

Stefan G. Ivković

LISZT'S SONATA IN B MINOR AND TRANSCENDENCE

Abstract. The search for hidden philosophical meanings in Liszt's Sonata in B minor is an open area of research worldwide. In this paper, we use commuting diagrams to uncover new connections between the *Sonata* and Goethe's *Faust*. In the *Sonata*, we also find parallels with Njegoš's *The Ray of the Microcosm* and Dis's *Dungeon*, which indicate the anthroposophic elements in the Sonata. Finally, we highlight the significance and symbolism of the number 3 in the Sonata.

Mathematics Subject Classification (2010): 00A65, 00A99

Keywords: Liszt's Sonata in B minor, Faust, Petar II Petrović Njegoš, Vladislav Petković Dis, commuting diagrams

Mathematical Institute of the Serbian Academy of Sciences and Arts,
Belgrade, Serbia

stefan.iv10@outlook.com

ORCID: 0000-0003-2248-8206

DOI: https://doi.org/10.18485/mi_sanu_zr.2024.29.21.ch5

CONTENTS

1. Introduction	76
2. Presentation of hypotheses and new interpretations of the Sonata	77
3. Final remarks	89
Acknowledgement	89
References	90

1. Introduction

A well-known international research topic regarding Liszt's *Sonata in B minor* is the search for its hidden philosophical meaning. Various theories have tried to interpret the philosophical meaning of this work. The most famous theory suggests that the Sonata is based on Goethe's *Faust* [1]. There is also a theory about the connection between the Sonata, the Bible and Milton's *Paradise Lost* [2], as well as the theory that the Sonata is autobiographical, representing Liszt's own life [3, 4]. It is important to note that many of Liszt's other works, such as the *Mephisto Waltz*, the *Dante Sonata* and the *Faust Symphony*, have explicit references to other works of art, while this is not the case with the B minor Sonata. Moreover, there is no known record of Liszt explicitly stating, either in writing or conversation, that the Sonata is autobiographical. On the other hand, it is known that throughout his life and career, Liszt was inclined towards philosophy and religion, even mysticism and esotericism. In addition, there are several elements in the Sonata that point to the deeper symbolism and meaning. This is exactly what inspired us to try to find a new, more abstract and complex philosophical meaning of the Sonata, which is not exclusively connected with *Faust*, Milton or Liszt's life, but which in a certain sense represents a generalization and synthesis of the existing interpretations, as we indicated in the introduction of the reference [5]. If the Sonata does indeed possess a broader, more abstract philosophical meaning, then it would depict a certain analogy in the creative process of composers and mathematicians. Namely, mathematicians often strive to raise the level of abstraction and even create axiomatic theories that cover many different concrete cases. A possible parallel to this process in artistic creation could be the existence of some general, abstract philosophical meaning in Liszt's Sonata, which also contains elements of Goethe's *Faust*, Milton's *Paradise Lost* and Liszt's life.

It is also interesting that Liszt wrote this Sonata before an important turning point in his life when he decided to leave his concert career and devote himself

exclusively to composing and teaching. Therefore, there is a possibility that in this Sonata Liszt wanted to summarize his life experiences and philosophical insights. For these reasons, it is natural to assume that the sonata represents a kind of deep psychological analysis in the spirit of the philosophy of Goethe's *Faust* as well as in the spirit of the philosophy of Milton's *Paradise Lost*, given that Liszt was inspired by *Faust* in his creativity, and that he was also inclined towards religion. The theme of spiritual transcendence and introspection, where one delves into the inner microcosm as a reflection of the macrocosm is a theme characteristic of many works of art, and as an example we can cite Hesse's works *Damian* and *Siddhartha*.

Furthermore, as also mentioned in the introduction of the reference [5], Liszt used the technique of motif transformation in his sonata. In reference [5], this technique is compared with topological deformations in topology, and a possible philosophical interpretation is also discussed. Apart from these observations, we would like to point out that the technique of motif transformations in a certain sense has parallels with the historical development of different languages. Namely, it is known that certain linguistic theories advocate the thesis of the existence of a single, common protolanguage, that the roots of many words come from that protolanguage, and that contemporary words have evolved through numerous transformations of those roots over time.

Our idea in reference [5] was to look for the philosophical meaning and message of this sonata by identifying connections between different themes and characters, realized through common motifs in those themes. The inspiration for such an approach comes from the mathematical concept of commuting diagrams, which will be elaborated in the next chapter. Moreover, this approach is also used in linguistics in connection with the above-mentioned theory of the existence of a protolanguage and the common root of words. According to this approach, words with a common root in the protolanguage may have different meanings in the present-day languages, but all these meanings have some common element or sense that connects them, and that element/sense reflects the original meaning of the root in the protolanguage. (This linguistic approach was discussed during Noel Putnik's lecture entitled *De harmonia mundi: a philological historical overview of the concepts of symmetry and harmony at the Mathematics and Music seminar*.)

In this paper, using the same approach, that is, by analyzing the connections and identification of different themes through a common motif, we will present an interpretation of the sonata that differs from the one in reference [6] and is closer to the interpretation in reference [4].

2. Presentation of hypotheses and new interpretations of the Sonata

Before presenting our interpretation, we will recall some concepts and settings from reference [5]. As stated in that paper, in music, each theme in a composition has its own specific character, and in program music (music with a concrete literary background), themes and characters usually symbolize corresponding literary terms and contents. From a formal music-historical point of view, Liszt is associated with the so-called "New German" school to which Berlioz and Wagner also belonged, and they composed program music. In Liszt's Sonata in B minor, we can identify

themes with certain (literary) terms and content. However, unlike some of Liszt's other compositions, this sonata does not have a specific literary background, it gives room for different interpretations. For this reason, in this paper we will identify the themes in the sonata using general terms and contents, but somewhat different from those presented in reference [5].

Let us denote the literary content-meaning-character-concept abbreviated as LMCC. We can associate a certain LMCC with each theme, and the connection or identification of two different themes is achieved through a common motif that is used as a building block for both topics. In this way, we get a diagram, and the question is whether the diagram commutes, that is, whether there is any connection or identification of LMCC 1 and LMCC 2. In this paper, as in reference [8], we will work under the assumption that the diagram actually commutes. If we accept this hypothesis about the existence of connections-identification of different LMCCs through the commuting diagram, then such a setting gives us opportunities for several new interpretations, depending on which LMCCs in the diagram we associate with the corresponding themes.

The thematic material for the main theme consists of two motifs, which we will call (as in reference [5]) MOTIF 1 and MOTIF 2. The first motif occurs in the first beat of the main theme, and the second motif occurs in the second beat of the main theme, alternating throughout the theme. It can be said that the second motif has a certain contrapuntal role in relation to the first motif. In Figure 1, MOTIF 1 is marked in blue in the main theme, and MOTIF 2 in red.

The image shows a musical score for piano. The upper staff is in treble clef and the lower in bass clef. The key signature has two sharps (F# and C#). The tempo/mood is 'sempre forte ed agitato'. A blue box highlights a motif in the first two beats of the upper staff. A red box highlights a motif in the second two beats of the lower staff. Fingerings are indicated with numbers 1-5. There are also some performance markings like 'marcato' and 'Ped.'.

FIGURE 1. MOTIFS 1 and 2.

The first motif also appears at the very beginning of the Sonata, but in a slightly longer form, as a diminished (dim) chord is added to the end of the motif. In Figure 2, MOTIF 1 is framed in red, and the broken minor chord within it is framed in blue.

This extended version of MOTIF 1, with the expanded diminished chord at its conclusion, also occurs in the quieter parts of the Sonata (Figure 3), then that motif takes on a character of questioning and searching, even doubt (especially due to the expanded diminished chord at the end of the motif that represents non-resolution).

Apart from these examples, MOTIF 1 appears in throughout the Sonata in various transformations and with various musical characters. Almost all of these

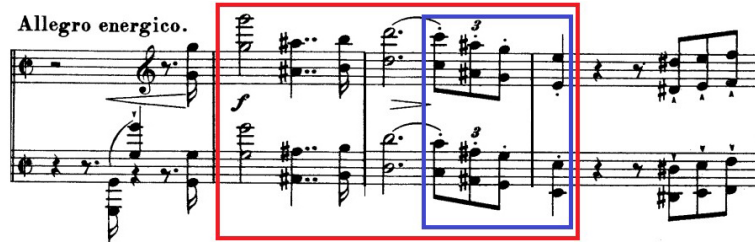


FIGURE 2. MOTIF 1.

FIGURE 3. MOTIF 1 in the meditative section.

examples were already mentioned in the reference [5], but now we will present another interpretation of MOTIF 1. According to the reference [4], MOTIF 1 represents Liszt himself, and according to our hypothesis, MOTIF 1 represents humanity more broadly. The different spiritual states expressed in the mentioned musical examples where MOTIF 1 appears actually represent the spiritual states of man himself.

In other words, the transformations of MOTIF 1 are spiritual transformations and internal changes that a person undergoes at different moments in life. We come to this conclusion precisely by applying the above-mentioned commuting diagram, that is, by connecting different contents through a common motif by which they are presented musically. What connects all these contents is that they depict the human condition at certain moments in his life, representing different spiritual states, which follows from our initial assumption that MOTIF 1 symbolizes humanity (or even specifically Liszt according to the interpretation in the reference [4]).

MOTIF 1 itself consists of a diminished seventh which is a symbol of longing, begging and cries. This observation was previously made in the reference [5], but in the context of this new approach, where MOTIF 1 represents humanity itself, we can see the diminished seventh as an expression of man's longing, desire, and restlessness, in short as the spiritual crucifixion of man.

In addition to the diminished seventh, MOTIF 1 also contains a minor third. The minor third as an interval exudes quiet sadness, while the major third is an expression of serenity and inner peace. In the last transformations of MOTIF

1 at the end of the Sonata, the minor third grows into a major third, which can metaphorically depict that a person finds inner peace at the end of his life's journey, and that the ever-present sadness in a person finally gives way to tranquility after many inner turmoils and transformations (all of which reflect transformations of MOTIF 1, that is, the man himself).

Finally, the diminished (dim) chord appears in the extended form of MOTIF 1. This diminished chord can symbolize the devil's temptation, as we mentioned in reference [5], and we have already noticed that, in the quieter parts of the Sonata this diminutive chord has the character of a question, searches, and doubts.

When we summarize all the elements that characterize MOTIF 1, we can finally draw some parallels with the introduction of Goethe's *Faust*, where Faust longs, desires and suffers for all those charms and beauties of youthful life that he did not live and experience, and the longing and suffering according to our analysis correspond to the diminished seventh and the minor third in the first part of MOTIF 1. In addition, the lonely Faust questions and doubts whether he has chosen the right path in life, and the questions and doubts according to our analysis correspond to the diminished (dim) chord at the end of MOTIF 1. We also find certain parallels with Milton's *Paradise Lost* and with the introduction of Njegoš's *The Ray of the Microcosm*. According to Milton and Njegoš, man in this worldly life is permeated with constant restlessness and sadness (diminished seventh and minor third), but also longing (diminished seventh) for a lost paradise, according to Milton, or longing as a kind of hazy memory of the heavenly preexistence, according to Njegoš. In addition, according to Milton, man faces temptations (diminished (dim) chord), while Njegoš describes man as continually striving to penetrate the secret meaning of existence, life and destiny, which remains an eternal question for man and there is also a latent doubt as to whether a higher, hidden meaning truly exists (diminished (dim) chord).

We can therefore assume that if MOTIF 1 really symbolizes Faust, that is, in a broader sense, humanity itself (or even specifically Liszt), we can assert that Liszt perceives and defines man (Faust) and his inner essence through these three elements. The first element is expressed through a diminished seventh and represents, as we mentioned, desire, longing, restlessness and cry. The second element is a minor third as an expression of quiet sadness, and the third element is a diminished (dim) chord that symbolizes temptation, doubt, questions and searches. The conclusion is therefore that these three elements could express Liszt's conception and understanding of man as a whole, and as we have indicated, these views have a certain support in the introduction to Goethe's *Faust*, Milton's *Paradise Lost* and Njegoš's *The Ray of the Microcosm*.

We will then analyze MOTIF 2 and the LMCCs that may potentially connect with it. According to the reference, MOTIF 2 represents Satan or the diabolical in Liszt himself. However, from our perspective, musically speaking, this motif does not have a devilish character unlike some other motifs in Liszt's works (for example, the diminished (dim) chord in MOTIF 1). As we pointed out in the reference, MOTIF 2 is characterized by a certain rhythmicity and determination, and we accordingly assigned certain symbolic meanings to this motif in the reference

[5]. In this paper, we will present and explain a different analysis of MOTIF 2, which is somewhat closer to the analysis in reference [4], though it still does not categorize MOTIF 2 as a Mephistophelian motif with a devilish nature.

Due to the repetition of the same tone four or five times (depending on the transformations) in the first half of MOTIF 2, we believe that this motif is characterized by a certain inexorability and relentlessness. This leads us to the assumption that this motif actually represents human destiny and real life, or rather the fate that inexorably haunts mankind. As an argument in support of our claim, refer to the opening motif in Beethoven's 5th symphony (Figure 4), which begins with the repetition of the same tone three times, and precisely because of this it is characterized as a "fateful" motif by the wider musical public. We also encounter this phenomenon in Bach's works, specifically in the second movement of the piano concerto in D minor, where the same tones are repeated twice in the melodic line of the bass line (Figure 5), and according to some interpretations, this theme in the bass symbolizes fate and the flaw of life. Finally, and at the very beginning of Liszt's Sonata in B minor, which is discussed in this paper, the tone G is repeated three times in octaves (Figure 6), so we can also observe this motif at the beginning of the sonata due to its character of constancy and indomitability as a motive of fate, but in this case as fate in a cosmic sense due to the somewhat more neutral and less subjective character compared to MOTIF 2.

As a small digression in this context, we would like to remind the reader that in the reference [5] we indicated two possible aspects of the Sonata, the inner turmoil in man and the outer cosmic aspect, as well as the dualism between these two aspects. If Liszt really wanted to musically embody and symbolize these two aspects in the sonata, then it is quite possible that he found inspiration for this in Boethius' division of music into cosmic music (*musica mundana*) and the music of man (*musica humana*), a topic explored in Saša Popović's lecture *De institutione musica* at the *Mathematics and Music* seminar.

Already at the beginning of this work, we mentioned that MOTIF 2 has a certain contrapuntal role in relation to MOTIF 1. Aside from its presence in the main theme, as illustrated earlier in the text, Liszt juxtaposes MOTIF 2 with MOTIF 1 in other parts of the Sonata as well, further highlighting the contrapuntal role of MOTIF 2 in relation to MOTIF 1. An example of such a section can be found in reference [5], and another notable instance can be found in the magnificent fugue in the Sonata. If MOTIF 1 represents a man filled with longings, desires, questions and searches, then the counterpoint to these emotions is precisely man's inexorable destiny, his fate or doom, his real life with all its challenges and difficulties.

In the main theme of the Sonata (Figure 1), MOTIF 1 and MOTIF 2 alternate measure by measure, which, according to our analysis, depicts the struggle between man and fate. Given that MOTIF 1 begins with a diminished seventh which, according to our interpretation, represents the cry of the soul, and MOTIF 2 could, due to its musical character, represent man's fate and the inexorability of destiny, i.e. in a figurative sense the imprisonment and shackles of the soul, then we find a certain parallel to this representation in *The Ray of the Microcosm* where Njegoš views the soul as a spark from the heavenly fire imprisoned in earthly bonds.



FIGURE 4. Opening motif from Beethoven's 5th symphony.



FIGURE 5. The bass line at the beginning of the second movement of Bach's Piano Concerto in D minor.



FIGURE 6. The opening motif of 3 G-octave in Liszt's Sonata in B minor.



FIGURE 7. MOTIF 2 in dreamy sections.

Later, MOTIF 2 appears in another theme that exudes tenderness and warmth, symbolizing dreams, and according to proponents of the thesis about the connection between the Sonata and Goethe's *Faust*, this theme even represents Greta herself or Faust's dreams about Greta. The following are corresponding examples (Figures 7 and 8), which are also shown in reference [5].

We will once again use the same approach of LMCC identifications via common motif and commuting diagram to discover possible philosophical messages and Liszt's views in the transformations of MOTIF 2. If MOTIF 2 in the meditative sections of the sonata really represents Greta or Faust's dreams of her, then Greta herself is at the same time the source of Faust's fantasies, imbued with serenity (which also characterizes the aforementioned transformations of MOTIF 2 in meditative themes) and Faust's fate, a fate that relentlessly and mercilessly haunts



FIGURE 8. MOTIF 2 in meditative sections.

him. (MOTIF 2 in its original form embodies indomitability and inexorability). This approach to the theme of love and dreams of love indeed shares elements with Goethe's *Faust*, but perhaps even more so with Goethe's *The Sorrows of Young Werther*. In this context, we might also recall Berlioz's *Symphonie Fantastique* with its specific literary and programmatic background, where the main motif in the first movement symbolizes the beloved, and later appears in the last movement, which refers to the coven (ritual gathering of witches).

The aforementioned analysis of the identifications realized through the transformations of MOTIF 2 leads to the conclusion that one of Liszt's possible philosophical interpretations and messages in this Sonata is that what we fantasize and dream about, which sometimes fills us with exhilaration and bliss, can also present a challenge that ignites longing, disturbs us and keeps us in spiritual captivity. In addition, these identifications suggest that everything actually originates within ourselves, our dreams, visions, as well as everything that haunts us in our thoughts and narrows our horizons, because our reality is created by our own thoughts and perception. We can find such thoughts in the lyrics of the poem *Dungeon* by Vladislav Petković Dis, where the following is mentioned:

I da nosim oblik, san lepote, več
 I tišinu blagu ko dah otkrovenja,
 I da moja glava radja sav svet jada.
 Dream of beauty that in the evening glowed,
 Silence soft as breath of revelation.
 That this world of woe was inside my brow. [8, p. 10]

In other words, our reality is actually what happens and unfolds on the inner psychological plane because "things have the appearance that our soul gives them", as Jovan Dučić said. From this perspective, Greta no longer represents a person or a subject in Faust's life, but rather an abstract concept, Faust's vision and dream of love, but also his fate and spiritual burden. This artistic-philosophical approach was later explored in Andrić's work *Jelena, Woman Who Is Not There*.

In the context of the mentioned meditative sections in the Sonata, it is important to note that MOTIF 1 also appears in these sections, but in an inverted form, where the diminished seventh is replaced by a major second (Figures 9 and 10). In this inversion, the motif takes on disembodied and floating quality. This detail may also indicate that Liszt, in these sections, is musically portraying dreams as special psychological meditative-transcendent states of consciousness where inverse images



FIGURE 9. MOTIF 1 in inverse form.



FIGURE 10. MOTIF 1 in inverse form.

of reality appear. Bearing in mind that MOTIF 1, according to our analysis, symbolizes man, and the diminished seventh expresses his longing, yearning and cry, this transformation of MOTIF 1 can represent that in the dream state, man is freed from the inner turmoil and restraints of real life.

There is another possible interpretation of the identifications achieved through the transformations of MOTIF 2. These identifications may indicate that Liszt sees Greta only as Faust's fateful (and not diabolical) temptation. Hence, according to our analysis, he uses a fateful (rather than diabolical) motif, MOTIF 2, to musically symbolize Greta. On the other hand, as we stated earlier, the diminished (*dim*) chord in MOTIF 1 undeniably carries a devilish, but it also conveys a sense of questioning and searching character. This suggests that Liszt classifies Faust's inner doubts and suspicions under the devil's temptation, and that Greta's entry into Faust's life, according to Liszt, is actually just a fateful temptation. The notion that the moral decline and spiritual ruin of a person occurs one himself begins to doubt their ideals is also found in the verses of Silvio Strahimir Kranjčević. We also remind the reader that both Mephisto and Greta appear only when Faust experiences doubts and suspicions, questioning whether he is on the right path due to his loneliness and deprivation of worldly pleasures. This means that there is a possibility that Liszt sees Greta's entry into Faust's life only as a result of Faust's own thoughts and his "invocation of fate", and that Mephisto is an integral part of Faust's psychological being, embodying his temptations and stumblings.

Apart from the interpretations of the identifications achieved through the transformations of MOTIF 2, we can also suggest that if MOTIF 2, with its musical character of inexorability and indomitability, symbolizes fate and real, earthly life with all its challenges and difficulties, then the transformations of MOTIF 2 into

dreams and meditative themes or melodies musically represent a person's dream, idea and vision of what life could actually be. This approach may carry a religious background, like Tolstoy's thoughts in the novel *Resurrection*, where the main character Nekhludov concludes that the kingdom of heaven could be established on earth only if all God's commandments were obeyed. The fact that Liszt himself was inclined towards religion gives some grounds for this interpretation. If we were to rely on Milton's *Paradise Lost* in this context, and assume MOTIF 2 symbolizes earthly life and human destiny, then its transformation into dreamy and meditative themes could represent a memory of life in lost paradise. Finally, in this context, we can also draw paralel with Njegoš's *The Ray of the Microcosm*, where, earthly life is man's destiny (MOTIF 2 in this original form with the character of inexorability and indomitability), and only in special moments does man (according to Njegoš) transcend through dreams and visions, realizing his heavenly existence (transformation of MOTIF 2 into transcendental, meditative themes).

We can also find these views in the poem *Dungeon* by Vladislav Petković Dis in the following verse:

Al' begaju zvezde; ostavljaju boje
 Mestâ i daljine i viziju jave:
 I sad tako žive kao biće moje,
 Nevino vezane za san moje glave.
 Al' begaju zvezde, ostavljaju boje.
 Kao stara tajna ja počeh da živim,
 Zakovan za zemlju što životu služi,
 Da okrećem oči daljinama sivim,
 Dok mi venac snova moju glavu kruži.
 Kao stara tajna ja počeh da živim.

But the stars that run leave colours behind,
 Of distant places, a sight of the real:
 Now they live like a being of my kind,
 Bound to a dream that in my head I feel.
 But the stars that run leave colours behind.
 Like an old secret I started living,
 Welded to the land that to life does serve,
 To grey distances my eyes were turning,
 While a wreath of stars round my head doth curve.
 Like an old secret I started living. [8, p. 10]

The aforementioned transformations of MOTIF 1, with its disembodied, floating character in the meditative sections of the Sonata, could in this context represent the former existence and life of man in a more perfect spiritual form in the lost paradise.

Our previous analysis of MOTIF 2 was based on the musical experience of the character of this motif as one of inexorability and relentlessness. However, we mentioned in the reference that the musical character of this motif can also be experienced as a character of determination and perseverance. If we combine such

an experience with our assumption in this work-that the transformations of MOTIF 2 into dreamy and meditative themes symbolize man's dreamy memory of the lost paradise (according to Milton) or the heavenly primeval existence (according to Njegoš) - then we arrive at another interpretation. This suggests that the transformations of MOTIF 2 could symbolize philosophical views, based on Milton and Njegoš, that man's spiritual heritage from paradise manifests as dreams or visions. Moreover, what is sublime in man, when faced with the inexorability of fate in earthly life, transforms into a quiet inner strength that fosters determination and perseverance. We can find these views again in the poem *Dungeon* by Vladislav Petković Dis in the following verses:

Pri beganju zvezda zemlja je ostala
 Za hod mojih nogu i za život reči:
 I tako je snaga u meni postala,
 Snaga koja boli, snaga koja leči.
 Pri beganju zvezda zemlja je ostala.

As the stars ran away, the land remained
 For my legs to walk and the life of words:
 And that is how this inside strength I gained,
 A strength that hurts, but one that our loins girds.
 As the stars ran away, the land remained. [8, p. 10]

Bearing in mind that, according to the reference, the poem *Dungeon* contains elements of anthroposophy (which was discussed in the lecture by Miloš Milovanović and Gordana Medić-Simić entitled *Miloš Radojčić - Round table at the Mathematics and Music seminar*) [6, 7], this analysis also suggests the possible presence of anthroposophical elements in Liszt's Sonata in B minor.

Apart from the motifs mentioned above, there is another central motif in the Sonata, which is the sequence of three ascending seconds (Figure 11), which is also listed in reference [5].

FIGURE 11. Motif of 3 ascending seconds.

It is almost undeniable that this motif represents awakening, ascension and resurrection, as we stated in reference [5]. According to reference [4], this is also the motif of the cross, which may indicate that Liszt saw spiritual ascension and resurrection as a sublime characteristic of man, as his sacred duty and mission. We observe the significance of the number 3 in this motif (it consists of three ascending seconds).

The initial motif in the Sonata (Figure 6), which we characterized as the motif of fate in the cosmic sense, also consists of three G-octaves. This motif reappears at the very end of the Sonata (as well as in other sections), where, instead of the G-octave, the G-major chords are repeated three times (Figure 12).

Finally, the theme of the epilogue appears three times in the Sonata (Figures 13–15).

We refer to this as the theme of the epilogue because, after the stormy sections, this theme appears in the concluding sections of the Sonata. From the presented examples, it can be assumed that Liszt may have used the number three as a symbol of calmness, resolution, harmony and balance, and given in mind that Liszt was inclined towards religion, it is quite possible that he wanted to symbolize the Holy Trinity through the number three in the Sonata.

In this context, we should mention the chromatic ascending passage of three chords at the end of the Sonata, which are A minor, F major and B major (Figure 16).



FIGURE 12. Motif of three octaves at the end of the Sonata.



FIGURE 13. Theme of the epilogue.

A minor has the character of contrition and exudes images of hell and suffering, which is why, according to some interpretations, it symbolizes hopelessness and apathy. F major is filled with energy and, therefore, can represent strivings and aspirations. Harmonically speaking, the resolution of F major is B major, however,

The image shows two systems of musical notation. The first system features a vocal line (treble clef) and a piano accompaniment (bass clef). The vocal line begins with a fermata and is marked *ff* and *poco rallent.*. The piano accompaniment has a *dolce* marking. The second system continues the vocal melody and piano accompaniment.

FIGURE 14. Theme of the epilogue.

The image shows two systems of musical notation. The first system features a vocal line (treble clef) and a piano accompaniment (bass clef). The tempo is marked *Andante sostenuto.* and the dynamic is *p*. The second system continues the vocal melody and piano accompaniment, ending with a *diminuendo* marking.

FIGURE 15. Theme of the epilogue.

The image shows a single system of musical notation for piano accompaniment. It features a chromatic passage of three chords, highlighted with a red box. The dynamic markings are *pp* and *ppp*. There are also markings for *8va* at the beginning and end of the system.

FIGURE 16. Chromatic passage of 3 chords at the end of the Sonata.

in this passage, B major follows F major, which is half a step higher than B major. This technique of resolution in a higher tonality was also applied by Wagner in the opera *Tristan und Isolde*, where he wanted to present that Tristan and Isolde unite and find peace only in the afterlife. As in the analysis of MOTIF 1, it is our belief that in this case, too, Liszt sees life and the world as a whole through these three elements-chords, which are hopelessness-suffering, strivings-aspirations and resolution-calm, which is achieved on a higher spiritual level plan through a unique and different perspective, which again indicates that transcendence is a key philosophical-artistic concept in Liszt's work.

3. Final remarks

We would like (as in reference [5]) to emphasize at the end that we by no means exclude the possibility that the Sonata was created only as a piano piece without the intention of containing a hidden philosophical meaning. Liszt may have used the transformation of motifs only as a composing technique, and unlike in some of his other works, such as the *Faust Symphony*, he may not have tied motifs to symbols in this work. Our intention in this paper was to present an analysis that offers suggestions and indicate possible interpretations in the event that the hidden philosophical meaning of the Sonata indeed exists. In doing so, we used mathematical concepts of commutating diagrams in order to explore the possible philosophical meanings and messages in the Sonata. We hope that, in addition to the interpretations proposed in this paper, and approach can be a possible guide or inspiration for some other new interpretations. We remind the reader that other interpretations can be reached through the switching diagram, depending on which symbols and LMCCs are associated with the corresponding themes.

Our initial assumption in this paper was that the Sonata represents a form of deep psychological analysis in the spirit of the philosophy of Goethe's *Faust* as well Milton's *Paradise Lost*, given that Liszt was inspired by Faust in his work, and that he was also inclined to religion.

Liszt's inspiration and fascination with *Faust* are evident in works such as the *Faust Symphony* and *Mephisto Waltz*, and the fact that he studied theology for several years and became an abbot towards the end of his life testifies to Liszt's affection for religion. Finally, the theme of *Faust* itself has a somewhat religious basis, considering that it is about moral and ethical dilemmas, temptation and redemption.

Acknowledgement. This paper is based on a lecture titled "Hidden Philosophical Meaning of Liszt's Sonata" held on April 18, 2022 at the Mathematical Institute SANU in Belgrade as part of the seminar Mathematics and Music. I would like to thank the chairperson of this seminar, Prof. Vesna Todorčević for organizing the lecture, and for her support and encouragement in researching this topic.

References

- [1] B. Ott, *An interpretation of Liszt's Sonata in B minor*, JALS: The journal of the American Liszt Society, **10** (1981), 30–38.
- [2] T. Szasz, *Liszt's symbols for the divine and diabolical: Their revelation of a program in the B minor Sonata*, Journal of the American Liszt Society **15** (1984), 39–95.
- [3] P. Raabe, *Franz Liszt: Leben und Schaffen*, 2 vol's, Stuttgart, 1931; rev. ed., 1968.
- [4] J. D. K. James, *Franz Liszt: The Sonata in B Minor as spiritual autobiography*, PhD dissertation, Madison University, 2011.
- [5] S. Ivković, *Hidden philosophical meaning of Liszt's Sonata in B minor seen through mathematical concepts*, Phlogiston **30** (2022), 107–127.
- [6] M. Milovanović, The anthroposophy of professor Radojcic. in: M. Milovanović (ed) *Milos Radojcic Round table: Proceedings*, 5–30, Interklima-grafika, Vrnjačka Banja, 2020. (Serbian)
- [7] G. Medić-Simić, *Pedagogy through (self) education of personal experience in the works of Miloš Radojčić*, in: M. Milovanović (ed.), *Milos Radojcic Round table: Proceedings*, 115–126, Interklima-grafika, Vrnjačka Banja, 2020. (Serbian)
- [8] V. Petković Dis, *Vladislav Petković Dis (1880–1917)*, Translated by Novica Petrović, Treći Trg **55–56** (2017), 4–15.