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Structure of subjective experience of classical music

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Previous studies on the subjective experience of music did not give unambiguous results related to the number and content of dimensions underlying the experience that one has in contact with various musical pieces. Furthermore, previous studies have provided no evidence relating to the structure of subjective experience of classical music pieces. The aim of this study was to determine the number of structurally distinct dimensions of the musical experience of classical music pieces and the relations among obtained dimensions. The research was conducted in two phases. In the first phase, 28 participants were asked to produce descriptions of their subjective experience of 44 short segments of music pieces. In the second phase, 44 participants rated the same set of musical pieces using a scale comprised of the most frequent descriptors obtained in the first phase of the study. Results have shown that musical experience descriptors are grouped into five interrelated dimensions of musical experience: the Aesthetic Experience, Affective Tone, Tension, Content–Fullness, and Structure. The paper discusses the nature of these dimensions, their relationship and compares them to those obtained in previous studies both related to the experience of music as well as art in other modalities.

Key words: subjective experience, classical music, aesthetic experience, structure

Highlights:

- Classical music excerpts are randomly sampled and rated on the descriptors of subjective experience obtained in the preliminary study.
- Five interrelated dimensions of musical experience are obtained: Aesthetic Experience, Affective Tone, Tension, Content–Fullness, and Structure.
- Aesthetic Experience is the most prominent dimension of subjective experience of classical music.
- Obtained factors are largely comparable to those found in previous studies of the musical experience and subjective experience of artworks in other modalities.

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Some authors find that one of the reasons for the frequent and broad appeal of music in different artistic forms and everyday life lies in the emotional reward that music offers to its listeners (Zentner, Grandjean, & Scherer, 2008). Authors agree upon the large influence music has on emotions and that intensity and entirety of musical experiences depends on the environmental factors (atmosphere and environment), personality, and cognitive factors (susceptibility to this form of art, prior experience, and general musical knowledge), current psychophysical state of the person, as well as cultural and social effects (e.g., Brattico, Bogert, & Jacobsen, 2013; Brattico, Brattico, & Jacobsen, 2009; Fossum & Varkøy, 2012; Hargreaves & Colman, 1981; Juslin & Västfjäll, 2008; Popović Mlađenović, Bogunović, & Perković, 2014; Zentner et al., 2008). The other group of factors that could affect musical experience of listeners refers to an impact of musical structure on emotional expression (Gabrielsson & Lindström, 2010; Juslin & Sloboda, 2001), different categories of listeners' music-related emotions: perceived and induced (Hodges & Sebald, 2011; Juslin & Laukka, 2004; Juslin, Liljeström, Västfjäll, & Lundqvist, 2010), anticipation for further melody development (Huron, 2006; Meyer, 1956, 2001; Narmour, 1991; Radoš, 2010), etc.

Previous studies focused primarily on emotional aspects of subjective experience of music – emotional response, i.e., emotions evoked in listeners while listening to a specific type of music, emotional induction, as well as emotion recognition and emotion attribution to different musical stimuli (Juslin & Västfjäll, 2008; Kallinen, 2005; Konečni, 2008; Lundqvist, Carlsson, Hilmersson, & Juslin, 2008; Lychner, 1998; Mohn, Argstatter, & Wilker, 2011; Vieillard et al., 2008; Zentner et al., 2008).

The subjective experience of music is a complex phenomenon which includes and integrates different components participating in a unique music experience (Lundqvist et al., 2008). Even though there has been numerous research in the field of subjective experience of music, there is no consensus regarding the precise definition of subjective experiences of music. One of the reasons could be found in the lack of empirically based taxonomy of musically induced emotions which cause for researchers to apply models and measures from different nonmusical areas of emotion research (Zentner et al., 2008). In this study, the subjective experience of music is broadly defined as the entirety of psychological output of an encounter with musical stimuli and which is attributable to different implicit and explicit aspects of artistic input.

Not many studies focused on the empirical pursuit of the structure of subjective experience of music, i.e., detection and description of different aspects of subjective experience of music. Additionally, most of those studies used different musical stimuli, sampling, and generation of descriptors of music experience resulting in inconclusive data on the structure of such an experience.

In one early study participants were asked to rate music pieces using a number of different emotion attributes. Four factors were extracted and interpreted as Softness, Colorfulness, Magnitude, and Relaxation (Nordenstreng, 1969). On the other hand, Wedin (1972) has shown that the most suitable factor solution that subsumes musical experience is through three bipolar factors: Tension/Energy, including the dimensions such as vehement, violent, furious; Gaiety/Gloom including the descriptors exuberant, playful, glad, and the factor that the authors interpreted as Solemnity/Triviality, which included descriptors such as sublime, solemn, and grand (Wedin, 1972). More recent studies suggested a somewhat different number and nature of core dimensions of affective experience as a response to music stimulation. Some findings suggest that affective experience of music is constituted of three underlying factors, interpreted as Affective Valence, Arousal, and Cognitive Evaluation (Trkulja & Janković, 2012) suggesting that musical apperception consists, clearly, not only of an emotional but cognitive layer of experiences, as well. Moreover, some findings indicate that musical experience could be more complex than previous studies suggested. Zentner et al. (2008) have found that three second-order factors subsume emotional reaction to musical stimulation. These factors are interpreted as: Sublimity, which includes first-order factors – Wonder, Transcendence, Tenderness, Nostalgia, and Peacefulness; Vitality that includes Power and Joyful activation, and Unease that includes Tension and Sadness, as the first order factors (Zentner et al., 2008). All aforementioned studies suggest that the subjective experience of music can be described through a number of dimensions that are emotional in nature, but also through dimensions that are less emotionally saturated and to a large extent related to the cognitive processing of artistic stimulation, namely, evaluation of intrinsic characteristics of different aspects music (see also Hargreaves & Colman, 1981). However, since previous studies mainly focused on the emotional experience of musical content, i.e., emotions that are induced or perceived in an encounter with musical stimulation, most of the previous findings failed to cover a wide range of other aspects of musical experience.

One of the most important and widely recognized aspects of musical experience that was frequently neglected in previous studies is Aesthetic experience – one of the most prominent aspects of the experience of various forms of art. Despite the importance of this phenomenon as well as the long history of philosophical and scientific examination and analysis, aesthetic experience is one of the least clear and precisely defined concepts (Marković, 2012). According to some authors, aesthetic experience doesn't differ much from the everyday experience, while others define it as an experience different from the everyday one, as an extraordinary state of mind that exclusively occurs in an encounter with a piece of art. According to these authors, the aesthetic experience is an exceptional state of mind characterized by a fascination with artistic stimulation, accompanied by high arousal and attention, and overall high cognitive engagement and immersion into the object of art (Csikszentmihalyi, 1975; Csikszentmihalyi & Rathunde 1993; Frijda, 1989; Marković, 2012; Ognjenovic,

1997; Tellegen & Atkinson, 1974). Additionally, some neuroimaging studies have shown a distinct activation of certain cortical areas related to emotion processing and higher cognitive processing (e.g., Cupchik, Vartanian, Crawley, & Mikulis, 2009) while being faced with or going through a process of art comprehension. Despite theoretical considerations, previous empirical studies in the field of music experience failed to unequivocally indicate the existence of an aspect of musical experience which could be characterized as an aesthetic experience.

Given that previous studies of the structure of music experience used a wide range of music stimuli, a possible reason for missing to detect the factor of aesthetic experience could be that such experience is not a necessary product of the encounter with music *per se* but a psychological output of the encounter with a specific type of music. Additionally, frequent usage of predetermined descriptors in different research designs as opposed to a variety of potential emotions, thoughts, etc. that could be evoked by music stimulation could disable detection of such a dimension leading to a reduction in breadth and content of basic factors of music experience.

Finally, it can be expected that music stimuli differ in terms of potential to evoke different levels and types of experience. Classical music evokes responses of both higher and lower levels of complexity (Popović Mlađenović, Bogunović, Masnikosa, & Perković Radak, 2009). In other words, complex music has a potential to evoke complex and broad-ranged responses and therefore classical music is in the first row of investigation when the aesthetic experience is in question. To the best of our knowledge, no study has attempted to exclusively detect and describe dimensions of the subjective experience of classical music pieces by using empirical methodology.

The aim of the study

This study aims to detect and describe the minimal number of structurally distinct dimensions of the musical experience of classical musical pieces, as well as to determine the relations among those dimensions.

Overall, very few studies have focused on identifying the structure of the music experience, and in whole, they resulted in comparable, but inconclusive findings regarding number and nature of underlying dimensions of musical experience. Thus, most of the previous studies reported a different number of dimensions of musical experience that differ in terms of their content. Moreover, the use of various musical stimuli, sampling (choice of stimuli) and methods of generating descriptors (free generation vs. predefined scales) of musical experience are very different across the studies (see e.g., Hargreaves & Colman, 1981; Nordenstreng, 1969; Trkulja & Janković, 2012; Wedin, 1972; Zentner et al., 2008). These conceptual and methodological issues gave rise to a narrow and vague image of the basic dimension of the subjective experience of music, which provided the limited possibility of generalization of results even within the same type of music and music genres.

Therefore, this study aims to detect the structure of subjective experience of a well-defined cluster of musical pieces – classical music, sampled in a way that would enable generalization of results to the aforementioned field of music. Furthermore, using empirically obtained descriptors of music experience could presumably enable wide coverage of psychological processes involved in perception and evaluation (emotional, cognitive, etc.) of this type of music stimulation and consequently be able to account for the breadth of experience of music.

Method

The study was conducted in two phases. The aim of the first phase (preliminary study) was to obtain relatively broad and representative sample of music stimuli originating from four musical periods and to obtain a sufficiently broad set of descriptors of musical experience. In the second phase (the main study) the same sample of musical stimuli was rated on a selected set of descriptors in order to obtain a minimal number of relatively distinct dimensions of the subjective experience of classical music and to gain insight into their relations.

Preliminary study

Participants. Preliminary study included 28 participants aged 21 to 41 years (M = 26.82, SD = 5.00). In order to gain a wider spectrum of different perceptions and experiences of different musical pieces, the sample consisted of individuals without music education – psychology students and graduates from University of Belgrade (N = 25) as well as music experts, Music Academy graduates and post-graduates (N = 3).

Musical stimuli. In order to obtain music stimuli which would be fairly representative for each of the four musical periods, the compositions were sampled through three following phases.

Phase I – Selection of composers. The first phase consisted of a sampling of typical and the most prominent representatives of the four musical periods: Baroque, Classical, Romanticism, and the Modern. The sampling of the most prominent representatives of four musical periods was conducted by researchers following consultations with music expert.

Phase II – Selection of compositions. Following selection of representative composers of four musical periods, an extensive list of their opuses was obtained from the web music library http://imslp.org and evaluated by music expert. Musical pieces of selected authors were then subjected to random-sampling within given musical period. In order to obtain an economic yet sufficiently representative and broad set of compositions, 11 musical pieces per epoch were sampled, in total, 44 compositions.

Phase III – Selection of excerpts. In order to make sampled compositions appropriate for rating by means of their duration, short musical sequences were randomly sampled from each composition. This sampling method resulted in a set of stimuli lasting from 90 to 322 seconds (M = 198.59, SD = 62.27). Differences in segments duration came as a result of compositions' structure. Namely, since compositions differed in terms of continuity/discontinuity of melody and music flow selection of segments with an equal duration would disrupt its structure. However, excerpts from different epochs did not differ in terms of their duration. The list of musical compositions used in the study is given in the Appendix.

Descriptors of musical experience. Participants were instructed to listen 44 excerpts and after each one to try to verbalize their experience of a given musical piece. Criteria for descriptor inclusion were its absolute frequency (total number of occurrence),

as well as its unique frequency, i.e., the frequency of descriptor's occurrence in descriptions corrected for the number of occurrences in the descriptions made by the same participant. In this way, we wanted to prevent the overestimation of descriptor's importance due to idiosyncratic fixations on very specific aspects of stimulation and/or insufficient variability and flexibility of participants' verbal production. Finally, in order to prevent overestimation of the importance of some of the clusters of descriptors (e.g., emotional words vs. "cognitive" words, and "objective" characteristics of the music) which would consequentially bias the factorial structure extracted from a given set of descriptors, out of synonyms (e.g., mild vs. tender) and antonyms (e.g., sad vs. cheerful) and descriptors with very similar meaning the more frequent words were chosen. By combining aforementioned criteria, we ensured that the rating of individual excerpts in the main study not to be too time-consuming, yet sufficiently broad and representative for a number of descriptors produced. Using these criteria, from verbal descriptions and responses provided, a total of 43 descriptors of music experience were extracted.

Procedure. Participants were asked to listen to 44 excerpts and to give descriptive responses of their experience of melodies presented. The stimuli were presented in a randomized order, and participants did not have access to the name of the composition nor the composer's name.

The main study

Participants. In the main study, the sample consisted of 44 participants, ages ranging from 20 to 57 years (M = 27.20, SD = 5.60). An independent sample of psychology students and graduates of University of Belgrade (N = 40) and music experts who have graduated Music Academy (N = 4) participated in the main study.

Stimuli. The stimuli set consisted of the same 44 short segments extracted from classical music compositions used in the preliminary study.

Procedure. Participants were asked to rate presented excerpts on a seven-point scale, for each of the 43 descriptors. Each participant was supposed to rate five excerpts which were counterbalanced toward the historical epoch to which they belong and the order of presentation within a set of excerpts that the participants have listened to was randomized. This procedure resulted in five independent ratings for each composition by five different participants. The participants did not have access to the name of the composition nor the composer's name.

Results

In order to determine the structure of the subjective experience of music, exploratory factor analysis was conducted. The three-dimensional data matrix was reduced to two-dimensional using a *string-out* method (Osgood, May, & Miron, 1975; Osgood, Succi, & Tannenbaum, 1957). In order to maximize the reliability of the factors, Alpha factoring method of extraction was used along with the Promax rotation. The Kaiser-Meyer-Olkin (KMO) sampling-adequacy measure (.91) and Bartlett's test of sphericity ($\chi^2_{(903)} = 7785.81$, $p < .001$) were examined prior to factor extraction to ensure that the characteristics of the data set were suitable for factor analysis. Guttman-Kaiser's, as well as Cattell's criteria, suggested the retention of five factors. Five obtained factors accounted for 62.68% of the variance of ratings. Table 1 displays the pattern matrix.

Table 1
Pattern matrix (Alpha factoring; Promax rotation)

	Factors				
	1	2	3	4	5
fulfilling	**.87**				
beautiful	**.87**				
inspirational	**.85**				
flowing	**.80**				
exceptional	**.79**				
harmonic	**.76**				
impressive	**.76**				
engrossing	**.76**				
sublime	**.74**				
pleasant	**.73**		-.33		
magical	**.71**				
arousing	**.58**				
distinct	**.56**				
virtuously	**.56**				
creative	**.56**				
sad		**.87**	-.34		
tragic		**.83**			
dark		**.79**			
optimistic	.40	**-.77**			
ominous		**.74**			
dashing	.33	**-.74**			
grave		**.68**			
frightening		**.64**	.39		
deep	.52	**.55**			
tempestuous			**.82**		
mild	.57		**-.76**	.37	
aggressive			**.70**	.32	
tense			**.61**		
mighty	.44		**.61**		
dynamic		-.50	**.59**		
dramatic		.34	**.55**		
exciting			**.51**		
distressing		.42	**.47**		
monotonous				**.76**	
boring				**.69**	
senseless				**.69**	
cold				**.52**	
unclear				**.51**	.50
complex	.31			**-.39**	
unusual					**.74**
chaotic					**.67**
uncontrollable					**.65**
uncertain					**.60**

Note. loadings bellow .30 are omitted.

The most prominent, first factor accounted for 28.34% of the ratings' variance. This factor predominantly saturated descriptors referring to the aesthetic fascination, fusion with, and immersion into music stimulation, as well as descriptors which refer to the pleasure of the encounter with music stimuli. In line with the content, this dimension is interpreted as an Aesthetic Experience.

The second factor that accounted for a substantial proportion of the ratings' variance (18.93%) primarily saturated highly emotional descriptors. This factor, in line with its content, is interpreted as the emotional aspect of the experience of classical music, i.e., an Affective Tone that accompanies the experience of music.

The third factor that accounted for 8.15% of the variance is named Tension. All the descriptors primarily saturated by this factor are referring to the experience of the tempo of the music, its dynamics, as well as the rate of change of the melodic sequences.

The fourth factor that accounted for about 4.44% of the variance is defined by descriptors which are pointing to content-related aspects of evaluation of the musical compositions. Namely, all descriptors except *cold* (which was apparently interpreted as 'sterile') refer to the evaluation of the "richness" of content and content diversity of a music piece and therefore was named Content–Fullness.

The fifth factor that accounted for 2.82% of the variance primarily saturated descriptors that summarize the order and organization of composition. Extraction of this factor, therefore, indicates the existence of dimension of subjective experience along which it is possible to differentiate musical compositions regarding their level of organization and cognitive balance. Accordingly, the fifth factor was named Structure.

Finally, it should be noted that descriptors showed very few cross-loadings, with high primary loadings for each factor .727, .736, .626, .594, and .664, for the first to the fifth factor, respectively.

Table 2 presents the correlations between extracted factors and obtained measures of factor reliabilities.

Table 2
Factor correlation matrix

	1	2	3	4	5
1	.95	-.14*	.26**	-.59**	.17*
2		.91	.30**	.18**	.19**
3			.87	-.16*	.60**
4				.83	.02
5					.76

Note. 1 – Aesthetic Experience; 2 – Affective Tone; 3 – Tension; 4 – Content–Fullness; 5 – Structure; Numbers on the main diagonal – Cronbach's alpha (α); * $p < .05$, ** $p < .01$.

Aesthetic Experience evoked by music compositions was negatively related to its Affective Tone – the more intense aesthetic experience is evoked by those compositions characterized by positive emotional tone (or alternatively, the absence of negative affective tone). Intense Aesthetic Experience of music was associated with increased Tension and perceived intense dynamics and the

compositions' tempo. Furthermore, higher Aesthetic Experience is evoked by compositions that are perceived as meaningful and rich in content. Correlation between factors of Aesthetic Experience and the factor of compositions' Structure reached statistical significance as well.

On the other hand, musical compositions that are characterized by high tension were on average rated as "darker", and more content filled. One of the highest correlations found was the one between factors of Tension and Structure. The experience of the composition as highly tense (higher Tension) is accompanied by the experience of uncertainty and disorganization. On the other hand, no correlation was found between the two factors which can be interpreted as cognitive – Structure and Content–Fullness.

Discussion

The aim of this study was to determine a minimal number of structurally distinct dimensions of the musical experience of classical musical pieces, as well as to examine the relations among obtained dimensions. A multi-stage selection of stimuli performed, i.e., selection of typical and the most prominent representatives of the four broad musical periods, followed by a random selection of compositions and excerpts resulted in relatively diverse and representative set of musical stimuli. In order to ensure a sufficiently representative set of the descriptors, empirically driven selection of the most prominent markers of emotions and cognitions the most frequently evoked by stimuli used was performed. Consequently, the final set of descriptors resulted in a fair representative sample of potential descriptors of the subjective experience of classical music pieces, as indicated by item sampling adequacy measure.

Results indicated the existence of five factors or dimensions of the subjective experience of music. Obtained factors seem to unequivocally summarize relatively distinct but interrelated aspects of the experience of classical music.

The main result of this study is the emergence of the factor of Aesthetic Experience that was so clearly and strikingly detected. Namely, this factor proved to be the most prominent in accounting for the variance of musical experience, which is largely the result of numerous descriptors obtained in the first phase of the study. Descriptors most strongly saturated by this factor represent typical markers of aesthetic experience as unique and unusual experience which results from an encounter with a work of art and in which a person loses sense of reality and fully immerse in an artwork (Csikszentmihalyi, 1975; Csikszentmihalyi & Rathunde, 1993; Frijda, 1989; Ognjenovic, 1997; Tellegen & Atkinson, 1974). It seems that the nature of this factor fits very well this extraordinary state of consciousness that occurs in an encounter with artistic stimulation.

Descriptors that highly loaded on the second factor clearly indicated the emotional dimension of the subjective experience, thus this factor was named Affective Tone. This factor is only somewhat similar to the dimension that some authors (e.g., Hargreaves & Colman, 1981; Trkulja & Janković, 2012) are referring to as Affective Valence or Gaiety/Gloom (Wedin, 1972). In other words, this factor does not summarize only elemental emotions that could be positioned along the continuum

of basic emotional experience such as comfort-discomfort, yet this dimension refers to both quality and valence, as well as the level of emotional depth and summarizes emotional complexity as a psychological output of musical stimulation.

Aesthetic Experience and Affective Tone can be considered primary dimensions of the experience of classical music and they are predominantly affective. They indicate a potential of music to evoke profound, positive or negative feelings and denote the emotional impact of music on the audience. In other words, these two factors summarize the depth, valence, and intensity of the experience as a result of musical stimulation.

The third factor, named Tension emerged as the summation of descriptors that are referring to the experience of the tempo of the music, its dynamics, and the change of the melodic sequences. These elements, taken together seem to lead to the experience of calmness/restlessness or relaxation/tension induced by the mode of musical performance. In this sense, the resulting dimension is very similar to the Energy/Tension factor (Wedin, 1972) and somewhat similar to Arousal factor (Trkulja & Janković, 2012), and Power factor (Zentner et al., 2008) obtained in previous studies. This dimension apparently subsumes the mode of musical performance that leaves an impression on the audience.

The fourth factor, Content–Fullness indicated the dimension of music experience along which music pieces can be arranged from those seen as worthless, meaningless, and "pale", on the one end, and the ones that have striking, impressionable content, that have "weight" and "meaning", on the other. In the context of earlier studies which aimed to determine the structure of music experience, extraction of this dimension is a novelty. In fact, this dimension indicates an aspect of cognitive evaluation that reflects the perception of meaningfulness in music stimulation, which seems to be an exclusive feature of the classical music.

The fifth dimension, named Structure highlighted the aspect of the subjective experience of classical music which summarizes cognitive balance and composition's level of organization. This factor is very akin to the dimensions obtained in earlier studies which were referred to as Cognitive Evaluation (Trkulja & Janković, 2012). Unlike first two dimensions that are predominantly affective, fourth and fifth factor seem to be predominantly cognitive summarizing the form (structure) and fullness (content) of perception of the artwork in the "eyes" of the listener. Extraction of separate dimensions that are essentially cognitive, named Content–Fullness and Structure implies a duality of cognitive experience of music. On one hand, music is perceived and experienced as a set of more or less ordered tones (Structure), and on the other, as a meaningful or worthless (Content–Fullness).

Overall, obtained factors, to some extent, correspond to dimensions obtained in previous studies which were using different music stimuli. Thus, the dimensions of Affective Tone, Tension, and Structure are aspects of the experience of musical stimuli which are established in most of the previous studies (e.g., Hargreaves & Colman, 1981; Trkulja & Janković, 2012; Wedin, 1972; Zentner et al., 2008) and presumably are a necessary product of the encounter with musical pieces, since they can be found across different music stimuli and genres. On the other hand, the factor of Aesthetic Experience was not obtained

or was not recognized as such in previous studies of the subjective experience of music. Namely, some previous studies have reported dimensions that are aesthetic experience-alike, however, authors have not recognized those factors as such (e.g., aspects of second-order factor Sublimity in the study of Zentner et al., 2008; dimension Gala/Trivial in the study of Wedin, 1972). However, it is possible that the dimension of Aesthetic Experience is somewhat specific to the type of stimuli used and is perhaps the most strongly (but not exclusively) evoked by classical music. One of the possible explanation can potentially be found in the complexity of the stimuli used. Namely, since classical music evokes responses of both higher and lower levels of complexity (Popović Mlađenović et al., 2009) it seems to have an optimal level of complexity presumably evoking more complex and diverse psychological outputs than other types of musical stimuli.

Aesthetic Experience evoked by classical music has shown to be accompanied by a positive emotional tone, pronounced tension, perception of composition as more content-full, and less structured, indicating a complex relationship between the aesthetic experience and other aspects of musical experience. One of the most striking correlations observed was between factors of Aesthetic Experience and Content–Fullness, pointing to the inherent relation between aesthetic axperience of music and its content. Additionally, aesthetic fascination by a musical piece has shown to be positively related to the level of uncertainty/experienced disorganization, i.e., compositions' Structure and its Tension. Structure of these relations gives rise to the Berlyne's notion (Berlyne 1971, 1974) of complex, unusual, and irregular stimuli having a greater arousing potential, therefore, evoking complex emotions and cognitions. In the same time, the strength of obtained relations suggests that the aesthetic experience is not reducible to other aspects of the subjective experience of music. Additionally, the high correlation between Structure and Tension factors indicate the relation between high melody tempo, its dynamics, and the shift of melodic sequences, and unexpected harmony flow and rhythm patterns corresponding to previous findings demonstrating positive relationships between musical complexity and arousal (e.g., Marin & Leder, 2013).

On the other hand, extraction of two uncorrelated "cognitive" dimensions of musical experience pointed to a potential inadequacy of generic terms such as cognitive evaluation, when interpreting a cognitive aspect of the experience of musical stimulation, at least when speaking about classical music. However, it makes sense to expect that the formal and content characteristics of music are perceived and experienced independently, despite a shared domain of processing. These two components of the cognitive effect of musical pieces on the audience were referenced as formal versus content qualities.

Finally, the resulting structure of the experience of classical music is directly comparable to the structure of subjective experience of art in other modalities obtained in studies which used a comparable methodology. Thus, dimensions of Affective Tone, Structure, Tension, and Content–Fullness obtained in this study, even though often named differently, are directly comparable to dimensions obtained in studies that used visual art (Marković & Radonjic, 2008), olfactory stimuli (Marković & Vulin, 2008), haptic stimuli (Žunić, 2002), although, factorial

structure of subjective experience in individual studies is frequently less complex by means of the number and nature of dimensions obtained. Additionally, relations between obtained factors closely resemble those obtained, for example, in visual art (e.g., Polovina & Marković, 2006; Marković, 2012) – pointing to the similar structural relations between dimensions of the subjective experience of art in different modalities. However, previous pursuits of the structure of subjective experience of art in non-musical domains, similarly as in studies using diverse musical stimuli, haven't resulted in a critical number of descriptors of aesthetic experience, therefore, failed to detect relatively distinct factor of Aesthetic Experience. On the other hand, results of this study are leading to the conclusion that a salient potential of musical stimuli for emotion induction, documented in a large body of work appears to be additionally enhanced in an encounter with classical music which seems to more easily evoke complex emotions and cognitions than other musical stimuli as well as artwork in other modalities.

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Struktura subjektivnog doživljaja klasične muzike

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Prethodna istraživanja subjektivnog doživljaja muzike nisu rezultovala nedvosmislenim nalazima u pogledu broja i sadržaja dimenzija koje leže u osnovi doživljaja koji se javlja prilikom susreta sa različitim muzičkim delima. Takođe, dosadašnja istraživanja nisu rezultovala nalazima koji bi rasvetlili strukturu subjektivnog doživljaja klasične muzike. Cilj ovog istraživanja je utvrđivanje broja strukturalno distinktnih dimenzija doživljaja klasičnih muzičkih dela, kao i utvrđivanje relacija između dobijenih dimenzija. Istraživanje je sprovedeno u dve faze. U prvoj fazi, 28 ispitanika je opisivalo svoj doživljaj 44 kratkih segmenata muzičih dela. U drugoj fazi, uzorak od 44 ispitanika procenjivao je isti set muzičkih dela na skali najfrekventnijih deskriptora dobijenih u prvoj fazi studije. Rezultati su pokazali da se deskriptori grupišu u pet međusobno koreliranih dimezija muzičkog doživljaja: estetski doživljaj, afektivni ton, napetost, punoća sadržaja i struktura. U radu je diskutovana priroda ovih dimenzija, njihov međusobni odnos, te prikazana komparacija sa dimenzijama utvrđenim u ranijim istraživanjima muzičkog doživljaja, kao i doživljaja umetnosti u drugim modalitetima.

Ključne reči: subjektivni doživljaj, klasična muzika, estetski doživljaj, struktura

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Appendix

Musical stimuli used in the study

Epoch	Composer	Composition
Baroque	Telemann, Georg Philipp	4 Concerti for 4 Violins
	Purcell, Henry	10 Sonatas in Four Parts
	Albinoni, Tomaso	12 Concerti a cinque
	Vivaldi, Antonio	Concerto in D minor
	Bach, Johann Sebastian	Fantasia and Fugue in C minor
	Lully, Jean-Baptiste	Le bourgeois gentilhomme
	Corelli, Arcangelo	Sonata a Quattro
	Handel, George Frideric	Suite in D minor
	Pachelbel, Johann	Kanon In D
	Bach, Johann Sebastian	Brandenburgisches Konzert Nr. 1 (BWV 1046) – Allegro
	Handel, George Frideric	Violin Sonata in F major
Classical	Salieri, Antonio	Axur Re d'Ormus
	Clementi, Muzio	6 Sonatinas
	Bach, Carl Philipp Emanuel	12 Variations über die Folie d'Espagne
	Haydn, Franz Joseph	Keyboard Sonata in B minor
	Rossini, Gioachino	Petite messe solennelle
	Beethoven, Ludwig Van	Symphony No.5, Op.67
	Mozart, Wolfgang Amadeus	Symphony No.38 in D major
	Bach, Carl Philipp Emanuel	Flute Concerto in G major, H.445
	Reicha, Anton	Wind Quintet
	Paganini, Niccolo	Concerto Pour Violon No. 1
	Mozart, Wolfgang Amadeus	Konzert Fur Flote, Harfe Und Orchester (K. 299) – Allegro
Romanticism	Liszt, Franz	2 Waltzes
	Brahms, Johannes	8 Klavierstücke
	Chopin, Frédéric	Andante spianato et Grande polonaise brillante
	Schumann, Robert	Humoreske
	Berlioz, Hector	La damnation de Faust
	Fauré, Gabriel	Pelléas et Mélisande, Op.80
	Gounod, Charles	Petite symphonie
	Bizet, Georges	Roma
	Dvořák, Antonin	Symphony No.7, Op.70
	Elgar, Edward	The Crown of India, Op.66
	Tchaikovsky, Pyotr Ilyich	The Nutcracker, Op. 71 – Dance Of The Sugar-Plum Fairy
Modern	Debussy, Claude	2 Arabesques
	Villa-Lobos, Heitor	12 Estudos
	Strauss, Richard	Also sprach Zarathustra
	Ravel, Maurice	Miroirs
	Hindemith, Paul	Organ Sonata No.2
	Prokofiev, Sergei	Piano Concerto No.1, Op.10
	Mahler, Gustav	Symphony No.1
	Holst, Gustav	Terzetto
	Barber, Samuel	Adagio For Strings
	Sibelius, Jean	Finlandia, Op. 26
	Gershwin, George	Rhapsody In Blue