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# ***Music in the Natural-Tone System: Josip Slavenski, Microtonal Folklore and Electroacoustic Music***

*A música no sistema de Tons Naturais: Josip Slavenski, Folclore microtonal e música eletroacústica*

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# ***Music in the Natural-Tone System: Josip Slavenski, Microtonal Folklore and Electroacoustic Music***

Miloš Bralović

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## **Resumo**

Neste artigo, apresento a minha investigação sobre a única obra microtonal do compositor Josip Slavenski (1896–1955), nascido em Čakovec e radicado em Belgrado, intitulada *Música no Sistema de Tons Naturais* (1937). Abordo inicialmente o lugar de Slavenski na história da música jugoslava/sérvia, bem como a sua investigação no domínio da música microtonal através do folclore musical e a subsequente criação do «sistema de tons naturais». De seguida, avanço com a análise da obra *Música no Sistema de Tons Naturais*, enquanto peça experimental de Slavenski neste domínio, concluindo a análise com uma possível recepção, uma vez que esta peça nunca foi executada. Em conclusão, estabeleço relações entre esta peça e as outras obras de Slavenski compostas durante a década de 1930, que constituem o seu legado à geração mais jovem de compositores sediados em Belgrado.

**PALAVRAS-CHAVE:** Josip Slavenski; *Música no Sistema de Tons Naturais*; Música microtonal; Folclore musical; Acústica.

## **Abstract**

In this article I present my research on the only microtonal piece by Čakovec-born, Belgrade-based composer Josip Slavenski (1896–1955), *Music in the Natural-Tone System* (1937). I begin with Slavenski's place in Yugoslav/Serbian music history, and Slavenski's research in the domain of microtonal music through musical folklore, and subsequent creation of the 'natural tone system'. I continue with the analysis of *Music in the Natural-Tone System*, as Slavenski's experimental piece in this domain, concluding the analysis with a possible reception, since this piece was never performed. In conclusion, I connect this piece with the other Slavenski's works composed during the 1930s, which form a legacy he left to younger generation of composers based in Belgrade.

**KEYWORDS:** Josip Slavenski; Music in the Natural-Tone System; Microtonal music; Musical folklore; Acoustics.

## Introduction

Josip Slavenski (b. Štolcer, 1896–1955) is one of the most successful composers to emerge from what is now Serbia (and during his lifetime, he was from the Austro–Hungarian Empire, the Kingdom of Serbs, Croats and Slovenes, the Kingdom of Yugoslavia, and the Federal People’s Republic of Yugoslavia). And yet, his nonconformist, somewhat visionary poetic and its artistic results have hitherto remained without a proper aesthetic valorisation. Although there were significant contributions to the research of Slavenski’s works, starting from the late 1950s, throughout the 1980s, which highlighted the originality of Slavenski’s compositional process in his orchestral, chamber and choral works, there is a significant lack of scholarship regarding his experimental compositional practice, that was certainly unique, when we consider the timeframe of his active period (late 1910s to early 1950s). Among Yugoslav and international musicologists and fellow composers who wrote about Slavenski’s life and works, one should mention Petar Bingulac (1966; 1966a), Seadeta Midžić (1968), Bojan Bujčić (1978), Vlastimir Peričić (1984), Sanja Grujić–Vlajnić (1984), Milena Medić (Medić M. 1995), Ana Kara–Pešić (2000), Danijela Š. Beard (2003; 2013), Katarina Tomašević (2009), Jim Samson (2013), Mirjana Živković (2014), Melita Milin (2020), and others. A two–volume monograph by Eva Sedak, titled *Josip Štolcer Slavenski: Skladatelj prijelaza [Josip Štolcer Slavenski: Composer of the Transition]*, published in 1984, still serves as the most comprehensive account on this composer (Sedak 1984). There are also several edited books on various aspects of Slavenski’s life and work (Živković 2006; I. Medić 2017), as well as lengthy studies of his works published as introductory texts to sheet music scores within the critical edition of his Collected Works (eds. Živković and Sedak).<sup>1</sup> In more recent writings on Slavenski, the various problems of his experimental research and composition were addressed by musicologist Vesna Mikić (2006; 2007; 2009). On the other hand, the most recent paper on the subject of microtonal music in Serbia is a comprehensive overview and analytic study written by Miloš Zatkalik. However it does not incorporate any of Slavenski’s experimental pieces (Zatkalik 2020).

In this article I analyse a lesser–known piece by Slavenski, *Music in the Natural–Tone System*, completed in 1937. This piece represents one of the cornerstones in the history of Serbian/Yugoslav music of the time, where avant–garde tendencies appeared later than in other European countries. Since the majority of avant–garde pieces (notably those by then young members of the Prague Group) were written abroad (in Prague), an additional value of Slavenski’s

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<sup>1</sup> From 1980 to 1990 the Croatian Composers Association and the Serbian Composers Association led a joint project of publishing complete works of Josip Slavenski. In this project, a total of forty–five volumes were planned. By the end of the year 1990, a total of sixteen volumes were published; however, any further work on the planned volumes was abruptly stopped by the dissolution of Yugoslavia in 1991. According to the volume organisation plan made by Mirjana Živković in 1981, Slavenski’s choral music was gathered and grouped in two volumes, which were not published during the 1980s. On Živković’s initiative, and thanks to the efforts of the Serbian Musicological Society, the two volumes were published in 2016 and 2017 (for more information see: Živković (2014)).

*Music in the Natural-Tone System* comes from the fact that it was written in Belgrade, then the capital city of the Kingdom of Yugoslavia. I begin by discussing the place of Slavenski's works within the context of Serbian art music history. This is followed by a brief discussion of the genesis of Slavenski's 'natural-tone system', an analysis of his folklore transcriptions, and the development of the actual system in the 1920s and early 1930s. Finally, I analyse the features of the piece itself, while reconsidering Slavenski's position in the history of Serbian and Yugoslav music and finally reflect on the unfortunate fate of *Music in the Natural-Tone System*.

## The Origins of Slavenski's Natural-Tone System

In 2029 Serbian music culture will celebrate its bicentenary. In the newly founded semi-autonomous Principality of Serbia, Prince Miloš Obrenović invited Josif Šlezinger (1794–1870), a composer of Czech Jewish descent, born in Sombor (then in the Habsburg Empire, nowadays in the northern Serbian province of Vojvodina), to come to Kragujevac, capital of the Principality of Serbia. In 1829, Šlezinger responded to his call and became a music teacher and a military band leader. His work, alongside other composers who worked among the Serbs, both within and outside of the borders of nineteenth-century Serbia, such as Milan Milovuk (1825–83), Kornelije Stanković (1831–65), Jovan Paču (1847–1902), Dimitrije Mita Topalović (1849–1912), and several Czech musicians, for example, Václav Horejšek (1839–74), Hugo Doubek (1852–97), Robert Tolinger (1859–1911), and others—is regarded as a pioneering work for the development of Serbian art music and Serbian national romantic style. Its culmination in the late nineteenth and early twentieth century is found in the works of Josif Marinković (1851–1931) and Stevan Stojanović Mokranjac (1856–1914). The end of World War I in 1918 and the establishment of the Kingdom of Serbs, Croats and Slovenes opened the door to new artistic tendencies. The interwar period was distinguished by stylistic pluralism, spanning from national romanticism, sometimes leaning towards impressionism, atonal expressionism, and quarter and sixth-tone music.<sup>2</sup>

Čakovec-born and, since 1924, Belgrade-based composer Josip Slavenski was among leading modernist composers of the interwar period in the Kingdom of Serbs, Croats, and Slovenes (since 1929 the Kingdom of Yugoslavia). Slavenski's folklore-driven expressionism was prompted by his upbringing in the provincial town of Čakovec (in present-day northwestern Croatia, then Austria-Hungary) and further developed during his studies at the Budapest Academy (1913–6), and Prague State Conservatory (1920–3). During his studies in Budapest, abruptly ended by Slavenski's recruitment in World War I, he informally collaborated with Béla Bartók (1881–1945) on folksong transcription. This skill was in many ways crucial for his future compositional style. Namely, Slavenski sought compositional innovations in implementing

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<sup>2</sup> For more information on the development of Serbian music up to 1945 see: Đurić-Klajn (1971); Bergamo (1980); Tomašević (2009); Gostuški (2017).

some features of musical folklore into his art music, which led him to develop the ‘natural-tone system’.

Slavenski also actively contributed as one of the founders and members of Belgrade’s ‘Ruđer Bošković’ Astronomical Society since 1934; after World War II, he constructed his own telescope (cf. anon. 1956, 16). According to the letter dated 6 June 1950, found in the manuscript legacy kept at the Library of the Faculty of Music in Belgrade, Slavenski became a member of the French Astronomers’ Society as an amateur astronomer. According to an obituary published in January 1956 in the journal *Vasiona* [*The Universe*] (to some extent, the text is a reference to the commemoration of Slavenski’s death, on 18 December 1955, held in the ‘Ruđer Bošković’ society), one could conclude that Slavenski was more appreciated as an astronomer, a composer, and a visionary among the fellow members of the astronomers’ society, then among his fellow musicians.

The beginnings of microtonal music among Serbian composers are usually attributed to the generation born in the first decade of the twentieth century and called ‘the Prague Group’,<sup>3</sup> because they studied at the Prague State Conservatory during the 1930s. However, Josip Slavenski’s attempts in microtonal music can be traced to the early 1920s (or even earlier, considering several scarce notes in his manuscript legacy, kept at the Library of the Faculty of Music in Belgrade). It is also worth noting that not all members of the Prague group experimented with microtonal music, nor did all of them have any substantial contact with the composer who is considered to be among the pioneers of microtonal music in the early twentieth century, Alois Hába (1893–1973).

Serbian art music in the 1930s had its brief ‘meeting points’ with the European avant-garde tendencies: Ljubica Marić wrote the first atonal piece in the history of Serbian music, *Wind Quintet* (1931), while her and Vojislav Vučković’s explorations of microtonal music started about the same time; Milan Ristić started composing quarter-tone pieces in 1937, while studying in Hába’s class. Yet, all the avant-garde tendencies during the interwar period abruptly ended with the outbreak of World War II. Nevertheless, when it comes to microtonal music between the two world wars, Serbian composers who were open to new tendencies were not falling behind their European and American counterparts such as the aforementioned Alois Hába, Ivan Wyschnegradsky (1893–1979), or even Charles Ives (1874–1954), although his music was probably not known to Belgrade composers.

Among the members of the Prague group, Marić wrote her first microtonal pieces in the late 1930s: *Suite for Quarter-Tone Piano*, 1936/7, *Trio for Clarinet, Trombone and Contrabass*

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3 Members of the Prague group were Dragutin Čolić (1907–87), Milan Ristić (1908–82), Ljubica Marić (1909–2003), Vojislav Vučković (1910–42), and Stanojlo Rajičić (1910–2000). In Serbian musicology, they are usually joined by their slightly older contemporaries, Mihovil Logar (1902–98), and Predrag Milošević (1904–88). Among these composers, only Čolić, Marić and Vučković attended Hába’s (facultative) courses in quarter- and sixth-tone music, while Ristić was the only student in Hába’s ‘regular’ composition class, and also attended his courses in quarter- and sixth-tone music. Compare: Bajgarová and Šebesta (2010); Bralović (2022).

[Quarter-Tone Trio], 1937/8, and Canon for Quarter-Tone Piano, 1936/7; unfortunately, all the scores have been lost (Milin 2018, 438). Vlastimir Peričić states that Vučković wrote his quarter-tone Trio for two clarinets and piano as a student in Prague (Peričić 1969, 572), therefore before 1933, when he graduated in the class of Josef Suk. Dragutin Čolić completed his Concertino for quarter-tone piano and string sextet in 1932 (Zatkalik 2020, 118), followed by two Suites for Quarter-tone piano (Peričić 1969, 85).

Belgrade's music life throughout the 1930s was not open to innovations. Not only Slavenski's works, but also more ambitious, dominantly expressionist works of his former students—the Prague Group of composers—were not positively received, due to their technical difficulties which exceeded the capacities of Belgrade orchestras and ensembles of the period.<sup>4</sup> Still, Slavenski, alongside Vojislav Vučković, gave a public lecture at the Kolarac People's University (Kolarčev narodni univerzitet), within the series on music titled 'Musical Lesson' ('Muzički čas'), dedicated to quarter-tone music (Peričić 1969, 118–9). In 1939, Slavenski published an article 'Electronic Instruments', trying to approach the most novel trends and their importance for contemporary composers (cf. Slavenski 1939; Tomašević 2009, 132).

## Slavenski's Natural-Tone System and Its Genesis

As previously mentioned, Slavenski was aware of non-tempered pitches and intervals found in musical folklore. Throughout the 1910s, and especially during his studies in Budapest, Slavenski sought a way to notate them as accurately as possible. Having that in mind, I will briefly elaborate on Slavenski's early exploration of microtonality starting from the period around 1920.

What confirms Slavenski's early interests in microtonal music and experimental composing is the incomplete cycle titled *Misterij* [*Mystery*], conceived as a two-act symphonic opera depicting events from the creation of the universe to the spiritual awakening of humans. First sketches of this cycle date back to 1918/9<sup>5</sup> (cf. Bralović 2024). Since several of the parts of the *Misterij* were composed as individual pieces throughout the 1930s, it is plausible that *Music in the Natural-Tone System* was also conceived as a part of this cycle (Bralović 2024). Some of his ideas were embodied later in 1920, in Slavenski's oldest preserved microtonal folksong transcription.

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<sup>4</sup> More radical breakthroughs into the expressionist sharpness were, in Belgrade, destined to fail; those who felt that they failed were the best were the representatives of the youngest generation of composers, when, near the end of the fourth decade, they brought, from their studies in Prague, their "ambitious" music scores. The main obstacle for their approval was not only the conservative audience's taste; their "avantgarde" works were rejected by musicians themselves, mainly because the technical demands of the compositions were high above their performance abilities' (Tomašević 2009, 99).

<sup>5</sup> For more details on the first sketches of *Misterij* see: Sedak (1984, 237-8, fn. 21).



Upon arriving in Prague to study composition in the class of Vítězslav Novák (1870–1949), Slavenski met Hába. The two became friends and Hába introduced Slavenski to his quarter-tone system. The earliest use of Hába's quarter-tone notation can be found in Slavenski's transcription of Dalmatian folksong *Lipa piva* (*A Linden Tree Sings*), dated 'Praha, 1920' (Ex. 1), and on the next page, he explained why it was necessary to use microtonal intervals.<sup>6</sup> Slavenski stated:

Almost everyone knows that starting with Kuhač [Franjo Ksaver Kuhač, 1834-1911], all our great musicians (Brajša [Matko Brajša-Rašan, 1859-1934], Dobronić [Antun Dobronić, 1878-1955], Žganec [Vinko Žganec, 1890-1976], Širola [Božidar Širola, 1889-1956] etc.) noticed that our folk melodies are mostly sung in so-called natural (non-tempered!) tones, but they did not transcribe them as such, because they were forced to use the tempered system—not adequate for natural tones (already known by the Ancient Greeks!)—and to explain to us with tempered system how a peasant was singing; listening to another singer from the same region, everyone would know that the singer was singing correctly! [Meaning: tempered notation is incorrect] (Slavenski 1920, s. p. *Transl. by author.*)

In the end, Slavenski offered a brief musical analysis of the song, defining the non-tempered tone row, to facilitate the task for the singers who would eventually perform it (see Ex. 2).

The example of the song *Lipa piva* demonstrates the nature of the experimental compositional procedures in Slavenski's works, which mostly had their roots in musical folklore. Although Slavenski joined the Belgrade music scene in the autumn of 1924, upon finishing his studies in Prague and a brief appointment at the Music Institute (today Music Academy) in Zagreb, this early experiment with quarter-tone notation might be among the first, regarding the composers from Kingdom of SCS / Yugoslavia, and certainly the first in the history of Serbian music, that he became a part of after moving to Belgrade.

## Natural-Tone System: From Purpose to Performance Issues and Analysis

Slavenski's research on musical folklore (from the Far East to the Balkans and encompassing North and East Africa) continued throughout the late 1920s and 1930s. While researching the folklore of the Balkan peoples, Slavenski used folksong collections prepared by local researchers; when it comes to the farther regions of the world, Slavenski used recordings—most notably, he came into possession of Erik von Hornbostel's collection of field recordings titled *Musik des Orients*, possibly sometime in the early 1930s.<sup>7</sup> Therefore, the more Slavenski

<sup>6</sup> There are four transcriptions of this song. The first transcription is cited above; the second is arranged for a mezzosoprano and alto voices, with a possible string quartet accompaniment, and lyrics translated into German; the third is an arrangement for two alto voices and a polyrhythmic configuration, dated 1921-2; and the fourth transcription, for one voice and quarter tone piano, was left unfinished.

<sup>7</sup> For more information see Bralović 2024a. *Musik des Orients*, a collection of 24 recordings from Japan to Tunis was published in 1931, see: <<https://www.discogs.com/release/15541352-Univ-Prof-E-M-von-Hornbostel-Musik-Des->

researched musical folklore, the more he felt the need to refine the scales and notation systems that he would use in his folklore-inspired pieces. Aware of the limitations of his *milieu*, while returning from a trip to Baden-Baden in 1936 where his orchestral piece *Music for Orchestra* (*Music 36*, 1936) was premiered, he briefly stayed in Frankfurt, where he met Bruno Helberg (1884-1951) who demonstrated to him the instrument that he invented, hellertion; while in Frankfurt, Slavenski decided to buy a trauttonium, one of the three manufactured by Siemens (cf. Slavenski M. 2006, 133-4).

The 'natural-tone system' that Slavenski was developing was based on dividing an octave into fifty-three equal parts, thus delving into the space of eight-tone music. To further test and possibly perform music in this system, Slavenski turned to electroacoustic musical instruments. On the other hand, Slavenski researched older acoustic instruments which had the fifty-three-tone division of the octave, such as Bosanquet's (Robert Holford Macdowall Bosanquet, 1841-1912) enharmonic harmonium, developed around 1873.

Slavenski composed *Music in the Natural-Tone System* in 1937. He initially wanted it to be performed at the *Société internationale de la musique contemporaine* (SIMC - ISCM) festival held in London the following year. Unfortunately, the piece was rejected as it was impossible to perform (cf. Slavenski M. 2006, 135).

*Music in the Natural-Tone System* is written in two parts, called 'étapes'. The first part, *Cantabile, spontaneo ritmico*, is written for Bosanquet's eight-tone harmonium, containing fifty-three tones in an octave. The texture consists of a two-part, ornamented polyphony, resembling heterophonic singing often found in the Balkans, with a texture somewhat resembling the one found in the song *Lipa piva*. The origin of the melodic material is unknown. Regarding the melodic structure and several chords that end the piece, one concludes that Slavenski wanted to employ the natural relations derived from the harmonics on the tone C<sub>0</sub>.

The foreword to the first part contains the definition of the eight-tone system used in the piece, where every tempered tone can be sharpened or flattened by one, two, or three commas. Also, microtonal, 'natural-tone system' indicates that Slavenski wanted to use natural frequencies, that is, intervallic ratios from the harmonic row, as found in folk music (see Ex. 3). At the end of the piece, the texture changes, from a simulation of two-part folk singing to a melody accompanied by chords. The construction of the chords is based on the stacked harmonics, where the signs for microtonal alterations are used according to the ratios of natural intervals. The piece ends with a note: *Bosanquet instruments j[o]uer e[st] très facil[e] [sic!]* (*Bosanquet's instruments are easy to play*), dated Belgrade, 10 November 1937.

Music for Natur-ton-system  
I stapp=:

for Concert acoustic instruments (Improvement of 53 tones)  
(London, 1875!)

J. Slavenski  
1937

(72=♭) Cantabile, spontaneo rythmico.

Example 3. Josip Slavenski, *Music in the Natural-Tone System*, part I, Cantabile, spontaneo rythmico, mm. 1-12

The second part, *Molto dinamico*, was written for three timpani (one performer) and four trautioniums, covering a large, eight-octave register (C0–C3, C2–C4, C3–C6, C4–C7). The previously mentioned cycle *Misterij*, conceived before 1920, was developed throughout the two interwar decades. In one undated manuscript sketch, not older than 1930, Slavenski made an

instrument list for *Misterij*, which, among speaking and singing soloists, children and mixed speaking and singing choir, and a large orchestra, contains several electronic instruments, hellertion, electric piano, and just like in the second part of *Music in the Natural-Tone System*, four trauttoniums (cf. Slavenski, A sketch for *Cosmophonia [Misterij]*, s. a., s. p.). What is even more important—regarding the instrument list and conception of *Misterij*, (according to the manuscript sketch from the 1930s)—is that the majority of Slavenski's symphonic pieces composed in the 1930s share multiple common features, such as the same twelve-tone row, ostinato patterns, and other thematic materials, starting from *Chaos* for full orchestra (1932), *Symphony of the Orient* (1934), *Music for Large Orchestra (Music 36)*, or *Music for Chamber Orchestra (Music 38, 1938)*—including *Music in the Natural-Tone System*.<sup>8</sup>

The timpani part plays an ostinato pattern found in other pieces composed in the 1930s (such as the two chronologically closest orchestral works, *Music 36* and *Music 38*). Meanwhile, the fourth trauttonium plays the pedal tone Co. In Slavenski's writings on *astroacoustics*, the frequency of 1Hz corresponds to the frequency of the Sun; being inaudible to humans, Slavenski transposed it four octaves higher, to the frequency of approximately 16Hz, or Co, the same pedal tone which appears in *Chaos* for full orchestra, and it is often described as the 'primordial C' (Bralović 2024, 52). The third trauttonium (m. 3) develops a melody starting from the second harmonic, C1, reaching the fourteenth harmonic in m. 28. The second trauttonium starts with the eighth harmonic, C3. First trauttonium appears in m. 38, developing the melodic material from the sixteenth harmonic (see Ex. 4).

The melodic material changes in m. 52, when a twelve-tone row with figuration (C-D-F-E-F#-Eb-Cb-Ab-Db-Bb-A-G) appears in the parts of the upper three trauttoniums, while the fourth still plays the pedal tone Co. This twelve-tone row, rhythmically developed in triplets with a pedal tone C, is quoted from *Chaos* for full orchestra. With its appearance, Slavenski switches from a microtonal 'natural-tone' system to the tempered system. In the end, the fourth trauttonium also plays the twelve-tone row with figuration, returning to pedal tones in m. 100, Gb1, and Do, m. 106 (see Ex. 5).

All four trauttoniums are set to produce sound of the same registers (or timbres)—'strings' should be used during the first 51 measures, mm. 52–87 'winds with reed' are to be used, mm. 88–105 timbre 'brass' is used, and from m. 106 to the end of the piece Slavenski noted '*Timbre avec [le] plus riches sous harmonique[s]*' [sic!] (*Timbre with the richest sub-harmonics*).

On the last page, Slavenski wrote the instructions for playing intervals on electroacoustic instruments, the so-called 'tonika-solfa' (movable *do*) method (see Ex. 6).

<sup>8</sup> For more information about the cycle *Misterij* by Josip Slavenski, its full genesis, development and completed parts see: Bralović (2024). During the 1920s and 1930s, while developing the concept of *Misterij*, Slavenski also developed his pseudoscientific discipline that he named *astroacoustics*. See: Peričić (1984); Mikić (2006; 2007; 2009); Živković (2014a). Slavenski also gave a lecture on *astroacoustics* in the Astronautical Club in Belgrade in March 1955.

The image shows two systems of handwritten musical notation. The first system consists of a piano part (left) and a violin part (right). The piano part features a melodic line with various dynamics (p, pp, f) and articulation (accents, slurs). The violin part has a similar melodic line with slurs and accents. The second system continues the piece, with the piano part showing more complex rhythmic patterns and the violin part maintaining its melodic flow. The notation is dense and expressive, characteristic of Slavenski's style.

Example 4. Josip Slavenski, *Music in the Natural-Tone System*, part II, Molto dinamico (crochet = 80), mm. 36-41

The image shows two systems of handwritten musical notation. The first system consists of a piano part (left) and a violin part (right). The piano part features a melodic line with various dynamics (p, pp, f) and articulation (accents, slurs). The violin part has a similar melodic line with slurs and accents. The second system continues the piece, with the piano part showing more complex rhythmic patterns and the violin part maintaining its melodic flow. The notation is dense and expressive, characteristic of Slavenski's style. Below the second system, there are performance instructions in French: *Molto apilato plus (♩ = 132) Timbre avec trilles sans harmonique.*

Example 5. Josip Slavenski, *Music in the Natural-Tone System*, part II, Molto dinamico (crochet = 120 - crochet = 132), mm. 102-107

exercices for trautes faring „Commus“ (dimin. et amp.)  
 or the electric instruments.  
 1) for Pytharros „Commus“ (focantat metad-Tonica-3-4ta) English method!

2) for Sidyguas „Commus“ (Tera) a) diminishing (ex. 1)  
 a) dim. ex. 1  
 do-mi do-mi do-mi do-do

3) imp. ex. 2  
 mi-sol mi-sol mi-sol do-do

4) amp. ex. 3  
 do-mi do-mi do-mi do-do

5) sept. nat. ex. 4  
 sol-fa do-do sol-fa do-do

Ex. aliquotones =

Le signes de transpositions en usage et été gardés  
 (# 90 etc) le nouveau x signes sont

- = élévations d'un Commus ex. une gamme des Commus
- = „ deux „
- = „ trois „
- = abaissement d'un „
- = „ deux „
- = „ trois „

-1/3 (cinq) -1/2 0 +1/2 (cinq) +1/3  
 -3 -2 -1 0 +1 +2 +3 Commus

Example 6. Josip Slavenski, Music in the Natural-Tone System, endnotes

The analysis of *Music in the Natural-Tone system* demonstrates an innovative way of integrating music inspired by musical folklore (and with its features—non-tempered scales, specific tone rows, etc.) into avant-garde electroacoustic music. Unfortunately, starting from the instrument list, this piece remained unperformed—Bosanquet’s enharmonic harmonium only existed as a museum exhibit instrument, and four trauttoniums were, according to the

organisers, difficult to get for the SIMC festival in London (Slavenski M. 2006, 135).<sup>9</sup> This piece represents the result of Slavenski's constant search for innovation through the implementation of the elements of musical folklore. Therefore, these unusual instruments that the piece was written for were a means for Slavenski to give his ideas a full embodiment in sound.

## Towards a Possible Reception?

Slavenski's contemporaries often criticised works of the 1930s were often criticised by his contemporaries. While more traditional-oriented critics (often called 'traditional Europeans') claimed that Slavenski's works were too complex to be understood by the public, the progressive critics, connected to the political left, saw a lack of social engagement in them. The major figure among 'traditional Europeans' was a composer, music critic, and musicologist, Miloje Milojević (1884–1946), who was openly negative in his reviews of Slavenski's works. On the occasion of a concert of Yugoslav choral music, on 11 April 1926 in Belgrade, when Slavenski's choral piece *Prayer to the Good Eyes* (*Molitva dobrim očima*) was performed, Milojević claimed that the piece was difficult and did not contain anything artistic; a progressive music critic, avant-garde literary writer, and painter, Branko Ve Poljanski (real name Branislav Micić, 1897–1947) responded to Milojević and said that he was wrong (Bralović 2021, 599). This division of music critics in Belgrade was the most obvious after the premiere of *Symphony of the Orient* in 1934 (Slavenski M. 2006, 127).

Slavenski's pieces composed throughout the 1930s were seldom performed in the composer's lifetime. Negative reception of Slavenski's works abroad was prompted by the rise of National Socialism in Germany. *Symphony of the Orient* was rejected for publication by Schott in 1934, because it contained the movement 'Jews' (Slavenski M. 2006, 128). In the same year, when *Symphony of the Orient* premiered, both Milenko Živković (1900–64), as a conservative critic, and Dragutin Čolić, as a progressive one, wrote negatively about that piece (Tomašević 2009, 184). Živković considered the piece to be too progressive and naturalist in expression, while the same feature—naturalist expression was a retrograde tendency for a critic such as Čolić.

The German premiere of *Music 36* in Baden–Baden received negative reviews in the German press (Slavenski M. 2006, 133). In the words of Milana Slavenski, '*Music 36* returned to Belgrade with him, to join his other, unperformed, or seldom performed works. He was lacking a platform for performances of his new works – music of *new sound*, which absorbed him completely' (Slavenski M. 2006, Transl. by author.)

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<sup>9</sup> Today, there might be a possibility to replace four trauttoniums set to different registers with more contemporary instruments, mixtur-trauttoniums. Unfortunately, there is no replacement for Bosanquet's harmonium. There was an attempt at an electroacoustic studio realisation of the second part of *Music in the Natural-Tone System* in the 1970s, when Eva Sedak made an experimental recording of the second part. Sometime later, Paul Pignon (b. 1939) also made an electronic realisation of the second part, for a television documentary on Slavenski, broadcast on Television Belgrade Channel 2, in December 1976 (Slavenski M. 2006, 135). This piece was never performed in its entirety, nor was it realised in an electronic studio.

Before his work on *Music in the Natural-Tone System*, Slavenski wrote to Rikard Švarc (Schwartz, 1897–1941), on 18 October 1936,

[...] Heliophony<sup>10</sup> will be finished in six months, and it may not be performed in 99 years (because of the amplified instruments and the applied natural-music system []), but I work despite all hardships, lack of understanding and mistaken beliefs of my contemporaries!

[...] Bach demonstratively struggled for the tempered system (Das Wohltemperierte Klavier), Hába for the tempered quarter-tone system, and I for the natural-tone system, which I have been working on since my young days, and I have gradually matured.

[...] However, as a musician, I ‘preach’ the truth! A ‘perfect octave’ is as important to me as my most chaotic ‘hypersound’; when I illustrate ‘Pagans’ or ‘Buddhists’, or ‘Macedonians’, as a kind of ‘Medium’, I use that ‘stimmung’, i.e. the ‘sound truth’, and thus create so much confusion and contradictions to those who think everything should be ‘classified’ in keeping with comfortable patterns. [...] (Slavenski 1936, after: Kara-Pešić 2000, 125-6).

Here, Slavenski himself summarised his struggles during his most fruitful years. On one hand, his ideas were obviously misunderstood; on the other, it was (and to some extent still is) difficult to perform some of his pieces. Nevertheless, his compositional work remained as vital as in previous years. Unfortunately, Slavenski did not write any other microtonal pieces after 1937. His postwar engagement included a position as a composition teacher at the Music Academy in Belgrade, while his compositional work revolved around mass songs and other genres preferred in socialist realism. Among them, the most significant is the *Symphonic Epic*, completed in 1945, which drew negative attention before its premiere,<sup>11</sup> causing Slavenski’s gradual withdrawal from composing in the early 1950s.

The last ten years of Slavenski’s life—from the end of World War II to the composer’s untimely death at 59—were dedicated to further exploration of Slavenski’s proto-scientific discipline, *astroacoustics* (see fn. 7), based on the sounds created by vibrations of celestial bodies, and radiation in space, vibrations of the Earth, and vibrations of both non-organic and organic matter (from chemical elements and their compounds, to the development of human species). Somewhat withdrawn from the public eye, deeply delving into his visionary concepts, Slavenski actively researched the universe, with the premise that all the natural laws are there to complement each other.

Despite the negative reception of his other works (and the one *Music in the Natural-*

<sup>10</sup> Slavenski’s incomplete work. Only the introduction, titled *Chaos* for full orchestra, is finished.

<sup>11</sup> *Symphonic Epic* premiered on 1 September 1949, in Belgrade, with Oskar Danon (1913–2009) conducting Radio Belgrade Symphony Orchestra. Slavenski wrote it as a cantata with soloists and choir. Before the premiere, the cantata was criticised for containing inadequate lyrics and naturalist sound effects in the orchestra. Slavenski erased parts of the vocal soloists and mixed choir, and the piece premiered as a four-movement programmatic symphony. See: Sedak (1984, 256–7); Slavenski M. (2006, 149–150); Bralović (2020).

*Tone System* could have had), and the fact that he never composed another microtonal piece after *Music in the Natural-Tone System*, Slavenski's enthusiasm did not fade, throughout the difficult war years, and post-war social engagement. He remained active in his research of microtonal music as a part of a larger concept, *astroacoustics*, where the natural-tone system was, for Slavenski, the most applicable means for accurately transcribing (mostly inaudible to the human ear) sounds of the universe.

## Conclusion

Josip Slavenski's only microtonal piece, *Music in the Natural-Tone System* left almost no impact on the history of Serbian/Yugoslav music. The piece is unknown to almost anyone outside of the circle of experts dedicated to studying the life and works of Slavenski. Eva Sedak claimed that this piece was within the borders of already established Slavenski's poetic and compositional procedure, despite the 'unusual' instruments:

This, somewhat extravagant movement [the second part of the piece], almost symbolically reflects the restraints (compositional automatism, repetitiveness of patterns), but also the clairvoyant views (autonomy of sound, and linearity), pointed out as important elements of Josip Slavenski's chamber music texture. Next to this, the movement is also interesting as a pioneering step in the domain of technological novelties, still filled with the arsenal of Slavenski's already known content (Sedak 1984, 138).

The claim, although correct at a first-glance observation, raises the question of the role of Bosanquet's harmonium and four trautioniums in this piece. As Sedak suggests, one might conclude that their use was a means to themselves, an indulgence in new sounds, since Slavenski did not offer any 'new' compositional method. But I would argue a contrary point: since Slavenski had a long-term interest in microtonal music (via musical folklore and precise notation of its non-tempered melodies and intervals), the new instruments became the way to achieve its accurate performance.

Since *Music in the Natural-Tone System* was probably imagined as a part of a large cycle (Bralović 2024), and by its melodic materials similar to pieces created in the same period, it is possible to assume it was the most accurate representation of Josip Slavenski's 'musical truth'. Although there were two attempts at electronic studio realisation of the second part of the piece (see fn. 9), neither the piece itself, nor its more contemporary electroacoustic studio simulation, were performed/reproduced publicly. Having that in mind, a proper critique and aesthetic evaluation are lacking, while all the observations in this text were drawn from the analysis of the score, its relation to other Slavenski's pieces and a possible imagination of what *Music in the Natural-Tone System* could have sounded like. This piece emphasises Slavenski's solitary compositional poetics in the history of Serbian/Yugoslav music. His musical legacy did not have many successors. His student from the Music School in Belgrade, future member of the Prague group, Ljubica Marić adopted some of his ideas, mostly those related to the use of

musical folklore in her works, and the physicality of sound, but in a more intuitive way.<sup>12</sup> His other successor was his first graduate composition student at the Academy of Music in Belgrade, Ludmila Frajt (1919–99).<sup>13</sup> Both of them, although appreciated throughout their professional life, were to some extent seen as out-of-the-ordinary, as the first and second successful contemporary female composers in Serbia, who pursued peculiar interests. Josip Slavenski, his natural-tone system, his solitary yet innovative poetics, compositional technique, and visionary ideas were ahead of his time, and maybe even ours.<sup>14</sup>

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12 Ljubica Marić graduated from Music School in Belgrade in 1929. For more information on life and work of Ljubica Marić see: Milin (2018).

13 Ludmila Frajt studied composition in the class of Miloje Milojević, but due to his poor health and series of unfortunate events during the World War II, she was transferred to the class of Josip Slavenski, where she graduated in 1946. For more information see: Varsaković (2016).

14 One photocopied manuscript score of Music in the Neutral-Tone System is available in the Library of the Faculty of Music in Belgrade (signature SLA-5 78.089.62). So far it is unknown if the studio realisations of the second part mentioned in footnote 9 can be retrieved. There are no recordings available.

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