THE USE OF METAPHORICAL MUSICAL TERMINOLOGY FOR VERBAL DESCRIPTION OF MUSIC

The aim of this paper is to indicate the importance of the metaphorical terminology and verbal description of music in education and performance due to inevitable role of emotions and embodiment in music experience. Metaphorical music terminology should follow the interpretative maturity, such as for the term *scherzo*, which would be *joke* for younger, but *forced joke* or *all but prank* for older musicians. For music beginners we can use extramusical verbal symbols: the pulse is represented as the stickman; major with the symbol of sun and minor with the symbol of rain; sequencing is presented with the picture of stairs; the picture of butterfly implies image-schematicity in interpreting the wave melodic contour; children understood duple meter through the picture of a soldier, while triple meter appreciated through the picture of a ballerina; *staccato* is experienced as a movement, but also as a visual and auditory metaphor. Multimodality plays an important role in music education, because it implies the integration of movement, sound, picture and verbal metaphors. Therefore, the musical experience is described and performance interpreted by following the direction from the emotional sound experience to its cognitive processing. Mul-
timodal approach would increase associative thinking and enlarge individual associations on musical terms, which gives a better understanding of music and widens perspective in music education.

1. Introduction

Terminology studies concepts, terms and their use, and the development of terms and their interrelationships within a different field. The analysis of the interdisciplinary nature of terminology is one of the main aims of this article. Although musical terminology presents an indispensable part of the musical performance and the whole science of music art, it has not been much studied in the field of terminology science today.

Music terminology is a provocative and never-ending topic. On one hand, it brings a systematic order in science, but on the other, it may cause misunderstanding within a field. For example, in music education terminology, there are some terms which are not defined properly, such as the inner hearing (whether it exists or not), complex and simple meter (meaning non-isochronous and isochronous meter), the confusion caused by the lack of a clear difference between meter and time signature, pulse and meter (probably because of the metrical structure hierarchy, see Lerdahl and Jackendoff 1983); even musical genres are not clearly defined and terminologically differentiated.

To describe music, musicians frequently borrow terminology from other, non-musical fields. It makes music terminology the most obvious cross-section between music and linguistics. Numerous terms have been taken from syntax to verbally explain music, while the attempt to explain the relation between a referent and a reference in music is the characteristic of semiotics and semantics. Inevitably, musical terminology becomes metaphorical.

As a fundamental mechanism of human cognition, metaphor plays an important role between music and emotion, presenting the verbal transformation of emotions stimulated by music. Metaphors are related to embodiment, that is a necessary concept for understanding music perception. It builds the network together with sensory, motor, cognitive and affective systems that is involved in music perception. Metaphors, emotions and embodiment form a triangle within
a certain culture, and a multimodal approach could be the possible solution when it comes to the question of music terminology. Embodied music cognition is linked to musical affect research, but more than that, it is essential in making meaning in music.

2. The meaning of music

In the mid-twentieth-century, authors were searching for the answers to the philosophical question whether music is a language or whether musical stimuli are signs or symbols (Meyer 1956). During the 20th century music theory, there was the famous debate between the referentialists, who believed that music does refer to meaning outside itself, and the formalists, who thought that there is no meaning in music, but itself. At the beginning of the 21th century, it has been found that some neural correlations do exist between linguistic and musical meaning (Koelsch et al. 2002), and that music is able to transfer semantic information (Koelsch 2004).

Music and speech have many aspects in common, such as phonological awareness, which is closely related to pitch awareness (Loui et al. 2011) or the similarity that is discovered between musical and language syntax (Koelsch 2011). Music causes extra musical interpretation by urging listeners to articulate explicit linguistic descriptions (Antović 2010:119), but a clear correlation between body movement and linguistic labels has been found (Amelynck et al. 2014). Therefore, linguistics is the first discipline from which musicians borrowed terms such as syntax (examines rules how to combine words within a sentence), semantics (the study of meaning), semiotics (includes the study of metaphor, studies meaning making, where sounds present signs of something else), hierarchical structure (music structure is hierarchically organized) that creates meaning or musical connotation in terms of music semantics (Bernstein 1976).

Different levels of meaning are also hierarchically organized (Antović 2010). Thirty musical terms verbally given to 187 musicians (students and professors) to get their free associations show their strong metaphorical answers (Petrović et al. 2017). The term *staccato* provoked one onomatopoeia (“pec-pec” means “it is hot, be careful!”), one embodiment (choking), while more than a dozen answers
included visual images and associations of jumping and skipping. Also, *staccato* provoked positive emotions (excitement, joy, happiness), conceptual metaphors (short, sharp) which were culturally conditioned (Mozart, piano, tone) and some very individual ones (spear, stairs, army, bells, glass).

*Staccato* is experienced as a movement (Giordano et al. 2014: 4), but also as a visual (the shape and color), auditory (necklace’s rattling) and spatial-kinesthetic sound in Binički’s Lied *Grivna*¹ (Petrović and Antović in press). *Staccato* presents a metaphor of the movement during the girl’s dancing and the necklace’s rattling. Here the multimodal experience and metaphorical associations play the important role (Example 1).

![Example 1](image)

**Example 1.**

*Staccato* has the same image-schematic interpretation in Milojević’s Lied *The eagle song*.² It presents the onomatopoeic level (the eagle’s click sound), the visual images (high piano register imitates sunny heights), conceptual metaphors (*Allegro energico* – lively and vigorously playing represents the eagle’s flight) and the individual musicians’ associations (Milojević precisely gave metaphorical instructions for interpretation such as “strong as the eagle clicks from the sunny heights”) (Example 2).

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1. Stanislav Binički (1872 – 1942) was a Serbian composer, conductor and pedagogue.
2. Miloje Milojević (1884 – 1946) was a Serbian composer, musicologist, music critic, folklorist and music pedagogue.
Example 2.

In both Binički’s and Milojević’s Lieder, the meaning construction is created by the correlation of text and music. Here we may see that the image-schematic structure of the words correlates to the image-schematic structure of the element of musical structure such as *staccato*. The image schemas provide metaphorical descriptions of music grounded in embodied experience (Johnson 1987). Beside the description of music, both music analysis and the analytical vocabulary of music theory are metaphorical (Spitzer 2004: 2).

3. The use of metaphors in music terminology formation

As a basic structure of understanding (Lakoff 1993), metaphor shapes and structures human understanding of music (Spitzer 2004) and metaphorization is the basic mechanism in conceptualization of music elements (Antović 2010). Metaphor plays a decisive role in perception, understanding and verbal description of music, i.e. music terminology. Music, as an abstract sound phenomenon, relies on phenomena from other areas of human experience. The usage of concrete to try to understand the abstract is crucial in the initial music education. Musical communication in early childhood has a major role for emotional, cognitive and social development of children.

Space and gesture related metaphors play an inevitable role in initial music education, where they are considered an effective theoretical and pedagogical tool (Guck 1981: 42). Embodiment (meaning bodily experience) is responsible for the construction of concepts (Gibbs 2008). The embodied music cognition theory puts the emphasis on the role of the human body as a natural mediator for music meaning formation and implies that the human motor system, gestures and body movements play an important role in music perception (Leman 2007). The body is considered as the mediator between the person’s environment and the person’s subjective experience of that environment (Merleau-Ponty 1945), so metaphors are often used to
describe sound and musical motion. Listeners treat music tones as a concrete series in time (Saussure 1959: 40), and visualize them as a series of physical objects moving through space at different speeds (Scruton 1977). The landscape metaphors describe some of the elements of the musical structure (where the listener is a traveler or the path is a form, see Johnson and Larson 2003: 72).

However, the integration between the body movement, listening, visual and verbal metaphors, and singing is far more important for the process of musical understanding. The results of a recent study showed that gesture training and body movement has a positive effect on improving children’s intonation (Liao and Davidson 2015). The famous method in music education named eurhythmics by Jaques-Dalcroze offers a practical example of basing music teaching on embodied experiences. It considers learning music through movement and expressing emotions through the body by establishing communication between mind (intelligence, imagination, emotions) and matter (the body, the senses, action) (Jaques-Dalcroze 1930/1985: 108).

In language, metaphor expresses what we do feel and sometimes even the physiological changes while emotional experience. The meaning in music arises from the suggestion of a particular mood, from extra-musical associations and from the interplay of formal structures that create patterns of tension and resolution. Music does provoke psychological reactions in listeners, at first the feelings that may be recognized, identified and classified (Cooke 1959). Music embodies the interior world of emotions or psychological states (Sloboda 1991, Krumhansl 1998) considering that musical structure has some similarities with the structure of experienced emotions (Gabrielsson and Juslin 2003).

Physical-emotional musical experience leads to the development of the logical schedule of musicians’ interpretational (im)maturity. Therefore, metaphorical terminology should follow the interpretative (non)maturity, such as for the term scherzo, which could be joke for music students and forced joke or all but prank for music professors; a term cello could be explained as a female body for younger, but as a subtle eroticism for the mature musicians; while adagio could represent a funeral procession or an old man walking slowly for students, for music professors it could conceptualize melancholy, pain, laziness, meditation, timeless; crescendo could mean turning the dial on the radio or the raising of dough for students, but growth, passion, energy, freedom for professors (Petrović et al. 2017: 55).
Metaphor in music is a semantic phenomenon that describes some sort of extra-musical reality (Zbikowski 2002) used for the analysis of the elements of musical structure and for making the musical terminology. As metaphors belong to the key concept of semiotics, then music presents a sign and depends on significative processes or semiosis (Peirce 1938–1956). Therefore, musical interpretation is the study of the musical sign related to its interpretants. Interpretants have their own individual response to musical sound/sign, which presents the sub-symbolic representation of music by visual and verbal metaphors.

4. Representing music by visual and verbal metaphors

Children prefer metaphors than the traditional analytical techniques and formal terminology of musical structure as it brings the communicative potential to music (Guck 1981).

The perception of the elements of musical structure through the inevitable experience of!visualization and verbalization in early education enables better understanding in later stages of music education. Through visualization children actively and consciously organize abstract musical elements perceived as a group and not isolated. Verbal description of musical structure is the way to achieve the affect. Children can understand the elements of music structure, such as tempo, pulse, meter, rhythm or melody, if using the integrative concept of guiding childrens’ perception by introducing movement, picture and lyrics as tools for their easier understanding. The relationship between understanding and visualization is twofold: in some cases visualization and verbalization is a means for a better understanding, while in other cases understanding is of great importance for proper visualization and verbalization (Petrović and Ačić 2008: 307).

Children’s invented notations could be a measure of their musical understanding (Gromko 1994) because children’s drawings are a mirror of the child’s mental image of the perceptual discrimination of a different elements of musical structures. An analogue correspondence between sound and sign is sometimes more acceptable than traditional notation: first, children create the external graphic representation or drawing map while listening to music, and then using movement to suggest a musical meaning (Fortuna 2017).
In early music education children understand more than they can verbalize, so the abstract musical terminology should be avoided. Pre-schoolers understand the integrative multimodal approach: movement, drawings and verse are introduced as a means for easier understanding the elements of musical structure (Milanković et al. 2008). They drew lines and squares to represent even, and triangle to represent the odd metrical grouping. They understood duple meter through the picture of a soldier while children appreciated triple meter through the picture of a ballerina (Table 1). Further on, they used lines and circles to represent their impression of duple and triple meter (Table 2).

Table 1. Visual metaphors of pre-schoolers on the even and odd meter

<table>
<thead>
<tr>
<th>Verbal musical terms</th>
<th>Visual metaphors</th>
</tr>
</thead>
<tbody>
<tr>
<td>even meter</td>
<td><img src="image1" alt="Image" /></td>
</tr>
<tr>
<td>odd meter</td>
<td><img src="image2" alt="Image" /></td>
</tr>
</tbody>
</table>

Table 2. Lines and circles represent the even and odd meter

<table>
<thead>
<tr>
<th>Verbal musical terms</th>
<th>Visual metaphors</th>
</tr>
</thead>
<tbody>
<tr>
<td>even meter</td>
<td><img src="image3" alt="Image" /></td>
</tr>
<tr>
<td>odd meter</td>
<td><img src="image4" alt="Image" /></td>
</tr>
</tbody>
</table>

Lines and other conceptual metaphors that apply geometric space or objects (such as line, arch, wave, pendulum) are frequently used to represent the melodic contour rather than a rigid terminological system (Nettl 1964: 147–148). Association between melody and line is common and traditional melodic description as a line is already the metaphor. In the recent study, the majority of participants represented pitch with height, and loudness with the thickness of the line (thicker line for louder sounds, see Küsslner and Leech Wilkinson 2014). If music exists in space, tone heights and melodic contours are metaphorically rooted within the physical and cultural experience. They are connected to the spatial metaphors up and down because of embodiment (Lakoff and Johanson 1980). Hence, the
embodiment approach may be an alternative to the representational approach (Leman 2010). Emotions that humans experience during the melodic contour perception are transformed into verbal metaphors due to the strong embodiment within the certain culture. This kind of multimodal integration of body, emotions, music and verbal music description (metaphors) creates new possibilities in music terminology.

5. Multimodal music terminology

Multimodality investigates how meaning emerges from the interaction between two or more modes (Forceville 2016). If synesthetic interaction of different modes can be found in verbal description of music (Zbikowski 2008), then we need to introduce visual, auditory, spatial and kinesthetic integration in the process of music education. Sometimes visual images provoke verbal metaphors and vice versa, because visual and aural cross-modal interaction leads participants to acquire a deeper understanding of the musical phenomena.

The initial background for a multimodal music terminology is that sequences of musical events produce brain maps that can correlate with brain maps produced by other modalities (Barsalou 1999). Music listening causes cross-modal interactions by activating both the hearing and bodily-kinaesthetic area of the brain (Chen, Penhune and Zatorre 2008). A multimodal and embodied approach in teaching is close to the child’s natural method of learning because musical training provokes neuroplasticity (Rodrigues, Loureiro and Caramelli 2010), while multisensory brain regions have a great role in music perception (Zimmerman and Lahav 2012).

Signal processing and neural networks make a transition from acoustical representations to perceptual images and long-term memory representations called schemata (Leman 1993). Image schemas are embodied structures and multimodal patterns of experience that motivate conceptual metaphor mappings. The results of the study (Milanković et al. 2008) show that pre-schoolers made their own perceptual images as the sub-symbolic representations of some of the elements of the musical structures. As such, they can become an important guide to the creation of a new, multimodal and metaphorical music terminology. In the
following legend (Table 3), the *pulse* is represented as the stickman that means a man who walks, or that pulse is a step; the *refrain* is shown with the *stick-man in a frame*; to differentiate major from minor, children used the symbols of *sun* and *rain*; for the melodic movement from tonic to dominant, they used *two circles connected with an arrow*; sequencing in music children presented with the picture of *stairs*, and the picture of *butterfly* clearly implies strong image-schematicity in interpreting the wave melodic contour.

**Table 3.** Verbal and visual vocabulary of pre-schoolers

<table>
<thead>
<tr>
<th>The elements of music structure</th>
<th>Verbal and visual metaphors</th>
</tr>
</thead>
<tbody>
<tr>
<td>pulse</td>
<td>![Stickman]</td>
</tr>
<tr>
<td>refrain</td>
<td>![Stickman in a frame]</td>
</tr>
<tr>
<td>4/4</td>
<td>![Fourth Time Signature]</td>
</tr>
<tr>
<td>3/4</td>
<td>![Third Time Signature]</td>
</tr>
<tr>
<td>major</td>
<td>![Sun]</td>
</tr>
<tr>
<td>minor</td>
<td>![Rain]</td>
</tr>
<tr>
<td>tonic to dominant melodic movement</td>
<td>![Two Circles Connected With An Arrow]</td>
</tr>
<tr>
<td>sequencing</td>
<td>![V]</td>
</tr>
<tr>
<td>wave melodic contour</td>
<td>![Butterfly]</td>
</tr>
</tbody>
</table>

Multimodality plays an important role in forming music terminology because children perceive dynamics, intensity, rhythm and melodic contour through the cross modal associations between facial, vocal and kinetic signals (Stern et al. 1985). Within the core of communication between the conductor and the children of Belgrade’s choir *Kolibri*, there is the emotional experience described metaphorically in the multimodal context (Petrović 2000: 56). They use a *scuba diver* as a metaphor for the breath taking, a *traffic light* as a signal to stop singing, a *grass snake* to open a mouth widely for singing high tone pitches, *singing through the eyelashes* is a metaphor for translucent singing, *below the rainbow* for singing on the breath, *jumping* for staccato, *painting with brush* for legato, while *cutting*
with scissors or hands waving in swimming are metaphors for crescendo (Table 4). Multimodal metaphors make music teaching closer to a child’s natural method of learning and could lead to new directions in forming music terminology.

Table 4. Multimodal metaphors as the music terminology in Belgrade’s choir

<table>
<thead>
<tr>
<th>Verbal and visual metaphors</th>
<th>Their meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>take a breath</td>
</tr>
<tr>
<td></td>
<td>stop singing</td>
</tr>
<tr>
<td></td>
<td>open a mouth widely</td>
</tr>
<tr>
<td></td>
<td>translucent and easy singing</td>
</tr>
<tr>
<td></td>
<td>Sul fiato</td>
</tr>
<tr>
<td></td>
<td>(singing on the breath)</td>
</tr>
<tr>
<td></td>
<td>staccato</td>
</tr>
<tr>
<td></td>
<td>legato</td>
</tr>
<tr>
<td></td>
<td>crescedo</td>
</tr>
</tbody>
</table>

6. Conclusion

In this article we tried to investigate multimodal occurrences of metaphor and metaphoric music terminology whose identification and interpretation depend on the co-presence of at least two of the following modalities: music, language, visuals and gestures. Verbal and visual metaphors are almost inescapable in the process of understanding and representing music. Using metaphorical expressions seems to be the only way to verbally approach music. On one hand, we need to use metaphorical expressions strongly based on image schemas to conceptualize music theory phenomena for music education purposes, while on the other, to use metaphors to describe music.
Music knowledge is constructed and the child’s thinking develops through learners’ active engagement with the physical, social and cultural environment of which they are a part. The triad body-mind-culture situates cognition in socio-culturally determined contexts (Hampe 2005). An embodied way of learning and the challenge to find out an individual graphic symbolization and verbal metaphors could lead to a stronger mental image and psychomotor awareness of a musical experience. Multimodal perception, in which body movement, aural images, visualization and verbal metaphors are integrated, may develop associative thinking, metaphorical and individual associations to some specific musical terms. A multisensory approach is more effective than a disembodied and fragmented approach in the process of musical understanding, and could bring a new perspective to music terminology.

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**Upotreba metaforične glazbene terminologije u verbalnome opisu muzike**

**Sažetak**


**Keywords:** music terminology, metaphors, verbal description of music, embodiment, multimodality

**Ključne riječi:** glazbena terminologija, metafora, verbalni opis glazbe, utjelovljenje, multimodalnost