие композиторы от бога, например, П.И. Чайковский, и А.А. Глазунов, слышали музыку и записывали её сразу в партитуре, так же как древнему хореографу, давалась музыка, которую он пел или воспроизводил на каком-либо музыкальном инструменте, сопровождая её танцевальной одно-временно.

И так, ЛАЙКОС-ликование, до сих пор сохраняет современная Греция, называя их народными, видимо со временем, утратив имена богов, которым были посвящены эти танцы-пляски. Ликовании так же были и в Древнем Риме. АЛИКИЯ (ALIQIA) – славянский религиозный танец в Древнем Риме, предположительно наследие этрусков (расенов) - пишет Лукиан (1935, 5, 8, 11). Для подтверждения приводим высказывание Цицерона, в имени которого зашифровано – «сын Ра»: «Видимо, в глубокой древности славян и римляне были единым индоевропейским племенем и поклонялись одним и тем же богам. Затем их пути разошлись, а боги прошли некоторую эволюцию, ибо боги являются к каждому народу в том наряде, какой ему наиболее близок и понятен. Однако римские могли сохранить те черты их общей древней религии, о которой славяне забыли. И римская религия может нам давать подсказки и о религии славян в глубокой древности», пишет Цицерон (1985).

Надо полагать, что эти термины относились к религиозному танцу, который ещё не был истреблён ко времени Василия Великого, к таким танцам С.Н. Худеков относит, Апполинарии, Пиррихии, космические танцы, то есть танцы, богов прародителей.

Интересен такой факт, что ЛАЙЛАК таджикский танец аиста, на современном таджикском, тюркском наречии – аист, произносится, как и у грузин, латышей, норвежцев, словенцев, шведов, датчан и ирландцев «Сторк», у якутов, украинцев, турок, как «Стерх». Забытый тотемный танец протославянских предков, который на древнеславянском назывался в честь Пеласга - (Рода – на сербском, боснийском языке), первого человека посланца Бога λαïκός,- ликование Пеласга πελαργός, лелёк (аист на малоросском наречии). Пеласг – это аист на др. греческом языке. Именно такое прозвище дали греки первому человеко-богу, пришедшему на Балканы и Средиземноморье, он же на других территориях именовался Род, Стерх, Сторк, Бусл.

Народы других культур, считали, что можно обмануть бога, надев на себя маску, личину. ЛИК (лики) — ветхозаветный иудейский круговой медленный женский хоровод в масках и с тимпанами (Мокульский 1956). Прообраз умывальных хоровод-дьяньских игр, которые исполнялись на Аполлона-Хорса, позже на Рууси и даже, в некоторых областях в настоящее время на Ярилу, но, естественно, без масок. У малых народов были репродуктивные культуры, смысл которых, обновление крови. В большей степени они культивировались у изолятных племён с матриархальным укладом.


Зная музыкальные первоисточники, понимая их эмоционально-образные характеристики, ритм, темп, ладогармонический строй, мы можем составить себе психологический портрет образов танца, исполняющих, содержание и язык танца.

Интерес к теме формирования нравственного содержания личности становится тем более востребованным с подъемом национального самосознания части “Русского мира”, оказавшихся иностранным воинством на своей земле, с одной стороны.

С другой стороны, девальвацией национального самосознания части общества и утратой национального иммунитета, вследствие воздействия чужеродных культов, направленных на подрыв национального
самосознания, что, как мы помним произошло дважды с интервалом в сто лет в Австрии, под названием "танцевальная чума" в 1518-1642 гг. (Соковикова 2017). Не обошла танцевальная чума и Францию, в некоторой степени и Россию, под личинами скоморохов, один из оргийных сюжетов описывает А. Гильфердинг (1871, 732). С третьей стороны размыванием культурного слоя носителей национальной традиционной культуры, агрессивным маргинальным элементом, лишённым этно-культурной родовой среды, агрессивным маргинальным элементом, лишенным этно-культурной родовой среды, домашнего воспитания в результате различных экспериментов над русской культурой, традициями, образованием, историей, а именно, подменой понятий, смыслов и содержания культуры, а также политикой мультикультурализма, проникающей в нашу страну.

В многообразии разнонаправленных тенденций развития современной наднациональной танцевальной культуры, всё более остро просматриваются тенденции упрощения эмоционально-чувственного содержания национальных и классических танцев, до откровенно эротического, заполонивших любительские по-домашнему воспитания в результате различных экспериментов над русской культурой, традициями, образованием, историей, а именно, подменой понятий, смыслов и содержания культуры, а также политикой мультикультурализма, проникающей в нашу страну.

Ибо по мнению Тейяра в основе любой эволюции лежит психоэнергетический феномен божественного источника космической эволюции. Высшим ее выражением является разумный человек принимающий, эту энергию естественной формой божественной благодати, в совершенной действительности, идущей через Христа. Человек, концентрирующий в себе психическую энергию, творит ноосферу (де Шарден 2002).

В условиях кризиса духовных ценностей традиционная и христианская культура, в частности танцевальная и музыкальная культура, должны стать основой возрождения и развития современных общественных отношений. К сожалению, напрочь ушла вокально музыкальная лирика не только в России, но и в Италии и Франции, на смену им пришли нерифмованные репы, жесткие ритмы и не человеческие образы, и уж тем более не божественные.

Подобные танцы, приобретая все более массовый характер, вовлекают в ареал своего влияния детское население, через огромное количество конкурсов и фестивалей. На первый взгляд это положительное явление, но за двадцать лет выработало определённые жёсткие требования, противоречащие традиционным национальным и классическим культурам, нарушающими нравственные принципы педагогики и психологии Детства, формируют упрощённое восприятие мира, эгоцентризм и снобизм.

Являясь частью синкретического культа, танец синкретичен сам по себе, поэтому для аргументации достоверности выводов необходима опора на междисциплинарные как базовые знания, так и современные открытия. Понимание культовой танцевальной культуры, как части культуры музыкальной, божественной формирующей духовность, собственно то качество, которое отличает не просто человека, мыслящего от животного, по мнению Тейяра, но и «человека мыслящего, от человека, одухотворённо...
мыслящего» (Ибид). Формирование внутреннего духовного «репертуара», считает П.П. Горяев: «происходит, с одной стороны, путём настройки на небесную гармонию, с другой стороны, организм её генерирует сам, за счёт имеющихся следов, оставляющих предками в генетической памяти зашифрованных в виде числовых структур. В этих формулках в определённом порядке шифруются числовые значения метронима, рифмы, темпа и лада. Приобретённые знания и последующая запись их на волновом уровне может сохраняться в долговременной памяти, либо для постоянного пользования могут сохраняться в оперативной памяти (Горяев оп. цит.) Таким образом, такие психические явления как пляска, ликование, игра, хоровод закодированы в одном из 35000 генов, называемых «хорея», который древние греки понимали, как сущность танцевального явления. Изучение проблем, формирования гендерного и национального иммунитета обусловливает актуальность фундаментальных теоретических исследований и разработок в предметности «психология творчества» и «танцевальная культура».

Почему для более аргументированного объяснения отдельных процессов развития и расширения, репрезентируемых системой теоретических знаний о танце в целом, они требуют уточнения не только через историческую науку, которая в направлении истории танца за годы застоя превратилась в переписывание одних и тех же мыслей по определённому шаблону. Уточнение этих знаний, их достоверность может быть проверена, главным образом через смежные науки, которые в контексте собственной проблематики, проливают свет на культурно-творческие явления или имена, связанные с танцевальной культурой в разные исторические периоды, в основном, через психологию и философию древних греков.

Необходимо отметить, что создание ряда реставрационных методик, включающих в себя всё многообразие музыкального и движеческого материала в контексте с их родными текстами, как полноценными произведениями искусства, а также выстраивание иерархии: музыка, текст, движение, является очень важной задачей. Ибо в историческом развитии культуры, как только общественная культурная мысль выходила на понимание ответственности психологического влияния на личность средствами классической музыкальной культуры, начинал подниматься дионисизм с его идеями свободы и анархии, которые являются предшественниками национальных катастроф и приводят к победе интернациональные, наднациональные или откровенно фашистские силы. «Дионис пришёл в мир уничтожить Аполлона».


Недооценка психотропной угрозы со стороны масскультуры, представляющей реальные проблемы от внедрения социальных вирусов и незащищённости молодёжи от реальной опасности психофизического оружия, которому якобы нет, но оно физически убивает молодежь. Сегодня это уже не мифы, а реальная угроза, продемонстрированная Киевским Майданом, и новым типом молодёжи с изменённым сознанием, ориентированным на жестокость, садизм, насилие и национальное самоуничтожение, под руководством «золотой молодёжи шестидесятых», которая всего лишь, с восторгом, невинно перенимала музыкально-танцевальные шаманские ритмы или Западные ритмы Армагеддона.
Недооценка значимости традиционных культо-вых танцев их первозданного творческого, интел-лектуального и эмоционально-нравственного содержания национальных или этнических особенностей ведет к нарушению субординации значений и смыслов отдельных факторов, как в формировании личности, так и в целостной системе сохранения культурной идентичности.

Это происходит в отдельных национальных группах, так и регионах в целом, где большую роль играет мода и дух времени, где на первое место выходит не интеллект, а мотивация в стремлении самовыражения.

Понимание происходящих процессов в обществе наших предков, которые нам даются через историю, психологию, литературу, музыку мы можем объяснить многие явления описанные в трудах древних философов и таким образом, понять религиозный смысл культового искусства; понять драматургию, танец, музыку, поэзию, литературу, сохранённую в литературных, музыкальных и танцевальных первоисточниках, а так же в памяти народа, через последователей воспитанных в традиционных и академических культурах, в том числе и через современников.

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BALETI ZA DECU: POVODOM OBELEŽAVANJA 70 GODINA POSTOJANJA BALETA U SRPSKOM NARODNOM POZORIŠTU (1972-2017)

Svenka Savić

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ABSTRACT

Ballets for children have been recognized as a unique genre of the dance art. From the point of children ballet production of the Yugoslav ballet assembly very little was documented, and this particularly referred to the Serbian production. Children’s ballets aim to provide an experience for young people, to educate on dance art and to attract, engage and sustain children as an audience for major ballet houses. They challenge a whole range of difficulties and problems that have to be solved by the choreographers and dancers. For example, the first major challenge in taking children to the ballet is that the story is told entirely through dance, and many children find this aspect of the ballet difficult to appreciate. The author examined the representations of the ballet body and analyzed how this and some other difficulties have been solved in children’s ballet production of the Serbian National Theatre Ballet (SNP) in Novi Sad during the long period of forty five years, from the first performances in 1972 up to now, namely to 2017. In addition, the author has made an inventory by listing repertoire, choreographies, and stories. She was tracking the number of performances for each production and the number of audience to conclude on the impact of the children’s ballet. The implication of the paper is that the possible solutions referred to in the paper could be seen as a suggestion for the future opportunities of the production, particularly in the case of the future premieres.

Keywords: Yugoslav ballet assembly, Children’s ballet, Serbian National Theatre Ballet (SNP) in Novi Sad, dancer, choreographer

Uvod

Baleti za decu su prepoznati kao poseban žanr unutar umetničke igre, ali je o njemu malo pisano sa stanovišta produkcije u pojedinim baletskim ansamblima u jugoslovenskom regionu, i u Srbiji posebno. Obrazovanje mlade publike za umetničku igru podrazumeva čitav niz rešenja koja staje pred koreografima i igračima (kao što

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Savic, Svenka. 2018. "Ballet for Children at the Serbian National Theatre in Novi Sad (1972-2017)." _Acclerando Belgrade Journal of Music and Dance_ 3:7 [In Serbian]

su, na primer, kako pričati deci sadržaj pokretima klasičnog baleta i dr.). Cilj je ovoga rada da analizira balet za decu na sceni jednog baletskog ansambla – Baleta Srpskog narodnog pozorišta (SNP) u dužem vremenskom periodu, od prvih izvođenja do danas (1972-2017), opiše i popiše mogućnosti koje stoje na raspolaganju u pogledu repertoara, koreografije, sadržaja, što može poslužiti kao predlog za buduću produkciju, naročito kada su u pitanju prva, ili (pra)izvođenja.

U 20. veku posebna se pažnja posvećuje detetu u smislu vaspitanja i obrazovanja kako u svetu tako i kod nas. Kao što postoji književnost za decu i kao poseban predmet na Filološkom fakultetu, na Odseku za srpsku književnost, i pozorišta za decu, kao što je u Novom Sadu Pozorište mladih, kao se zove danas, ranije se zvalo Pozorište lutaka, tako se na repertoaru nacionalnih pozorišnih kuća širom sveta i u jugoslovenskom regionu prikazuju baletske predstave namenjene deci mlađeg ili predškolskog uzrasta. Termin balet za decu odnosi se na pozorišnu predstavu ispričanu pokretima (gestovima) baleta, na sadržaj koji će deca dobro razumeti, a uz muziku komponovanu za tu namenu. Radi se o sadržajima koji imaju jasnu narativnu priču 'ispričanu' gestovima igrača, najčešće uz dosta pantomimskih pokreta uz jasnu moralnu pouku. "Praviti balet za decu nije nikako jednostavna stvar. Zapravo, ne znamo kako dete poima igračke simbole na osnovu kojih je pravljen klasičan balet.... Šta je za dete toga uzrasta smešno, a šta lepo? To su samo neki od mnogih problema sa kojima se susreće svaki stvaralac za decu pa, dabome, i koreograf. Umetnici stvaraju za decu na osnovu svoje predstave o dečjem svetu", konstatuje Savić (1972) u vreme kada se pojavljuju prvi baleti za decu u SNP. Namera uprave Baleta, stavljanja ovakvih baleta na redovni repertoar, je pre svega da se odnjuguje mlada publika koja će kasnije (po)ostati verna baletska publika. Zatim da im se pomogne da razviju sposobnost prepoznavanja značenja (sadržaja) u odsustvu govora, odnosno iz gestova koje izdvoj u igrači na sceni uz muziku, odeveni u odgovarajućim kostimima i u scenskom prostoru koja im dočarava kontekst priče.

Treba ukazati na granicu između baleta za decu i drugih baleta koji su ustaljeni na repertoaru, i podvući razliku, budući da je većina tzv. belih baleta zapravo zasnovana na sadržaju bajki koje se čitaju deci u celom svetu, pa i kod nas: _Pepeljuga, Kopalija, Uspavana lepotica, Labudovo jezero, Ščelkinčik_ (Krcko Oraščić). Razlika je u igračkoj formi, jer se u tim baletima sadržaji prikazuju apstraktnim pokretima umetničke igre. Ali treba pokazati i sličnosti, na primer scene humora, šale, ili gega u igri, koji su deci razumljivi.

Govorimo ovde o baletima koji su posebno namenjeni deci na repertoaru jednog baletskog ansambla - Baleta SNP u periodu od nekoliko decenija, pa analiza može dobro poslužiti za poredenje sa situacijom u drugim nacionalnim ansamblima u jugoslovenskom prostoru (u Ljubljani, Zagrebu, Beogradu, Skoplju, Sarajevu, itd.) u istom vremenskom periodu.

_Istorijski osvrt_

Istorijski gledano, u ansamblu baleta SNP dečji baleti nisu bili na repertoaru na samom početku rada u 1948. godini, nego je ansambl sazrevao u repertoarskoj politici. U
vreme kada se pokazalo da jedan deo publike ostaje zanemaren u nastojanju da se edukuju za baletsku publiku -- naime deca predškolskog i ranog školskog uzrasta, ali takođe i ona u Baletskim školama, koje su otvorene u isto vreme kada i Opera i Balet Narodnog pozorišta, u školskoj 1948-49. godini (detaljnije: Savić, 2006), a koja su mogla učestvovati u baletskim predstavama za decu (kako je to inače običaju u drugim velikim centrima, kao što je to u slučaju baletskih škola u Petrogradu, Londonu, Parizu) -- na repertoar se pojavljuju baleti za decu. To se događa u određenim društvenim okolnostima koje karakterišu poimanje važnosti ranog dečjeg uzrasta, zatim u određenom trenutku sazrevanja samog baletskog ansambla i uz njega baletske škole koja obrazuje decu da igraju.

Cilj istraživanja

Cilj je autora ovoga rada da analizira baletje za decu na sceni jednog baletskog ansambla – Baleta Srpskog narodnog pozorišta (SNP) -- u dužem vremenskom periodu, od prvih izvođenja do danas (1972-2017), opise i papiše mogućnosti koje stojje na raspolaganju u pogledu repertoara, koreografije, sadržaja, što može poslužiti kao predlog za buduću produkciju, sa stanovišta uloge koju imaju u odrastanju mlade publike.


Materijal odabran za analizu


Tok analize

*Vila Lutaka*


Balet je prvi put u svetu izveden 1888. u Beču, zatim u Zagrebu 1892, a premijera u Novom Sadu u SNP je bila 27. novembra 1972., a zatim je na repertoar bio i

Već ovaj prvi balet za decu pokrenuo je čitav niz pitanja kako postavljati balete za decu, koje sadržaje odabrati, kako dozirati odnos pantomimskih pokreta i onih koji pripadaju inventaru klasičnog baleta, zatim odnos kostima i lika, ali i ostalih faktora kojima se uzima u obzir uzbir uzast dece (kao što je dužina trajanja predstave, i sl.). U predstavi je kostim jedan od važnih znakovnih poruka za razumevanje sadržaja predstave i lika posebno. Budući da je u baletskoj predstavi za decu kositima komunikacije između malog gledaoca i izvođača, unutar predstave su kostimi kostimografa Stane Jatić bili lepi i raskošni, i deci dopadljivi. Što se tiče pitanja kojem polu je ovaj balet izraziti nezajednicu, možemo zaključiti da je bio više prijemčiv za devojčice, koje su i inače više usmerene na ovaj vid izražavanja od dečaka, nego za dečake.

**Petar Pan**

U sezoni 1974-75. postavljen je **Petar Pan**. Premijerno je odigran 12. 12. 1974, i u sledećoj sezoni 1975-76; i u sezoni 1976-77, ukupno 31 predstava, 10.479 gledalaca. **Petar Pan**, baletska predstava za decu, na muziku Bruna Bjelinskog, u koreografiji Vera Kostić, naslanja se na već usvojeno znanje dece o ovom junaku dobijeno iz crtanih filmova produkcije Dizni, i teksta u knjigama za decu, a nov je način na koji će deca videti ovaj sadržaj ispričan pokretima igrača, uz odgovarajuću muziku. Više puta je u baletskoj literaturi naglašavano da je baletska predstava kompleksnija od drugih pozorišnih formi, drame i opere, jer uglavnom izostaju reči, a sadržaj se isčitava iz pokreta koji deci ne moraju biti sasvim bliski.

Koreografija Vere Kostić, najpre izvedene u baletu Narodnog pozorišta u Beogradu, potom translačije u novosadski ansambl, upravo se oslanja na ovo predznanje mlade publike. Koreografkinja uvodi u predstavu naratora (glumac Aleksandar Đorđević) koji zapravo vodi decu kroz priču i kroz vreme događanja. Centralna ličnost ovog baleta je Petar Pan (u izvođenju Dušana Simića), ali za razliku od ženskog lika Pipi, u baletu Pipi Duga čarapa, ovde koreografkinja Vera Kostić daje glavnom junaku čist igrački prostor i on vlada predstavom. U tom smislu je ova predstava više namenjena dečacima i po načinu na koji je koreografisana i po odbiru likova (Savić, 1974).

**Crvenkapa**

postoji potreba za baletom ove vrste u širem regionu. U Sarajevu i Kijevu koreografi su bili različiti.

Crvenkapa (Slika 1) je balet za decu u jednom činu sa četiri slike, postavljen na libreto i muziku Tibora Hartiga, u koreografiji i režiji Žarka Milenkovića.

Balet ima dva osnovna dela: I deo kao uvod u priču u kojem prikazuje različite šumske i domaće životinje (Leptiri, Ptica, Guske, Petao, Koka, Plići, Medved, Zec, Medved, Srna), učesnice igre koja se odvija oko kućice u kojoj živi Crvenkapa sa majkom: Crvenkapina kuća; slika 2: Crvenkapa i vuk daleko u šumi). Životinje čine družinu, a medved je njihov zaštitnik od vuka i drugih nezgoda. Lovac je oličenje muškarca koji goni vuka. U drugom delu priča uzeta iz poznate Grimove bajke (slika 3: Bakina soba; slika 4: Vukov san daleko u šumi): vuk dolazi u bakinu sobu, nasrče na nju, zatvara je u orman, brzo se presvlači u baku i leže u njen krevet; ulazi Crvenkapa i vuk, nakon razgovora sa Crvenkapom, skoči iz kreveta, zgrabi Crvenkapu i zatvori je u orman kod bake i beži iz kuće. Prolazeći šumom, Lovac svrati kod bake, čuje zapomaganje iz ormana, i oslobađa baku i Crvenkapu, potom saziva družinu životinja i svi kreću u potragu za vukom. Kada nadu vuka, Lovac ga ne ubija, nego ga odvodi u zoološki vrt.

Kompozitor Tibor Hardig objašnjava kako je nastala kompozicija za balet: "Jedno vreme sam bio saradnik Lutkarskog pozorišta u Zrenjaninu. Tamo je postavljena Crvenkapa, a ja sam dobio zadatak da pišem muziku" (Hadnadev 1975, 8). Ali takođe znamo da je kompozitor bio motivisan za ovaj balet jer je njegova ćerka upravo bila uzrasta u kojem bi rado videla baletsku predstavu na temu
Crvenkape, kao što je koreograf Žarko Milenković imao čerku uzrasta za koji je bila odgovarajuća predstava Vila lutaka (obojica su u to vreme bili zaposleni u SNP). Zaključujemo da balet za decu može nastati narudžbom, ali da kompozitori takođe mogu imati i posebnu naklonost i motivaciju za to u nekom periodu svoga života. Tako je praisvedba Crvenkape prema istoimenoj Grimovoj bajci, uz modifikaciju osnovne priče, deci dobro poznate iz slikovnica, nastala iz uverenja da će deci dobro poznati sadržaj biti uživanje dok gledaju radnju na sceni, izraženu pokretima u igri sa životinjama. U razgovoru kompozitor kaže da njegova muzika nije avangardna, da su motivi zasnovani na dečjem pevanju, a ličnosti su muzički jasno diferencirane i psihološki karakterizirane - naravno, Vuk je najslabija uloga (Mišić 1976, 3). "Pokušaj da se Vuk ne prikaže strašnim, kako je u bajci predstavljen, u osnovi je dobar, ali nije pronađena adekvatna zamena za osnovnu osobinu Vuka. Ovde osnovne karakteristike svedene su na igru, a ne na karakter. Cee ansambl trudio se da ovu predstavu čini interesantnom i prijemčivom za decu. U osnovnoj nameri u tome se i uspelo" (Savić, 1976). Ova praisvedba baleta za decu je važna i zbog toga što afirmiše domaćeg kompozitora i koreografa i koji neguju tradiciju baleta za najmlađe. Odabrana je deci dobro poznata bajka, uz pokušaj smanjivanja udela stereotipa i nasilja (o vuku koji pojede baku i lovcu koji ubija vuka)

**Pipi Duga Čarapa**


**Pipi Duga Čarapa (Slika 2)** je dečji balet u jednom činu, na muziku Jakova Cipcija. Libreto i koreografiju potpisuje Iko Otrin. Libretista i koreograf Iko Otrin, preneo je u SNP koreografiju koju je prvobitno napravio u mariborskom baletskom ansamblu prema poznatoj knjizi Astri Lindgren, kao gost reditelj iz Maribora.


![Slika 2a.](image-url)
kompozitora Kruna Cipcija i on se oduševio. Napravili smo dramaturški kostur baleta i krenuli na posao. Ja sam mu iz Maribora u Ljubljano slao sadržaje pojedinih slika, on mi je obratnom poštom slao klavirske izvode muzike, koju sam odmah koreografisao."

Iz svedočenja koreografa doznajemo da je balet naručen i da je rastao u idealnom stvaralačkom dublu kompozitora i koreografa. Ovde se setimo Bručijevog suda da će kompozitori stvarati muziku za balet ukoliko su sigurni da će se delo i izvoditi.

Što se tiče sadržaja baleta on uključuje sve najvažnije podatke iz autorskog teksta. "Otrin je odabrao za igrački jezik one koji se na sceni mogu izvesti bez tehničkih pomagala i koje čuvaju meru ushićenja i divljenja za devojčicu neobične prirode (Pipi hoda natraške, dok spava drži noge, a ne glavu, na jastuku) izuzetne je jačine (lopove u kući prevari i sredi za tli čas), izuzetne je hrabrosti (podsmeva se učiteljici), izvodi razne šaljive i dopadljive vragolije, zna lepo da priča itd." (Savić, 1978).

U kritici obnovljene predstave po treći put na novosadskoj sceni konstatuje se da je "poznata priča o devojčici koja je osmišljavala sopstveni put kroz detinjstvo, opirući se modelu vaspitanja koje su odrasli rezervisali za nju: disciplina u školi, čuvani daleko od prirode i životinja. A Pipi, prepuštena sama sebi (majka umrla, otac daleko na putu), osmišljava svoju svakodnevnicu živeći u prirodi, uz životinje, vernog majmuna i konja, u igri i omiljenoj aktivnosti – pričanju priča: ona voli da priča maštajući i obratno. Ova antijučkinja devojčicama iz bajki Andersena, deo je literature i naše dece danas. Gledajući predstavu oni prepoznaju događaje priče dobro ispričane gestom, gegovima, šalama deci dobro poznatim, u scenama koje deca i inače vole: cirkus i životinje u njemu" (Savić, 2005).

Koreograf je odabrao savremeni lik devojčice, ali je kostimografkinja obukla Pipi i njenog konja u kostim dominanto roze boje - stereotipni simbol femininosnog. Koreograf nije izdvojio Pipi u poseban lik (kao što je to bilo sa likom Petra Pana u koreografiji Vere Kostić), nego je ona deo zajednice "što je dobra režijska poruka u smislu – igraju svi zajedno". Ono što je posebno važno
Jeste da u predstavi učestvuju učenice i učenici Baletske škole, čime se direktno povezuju sa profesionalnim baletskim ansambom i tako stiču dragoceno igračko iskustvo. Pored toga, ispunjen je i smisao baleta za decu, naime da u njemu deca igraju.

Po odabranoj temi i ženskom liku, po načinu na koji je režirao predstavu i po dobro osmišljenoj saradnji ansambla Baleta i Baletske škole, ova predstava je redak i dobar primer koji pokazuje čemu služe baleti za decu na repertoaru nacionalnog teatra.

**Konjić Grbonjić**

U sezoni 1996-97. na repertoaru se našao *Konjić Grbonjić*, balet za decu u dva dela i osam slika.

*Konjić Grbonjić* - Koreografija: Viktor Litvinov. Muzika: Rodion Ščedrin. Balet je prvi put izveden u Moskvi 1960. godine, prema motivima omiljene ruske bajke, P. Jeršova. Mada u programu ne piše da je reč o baletu za decu, sadržina ove priče je uglavnom namenjena mladima i deci, uz obilje humora i dosetljivih igračko-pantomimskih scena, što daje predstavi dinamiku i svojstven ritam. Za razliku od ruske mlade publike koja odrasta uz priču o Konjiću Grbonjiću u svakodnevnici, našoj mladeži sadržaj bajke nije toliko deo svakodnevice, niti po poruci (car je glup i tašt), niti po originalu priče, a još manje po izmenama koje je koreograf nužno morao uneti u inače veoma digresivan osnovni sadržaj bajke. Kritika konstatuje da je predstava dobro edukativno sredstvo za obrazovanje mladih o samoj baletskoj simbolici, a uživanje i humor su most kojim se gledaoci prizivaju u sećanje lično iskustvo iz detinjstva (različite zgode i nezgode), ili ono o kojem smo svi čitali u časopisima za decu. Tako je predstava Konjić Grbonjić povod da se razmišlja o prenosu baleta za decu iz drugih kultura pred naše mlade gledaocene: mera unosa druge kulture (uključujući i ideologiju), zatim rodnu perspektivu i vrednosti koje balet afirmiše, deo su onih vrednosti o kojima razmišljamo kada jedan balet za decu stavljam na repertoar. Činjenica je da je ovaj balet nastao u jednom ideološkom ključu borbe za socijalističko urednje i u jednoj tradicionalnoj kulturi. Možda je upravo ona jedna od onih graničnih predstava koja ne bi bila osnovana za decu, što podržava i podatak da predstava duže traje i da je režijski postavljena u dva dela.

**Maks i Moris**


*Maks i Moris* je balet na muziku Đoakina Rosinija, u koreografijskom pokretu Petra Markusova. Tekst nemačkog pisca stripova Vilhelma Buša poslužio je za libreto Edmunda Glida, za čiju sadržinu je koreograf Petar Markus odabrao muziku italijanskog kompozitora Đoakina Rosinija (emitovanu sa magnetofonske trake), koju je adaptirao mađarski koreograf Ferenc Babbar u novosadskom baletu. "Bajkovita slikovnica je samo okvir u kojem gledaoci prizivaju u sećanje lično iskustvo iz detinjstva (različite zgode i nezgode), ili ono o kojem smo svi čitali u časopisima za decu. Tako ona dobro naleže na lično iskustvo, govoreći o dobru i zlu na dečji način, pa je podjednako privlačna za one koji su sada deca, koliko i za onih koji su sada mladi, ali ipak i za onih koji su sada deca, koliko i za odrasle kojima je detinjstvo bitni deo sećanja" (Savić, 2002).
Sadržaj predstave se zasniva na tom da dva prijatelja (drugara) 'zamese' neku scenu punu dinamike (tuče, nadmetanja, vrištanja) u kojoj su važne osobe iz susedstva (udovica, učitelj, ujak, krojač i njegova žena, pekar, seljak) i životinje, pa svi zajedno proizvode obilježavajuće situacije iz svakodnevnog života, sa puno optimizma, što sve zajedno izmamljuje smeh i dobru volju publike. "Predstava ima izvanredan tempo, sa puno gegova i komičnih rešenja" (Savić, 2002).

Interesantan je podatak da je predstava igrana u pozajmljenim kostimima iz Opere u Minhenu na godinu dana (čime se afirmiše novi način saradnje i štednje u pozorištima), ali, nažalost, ova dobra predstava više nije ponovljena na sceni Baleta SNP (kao što je Pipi Duga Čarapa, čije su scenografija i kostim urađeni u radionicama SNP).

**Mačak u čizmama**


**Ko je najmoćniji na svetu?**

Komični balet u jednom činu za decu i odrasle, **Ko je najmoćniji na svetu?** (*Slika 4*), postavio je koreograf Vladimir Semjonović Feđanin (gost iz Nemačke), na muziku Bohuslava Martinua. U ovom baletu su glavne uloge date životinjama (Petao, Princeza mišica, Tata miš, Mama mišica, Blizanci miševi, Princ miš i deca i bebe mišići) i prirodi (Sunce, Oblak, Vetar). U izvođenju učestvuju i učenici Baletske škole.

*Slika 3. Mačak u čizmama.*

*Slika 4a.*

*Slika 4b.*

*Slika 3a.*
Diskusija dobijenih rezultata i zaključci

Ukupno je 10 do sada postavljenih baleta za decu u SNP za period od skoro pola veka (1972-2017), sa veoma raznovrsnom pozadinom, a samo je jedan doživeo prazivzdu na ovoj sceni (Crvenkapa). Nastojanje uprave Baleta da ustavi izvođenje baleta za (naj)mладе gledaоce u svakoј pozoriшном sezoni, očigledno je poveзana са разлиčитим problemima koji se moraju rešavati, након тога што се донесе odlуka да je balet za decu neophodan.

Baletska predstava je kompleksan kognitивno образовни pozorišни чин у коме mladi gledaоci traže značenje сadržaja u odsustvu rečи, а prisustvu pokreta, zatim znakovnosti kostima и čitave scenografije, uz određenu mузiku. Nавикavanje dece (naj)младег узраста да gledaju ovakve представе zapravo je образовни чин koji ima elemente забаве и задоволства. Pronaćи meru између образовања и забаве je једин део проблема.

Разлог заšto domаći композитори ne пишу балете за decу delimično nalazimo u objašnjenju новосадског композитора Rudolfa Bručija (1917-2002), koji je komponovao ukupno 6 baleta od kojih су 4 doživела prazivzdu на сцени новосадског Baleta, али ни jedан nije bio namenjen deci (Demon zlata, Pasión, Kirka, Agostino, Noć на prazi, Katarina Izmailova).

Da li se u izvedenim baletima за decu ponavljaju u садржајама патриjarhalni концепт o decи и o (не)pравнopravnosti polova? (kao што Savić заклjučuje за likove žena u prazivzbama u baletima SNP). Садржаји baleta za decu se ослањају на već stečeno znanje на osnovу приčа нi, или читанja literature за decu, као што су бежke (Crvenkapa), ili poznati junaci и junakinje u literarnim tekstovima za decu koji su већ medijski prisутни (kao што je Pipi Duga Čarapa у filmu, kao што су crтани filmovi Петar Pan, Mačak у цицама и dr.). У gledanje baletske predstave oni donose svoje већ usvojene стереотипе. Mogu bitи и oni sadržaji koji су типиčni за узраст dece, али у другим kulturama, nama manje или viшe (непоznатим (kao што je Konjić Grbonjić u ruskoj), ili namenjeni dominantнне jedном полу – devoјицама (Pipi Duga Čarapa).

Kada su koreografski postupci у пitanju, на raspolaganju су uvek sredstva humora и сале, што prihvataju deca svih kultura, zatim obilje životinja prisutних uz glavnejunake и decu.

Kada su u пitanju kulturoloшке разлике, и разлике poveзane sa полом, neki baleti за decu су директнije namenjeni jedном полu (на primer Pipi Duga Čarapa devoјицама, а Petra Pan dečаcima), ako se питамо o могуности identifikovanje dece sa glavnim likovima baleta. Оvaj podatak je битно разлиčит od анализе lektire за osnovu školu (Stefanović 2017) у коjoj dominiraju likови dečака.

S tim у веzi je и питанje да ли подједнако праве балете за decu koreografinje и koreografi? Očekivali smo odgovor да je koreografinja viше с обзиром на то да je јанр balet за decu нество 'skrajnut', tačnije, prostor u koji žena može lakše ući od onog простора baleta за оdrasле. Konstatujemo da су dve љена правиле балете ovoga žанра, остали су муšкарци (ali je podatak u вези са јинjenicom да je u ukupnom inventarу koreografa у Srbiji само неколико љена (Lidija Plipenko, Vera Kostić, и у raznim fazama razvoja baleta Marina Olenjina и Nina Kirsanova). Otuda...
je daleko veća odgovornost za baletsko obrazovanje (naj)mlađe generacije gledalaca upravo na koreografi ma.

Kada se pitamo da li su baleti za decu uža specijalnost nekih koreografa, onda možemo pozitivno odgovoriti: jer su na primer pojedini koreografi pravili više takvih baleta u SNP, najverovatnije uz ličnu motivaciju takođe – Žarko Milenković tri i Iko Otrin četiri baleta za decu.

Činjenica je da se od domaćih afirmisanih kompozitora ni jedan nije bavio baletima za decu (Parlić, Pilipenko, Simić, Mkedonski), što možda upućuje na status ovog žanra umetničke igre kao manje prestižnog.

**Broj odigranih predstava** baleta za decu takođe može biti podatak za diskusiju: u periodu od gotovo pola veka te predstave su uglavnom mnogo izvođene, pošto su jednom postavljene. Drugi podatak može biti broj posetilaca na njima, pa utvrditi da je broj izvođenja izrazito velik, broj posetilaca takođe (kada bi se sabrali svi brojevi posetilaca bila bi to cifra od blizu 100 000). Onda ostaje odgovor na pitanje da li su ove predstave ispunjavaju edukativnu funkciju kada su u pitanju učenice i učenici baletske škole kojima se daje mogućnost da stiju scenisko iskustvo, možemo pozitivno odgovoriti da u izvođenju učestvuju učenice i učenici Baletske škole.

**Preporuke za dalji rad**

Organizovati javnu raspravu o žanru baleti za decu i pozvati stručnjake različitih profila da se o njemu izjasne.

Sakupiti svu raspoloživu dokumentaciju i štampati u posebnoj brošuri osnovne informacije o baletima za decu igranim u jugoslovenskom regionu u poslednjih 50 godina kao izvor informacionijom onima koji se žele baviti ovom problematikom u budućnosti.

Napomena: sve fotografije objavljene u ovom tekstu su preuzete sa dozvolom iz arhiva Srpskog Narodnog Pozorišta, Novi Sad.

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Modern Dance in Serbia
ABSTRACT
Marija Maga Magazinovic (Užice, 1882- Belgrade, 1968), a choreographer, dancer, modern dance theorist, philosopher, feminist, librarian and journalist, was the founder of modern dance in Serbia. In her efforts to introduce modern dance, Magazinovic demanded emancipation of art, "pure" dance, a beauty of simple movements, which had no need for story, scenography, costume, even music, nothing but naked dancer's body. Maga, who graduated philosophy at the Belgrade University in 1904, and was a journalist by vocation, working as the first woman journalist in the daily newspaper "Politica" as a columnist, also fought for women's rights and emancipation. By bringing modern artistic view into the patriarchal Serbian society, she contributed to the social and cultural development, and to the understanding and adopting of the modern dance at the very time when it was developed and brought on stage in the West. Stemmed from the schools of Max Reinhardt and ballet school of Isadora Duncan, she brought their views and pedagogical methods to Serbia when she returned from Berlin and Munich to Belgrade, where she opened the first school of modern dance in 1910. She was the first to advocate for the necessity of female education, particularly of engaging girls in doing rhythmic gymnastics and dance as a form of bodily and spiritual education. Given that Marija Maga Magazinovic was the first who opened the door for the progress and changes in the fields of dance and women's rights by bringing concepts of those movements, in which she directly participated, to Serbia, these concepts had to be explained. Therefore, the main goal of the paper is to examine these concepts, such as modern dance, rhythmic gymnastic, body culture, Ausdruckstanz, expressionism, and women emancipation, which is crucial if we want to understand early period of modern dance development, and to understand Magazinovic's efforts and achievements and her place and historical significance for Serbian, and Yugoslav region.

Keywords: modern dance, rhythmic gymnastic, body culture, Ausdruckstanz, expressionism, women emancipation, Maga Magazinovic
Historical Background: Dance and ballet tradition in the beginning of the 20th century in Serbia

In the early 20th century the first educated dancers in Serbia were Russian émigrés, who arrived as refugees after the October Revolution and began work on the foundation of a ballet ensemble at the National Theater in Belgrade (Kosik 2017). The history of ballet in Serbia bears unique features, contrary to other European countries and the United States of America, namely, modern dance was established in Serbia before the classical ballet.

Maga Magazinovic, a student of Max Reinhardt and Elizabeth and Isadora Duncan, established her school in 1910, eleven years before the official foundation of the ballet ensemble in the Belgrade National Theater (Mosusova 2012). Her school was established under the name of The School for Declamation, Aesthetic Gymnastics and Foreign Languages, and in 1914, after a year spent in Dalcroze School in Hellerau, Germany, where she was studying method of Emile Jacques-Dalcroze, in the school of Minetta Wegmann, changed the name to The School for Rhythmic and Plastics of Maga Magazinovic.

Modern Dance: An expression of life

Modern dance arose in 1900 as a protest against the old society and the artistic stagnation of classical ballet which was perceived as the superficial entertainment, austere, mechanical, tightly held in fixed and conventional forms. The new dance was freer, natural, and less rule-governed, showed more spirit and emotion, and less virtuosity. It was both individual and artistic creation, improvisational, uninhibited, and provocative.

Modern dance was influenced strongly by the expressionistic visual arts. As non-verbal art it has a strong affinity to visual arts and music, which became particularly intense at the turn of the century. This could be seen in the works of Gustave Moreau, Arnold Böcklin, Edvard Munch, Degas, Seurat, Toulouse-Lautrec, who were fascinated with the images of dancers, cabarets, musical halls, circuses, with the floating movements and changing lightning effects. Auguste Rodin conceived sculpture as a kind of continuous motion in space and was a keen observer of Isadora Duncan, Loie Fuller and Vaslav Nijinsky (Martin 1982, 11-55).

Dancers have always had a close collaboration with composers, and at the time when modern dance was developing composers viewed writing for modern dance choreographies as a way to create scores that emphasized mood and atmosphere over dramatic development. An interest in authentic folk and ethnic dances provided inspiration for new rhythmic patterns and tonalities. Early modern dancers regularly commissioned scores from major composers of the period. Debussy, Ravel, Milhaud, Tcherepnine and Stravinsky among others embraced writing for dancers as an important part of their repertory.

Playwrights incorporated dance into their work. Scenes of social dance were often used for satiric or ironic purposes; the medieval dance of death was used to express more modern themes; dance was also used to express symbolic, impulsive actions that break through societal constraints. Dance was not limited any more to an interlude or several scenes but was rather an integral to the structure of the work, with the words being used primarily for their rhythmic and musical quality, and dialogues and actions being eclipsed by music and choreography. Moreover, in several works, spoken text was shifted away completely with the dance scenarios and pantomimes. Concepts of abstract, stylized acting, as opposed to realism and the domination of words, influenced by the works and theories of Isadora Duncan and Emile Jacque-Dalcroze, were accepted in modern theater, in the works of Gordon Craig and Adolphe Appia, for example. For the theatre and dance artists the most important was to solve the problem of how to visualize and reveal inner life and spiritual
states, which drove to new experiments in staging and choreography.

Modern dance flourished until the World War II, when it disappeared almost completely in Central Europe. The main concepts of modern dance were: modernism, vitalism, expressionism, and avant-garde. The main features of modern dance were: naturalness, breathing, tension/relaxation, floor contact, weight of dance movement, experiments with music, body and physicality. Many solo dance evenings were held by the individual's claims to create and present their own choreographic works. A key protagonist was Isadora Duncan (1877 - 1927), who initiated new, natural, barefoot dance, and was striving for the body, mind and spirit united in the art. Being free-spirited to the core from her early childhood, and avoiding the restraints of convention, Duncan became the mother of Modern Dance and a pioneering feminist. Duncan opposed to the Romantic ideal of the ballerina, to the unnatural twisting of the body, and squeezing of the feet into painful pointe shoes, and developed a style in which she used wave motions and circular forms to demonstrate her philosophy that movement emanated from within, like rays from the sun, and emphasized the idea of "connected thought-provoking", or communication with socializing intent between a performer and the audience, thus discarding the Victorian notion of a dancer as an object at witch to look.

"The dancer of the future will dance, not in the form of nymph, nor fairy, nor coquette, but in the form of woman in its greatest and purest expression. She will realize the mission of woman's body and the holiest of all its parts. She will dance the changing life of nature, showing how each part is transformed into the other. From all parts of her body shall shine radiant intelligence, bringing to the world the message of the thoughts and aspirations of thousands of women. She shall dance the freedom of woman."(Thoughts of Isadora Duncan, quoted in Daly 1992.)

Duncan's own philosophy was in part laid by the teachings of singing teacher François Delsarte, who proposed a system for connecting movement within the body. She was also influenced by Hellenic aesthetics, Wagner's theories of Gesamtkunstwerk (total art work), and Walt Whitman's transcendentalism.

With her sister Elizabeth she opened a free boarding school for 20 students, "a school of free dance", in Villa Grünwald in Berlin in 1905, where she thought her students the free, expressive, natural dancing movements, completely opposed to artificial, determined classical ballet movements. She was searching for improvisation in her dancing to music by Beethoven, Mozart, Schubert, Mendelssohn, Strauss, Liszt, Chopin, Tchaikovsky, Gluck, Wagner, and Franck. (Improvisation in a sense of a continuum of moving moments in choreographic imagination and performance).

"From the mystery of the Parthenon, the frescoes, the Greek vases, and the Tanagras came my dance – not Greek, not Antique, but in reality the expression of my soul moved to harmony by beauty" (Duncan's words quoted in Magriel 1947).

She avoided classical ballet technique as something opposed to the anatomy and physiological function of muscular structure of the human body. In her lecture "The dance of the future", Isadora presented her ideas. She assumed dance as the expression of life, of the imagination and spirit, not of the body. Through her dance she was worshiping truth, beauty and freedom. The text "The dance of the future" became the manifesto of modern dance. "The text circulated widely in various languages, and is still considered the manifesto of modern dance as well as of the women's liberation"(Rafitis 2017). She also avoided illusionist effects and realistic scenography for the stylized simplified scene, that sought to find a visual metaphor, distill the image and evoke a mood, often with the grey-blue curtains and the horizon behind the bush somewhere at the side when she danced her variations in Grecian-draped dresses which influenced fashion as well as
signaled a loosening of social conventions. She was searching for the inspiration in ancient Greek and Egyptian art, together with Olga Desmond. (Her Greek dance style inspired the work of Leon Bakst whom she met in 1905. Therefore, the Ballets Ruses was not the first to link the new dance with new forms of scenic design, but there were both Loie Fuller and Isadora Duncan, American dancers, who had made it before.) She wanted to be remembered as a legend, and did not allow her performances to be filmed, but in 1927 she wrote her memoirs "My Life"(Duncan 1955).

**Maga Magazinovic and Central European Expressionist Dance:**

**Isadora Duncan and Ausdruckstanz**

Maga Magazinovic (1882-1968), a professor of philosophy, German and Serbian languages, librarian, journalist, choreographer, dancer, modern dance theorist, dance historian, was the founder of Serbian modern dance. In the Serbian center she transferred impacts of Central European Expressionist Dance, particularly of Isadora Duncan and Ausdruckstanz.

After she had seen the performance of the famous Canadian modern dancer Maud Allan (1883-1956) in 1907 at the Belgrade National Theater, and being fascinated with her dancing, Maga started to learn modern dance and developed interest for Eurythmics after she had met Rudolf Steiner, a mystic and philosopher, in 1909 in Munch. In 1909 she enrolled at School of the famous Max Reinhardt (1873-1943) in Berlin, and attended ballet classes with Charlotte Schnitter, the director of Berlin Opera House. In addition, she enrolled at Duncans' School of free dance in Berlin, which was at the time under the direction of Isadora's sister Elizabeth Duncan (1874-1948).

Maga was influenced by Isidora Duncan's concept of dance, and broke away ballet vocabulary, technique virtuosity, and stiff tutus for free, natural movements, and loose-flowing, transparent, white, Grecian tunics (Romanou 2009). Like her famous idol, she argued that the natural language of the soul was the movement of the body, and strove for simple and semi-improvisational movements, for the beauty of simple movements, finding inspiration in the natural world, while her dancing communicated not a story but her own highly individual, expressionist response to the music. She wanted to dance like Isadora, "no longer at war with spirituality and intelligence, but joining them in a glorious harmony."Furthermore, she insisted that dancer ought to be the choreographer, which was the idea of the new modern dance, where each expressionist dancer was at the same time a choreographer of his/her work creating his/her own distinct style in rejection of classical ballet vocabulary. In addition, modern dance rejected the representational value of movement, by representing it in a purely formalized mode, thus opened it up to new meaning. Maga Magazinovic was also influenced by another Ausdruckstanz representative, Gertrud Bodenwieser (pseudonym of the Jewish dancer Gertrud Bondi, 1890-1959). Getrude Bodenwieser was described as "a driving force towards the New"(Warren and Warren 2013, 19). Bodenwieser expressive dance, "Bodenwieser style", which was referred to as specifically Viennese, which she brought to Australia when she escaped from Nacism, had specific features: the close connection between dance and music, and fluidity of movement as reminiscent of the Sezessionist movement. In addition, in her dancing she expressed visionary content by sculptural forms and tableaux vivants.

"The new dance...wishes to embrace all the human feelings, not only harmony, lightness, and charm but also passionate desire, immense fervor, lust, domination, fear and frustration, dissonance and uproar. The new dance does not content itself with being enchanting and entertaining only; it wishes to be stirring, exciting and thought-provoking." (Getrude Bodenwieser, *The New Dance* quoted in Cuckson 1970, 79)
For Gertrude, as she was called, dance and music were inextricably intertwined, which differentiated her from Rudolf Laban for whom Absolute Dance meant a liberation from the requirements of music: “Dance becomes an 'absolute art,'” for it is there that 'knowledge of things stops, only experience is law; there begins dance” (Mary Wigman, 1986. "Das Tanzerlebnis," in Mary Wigman-Ein Vermachtnis, editor Walter Sorell. Wilhelmshaven: Florian Noetzel/Heinrichshofen, quoted in Manning and Ruprecht 2012, 196.)

Bodenwieser's most significant works were dance dramas, large group ensemble works with clearly defined themes and narrative structures. She strongly influenced the creation of national choreodrama developed by Maga Magazinovic and Smiljana Mandukic on the Serbian scene. Magazinovic was the first who stylized Serbian folk dance in contemporary expressionistic style, in her dance-dramas: "Jelisavka, the Obilics' mother", "Pray of Kosovo girl", and "The Death of the Jugovics' mother".

The hypothesis is that choreodrama has changed attitude towards dance, the attitude towards drama, and towards the female body. (...) The results show that in Serbia mainly female artists of great individuality and education dealt with choreodrama and they were only partly written about in our literature concerning the relationship of gender and choreodrama process of creation, selection of content, and affirmation in the public area: Maga Magazinovic, Smiljana Mandukic, Nada Kokotovic, and Sanja Vukicevic.

Maga Magazinovic and Women Emancipation in Serbia in the Beginning of the 20th Century

In the time when woman has not yet been emancipated, Maga Magazinovic was a feminist who fought for the equality of possibilities, namely for women to be allowed to graduate from the University, not only to attend the lectures. She graduated from the Belgrade University, School of Philosophy with distinction in 1904, and also enrolled at the School of Law, as the first woman who was enrolled at the University with the right to pass the exams and obtain a diploma of graduation. Also, she pointed out the importance of gymnastic education for everyone, especially young girls. “Alternative experimental arts school for women began to open as early as 1910 for example. Expressionist dancer Maga Magazinovic (1882-1968) started a school for rhythmics and gymnastics in Belgrade”(Novakov, 2011).

Moreover, Magazinovic established a dance group consisted of female dancers exclusively. She also insisted that dancer ought to be the choreographer, which was the idea of the new modern dance, and further on, this idea in the context of female dancer meaning that the woman is not the dancing object, object of male desire, and male choreographer's ideas, but the author of her dance. In the classical ballet, with its mechanical basis of language,
movement and performance, the image of the prima ballerina was the image of moving, weightless, machine-like doll, as referenced by Heinrich von Kleist's Über das Marionettentheater, or was Olimpia from E. T. A. Hoffmann's Der Sandmann. Both texts engage metaphors of dance by referencing a doll, to indicate how its language relies on a mechanical means to narrate and on formalization of movement. Like a marionette, the ballerina was controlled by her ballet master, each of her movement was choreographed and scripted, and individuality and subjective expression were shifted away for the sake of preserving historical narrative.

Expressionist dance radically challenged this idea of female dancer as a puppet or doll, the dancing object, as having been the consequence of patriarchal structure and its hierarchical power, by rejecting the image of a doll figure in order to liberate movement from the sterile conventions of classical dance. The dancer should express her deep feelings and experiences through movements, but the emphasis was on the interpersonal relationships and the dynamics of the group. Dance became the form of integrated "pure shapes", stylized, daily movements full of rhythmical and plastic sense, that expressed nothing else but themselves.

This form had the beginning, the development, the climax and the end. Body functioned as the screen on which was projected the whole spectrum of meanings, from the universal feminity, and the integration of the body and the earth, the erotics in the transcendental, to the projections of evils, hater, death, and anti-femininity. Those were complex pictures, representing radical versions of emancipation intertwining with the ideas of biological determinism. "Only with the onset of modern dance, when women took over the responsibility both for the creation and execution of choreographies were they able to evade the dominant male discourse of dance and implement their own aesthetics ideas"(Kolb 2009, 34).

With this emphasis on responding to new forms of femininity, "modern dance was construed as a counter movement to academic ballet, both in terms of its step repertory and its underlying ideology"(Idem., 2).

Consequently, this course established new social relationships as well as new audience. New dance was the answer to the changed role and woman's identity in the West Europe and America in the early 20th century, and the agent, the initiator of that changed role and identity in the other countries, such as Serbia. Furthermore, this new view of dance and its status allowed for the girls from middle class to participate in the dance groups and became ballerinas. In the previous time predominantly the girls from the working class were training for ballerinas.

Rhythmic Gymnastics and "FREIER Tanz"

Maga Magazinovic, a student of Max Reinhardt's and Isadora and Elizabeth Duncan's school in Berlin, after her return in Serbia from Germany, established the first dance school in Serbia in 1910, eleven years before the official foundation of the ballet ensemble in the Belgrade National Theater. Her school was established first under the name of The School for Declamation, Aesthetic Gymnastics and Foreign Languages. Afterwards, and after 1912/13 semester spent in Hellerau, Germany, where she was studying method of Emile Jacques-Dalcroze, she renamed her school to The School for Rhythmic and Plastics of Maga Magazinovic.

The development of modern dance both in the United States and Europe was preceded by the rhythmic gymnastic schools (Partsch-Bergsohn 1997, 13). These schools offered an alternative dance form, emphasized the study of rhythm and movement, and were predominantly attended by young female dancers who were not interested in studying classical ballet. After completing their training in rhythmic gymnastics, students went on to pursue their own directions in modern dance and develop their personalized dance methods and styles. Three major
gymnastic schools at the time were led by François Delsarte, Émile Jacques-Dalcroze and Rudolf Laban.

First educator who developed "a system for coding bodily expression and a concept for harmonic gymnastics" was a French musician François Delsarte (1811-1871). In his method, or as it was called "Delsarte system", he attempted to connect the inner emotional experience with a set of certain patterns of expression, which encompassed gestures, voice examination, movement dynamics, and other elements of the human body. His work was of a great inspiration for Isadora Duncan, Ruth St. Denis, Rudolf Laban and F. Mathias Alexander, among others. He never wrote a book about his method (Oxford Reference).

Émile Jacques-Dalcroze (1869-1950) was a Swiss composer and musician who developed Eurhythmics in his school in Dresden-Hellerau that was established in 1910. Eurhythmics is the understanding of the structure and rhythms of music kinetically, by the use of movement. Dalcroze employed the tactical, metrical and rational element of rhythm to sustain a highly structured relationship between the body and music. In addition, Dalcroze collaborated with mystic and reformer Rudolph Steiner, a founder of antroposophy.

The third, and most influential school, was that of Rudolf Laban, a Hungarian, who developed theory based on metaphysical ideas. He ran the school in Ascona, in Monte Verità, Switzerland. He studied Dalcroze method but rejected the structural approach of Dalcroze rhythmic gymnastics in favor of improvisational movement that was characteristic of his non-narrative open-form movement expression, "free dance." He developed a system of Eukinetics, which enabled the individual to "speak in his/her own voice, to contribute to a greater whole, and that allowed group access to the larger concerns of the human condition" (Bradley 2009, 13). He developed the concept of "movement choirs".

"The movement choirs were amateur groups, everyday people who came to the training programs to address growing concerns about the human being within the state, the role of spirituality within religion, and the role of the psyche within the forces at play in the 1920s. Adult students took classes that explored expanding and condensing, individual and group consciousness, breath and story, space (Choreutics [Space Harmony, M. M.]) and expressivity (Eukinetics)." (Ibid.).

These were dance-dramas, "based on improvisational impulses, musical theory, and visual design structures the form of which was spontaneous, participatory and performative" (Idem., 16). The choric principle harmonized the relationship between the individual and the group formation. He established the Dionysian concept of expression that transcended order, law and structure through ecstatic and ritualistic acts that encouraged the disintegration of the old "conditioned self" which allowed the production of an "individuated self", that was connected to the higher cosmic spheres of consciousness and nature. The Dionysian component of Ausdruckstanz was defined by its emphasis on ecstasy, mysticism, ritual, and nature.

This theory emphasized that if body remains in harmony with its natural rhythm, the self is moving in harmony with the cosmos. Body and mind, subject and object, self and world were united in the body's restored natural alignment with the cosmos. Transformation into movement of the invisible forces gave life to creative experiences. The dancer is a medium for it, and dance functions as a trance, as an expression of ecstasy, emotional impulses, that creates forms of movement as a consequence. Dance became a search for a truthful experience. Dance should not represent any more, dance should be. As Laban's student Mary Wigman used to say, "we do not dance histories, we dance feelings".
Body Culture – Körperschönheit

The rhythmic gymnastic education was closely related to the philosophy of Körperschönheit. The core elements of this philosophy were totality, harmonic rhythm, and physical beauty. In the modern, industrialized, mechanized era, the body was forced to repress its natural sense of rhythm, and it was the must for humans to restore this loss, to regain an open relationship with the body through uninhibited emotional and physical expression. Through subjective expressions and individuality the latent primal energies and psychological complexities that were stored in the body became activated, which inhibited external forces to be imposed upon the self. The modern notion of moving from the inside out was in accordance with the social reform aspects of Ausdruckstanz.

Accordingly, expressionist dance was the means to promote individual rather than social identity. It encouraged the individual to find his/her unique, personal style, and to reveal highly distinct personalities by experimenting with unconventional forms of movement.

Expressionism And Ausdruckstanz: Stylistic Innovations And Conceptual Problems

The artistic movements Expressionism and Ausdruckstanz were enhanced by the climate of experimentation that was flourishing during the height of avant-garde in painting, literature, film and dance. They were exploring new and imaginative possibilities of individuality and subjectivity. This experimental atmosphere provided dancers Rudolph Laban and Mary Wigman the artistic liberty to pursue unconventional dance styles, through movements, gestures, and naturalist credos, which ultimately established the foundation for Ausdruckstanz, or 'New Dance' or 'New German Dance'. The Ausdruckstanz was the realization of this revolutionary spirit, and was recognized as a significant form of artistic expression.

Ausdruckstanz or 'New Dance' or 'New German Dance' presented new angles, poses, and arrangements of movement patterns that emphasized individuality, self-expression, mystery, and nature. It liberated the body from point shoes and tight corsets by establishing a free and open style that rejected the imitation of ballet narratives, staged productions, and rigid, linear, harmonious compositions. Ausdruckstanz revealed a new dimension of physical expression that included gestures, props, masks, and mythical ideas to present an 'other-worldly', eccentric, and unique style of movement" (van Helden 2012, 8).

Furthermore, the importance of subjective and emotional expression led to refusal of theatrical and social conventions. Consequently, Ausdruckstanz functioning as a power that liberated the individual from alienating conditions and social pressures that obstructed the innate sources of creativity in individual.

Ausdruckstanz began from its break with Renaissance court ballet, about 1908, and lasted up to its transmission into Tanztheater and contemporary styles of postmodern dance in 1936. The term Ausdruckstanz was coined in 1928, and referred to the German modern dance. It brought new forms of expression as indicated by stylistic innovations and conceptual problems.

Expressionists focused on bringing the internal and primal elements of the personality to the surface. They depicted different forms of psychological conditions, and were compelled by the developments of Freudian and Jungian concepts of unconsciousness and attraction of experimental modes of self-exploration. Central theme of their work was mysticism.

Expressionist choreographers improvised using images and symbols, allowing the movements to flow and emerge organically. For them dance became a means for expression of subjective experiences and feelings through movements. To accomplish this task the rigid structures, tightly-fitted costumes, pointe shoes, historical narratives and stagnant forms repeated by traditional styles of classical ballet were changed by more mechanical and
formal concepts of movement, more natural movements and free, flowing costumes. However, since this technical style relied on the concept of spatialization as derived from theatrical convention, this movement failed to radically disrupt the representational value of dance.

The representational value of movement was radically rejected by the establishment of contemporary dance in the late 1950s. The tendency towards ideological or content oriented claims was negated when the object of dance became dance itself.

Two concepts were of the main importance in transmission from classical into modern dance: the notion of temporality and the notion of representation. In modern dance emerged different experience of temporality: the presence of movement was seen through its immediacy and rhythmic configuration, and the form does not predicate itself upon an ideological content. The concentration on individuality through symbolic and transcendent forms marked the beginning of a radically different understanding of movement, which challenged the *Gesamtkunstwerk* notion of theatrical performance by questioning its traditional practice and concept of representational art.

"*Ausdruckstanz* became a fascinating art form during the avant-garde because of its ability to present expressive gestures directly in the moment. This relationship between immediacy and presence of experience also coincided with the interest to explore subjectivity. Personal identity was displayed through emotional gesture and expressive movements in dance, which allowed modern concepts and ideas to be presented through a live medium" (van Helden *op. cit.*, 6).

It must be pointed out that *Ausdruckstanz* was not a uniform movement, but rather a complex one, examined ambivalent choreographic tendencies which had major dissimilarities in terms of movement styles, aesthetic tastes, personalities, as well as divers social backgrounds. Divers motifs were explores in the works of different choreographers/dancers, from abstract and symbolic, to grotesque, provocative and socially critical.

Modern dance styles were developing in various directions, based on the choreographer’s perception of "where the movement impulse originated, and how it was to be developed logically" (Don McDonagh, *International Dictionary of Modern Dance*, VII, quoted in van Helden *op. cit.*, 35).

**Dance, Symbolist Theatre and Literature**

When exploring modern dance it is a must to tell about its relationship with symbolist theatre and literature of the time, and to emphasized mutual influences.

Early modern dance and movement development challenged realistic theatre conventions, and influenced development in literary avant-garde movements. Writers who represented a literary interpretation of these new forms were: D. H. Lawrence, Samuel Beckett, and Upton Sinclair. *Embodied Texts* (Fleischer 2007) gives an outline of the relationship between symbolist theater and early modern dance in Europe from 1890s up to 1930s. "Early modern dancers were redifining how the body could be expressive: no longer servants to traditional technique or the hierarchy of a ballet company, these dancers expressed a personal vision, often deriving movement directly from the experience of their own bodies.

While early conventions had typed the performer into a limited number of dance roles, the authority and vision of early modern dancers demonstrated that the dancer's image could be invented anew. For playwrights, dance provided a way of extending language into "inexpressible realms, and the non-referential nature of interpreting dance movement became analogous to the creative process" (*Idem.*, Preface). This launched the experiments towards the theatre of non-verbal expression. D'Annunzio was fascinated with the presence of the body on stage, and the ability of an actor, Eleonora Duse, "to physicalize a compelling sense of inner life" (*Ibid.*). Hofmannsthal studied gestures and the expressivity of the body in his experiments in the theatre and non-verbal forms of dance, pantomime and music. He tried to create a new connection between feelings and words, body and
spirit, to find "wordless gestures", a level of communication that went beyond words. In his essay on Eleonora Duse, he wrote that the actress "offers up the entire demonic strength of her body" (Fleischer op. cit., 95). Hofmannsthal admired dancers Isadora Duncan, whom he met in 1904, through her husband Gordon Craig, Maud Allan, whose "Vision of Salomé" he had seen in Vienna in 1903, and Ruth St. Denis, who most inspired him during that period. He found that her movements did not illustrate nor elucidate, they were not "pretending to be ethnographic or sensational", but were simply there for the sake of its beauty. He found her "imbued with a spiritual quality that was neither 'sentimental nor allegorical'" (Hugo von Hofmannsthal, "Her Extraordinary Immediacy" translated by David Berger, Dance Magazine, September 1968, 38, quoted in Fleischer op.cit., 109).

He collaborated with the Austrian dancer Grete Wiesenthal (1885-1970), who was the exponent of the Vienna Secession period, with her natural, strongly defined lines, her "spherical technique," and her insisting in the unity of movement and music through a truer dance. She also proved that there was in the ballet a thinking and creative dancer, not only marionette, for which she was admired by Gustav Mahler, at the time director of the Vienna Opera. She found inspiration not in folklore, gymnastics or from studying poses and pictures like her contemporaries, but sought for the unconscious, "the turning inward of the new expression dance", that challenged her to develop a dance language from her own "ecstasy and musicality" (Grete Wiesenthal, "Unsere Tanze," quoted in Fleischer op.cit., 122). Through her lines and gestures she wanted to reveal her spiritual and psychic states, which was similar to Hofmannsthal's wish to express subjective feeling through external form.

Between 1909 and 1911 Hofmannsthal and Wiesenthal closely collaborated on two pantomimes, Amor and Psyche and Das fremde Mädchen, where they made extensive use of expressive rhythm. They both wrote essays on the art of gesture and pantomime during this period, for public lectures and for newspapers, and were excited by this new rhythmic play, "new pantomime". These experiments drove to the establishment of Dance theater (Tanztheater) that was established by Kurt Joos in the 1930s. It has been developed since 1970s, when it took a postmodern direction through the work of Pina Bausch.

The emergence of modern dance also led to the proliferation of dance literature (and vice versa) (see Kolb, op. cit.). Maga Magazinovic, in Serbian environment, strove to develop knowledge on modern dance through her articles and public lectures, and her published books, to mention the most important: Body Culture as Education and Art (1932), Exercises and Studies in Contemporary Gymnastics, Plastics, Rhythmic, and Ballet (1932), History of Dance (1951). In addition, she wrote a book A Textbook of Rhythmics to be published by Prosveta but it has not been realized so far. In 2000, her autobiography My Life was published after her death.

References


Smiljana Mandukic (1908-1992):
Beginning of Modern Dance and Dance Expressionism in Europe

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ABSTRACT
Smiljana Mandukić (1908-1992) - a dancer, choreographer, and teacher, was among those dancers who pioneering the modern dance in Serbia. The beginning of the 20th century brought new forms of art as the old ones were not sufficient to express new feelings and experiences, in that era of rapid technological progress. Mandukic was educated as a dancer in interwar Vienna, so she happened to be at the centre of Central European expressionist dance, free dance, at the time of her formation as a dancer. Smiljana acquired dance knowledge from her teachers, famous dancers and choreographers, Gertrud Bodenwieser, who developed her own style of modern expressionist dance, known as "Bodenwieser Viennese Style", and Grete Wiesenthal, who was a member of the corps de ballet of the Hofoper in Vienna (Vienna Court Opera Ballet). Both her teachers were the representatives of "Ausdruckstanz" or "Neur Tanz", and were rejected formalism and virtuosity of classical dance in favour of more natural movements. Like her pair, Maga Magazinovic (1882-1968), who introduced expressionist dance in Serbia, established the first school of modern dance in 1910, and founded the first modern dance group consisted of female dancers, Mandukic advocated for the importance of dance in education of female population. In the traditional, patriarchal Serbian society, she opened the second school of modern dance in 1931, and was the first artist who established a professional group of modern dance. Her greatest achievement was the creation of "epic-patriotic choreodrama". The main goal of this article is to confirm that Smiljana Mandukic's pioneer work in establishing modern dance in Serbia was the part of the European expressionist modern dance movement of the equal importance and significance not only when considering the Western Balkans but the broader European context.

Keywords: Smiljana Mandukic, modern dance, Ausdruckstanz, expressionism, epic-patriotic choreo-drama

**Introduction**

In the beginning of the 20th century Smiljana Mandukic weaved a provocative thought of free dance movement in her homeland and its cultural-artistic courses, at the time when the modern dance was being developed and taking its significant place in Europe. Due to the fact that she grew up in Vienna and that she was a Vienna student, she was formed under the strong influence of the artists who were either her teachers or influenced on establishing and developing of the unique Vienna modern dance scene, such as Grete Wiesenthal (1885-1970), Gertrud Bodenwieser (1890-1959), Elinor Tordis, Émile Jaques-Dalcroze (1865-1950), Rudolf Laban (1879-1958) Isadora Duncan (1877-1927), Max Reinhardt (1873-1943), and Hugo von Hofmanstal (1874-1929). Pioneer artistic practice of Smiljana Mandukic was definitely under the strong influence of the above-mentioned prominent Europeans from the field of modern dance and theatre.

**Mandukic's Education and Development of Modern Dance Style**

Smiljana Mandukic (Figure 1) was educated as a dancer in interwar Vienna, so she happened to be at the centre of Central European expressionist dance, free dance, at the time of her formation as a dancer. Smiljana acquired dance knowledge from her teachers, famous dancers and choreographers, Gertrud Bodenwieser, who developed her own style of modern expressionist dance, known as “Bodenwieser Viennese Style”, and Grete Wiesenthal, who was a member of the corps de ballet of the Hofoper in Vienna (Vienna Court Opera Ballet). Both her teachers were the representatives of "Ausdruckstanz" or "Neur Tanz", and were developed under the influences of Isidora Duncan, Rudolf von Laban, Mary Wigman, and Ruth St. Denis, who rejected formalism and virtuosity of classical dance in favour of more natural movements. Since being educated in German language and cultural environment, Smiljana Mandukic adopted alternative direction of expressionist dance, *Ausdruckstanz*, as a new view of art which she brought to the Kingdom of Yugoslavia, and Serbian region. She acted under the influence of Viennese school of dance and choreography by rejecting what was felt as artificial to the body in classical dance, tamed by strict discipline, technique and figure.

*Figure 1. Smiljana Mandukic (1908-1992)*
Smiljana Mandukic's performances were very successful in her home-town of Vienna, as well as in Tulln and Graz, according to "Der Tanz" magazine, which put her on its 1928 cover page (Figure 2). After her solo performances in Tulln (Figures 3, and 4), she returned to Serbia with exceptionally positive critiques (Figure 3). After she came back to Serbia, she continued her pioneer work and put in a lot of efforts to establish modern dance.
grief to arrogance, and recklessness, and each was enthusiastically applauded by the audience who, too, were enthusiastic about her subtle, sumptuous embroidered costumes. The audience in a grand hall, which was full until the last seat in a gallery, were watching the breathtaking performance of the artist in the following brilliant choreographic scenes: "Refugee," "Flirt," "Rascal," and "The figure from the music box." The audience reluctantly left the hall, expressing their wish to see this extraordinary artist again, and hoping it will be soon. (Translated into Serbian by Tatjana Šehić Christelbauer)

**The establishment and development of modern dance and dance drama (choreodrama) in Serbia**

We can neither state that the crisis of classical ballet dance in Serbian theatre in the early 20th century led to the phenomenon of modern dance, nor that there was a deliberate separation from the classical technique, poetics and aesthetics. Classical ballet as a form of theatre art did not exist on the Serbian scene at the time. The School of Classical Dance was opened in Belgrade National Theatre in 1921 (Kosik 2017; Jovanović, 1994, 20), eleven years after the first school of modern dance was established by Maga Magazinovic in 1910 (Mosusova 1993). Smiljana Mandukic joined Maga Magazinovic's efforts to bring modern dance to the Balkans. She opened the second Belgrade school of modern dance in 1931. Consequently, we can state that Maga Magazinovic and Smiljana Mandukic were the founders of an expressionistic modern dance movement in Serbia in the beginning of the 20th century, which was the new dance style at the time in the patriarchal environment in which they came. They transferred this new dance style, born and developed at the time in Europe and America, on the Serbian dance stage. They were both unorthodox artists, brave at connecting traditional and avant-garde, national and European, even though they received ambivalent reactions from their environment regarding their work. Modern art of dance stemmed from their schools.

In addition, contemporary national dance drama, which the author defined as "epic-patriotic choreodrama", was developed in the pioneer works of these two artists.
The very titles of their choreographies contained the allusions on dramatic contents based on myths from epic tradition.

However, neither Mandukic, nor Magazinovic, conceived their choreographic works as choreodramas. (Choreodrama can be defined as the deep synthesis of dance, pantomime, music and acting). Their pioneering works on the establishing of that theatrical genre in Serbia can be regarded as intuitively operated by both artists. Their preferred artistic forms were choreographic miniatures, so their theatrical performances were often in the form of the divertimento. Both were dedicated to national themes, rooted deeply in the collective subconsciousness and memories of the Serbian people. Additionally, Smiljana Mandukic found her inspiration in the music of national composers. Her main tendency was towards the creation of modern national dance in accordance with the national spirit, and set to the music of national composers who were her contemporaries, but established on the more relaxed, freestyle form of modern expressive dance movements.

In her review, ballet critique and publicist Ms. Milica Zajcev, referred to Mandukic's choreography "Concentration Camp" as choreodrama (Zajcev-Darić 1976). It was on the occasion of hosting "Belgrade Contemporary Ballet of Smiljana Mandukic", dancing troupe at the Ljubljana Dancing Days Festival in 1976. "Concentration Camp" was dedicated to the Yugoslav peoples' battle against fascism. The troupe consisted of female dancers: Ksenija Sekačić, Divna Petrović, Jadranka Mujanović, Nela Radovanović, Ljubica Šerbula, Dušica Milanović, Olga Marković. "Concentration Camp" got the festival award. Given that there is no video recording of the performance of the above-mentioned choreodrama, it is not possible to analyze the structure of the choreography. Unfortunately, there are numerous performances of Mandukic which are not recorded and archived, so that it is not possible to determine and differentiate her abstract dances from her dance dramas that melded dance and drama, i.e. choreodramas.

Dubravka Maletic, in her paper "A sketch for the portrait of the dance enthusiast – Smiljana Mandukic" published in the magazine Teatron, 78, 79, 80 (Maletic n. y.), gave an overview of choreographic works of Smiljana Mandukic. A number of titles of the Mandukic's opus listed in Maletic's paper has been chosen by Vera Obradovic, which Obradovic referred to as choreodramas (Obradovic Ljubinkovic 2016a). The chosen works are: "Slave" (on the music of Sergei Rachmaninoff), "The Death of Jugovic' Mother" (music by Stanojlo Rajcic), "Trilogy of a Woman: Girlhood, Motherhood, and the Last Battle" (compilation), "The Death of Jugovics' Mother" (music by Rajko Maksimovic), "Peer Gynt" (music by Edvard Grieg), "Barefoot Dancer" (music compilation), "Concentration Camp" and "Skull Tower" (both on the music by Dusan Radic).

In the choreodrama "Slave", Mandukic described the suffering of enslavement, the feeling of joy and the sweetness of freedom after the slave's flight, and at the end the slave's death, marked the beginning and the end of her choreographic opus. The first performance was held in Belgrade, Serbia, in 1928, when Mandukic performed solo
dance with Lovro von Matacic (1899 - 1985) at the piano. Later on, with her dancing troupe "Belgrade Contemporary Ballet of Smiljana Mandukic", she made new version of her choreodrama which was performed for the last time in Belgrade again, in 1991. Mandukic pointed out subsequently detected coincidence that the music by S. Rachmaninoff (Prelude in C sharp minor Op. 3 No. 2), inspired both Isidora Duncan and herself, to make the choreography with the same motif, considering that the theme of slavery was forced by the music score (Zajcev 1992). After the 1928 performance of the "Slave", when she was dancing and when new free modern dance style was introduced and presented to the Belgrade National Theatre audience, Serbian critiques, although familiar with the modern dance from earlier performances of Maga Magazinovic, could not determine if Mandukic's performance was an acting or dancing. Given that Mandukic began her dancing education in a classical ballet tradition (with Cecilia Ceri, prima ballerina at the Vienna Opera House), felt by Mandukic as restraining and shackled by tradition and from which she released herself for the sake of freestyle modern dance movement, the choreography of her “Slave” (Figure 5) can be considered to be her autobiographical note.

Another choreodrama, which the author of this article considered to analyze, is choreodrama Trilogy of woman. It was performed at the Kolarac Great Hall in Belgrade in 1943, as a part of a whole night's performance under the title "Modern Dance of Smiljana Mandukic".

The structure of this choreodrama was built from fragments, the form she kept in her later works. The following parts were the constituents of the trilogy: Girlhood, Motherhood, and the Last Battle, thus demonstrated the life cycle of a woman, namely the crucial moments of her lifetime. In that eternal circle youth, marriage, old age and death forever alternate. This choreography was featured by Danica Mokranjac, Sonja
Radovanović, Dubravka Kabalin, Gela Jovanović, Radica Karaklajić i Radmila Zafirović. They acted prayers, children and mothers. In the Girlhood the choreographer used golden apples as a symbol of the young girls' beauty that passed quickly. The one who was courageous enough to leave the golden apple went further on in her life, with the bride veil given to her and put on her head by her girlfriends. Then she passed through Motherhood, described with play, children's play and the joyful round. In the Last Battle, the time came for the experience to gather, for the past to be remembered, and talked over, but the dance developed sad features, while the steps of the dancers towards the out-world shore were becoming more heavier and gloomier.

Although the trilogy began with the girlhood, the author structures the choreographer two main ideas: firstly, it was the concept of maturation, defined as the predetermined unfolding of genetic information, development which occurs in fixed stages that are governed by genes, until the moment when the girl became conscious of her gender, and secondly, it was the apotheosis of a woman, or the allegory of the resurrection and the salvation of life after the war.

The fragmentary structure characterized another choreodrama, The Barefoot Dancer, performed in 1969 at the People's University of Veselin Maslesa in Belgrade, which was dedicated to the life and work of Isidora Duncan. The Barefoot Dancer was split into ten scenes, i. e. choreographies: First Meeting with Music, Spring, Kiss, Journey to Greece, My School, Journey to Russia in 1905, My Children are Dead, America, Moscow in 1921, and Good-bye my Friends. In the choreodrama Mandukic used music compilation from Bach, Beethoven, Chopin, Mendelssohn, Ottorino Respighy, Rachmaninoff, Debussy, Joaquin Rodrigo and others. She was inspired by Isidora Duncan's autobiography under the title My life. The narration was played by Danica Mokranjac, who was her pupil and actress. In the choreodrama she exploited various motifs, one of them being love between Isidora Duncan and Sergei Yesenin (Сергей Александрович Есенин, 1895-1925). With her free style dance she proposed new concept of woman's freedom which meant woman's emancipation, and was comparable with Isidora Duncan's efforts in the same matter.

Mandukic's choreodramas were based on the script. The above-mentioned choreodramas were integrated into a choreographic entirety with narration. Inspired by the Serbian epic poetry, Mandukic made several versions of Jugovic mother's death choreography. The first version was danced on Stanojlo Rajcic's music, and the second version on the music by Rajko Maksimovic. Moreover, Maga Maazinovic, another modern choreographer, dancer and pedagogue in Belgrade, had this title in her opus, too. This was the way by which both women expressed their patriotic feelings, by which they influenced Serbian society, and fight for the new concept of woman's freedom. Both artists exploited themes and motifs from national epic poems, which having been historical past, events or memories recorded or orally transferred, formed into the collective consciousness identity of Serbian people. They were searching for dance which could be the harmonious unity of both national and European characteristics, traditionalism and modernism. Both Smiljana Mandukic
and Maga Magazinovic advocated for the establishment of national dance, on the basis of the national folklore, as well as, on the stylization of free modern dance. Their pioneering creation was dance drama defined by the author as epic-patriotic choreodrama because of its national and patriotic features (Obradovic Ljubinkovic 2016a, 2016b).

**Theoretical works of Smiljana Mandukic**

Smiljana Mandukic wrote several theoretical works. Unfortunately, not many of them were published. Her most significant was *Body Language* (1990), a book originally written as the textbook for anyone interested in learning about modern dance. Another was an article published in the magazine *Our stage 90-91* (1954) under the title "About Modern and Classical Dance". In the program of the Matinée held at the National Theater in Vracar, Belgrade, on December 17, 1939, her accompanying text was published, under that title "A few words on rhythmical dances". In addition, her unpublished papers with reflections on her lifetime, her dance, and comparisons between classical and modern dance and its essence were numerous.

In her very concise text "A few words on rhythmical dances", she wrote about differences between classical ballet and modern dance: "Rhythmic dances, called by many as modern dance or modern ballet, are in fact the oldest dances which we've ever had. Rhythmic dance springs from the rhythm, and the rhythm is as old as the life itself (….) It is very dangerous to make comparison between ballet and rhythmical dances, because the pioneers of that so-called modern ballet are very much under the influence of classical ballet. Between these two styles the core difference is that ballet develops its course according to the prescribed form and the music with its theme determined by the composer, whereas rhythmical dance generates naturally and has free flow" (Mandukic 1939). Like Isidora Duncan, Mandukic preferred modern dance conceiving it as the art of the future. In her later, broader article "About classical and modern dance" Mandukic wrote:

"Modern dance is the expression of the soul, feeling, and emotion, of human being. In other words, it is based on the natural human instincts and urges for the movement, whereas classical ballet is made of the artificially-prescribed set of movements which, undoubtedly, could be very interesting, picturesque, very virtuosic and technically precisely produced, and accordingly very appealing, but they do not spring out of the essence of music, but are imposed upon the dancers to work them out in the given moment. (…) Moreover, classical ballet already belongs to history itself. It is so much the symbol of one past period of dance development that it cannot be the means for reviving the spirit of other times" (Mandukic 1954, 3).

*Body Language*

Mandukic wrote her book "Body Language" (1990) before the end of her life, when she had not have as much strength and vitality as she used to have in her previous, the most productive period, when she had written her article "About Classical and Modern Dance" (1954). We must point out the fact considering her unique use of the
term "Body Language" - she used it as the title of the textbook, as the title of her whole night's choreographic performance, and as the title of her two documentary television films with the theme dealing with her artistic and pedagogical work. Her first documentary "Body Language" was shot in 1986, for TV Belgrade, under director Srboljub Bozinovic, and the second was from 1991, for the same TV Belgrade, but the author and spiritus movens of the latter was Anita Panic (director Suncica Jergovic). Unfortunately, the latter was not saved in the TV Belgrade archive.

Given that the term "Body Language" is repeated continuously, we can construct semiotics and discourse model that suggests the conclusion that for Mandukic the dancing body has meant the language, the movements being letters, representing together the means of communication, the "writing", the source of symbolic meanings. "Movements can be read as writing. They have their symbolic meanings" (Mandukic 1990, 6). She argued that this "writing" was understandable to all nations on the planet. Verbal expression through one's native language was not the only way of communication, but there was also non-verbal type of communication, through body movement, body writing. She talked about choreography as it was a sort of a painting, painted by dancing movements which simultaneously appeared and disappeared in the space. That means that creativity is an ongoing process of continual change and reaction.

We could argue that it was the same idea as the one of the contemporary theorist and linguist Roland Gérard Barthes (1915 – 1980), who reflected over the origin of the writing (variations in writing), and wrote: "For the father Jakob van Ginken the first human language was that of gestures. That gestural language would yet be conventional language (which could be found in ideograms, in the graphic transcription of whatever was, although outside the words, a code: a social guest). Later, much later than it was suggested, the articulated language would be created…" (Barthes 2010, 42). According to Barthes the writing could be described as "manual gesture" contrary to oral, vocal gesture, and that translated into the dance language could be referred to as the following: dance would be a body gesture, a form of personal writing of the body in the space, and the result of that writing would be a choreography, which would communicate the meanings of the executed movements. The second semantic feature of the writing could be partly applied to dance, namely that the writing meant a set of signs that won the victory over Time – dance was victorious over Time at the moment of dancing, as the sum of virtual, current signs that "simultaneously appeared and disappeared in the space" according to Mandukic. The third Barthes’ semantic feature of the writing that defined it as "the endless practice in which the whole being is engaged, contrary to the simple transcription of the messages. Thus the writing enters into the opposition even with the speech (…) Or better, it is according to its use and philosophy, a guest, a rule, and pleasure " (Ibid.). It could be transferred onto semantic of dance, as the codified practice engaging the whole being – his body, soul and spirit. Mandukic trained dancers in her troupe through the exercises which she
made herself in order to enable them to "write", and to "speak" her choreographies.

**Coreographic intertwinings: Bodenwieser – Wiesenthal – Mandukic**

Smiljana Mandukic as a student at the Vienna Art Academy adopted her knowledge from famous and eminent artists: Gertrud Bodenwieser (1890-1959) and Grete Wiesenthal (1885-1970), who were leading personalities of the Vienna Ausdruckstanz movement. Moreover, their dance was closely connected to drama, dramatic expression, and theatre performances, which we can spoke of to be multimedia at the time. They nurtured a unique style, technique and philosophy of dance. Gertrud Bodenwieser perceived classical ballet as an ordinary exhibition of virtuosity, and she questioned this by her intention to realize essential powers of human sensibility. Therefore, she accepted the influence of François Delsart (François Alexandre Nicolas Chéri Delsarte, 1811-1871), Isidora Duncan, Émile Jaques-Dalcroze and Rudolf Laban (Cuckson and Reitterer 1993) She did not reject classical technique completely, but employed it as necessary warming up technique, which she rejected in her choreography creation. Bodenwieser closely cooperated with Max Reinhardt (Sassenberg, Marina. Gertrud Bodenwieser 1890-1959).

The uniqueness of style Gertrude Bodenwieser was recognizable for in the fields of expressionist dance was called "Bodenwieser Viennise Style". She used improvisation and spontaneous dance, which on the one hand had to be either an adequate response to music or completely independent from it, and on the other hand had to be understandable, explicit language. The meaning of movements had to be clear. For her as well as for other modernists, improvisation was the search for personal dance vocabulary, and movements were initiated from the emotional part of personality and breathing rhythm. Accordingly, Smiljana Mandukic adopted such relation towards the dance during her studying at Vienna State Music Academy with Bodenwieser who taught two subjects, Pantomime and Dance. Her teacher also included Dalkroze's method of Eurhythmics in the curriculum.

In addition, Bodenwieser established a dance group with which she toured around Europe, America and Japan, and was considered to be the leading person of Ausdruckstanz (Warren and Warren 2013). However, Nazism made her share the destiny of her contemporaries and she was expelled and became a part of dance ex-pats. Unfortunately, most documents regarding her Vienna period were lost or destroyed due to the war. Consequently, the artistic work of Gertrud Bodenwieser remained insufficiently recognized and explored. Her leaving the European continent contributed the founding and development of modern dance on another continent, Australia. She took with her most of her dance group "Tanzgruppe Bodenwieser". She became a pioneer of modern dance in Australia, founding the first ballet company in Sydney called "Bodenwieser Ballet".

Having a comparative insight into one of the most frequently staged Bodenwieser's choreographies, Dämon maschine or Demon Machine, which was awarded in Italy in the beginning of the 20th century, and Mandukic's
chores of work *Robots*, we can see a clear and obvious influence of Bodenwieser on the aesthetics and work of her student. The works are unavoidably comparable, but we can talk of interactive inspiring influence of the student, Smiljana Mandukic, and her teacher, Bodenwieser. We can provide the proof by Bodenwieser's choreography "Yugoslav Dance" (video).

G. Bodenwieser's and S. Mandukic's choreographic contemplations on human existence, society and the world, their thoughts about machine dehumanizing man and his life, the possible consequences of inventions which took human souls by making humans man-machine, were very similar and had an obvious close connection. Moreover, they both contemplated this topic in the beginning of the 20th century. Assuming that Vaslav Nijinsky's "The Rite of Spring" was a visionary prediction of social turbulence and the First World War, Kurt Jooss's "The Green Table" predicted the Second World War, then choreographic obsessions of portrayal of man-machine in the works of Mandukic and Bodenwieser predicted modern way of living in the hi-tech world. Both artists offered social, psychological and political topics in their creative work and dance dramas, by searching for human values through explicit dance expression. Mandukic created scene images and movements in the way related to the choreographic language of G. Bodenwieser. She drew movements from dancers, she intuitively crystallized their kine-spheres, and in the outcome she shaped and composed them according to her own ideas and thoughts.

Smiljana Mandukic brought Vienna expressionist dance practice to the national dance scene, she brought modern legacy of Wiesenthal/Bodenwieser which marked a necessity to devote attention to the rhythm and the sense of rhythm and spontaneity. She used to say that each person held their own individual inner rhythm which they should follow. Everyone should work on their own being and uniqueness of the body through dance, from which they should create different modes of movement. Generally speaking, that was the imperative of *Ausdruckstanz* in Europe: the genuine dance.

The second artistic and pedagogical role model for Smiljana Mandukic was Grete Wiesenthal, who strove to explore a method for relating music and movement. It seemed to her that acrobatic classical movements did not have the real connection with music, and that the classical dance tapped into formality, conventionalism and lifelessness by not allowing emotions and thoughts to find their expression through movement. However, she did not feel that the classical ballet should be rejected. In fact, her appearance in modern dance was more interesting due to the fact that she was initially taught on classical ballet and adopted the basis of classical technique. She was different from the most of the other modernists: she wasn't autodidact. She experimented with Chopin and Strauss's waltzes and with Dionysus component and cheerfulness that he found in them. She tried to explore dramatic form through her dance. Working closely with H. Hofmanstal she connected pantomime with dance. She drew her inspiration for movement and motion from nature.

Smiljana Mandukic adopted the same approach as Grete Wiesenthal, considering the classical ballet more of a social event than an artistic act. Also, she considered
dance as the means of exploring and creating through simple movement and without artificial body posture, through symbols. Both dancers grounded their theoretical work by writing essays on the art of dance and gesture. Both of them built their special system and movement technique.

There were testimonies regarding Wiesenthal’s work, which stated that she could make her soul visible through movement and gesture, and that her dance and gesture language seemed cleansed from any excess, intuitive and touching. Smiljana Mandukic accomplished the same with her dancers. Expressiveness of Wiesenthal’s arms and her dance, which was totally different from classical code which she felt unbearable and accordingly liberated herself from its chains, changing even the popular waltz, fascinated and spurred Mary Wigman (1886 -1973), by tracing her path towards the art of dance. "The expressiveness of Grete’s hands while performing The Blue Danube Waltz particularly impressed Mary. Her memoirs recount: ‘The Blue Danube Waltz deeply impressed me... For the first time in my life I saw that hands can be more than hands, that hands can become buds and flowers that can bloom before one's eyes...’" (Manning 2006:51).

Grete Wiesenthal, who was succeeded by Mandukic, brought significant innovations to the dance technique by avoiding static classical poses and by searching for the fluid dance movement. Wiesenthal was led by an idea to avoid routine of daily classical exercises that might drown creative potential. Smiljana Mandukic, who gained the knowledge of Wiesenthal’s innovations in technique, equally tried to establish her own inventive exercise system, i.e. modern dance exercise. In building the movement, she started from five positions, adding wave, swaying and freedom of upper body and feet. At everyday warm up, the movement did not stop when changing positions, it was continual and connected. Therefore, we can state that the pattern was almost the same. In fact, both Bodenwieser and Wiesenthal questioned dance movement in a continuous incessant flow as a waving movement and swaying, which also existed in Mandukic’s exercise system. Accordingly, we can conclude that Maga Magazinovic and Smiljan Mandukic, who were the first advocates of modern dance in Serbia, started from the same point as their predecessors and teachers who established and developed the expressionist dance movement in Europe. They found original natural generic movements which belonged to the bodies of dancers they worked with as well as to their life experience.

In addition, it must be pointed out that there were another strong influences by Max Reinhardt and Hugo von Hofmanstal, who alongside dance pantomime revived interest in non-verbal dance drama theater, as well. Their fruitful mutual and creative connection and cooperation with Ausdruckstanz dancers, Gertrud Bodenwieser and Grete Wiesenthal and the expressionist dance practice, left a deep trace in Serbia and Serbian choreodrama tradition. Smiljana Mandukic directly reflected and inherited teachings and influences of German art of choreodrama, European expressionist dance movement, and due to that
the existence of choreodrama in the Western Balkans was accepted and has been developed to this day.

On the other hand, talking about both Serbian and former Yugoslav space, the importance of Smiljana Mandukic on the development of modern dance is obvious, which is also true when considering much broader European space. Accordingly, her contribution to that pioneering work on the creation and development of modern dance in Europe must be remembered. Her work and influence in the socio-cultural context of the former Yugoslavia and Serbia particularly should be an area of concern and the topic of the further research.

**Award "Smiljana Mandukic"**

The UBUS (The Serbian Ballet Dancers Association) Award "Smiljana Mandukic" for the best dance interpretation in the field of contemporary dance was founded twenty years after she died, and is awarded once every year. The following dancers have been awarded until 2017: Nikola Tomašević (2012 and 2016); Strahinja Lacković (2012); Bitef dance company for the performance Yesterday – Remember to forget (2013), Ana Ignjatović Zagorac (2014), Rikardo Kampuš Freire (2015) and Dejan Kolarov (2017).

Nevertheless, the artistic path of Smiljana Mandulic was much more the path of the choreographer and dance pedagogue than that of the dancer. She brought the avant-garde thinking and innovations in the field of modern choreography. Accordingly, it should be considered the possibility to be awarded another prize annually for the best choreography or dance drama (choreodrama).

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Dance Injury
Lower Limb Flexibility and Risk of Injury in Professional Dancers: A comparative study of Ballet, Hip-Hop and African traditional dances

Aiyegbusi Ayoola Ibifubara¹, Odebiyi Daniel Olufemi², Udegbeh Otito Stephen³

ABSTRACT

Background: Dancers are highly trained athletes who are at significant risk of injury due to the repetitive nature of their movement. It is hypothesized that injury patterns will be determined by the peculiar movement patterns and physical requirements of specific dance genres. This study was therefore undertaken to determine the association between the flexibility of the lower limb muscles and the pattern and risk of injury among professional dancers in three different dance genres.

Methods: Eighty two professional dancers recruited from four (4) dance companies in Lagos State Nigeria presented as 28 indigenous African dancers, 26 ballet dancers and 28 hip hop dancers. A modified questionnaire on the epidemiology of dance injuries was administered to all participants and the degree of flexibility of the hip muscles measured by goniometry prior to warm up and stretching. Major Findings: There was a significant relationship between the flexibility of the hamstrings and injury occurrence in all the dance groups. The flexibility of the medial rotators, and the adductor group of muscles were significantly ($p<0.05$) related to injury occurrence respectively in the indigenous and ballet participants while a significant relationship ($p<0.05$) was seen between injury occurrence and flexibility of the adductors and medial rotators among hip-hop participants. Conclusion: The flexibility of the lower limb muscles is an intrinsic and a major factor contributing to injury among professional dancers. There is therefore a need to develop a stretching protocol for the different dance genres to prevent injury.

Keywords: body flexibility, injury occurrence, professional dancers, rotator muscles, hamstring muscles, gastrocnemius muscles.

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**Introduction**

Dance has been described as a rhythmic movement of the body usually to music and within a given space, for the purpose of expressing an idea or emotion (Mackrell 2015). It is performed in many cultures as a form of emotional expression, social interaction, or exercise in a spiritual or performance setting, and is sometimes used to express ideas or tell a story (William 1997). There are different types of dance genre which includes Ballet, Hip-hop, Jazz, various African traditional dances and a host of others. Professional dancers train many years, often from a young age, to attain one of the few positions available in professional dance companies and are subjected to fierce competition from other talented dancers as well as intense scrutiny from teachers, choreographers, and artistic directors, so they must possess innate talent, a high level of skill and physical ability (Craig et al. op. cit.).

Dancers are highly trained athletes who are at significant risk of injury due to intense competition and the repetitive nature of their movement patterns (Ibid.). Lower extremity and back injuries have been identified as being predominant while injury prevention includes identifying the risk factors for injury (Mackrell op. cit.). Though the lower extremities have been shown repeatedly to be the most commonly injured region of the body in dancers, the physical requirements of specific genres, however, may dictate injury location (Sides 2009, 43; Steinberg et al. 2012, 485). Injury or pain may impede dancers’ ability to attain or maintain their position or roles in a company and also at the extreme drastically shorten their career (Ramel 1999, 196). In one study comparing ballet to 61 other sports, it was deemed the second most demanding physical activity at par with bullfighting and second only to football (Nicholas 1975, 243).

Professional dance companies have reported that as many as 67% to 95% of their dancers are injured annually and it has been estimated that approximately 90% of professional dancers will suffer at least one musculoskeletal injury during their career (Craig et al. op. cit.; Quirk 1983, 507). The type of injury sustained has been found to depend on the type of dance: for instance, ballet requires high levels of external rotation in the hip, therefore, poorly developed ‘turn-out’ is a leading cause of injury (Bird 2015, 21) and ballet dancers are more likely to suffer from ankle sprains due to the high demand on foot work, while African style dancers are more at risk of neck or back injuries due to the strong dynamics of movements executed with the spine (Naranjo 2016). Also, hip hop dancers have their knees at higher risk of injury because of the attacked flexion and screw-type extension performed with the legs often with unpredictable changes in speed and direction (Bird 2015, 21).

Flexibility, which is the range of motion available in a joint is an important characteristic of physical and health related fitness since flexibility and stretching are recognized as the cornerstone of injury prevention, muscle recovery, and increased mobility for exercise enthusiasts (Brodowicz et al. 1996, 324; Alan 2013). Muscular tightness, the active resistance of a muscle to stretch is frequently postulated as an intrinsic risk factor for the development of a muscle injury (Reid et al. 1987, 347) as lack of flexibility may lead to early muscle fatigue or alter
the normal biomechanics of movement predisposing to injury. Prior studies have shown the benefits of flexibility to include improved athletic performance, reduced injury risk, prevention or reduction of post exercise soreness and improved co-ordination (Hartig and Henderson 1999, 173). However, stretching for too long or too much can also give way to an injury (Witvrouw et al. 2001, 190) as there is the possibility that excessive stretching could decrease the stability of the joint which would also increase the possibility of injury (Alan 2013).

Though some dance injuries are generally common, the type of dance determines its own risks (Ibid.) which is dependent on the different techniques that make up one’s personal training or choreographic engagements. These different techniques ultimately affect the flexibility of the lower limb muscles hence it is necessary to determine the relationship between lower limb flexibility and injury pattern among different dance genres in professional dancers. This will enable necessary proactive measures to be employed to minimize injuries in these groups of dancers. Presently, there is paucity of data comparing lower limb muscles flexibility and injury risk between Nigerian indigenous professional dancers and professional dancers in some other genres. Therefore, this study seeks to evaluate and compare lower limb flexibility and injury risk pattern among ballet, Hip hop and indigenous African professional dancers in Lagos State, Nigeria.

**Materials & Methods**

**Participants**

Eighty two (82) participants who were all professional dancers between the ages of 18-35 years were selected by convenience from four dance companies in Lagos, Nigeria. Twenty eight participants performed one of the indigenous African dances (Bata, Odudu, Ekpekpe, Atilogwu, Egwu Odum, Jarawa, Malik, Swange and Abang), while twenty six were professional ballet dancers, and twenty eight professional hip hop dancers. Student dancers were excluded from this study which affected the sample size because most of the dance companies had more students than professional dancers.

**Research Procedure**

A standard 360° goniometer (Baseline Company, U.S.A) was used to measure muscle group flexibility. Although there are different methods used to measure muscle flexibility, most studies utilize goniometry while a few used camera imaging. Arnheim and Prentice describe goniometry as the simplest and most widely used method for measuring muscle flexibility with an inter-rater reliability of 0.830 and intra reliability of 0.896 (Hartig and Henderson op. cit., 173).

An epidemiological investigation of dance injuries questionnaire which was developed in 2004 at Durban Institute of Technology was used to obtain data on demographics, dance history, present and previous dance injury history, and treatment of the injuries (Durban Institute of Technology, 2004).

**Questionnaire Details**

The questionnaire has 50 questions organized under sections 1-5. Section 1 (1-5) contains the demographic data, Section 2 (6-14) are questions on dance history and performance levels which are categorized into consistently (<10 hours a week), regularly (8-10 hours a week),
irregularly (5-7 hours a week) and very irregularly (less than 2 hours a week) (Gleim and McHugh 1997, 289). Section 3 (15-37) has questions on history of previous dance injuries, Section 4 (39-45) are questions on history of present dance injuries, and Section 5 (46-50) are questions on treatment history.

**Ethical Approval**

Ethical approval was sought and obtained from the institutional Health Research and Ethics Committee. Letters of introduction and permission to recruit dancers were submitted to the management of the dance companies included in this study. An informed consent form was attached to each questionnaire to seek participant’s permission to participate in the study and to assure each participant that any information given would be confidential and would only be used for the purpose of the study. A total of 94 questionnaires were distributed but 82 were returned validly completed.

**Evaluation of Flexibility**

The degree of flexibility of the following muscles was evaluated: hip adductors, hip internal (medial) rotator muscles and external (lateral) rotator muscles, hamstring muscles and the gastrocnemius muscles. The range of motion was measured prior to warm up and stretching in order to maintain uniform procedure.

**Hamstrings Muscles**

Participants were positioned supine on exercise mats and their opposite lower limb was stabilized firmly on the mat to avoid pelvic tilt. The knee to be measured was maintained in extension. The goniometer was placed with the stationary arm parallel to the midline of the trunk, the moving arm along the lateral midline of the thigh, and the axis over the superior half of the greater trochanter. The lower limb to be measured was raised to the point in the range where a small amount of pelvic rocking movement was palpated by the researcher (Witvrouw et al. 2003, 41). The measurement was recorded at the point where the onset of posterior pelvic tilt was detected. The participants were instructed to relax the hamstring muscles during the procedure.

**Adductor Muscles**

The flexibility of the adductor muscles was measured with the participants lying supine on the exercise mat. The axis of the goniometer was aligned with the anterior superior iliac spine and the stationary arm was parallel to the midline line between the anterior superior iliac spines while the moving arm of the goniometer was aligned with the long axis of the femur. The lower limb was passively moved away from the midline until femoral rotation occurred, indicating the end of the adductor flexibility (Ibid).

**Hip Medial and Lateral Rotators**

Participants’ passive range of motion in internal and external rotation for hip was measured in sitting, with both knees flexed over the end of a plinth. The contralateral lower limb was abducted slightly to allow free movement of the tested limb, but it was not allowed to rest on the outside of the plinth. The axis of the goniometer was placed on the tibial tuberosity. The moving arm of the goniometer was aligned along the longitudinal axis of the
tibia and the stationary arm was aligned vertically with the table leg. Passive hip internal and external rotation was measured at the point of the resistance (Heonsoo et al. 2015, 441).

**Gastrocnemius Muscles**

Participants were positioned prone on the plinth with their feet and ankles hanging over the edge of the plinth. The goniometer was placed with the stationary arm parallel to the lateral midline of the fibula, the moving arm along the lateral midline of fifth metatarsal bone, and the axis placed over the lateral malleoli. Passive ankle range of motion was performed by dorsiflexing the ankle to the end of the range, and then the measurements were recorded (Johanson et al. 2008, 172).

**Data Analysis**

Data collected was analyzed using SPSS 15.0 version. A descriptive statistics of mean, standard deviation and standard deviation were used to summarize the data. Chi-square was used to assess the association between type of dance and occurrence of injury and the association between gender and injury occurrence. Spearman’s rank correlation was used to determine the relationship among the body flexibility and injury occurrence among the selected dance professional dancers. The significant level of all the inferential statistic was p<0.05.

**Results**

A total of 94 participants were recruited for this study, though 82 participated fully in the study (28 professional indigenous dancers, 26 professional ballet dancers, and 28 hip hop professional dancers). The gender distribution of the sample population was 45 (54.9%) for female professional dancers and 37 (45%) for male professional dancers.

The mean years of experience as professional dancers was 3.29±1.16, with the least dancing experience to be 1.8 years and the highest dancing experience to be 7 years (Table 1). Majority of the participants were seen to perform very consistently, with 82.9% (n=68) performing very consistently, 9.8% (n=8) performing consistently, while 7.3% (n=6) performed irregularly.

**Table 1: Participants dance history**

| Years of experience as a professional dancer | 3.29±1.16 | 1.80 | 7.00 |
| Age at which dancing started | 16.46±2.61 | 12.00 | 24.00 |
| Indigenous Dancers | 14.68±1.44 | 12.00 | 18.00 |
| Ballet Dancers | 19.31±1.69 | 16.00 | 24.00 |
| Hip-Hop Dancers | 15.68±1.78 | 13.00 | 19.00 |

**Table 2: Participants’ precipitating factors for injury (n=73).**

(Multiple responses allowed)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stretching</td>
<td>41</td>
<td>56.16</td>
</tr>
<tr>
<td>Insufficient warm-up/cool down</td>
<td>38</td>
<td>52.05</td>
</tr>
<tr>
<td>Repetitive movements</td>
<td>38</td>
<td>52.05</td>
</tr>
<tr>
<td>Unsuitable floors</td>
<td>33</td>
<td>45.20</td>
</tr>
<tr>
<td>Jumping</td>
<td>30</td>
<td>42.46</td>
</tr>
<tr>
<td>Difficult choreography</td>
<td>30</td>
<td>41.35</td>
</tr>
<tr>
<td>Insufficient rest/recovery work</td>
<td>22</td>
<td>31.50</td>
</tr>
<tr>
<td>Incorrect postural placement</td>
<td>20</td>
<td>27.39</td>
</tr>
<tr>
<td>Falling</td>
<td>16</td>
<td>21.91</td>
</tr>
<tr>
<td>Pointe work</td>
<td>13</td>
<td>17.80</td>
</tr>
<tr>
<td>Twisting</td>
<td>13</td>
<td>17.80</td>
</tr>
<tr>
<td>Partnership</td>
<td>10</td>
<td>13.95</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>10.95</td>
</tr>
</tbody>
</table>
Table 2 presents the frequency with which certain factors were reported to be the possible cause of injury with the participants being allowed to indicate more than one factor. Stretching (n=41) was reported most often as the cause of injury, while other factors (e.g. tight underwear and foot wears) were reported the least precipitating factors for injury. Table 3 shows responses of participants in the different dance groups to the frequency of injury and the chi-square analysis of the association between injury prevalence and type of dance.

Table 3: The Chi-square analysis of type of dance and injury occurrence among Professional dancers

<table>
<thead>
<tr>
<th>Injury rate</th>
<th>Total</th>
<th>Hip Hop</th>
<th>Ballet</th>
<th>Indigenous</th>
<th>X²</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>U/month</td>
<td>3 (100.0%)</td>
<td>0 (0.0%)</td>
<td>3 (100.0%)</td>
<td>0 (0.0%)</td>
<td>0.009</td>
<td>0.303</td>
</tr>
<tr>
<td>U/3 months</td>
<td>14 (40.0%)</td>
<td>5 (35.7%)</td>
<td>9 (64.3%)</td>
<td>0 (0.0%)</td>
<td>13.53</td>
<td>0.009</td>
</tr>
<tr>
<td>U/6 months</td>
<td>26 (100.0%)</td>
<td>12 (46.2%)</td>
<td>12 (46.2%)</td>
<td>2 (7.7%)</td>
<td>0.009</td>
<td></td>
</tr>
<tr>
<td>U/12 months</td>
<td>24 (100.0%)</td>
<td>9 (37.5%)</td>
<td>12 (50.0%)</td>
<td>3 (12.5%)</td>
<td>0.009</td>
<td></td>
</tr>
<tr>
<td>No injury</td>
<td>9 (100.0%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>9 (100.0%)</td>
<td>0.009</td>
<td></td>
</tr>
</tbody>
</table>

Female participants recorded more injury than the male participants in the categories of 1 injury/month (66.7%), 1 injury/3months (64.3%) and 1 injury/6month (65.4%), while Chi-square analysis shows a significant association between gender analysis shows a significant association between gender and injury occurrence as presented in Table 4.

Table 4: Chi-square Analysis of Gender and Injury Rate among Professional Dancer

<table>
<thead>
<tr>
<th>Injury rate</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
<th>X²</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>U/month</td>
<td>3 (100.0%)</td>
<td>1 (33.3%)</td>
<td>2 (66.7%)</td>
<td>0.009</td>
<td></td>
</tr>
<tr>
<td>U/3 months</td>
<td>14 (100.0%)</td>
<td>9 (64.3%)</td>
<td>5 (35.7%)</td>
<td>43.39</td>
<td>0.009</td>
</tr>
<tr>
<td>U/6 months</td>
<td>16 (100.0%)</td>
<td>9 (56.2%)</td>
<td>7 (43.8%)</td>
<td>0.009</td>
<td></td>
</tr>
<tr>
<td>U/12 months</td>
<td>30 (100.0%)</td>
<td>11 (36.7%)</td>
<td>19 (63.3%)</td>
<td>0.009</td>
<td></td>
</tr>
<tr>
<td>No injury</td>
<td>9 (100.0%)</td>
<td>1 (11.1%)</td>
<td>8 (88.9%)</td>
<td>0.009</td>
<td></td>
</tr>
</tbody>
</table>

The relationship between the flexibility of the major muscles of the lower limbs and injury occurrence is expressed in Table 5.

Table 5: The relationship between flexibility and occurrence of injury for the dance types

<table>
<thead>
<tr>
<th>Indigenous group</th>
<th>Hamstring</th>
<th>Adductor</th>
<th>Lateral Rotator</th>
<th>Medial Rotator</th>
<th>Gastrocnemius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>64.00</td>
<td>42.00</td>
<td>50.00</td>
<td>28.00</td>
<td>13.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>75.00</td>
<td>49.00</td>
<td>58.00</td>
<td>38.00</td>
<td>19.00</td>
</tr>
<tr>
<td>Mean</td>
<td>70.6±3.1</td>
<td>45.6±2.33</td>
<td>54.7±2.04</td>
<td>34.0±1.99</td>
<td>17.7±1.64</td>
</tr>
<tr>
<td>Spearman's rho</td>
<td>-0.364</td>
<td>-0.355</td>
<td>-0.249</td>
<td>-0.430</td>
<td>-0.370</td>
</tr>
<tr>
<td>p-value</td>
<td>0.005**</td>
<td>0.076</td>
<td>0.168</td>
<td>0.027**</td>
<td>0.492</td>
</tr>
</tbody>
</table>

**Female participants recorded more injury than the male participants in the categories of 1 injury/month (66.7%), 1 injury/3months (64.3%) and 1 injury/6month (65.4%), while Chi-square analysis shows a significant association between gender analysis shows a significant association between gender and injury occurrence as presented in Table 4.**

**Discussion**

The purpose of this study was to compare the association between flexibility of the lower limbs muscles and injury risk and pattern among three different types of professional dances in Lagos, Nigeria. There were more female participants than male participants in this study in line with the trend in the literature and prior studies (Luke et al. 2002, 105; Ojofeitimi et al. 2010, 123; Jacobs 2010). One possible reason for this finding could be that female dancers often play the main role during dancing while the male dancers do more of back up dance (Hamilton and Hamilton 2002, 267).
Our findings show that injury occurrence among professional dancers was 89%, in line with the findings of some prior studies that reported a lifetime incidence of injuries among professional dancers to range from 50 - 100% (Hamilton et al. 1989, Russell 1994, 12; Coplan 2002, 579). Injury occurrence among participants was highest (36.6%) at 1 injury/12months and lowest (3.7%) at 1 injury/1month. This outcome was same with the findings of Balding (2010) that showed 67.6% of participants suffered 1 injury / 12months and 2.7% suffered 1 injury/month. However, the higher percentage of the values as seen in Balding’s study (Ibid.) may be due to the fact that there were more student dancers as participants than professional dancers. The high prevalence of injury among our study population could also be explained by the fact that the dancers were between the ages of 21 to 34 years with a mean age of 24.94±2.73 years (Craig et al. 2016) which is in line with the findings of Hamilton (1986, 61) who reported that older dancers reported more injuries, major physical problems and required long recovery period than younger dancers. Findings from this study showed a significant association between type of dance and injury occurrence as it was found that ballet participants experienced the highest number of injuries. However, the indigenous participants had the least number of injuries though this is in contrast to the findings of Ojofeitimi et al. (2012, 347) who concluded that Hip hop dancers report injury rates that are higher than other dance forms but similar to gymnastics. The high prevalence of injury among ballet dancers may suggest that ballet choreography is more tasking than the other categories of dance which corroborates the fact that ballet and aerobic dances demand complex movement which requires the action of muscles in a kinetic chain movement that may result in tissue break down and injuries if the capacity of that chain is exceeded (Wainwright et al. 2005, 49). Another reason for the high prevalence of injury in dancers is that most dancers, especially ballet dancers, are so passionate about dancing that it is difficult for them to stop even by reason of injury. Though outside the scope of this study, another possible explanation is that Hip hop and ballet dancers exhibit increased flexibility and are required to perform at extremes of motion which is in line with prior studies that suggested that hypermobile dancers are at increased risk for injury (Bronner 2006, 21; Briggs et al. 2009, 1613). While ballet dancers rarely use the torso, African dancers and certain modern dancers have to be extraordinarily supple in the torso and pelvis in order to execute the ripples, twists, and percussive thrusts that their particular dances require (Mackrell 2015). Also, the ballet dancers’ age and the level and length of training may have played a role in the outcome among this group of participants (Zazulak et al. 2007, 1123). In addition, though beyond the scope of this study, poor core stability has been identified as a risk factor for lower extremity injury just as inadequate neuromuscular control in the trunk was specifically associated with increased athletic knee injuries in females in a prior study (Micheli 1983, 473; Reid 1988, 295).

The significant association between gender and injury occurrence among all participants in this study may be due to the fact that females play different and more roles than

males almost in all categories of dance which corroborates the findings of Hamilton and Hamilton (2002, 267) that the role of female dancers is completely different from that of the males, thereby explaining the injury pattern found between the genders. Females begin ballet training at an early age, often as young as 4 years of age and train for approximately 11 years before turning professionals while in contrast, men start training later at close to 15 years of age turning professionals after 7 years of training (Hamilton et al. 1989; Micheli op. cit., 473; Reid op. cit., 295). This agrees with the report of Jacobs (op. cit.) who concluded that the number of years dancing and rank are associated with injury in professional ballet dancers.

Our results showed a significant relationship between flexibility of the hamstring group of muscles and injury occurrence in all the dance types suggesting that in all these categories the hamstring muscles are more often stretched while dancing. This is not unexpected as prior studies have classified hamstring injury as the most common in sports and even more common in dance (Garret 1990, 436; Askling et al. 2002, 230). To maintain their balance, dancers need adequate flexibility in their lower extremity muscles (Bird 2015, 21; Gleim and McHugh op. cit., 289) as dancers stretch continuously in order to increase their height of leg and range of motion in order to become supple and overcome stiffness (Gelabert 1986, 181). However, if stretching techniques are incorrect, injuries may occur while stretching and resulting in damage and pain to the muscles involved. The findings from our study corroborates this fact because, as seen in Table 2, more than half of the participants identified stretching as a precipitating factor for injury (Askling et al. 2000, 304). This underscores the need for dancers to employ proper stretching techniques to avoid injuries. More than half of the participants also cited insufficient warm up/cool down as a factor causing injury. A study by Amber (2013, 33) has extrapolated that preliminary exercise is important to prepare the body for more vigorous exercise and help reduce injury rates among dancers.

Also for indigenous dancers, findings have shown a significant relationship between the flexibility of the medial rotators and occurrence of injury. This suggests that the medial rotator muscles may have suffered from injury due to muscle imbalance between the strong lateral rotators and the weak opposing medial rotators since this muscle group does not play a major role during dancing (Rist and Kemedy 1986). Observation has shown that in performing most of the indigenous dances, the lateral rotator muscle group plays more role than the opposing medial rotator group of muscles which is likely responsible for the increased risk of neck or back injuries seen in African style dancers (Naranjo 2016). It has been suggested by Volkmar (Volkmar 2013) that tight medial rotators predisposes a dancer to back and sacroiliac joint injury.

For ballet participants, there was a significant relationship between injury occurrence and the flexibility of both the hamstrings and the adductor group of muscles suggesting that the hamstrings and adductor group of muscles are greatly stretched when performing the choreographies of ballet as seen in extreme turn-outs. For
hip hop dancers, the prevalence of injury was significantly related to the flexibility of the hamstrings and both the adductor and medial rotator group of muscles. This may be due to difficult choreographing seen in hip hop dance which involves repetitive abduction and lateral rotation movements as reported earlier by Sohl and Bowling (1990, 317) that 12% of injuries reported by hip hop dancers are caused by difficult choreographies. In search of something completely new, choreographers can embark on routines that are very awkward and are incapable of being performed with any type of established technique. Also, dancers may either become injured from trying to develop a new technique in order to carry out the required routine or from sudden unaccustomed use of a particular area of the body (Quirk 1983, 507; Holloszy et al. 1995, 124). The significant relationship between the medial rotators and injury occurrence among hip hop participants may suggest that this set of muscle which is not highly needed while performing hip hop dance maybe suffering from muscle imbalance, this is in line with the findings of Rist and Kennedy (1986) who concluded that injuries may occur when a dancer has not corrected the alignment of the body and places strain on a weak set of muscles. Thus following muscle injury, atrophy of the fibres may occur from disuse resulting in muscle shortening (Holloszy et al. op. cit., 124).

This study has thus been able to identify the flexibility of particular muscle groups as risk factors for injury in dancers of some selected genres in line with the suggestion of Wilson et al. (2015, 448) that identifying risk factors for injury is one of the preventive measures for injury in dancers.

**Relevance of Study to Dancers’ Health**

This study has been able to establish that flexibility of the lower limb muscles is a significant risk factor for injury. Also, the three dance genres involved in this study have peculiar flexibility risks associated with injury occurrence. To proactively minimize injury, dancers need to take part in regulated fitness training that is targeted at increasing the flexibility of the muscle groups involved in injury occurrence in the different genres.

**Conclusion**

The findings from this study show that hamstring flexibility is crucial in preventing injury in all the three dance genres studied. The flexibility of the adductors is important in preventing injury in ballet and hip hop dancers while the medial rotators are important in hip hop and indigenous dancers. Thus, flexibility of the lower limb muscles is an intrinsic and one of the major factors contributing to injury among professional dancers.

**Recommendation**

In view of the research evidence, it is recommended that dancers take part in general fitness training, not only as a helpful supplement to their technical training and performance, but as a means of decreasing their chances of injury (Wilson et al, 2015). Further studies are recommended with a larger sample size and also to develop an effective stretching protocol to prevent injury.
References


