



Research Article

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Beethoven's Exercises: Understanding the Piano Technique Features of the 32 Sonatas

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Abstract: The piano sketches found in-between the pages of Beethoven's notebooks propose exercises and experimental ideas that remain a largely unexplored area in the field of the Beethovenian studies. The existence of these exercises is well known, and their number continues to grow with the discovery of unpublished notebook pages. However, the purpose pursued by Beethoven, writing down so many heterogeneous and unsystematic fragments, remains unclear.

In order to better understand the function and significance of Beethoven's exercises, we correlated them with the 32 sonatas, which fully represent the composer's pianism. The ultimate objective of our study is to trace which gestural and timbral traits of his music Beethoven considered innovative, interesting or unusual, and what made him stylistically and instrumentally different, and an emblem in the world of piano Classicism.

From the collections of Wielhorsky, Kessler, Boldrini, as well as from other sources, we selected about seventy figurations and found their complete or partial analogues in Beethoven sonatas, establishing five degrees of similitude. In the process of quantitative and qualitative analysis, we noted for each figuration the number and movement of the sonata, the formal section, the exact number of measures containing it, and the level of compliance. Such a procedure has allowed to obtain a percentage index of the presence of the exercises in the sonatas, and to describe the characteristics of the most representative exercises with particular interest in timbral and gestural aspects.

Keywords: Beethoven's sketches, Beethoven's finger exercises, piano figurations, timbral and gestural aspects of piano texture, piano sonatas by Beethoven

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Научная статья

Бетховенские упражнения: к осмыслению особенностей фортепианной техники в 32 сонатах

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Аннотация: В эскизных тетрадах Бетховена то и дело встречаются наброски — технические упражнения и экспериментальные идеи, остающиеся в значительной мере неисследованной областью в бетховенистике. О существовании этих экзерсисов хорошо известно, а их число продолжает расти с открытием неопубликованных источников. Однако цель, которую преследовал Бетховен, записывая так много разнородных и бессистемных эскизов, остается неясной.

Чтобы лучше понять функцию и значение бетховенских исследований разных видов фортепианной фактуры, мы соотнесли их с текстом 32 фортепианных сонат, в полной мере представляющих пианизм композитора. Конечная цель нашего исследования состоит в том, чтобы проследить, какие жестовые и тембровые черты своей музыки Бетховен считал новаторскими, представляющими интерес или необычными, что определяло неповторимое своеобразие его инструментального стиля, олицетворяющего мир фортепианного классицизма.

Из коллекций Виельгорского, Кесслера, Болдрини, а также из других источников мы отобрали около семидесяти фигураций и нашли их полные или частичные аналоги в 32 сонатах Бетховена, установив пять степеней подобия музыкального материала. В процессе количественного и качественного анализа мы отметили для каждой рассмотренной фигурации номер и часть сонаты, раздел формы, точное количество тактов, содержащих данную фигурацию, и уровень соответствия. Это позволило вычислить процентный показатель присутствия материала отдельных набросков в сонатах и охарактеризовать наиболее репрезентативные из упражнений, уделяя особое внимание их тембровому и жестовому аспектам.

Ключевые слова: эскизы Бетховена, фортепианные упражнения Бетховена, фортепианные фигурации, тембровый и жестовый аспекты фортепианной фактуры, сонаты Бетховена для фортепиано

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INTRODUCTION

The piano sketches found in-between the pages of Beethoven's notebooks propose exercises and experimental ideas that remain a largely unexplored area in the field of the Beethovenian studies. Their existence is well-known, and their number continues to grow with the discovery of unpublished notebook pages. However, the purpose Beethoven pursued in writing down so many heterogeneous and unsystematic ideas is not clear for the sketches as a whole, nor has it been exhaustively investigated yet. In particular, certain studies on the sketches include clearly recognizable notes referring to the completed or unaccomplished works, while there are atypical sketches, defined as exercises or figurations, which remain a still unexplored but very interesting area of study.

These figurations, which testify to the absolute importance of the piano in Beethoven's creative process, are defined by characteristics that have attracted scholars' attention, such as a particular texture, timbral and dynamic choices, fingering indications, or an unusual application of a single hand. Yet, such indications do not exist for all the sketches making them particularly difficult to classify. Furthermore, the heterogeneous nature of these figurations does not express their specific purpose, as different interpretations are equally plausible. A number of sketches can be considered traditional exercises, whereas others seem to be figurative experiments; the remaining ones may be ideas for yet to come or undeveloped works, leaving part of them without an immediate or obvious function.

In order to explore the role that these notes had in the genesis of Beethoven's pianism, we have tried to retrieve the most evident traces of their characteristics in the corpus of the 32 piano sonatas, as well as study their features, relevance, and meaning within the sonatas.

Beethoven wrote the 32 piano sonatas between 1795 and 1822 with opera numbers 2 to 111. For this reason, they can fully represent Beethoven's pianism, and therefore, the eligible compositions to understand and deepen the function and meaning of these figurative exercises. The ultimate objective of our study is not aimed to expand the analysis of Beethoven's creative process, but rather to trace the gestural and timbral traits that he considered innovative, interesting, or unusual, and which made him stylistically and instrumentally different, and an emblem in the world of piano Classicism. Among others essays, our study has been prompted by Luca Chiantore's *Beethoven at the Piano*, which has opened a new perspective by highlighting the link between these figurations and the Beethovenian works [2]. This connection can outline a complete portrait of Beethoven's activities as a pianist, a teacher, and a composer, thus revealing the true reasons for their purpose by fitting the exercises into their context.

STUDIES ON FIGURATIONS AND EXERCISES

Previous studies reveal the existence of two fundamental approaches to the sketches: the first is an objective and exhaustive description, the second considers them dynamically as functional and fundamental elements within Beethoven's creative process by highlighting their presence and relevance in his works. Gustav Nottebohm was the first

academic to underline the importance of Beethoven's notebooks; however, his work was never oriented towards an in-depth analysis of the sketches [20].

He described the musical content of the sketches according to a perceptual point of view, which is not relevant enough for scholars looking for a more analytical approach. Nevertheless, Nottebohm's studies were highly regarded up to the '60s and were given credit for having detected certain piano figurations and having transcribed them. Nottebohm's transcriptions show figurations that contain written annotations, without precise references to the manuscripts, making it difficult to identify their source accurately, as Kerman pointed out [11]. Nottebohm's comments are rather brief, although they include a series of perceptual annotations about the appearance of the figures, and practical suggestions for their performance.

The caption *Ohne Übung kein Meister* ("No Master without practice," [21, 357]) suggests a practical function, possibly even a didactic one. Nottebohm is also the first academic to call them *Übungen* ("exercises") suggesting that they were focused towards the development of a refined, fluent, powerful, legato or staccato way of playing, therefore, demonstrating that Beethoven did not neglect piano technique [ibid., 358].

Nottebohm observed that the figures are mostly short and illustrate nothing extravagant mainly including scale exercises for one or both hands. A number of exercises can be ascending or descending, written in thirds, octaves, sixths, and tenths and may present opposite motion, while others concern double thirds and sixths, trills, double trills, leaps, intertwined, or crossed hands.

Nottebohm also identified a second group of figurations suggesting that they reveal how Beethoven was speculating on sound effects and experimenting with persistent resonant sounds.

He also acknowledged that a number of the figurations match the style and shape of Czerny's exercises implying that they may have originated during his lessons with Beethoven.

In 1892, a series of articles by John South Shedlock (1843–1919) published in "The Musical Times" described the contents of the Kafka Miscellany, and a small number of the many sketches that can be found there. Like Nottebohm, Shedlock transcribed a few of the sketches but made no attempt to analyse and classify them merely pointing out Beethoven's preference for this type of annotations and, without wondering what their function could be [24, 331–34, 394–97, 461–65, 523–25].

Joseph Kerman's transcription and facsimile of the Kafka Miscellany, published in 1970, was the first to report meaningful references to piano figurations [11]. In a further article that appeared in "The Musical Quarterly," Kerman became the second academic to attempt an analysis of figurations and was the first to hypothesize a distinction between the sketches of Beethoven's works and proper figurations [12]. Compared to other sketches the figurations are surprisingly well defined in terms of keys, rhythm, and dynamics. Beethoven's sketches have often proved difficult to read, while the figurations of the Kafka Miscellany for Kerman can be recognized for their clarity. He also observed that the figurations are instrumental, gestural, or timbral explorations, while the sketches mainly concern linear and thematic development.

Such figurations are usually based on simple alternating harmonies or harmonic progressions, which do not let us foresee creative development. Kerman believed that the function of these notations was unclear [12, II, XVIII], but suggested that they

could be piano exercises for Beethoven himself, or for his students, or notes regarding improvisations of his.

Kerman embraced the latter explanation collecting the exercises in a separate section at the end of his transcript, entitled “Part 2: Shorter sketches, exercises, and various notations” without any distinction. Along with the piano figures, there are several sketches for other instruments, unfinished works, and other notations, without specifying whether they are piano exercises or memorandums for improvisations. The most important collection of piano figures appears in the introduction to Hans Kann’s edition of J. B. Cramer’s piano studies published in 1974, where thirty-five figures taken from Nottebohm’s sketchbook and Wielhorsky’s are transcribed [10].

Kann speculated that Beethoven was also considering technical problems, and how to overcome them, while writing virtuoso works such as the *Eroica* Variations Op. 35, and the *Waldstein* Sonata Op. 53, an idea that reinforces Nottebohm’s point of view that these are simply exercises.

In addition, Kann suggested that the figurations may have been written during piano lessons to be used as teaching material [ibid., X]. The characteristics Kann highlighted are the attempt to overcome technical problems, the discovery of new combinations, and the experimentation of unexpected sonorities. However, he believed that the information obtained from those figurations was not sufficient to describe Beethoven’s pianism, and therefore, a complete collection of exercises seemed unlikely¹. Douglas Johnson in his book on the *Fischhof Miscellany*² noted the presence of these piano figures but considered them minor unidentified sketches, like the various annotations that appear on most of the pages [7, 1038; 8, 473]. Their presence in almost all the pages of the *Miscellany* should have alerted academics about their relevance and perhaps induced them to investigate their meaning. Nonetheless, the piano figures in the *Fischhof Miscellany* remained mostly unknown.

In the ‘60s and ‘70s, interest in the sketches grew and involved a large number of studies that converged in a volume by Douglas Johnson, Alan Tyson, and Robert Winter [9] focusing on Beethoven’s writing to determine the chronology and genesis of the sketches (for example [4; 14; 22]).

The ones referring to particular works are often more extensive and clearer than the exercises or figurations. For example, the sketches for Piano Sonata Op. 109, studied by Heinrich Schenker, Nicholas Marston, and William Meredith [17; 18; 25], support the hypothesis that the first movement was originally conceived as an independent composition, and that the exercises were used to guide important performative aspects, such as the dynamic and expressive ones.

Richard Kramer, Nicholas Cook, Nicholas Marston, and Barry Cooper made an important contribution to the studies regarding the sketches of the unfinished Beethovenian works, i.e., those conceived clearly enough to allow scholars to understand their structure, and, in a few cases, they suggested the hypothesis of a possible future completion of these works [3; 5; 13; 16].

¹ “Man wird erkennen können, daß es nicht möglich ist, eine wirklich vollständige Sammlung aller Fingerübungen herzustellen, die Definition derselben nicht immer eindeutig möglich ist” [10, X].

² The *Fischhof Miscellany* is a collection of sketches that were once thought to belong to Kafka *Miscellany*.

Figurations in these types of studies are used only occasionally to help highlight or validate their arguments. In particular, Newman identified and used a series of figures that supported his views about fingering styles and trills [19].

The most interesting part of Newman's and Skowronek's studies is the detailed description of Beethoven's pianos, his predilection on the subject, and the characteristics of the pianos that most influenced his writing.

In their investigation, they considered a large number of relevant figures for their discussion, yet concentrating on a few of them rather than considering and studying them as an organic and homogeneous collection. Rosenblum dedicated a small section of his book on performing practices to "Beethoven's Exercises and Other Fragments" ([23, 204–9], an enlarged edition of previously published material) but took his examples almost exclusively from Nottebohm's and Kerman's transcription of the Kafka Miscellany³. Rosenblum's use of the word "fragment" is particularly problematic, since it implies that the figurations are unfinished, while, as noted by Kerman, one of the distinguishing features of these figurations is their apparently self-sufficient nature. Also Rosenblum's comments mainly concern the genesis of the figurations and confirm that Beethoven never wrote the piano method he had mentioned to his friend Gerhard von Breuning.

Beethoven's interest in achieving such goals, as digital dexterity and strength, new piano timbres, virtuoso challenges, and innovative fingering is illustrated in the fragments of piano writing, and in the exercises contained in his notebooks [23, 204]. Beethoven's intention to write a piano method was not evaluated as much as it deserved by academics who have never clarified whether the figurations could have constituted the material for this method, or the reason of the choice between the terms "fragments" and "exercises".

Rosenblum acknowledged that it is possible to collect certain figurations thematically, as technique or timbral experiments, observing how some focus on the rapid octave technique, while others use rotation by alternating lateral fingers of the hands [23, 207–8]. An unexpected feature of the Kafka collection is the massive number of annotations scattered among other musical insights. These exercises, which cover about ninety pages in a modern edition of the entire collection, range from two to about twenty bars.

They are often written for two hands, and a few of them can be referred directly to any of his sonatas, keyboard chamber works, or other compositions, although they sometimes resemble the figurative models he employed for his piano works.

They represent ideas for piano writing, probably to be used for both compositions and improvisations. These two activities were not completely separated in Beethoven's creative life, and probably Beethoven wrote some of the figurations to memorize and establish a repertoire of materials and ideas that he could examine, study and introduce in his piano works [15, 64]. Skowronek's study is perhaps the most comprehensive in terms of specific information about Beethoven as an artist ([26], revised and abbreviated in [27]). This essay confirms that a large number of figurations date back to 1790 during his early years in Vienna, when Beethoven's career as a pianist reached its peak,

³ The only exception is a figure from Kessler Sketchbook [23, 209].

and his most urgent professional challenge was the competition with the Viennese *Klaviermeisters*.

Precisely in this period, numerous sketches with various kinds of technical or piano schemes were written [26, 109–11]. This observation supports the hypothesis shared by Nottebohm, Kann, Kerman, and Rosenblum that the figurations are actually piano exercises. Unfortunately, Skowronek did not develop this idea sufficiently, and above all, he did not transcribe the exercises supporting his point of view in a systematic way.

To date, the most recent and most detailed study of the piano exercises has been conducted by Luca Chiantore [1], who has provided most of the transcriptions of the currently known exercises by identifying homogeneous groups starting from performance characteristics, such as finger action, hand mobility, wrist-joint, lateral, longitudinal, and axial movement of the arm, and Beethoven's interest in dynamics, rests, pedalling, and unexpected sounds⁴.

Chiantore claims that the figurations are piano exercises, right from the title of his essay “Los ejercicios técnicos de Beethoven: Entre composición, improvisación e investigación sonora” (“Beethoven's Technical Exercises: In Composition, Improvisation, and Sound Investigation”), and his study focuses mainly on their execution, and on the piano techniques that Beethoven may have explored in each of the examined figurations.

Nonetheless, Chiantore rarely links the figurations to Beethoven's published works, a connection that would have provided a complete definition of how they fit into the context of his activity as a pianist, teacher, and composer, providing the information needed to explain their existence.

Chiantore echoes Skowronek's assertion that the first group of figurations appeared when Beethoven moved to Vienna and was more successful as a pianist and then suggests that the second group is related to the period in which the Piano Sonatas Opp. 53, 54, 57 and the Fourth Piano Concerto Op. 58 were composed [1, 132].

He has also noted that the composition of the figures seems to recur in two distinct chronological periods: between 1790 and 1795, and from 1800 on, i.e., in a period which reaches its climax in 1802–03. Chiantore's study is currently the most comprehensive, but his method of presenting the transcripts in the text precludes an evaluation of whether any technical development or progress could occur.

According to the theories proposed by Nottebohm, Kann, Kerman, Rosenblum, and Chiantore, claiming the figurations were designed either as technical exercises, or as notes for improvisation, and Skowronek's idea that they were the consequence of Beethoven's competitive attitude towards the Viennese *Klaviermeisters*, have never been supported by thorough or systematic research, with the result that their *raison d'être* is no more than a supposition.

The literature specifically concerning piano figurations, therefore, still offers abundant opportunity for further investigation beyond the first studies of Nottebohm, Shedlock, and Kann, in order to provide systematic and exhaustive collocation of the figures.

⁴ “La acción del dedo”; “La movilidad de la mano y la articulación de la muñeca”; “Desplazamientos laterales, longitudinales y axiales del antebrazo”; “El Interés por la dinámica”; “Hacia el Silencio”; “El Pedal: Una Nueva Frontera,” and “Sonoridades Imposibles” [1, 161, 170, 176, 195, 202, 206, 211].

An attempt toward a first real chronological catalogue transcribing and locating these figures was brought forth by Siân Derry, who analysed and classified them according to their type grouping them on the basis of technical themes linked to specific piano technique areas [6].

Our analysis has established that many of the figurations are highly inventive; from time to time, we can trace developments (in particular, the evolution of Beethoven's trill); and in many cases parallels can be traced with Beethoven's published piano works demonstrating that a single classification for figurations is often problematic.

Such an analysis also reveals that a significant number of figurations were written in 1793, and in compliance with earlier biographical studies, it strongly suggests that Beethoven's stay in Vienna gave great impetus to their production.

FIGURATIONS AND THE 32 PIANO SONATAS

The interest in the performative aspects of the figurations or in the gestural and timbral aspects imposed a first methodological choice that was not easy, since it was almost impossible to verify any perfect correspondence between each figuration and a particular section of the sonata involved. Looking for partial correspondence, the problem of identifying levels of similarity, or of a sufficiently well-defined similitude arose, although it was still possible to recognize a specific figuration in the section of the sonata, together with the significant timbral and gestural aspects introduced by the figuration itself.

On the basis of an initial examination of a few sonatas, 5 levels of conformity have been identified between the exercises/sketches and the passages of the sonatas starting from level 1, i.e. maximum correspondence pattern and rhythm, gradually reaching level 5 in which only one element of the exercise is traceable in the sonata:

1) Absolute correspondence of pattern and rhythm. The example may be in a different key than the one considered; it can be written with different values, only partially identified but, essentially, refers to the one in question.

2) Adequate correspondence of pattern (with possible differences in interval relationships) and rhythm (alternation of long and short notes, even though with different values with respect to the exercise in question).

3) Partial correspondence of the pattern. The example shows a different arrangement of the notes (for example, mirror or retrograde arrangements) but clearly attributable to the exercise under consideration. The rhythm may be different from that of this exercise but still maintaining its structure (example: alternation of long and short notes, presence of dotted figures).

4) Partial matching in a single hand. The example considered refers to the exercise in question involving only one of the hands and the differences are the same as shown in point 3.

5) Correspondence of only one aspect. For example: only one element of the exercise in the sonata is traceable, while all the differences referred to in point 4 are present.

Once the levels of coherence have been identified, the analysis of the sketches in the Sonatas has highlighted:

- The key of each one,
- Tempo indications,
- The gestural profile of the sketch,

- The presence of agogic and dynamic indications,
- Fingering,
- The sections of the sonata in which they are located,
- Bar numbers considered, and the frequency of their appearance in the sonata.

To understand in full how the type of work with which the 70 chosen figures have been verified in all the 32 sonatas, 5 examples will follow, one for each level of coherence, in which the figures are combined with the segments of the sonatas:

BH 124 manuscript (Beethoven Haus), p.1, II. 1. Conformity level 1

Harmony developed in broken chords is a very common pattern in the Classic, *Biedermeyer* and Romantic literature. The expressive meaning of melody and harmony merges, because there is no clear differentiation: the broken gesture of the arpeggio represents the musical element itself. In this exercise, which is conserved at the Beethoven-Haus in Bonn, Beethoven himself wrote the fingering, hence proving his attention to this particular pattern, and at the same time, the need to recall his nephew's diligence. This fingering seems to be intended for a small hand, because there isn't any considerable widening, and almost all groups require the use of the thumb.



Example 1. BH 124 manuscript (Beethoven Haus), p.1, II. 1



Example 2. Sonata Op. 27 No. 2, first movement

Kafka, f. 54v, l. 5-6, bb, 1-4. Conformity level 2



Example 3. Kafka, f. 54v, l. 5-6, bb, 1-4

The coherence level in this example is 2, because the interval ratio is slightly modified, and the rhythm is similar (ternary groups) but not exactly the same. The experimental aspect lies in an extremely dilated accompaniment. This pattern is quite difficult because of the great distance between the bass line and the upper one. Frequently Beethoven goes over the limits of the hands, and therefore the level of difficulty is higher than the one commonly found in the sonatas.

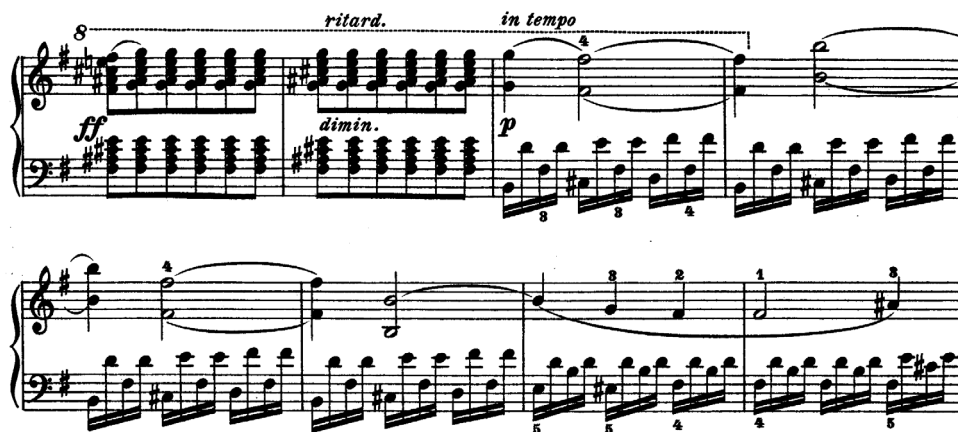
Example 4. Sonata Op. 111, second movement

Kafka F. 55v, II. 14-17. Conformity level 3

The left hand accompaniment is a great step forward in comparison with the Alberti bass generally used by Mozart, Haydn and Clementi. The wide arrangement produces the new and deep resonance which will clear the way towards the Romantic literature, where this phonic arrangement expands and includes the entire keyboard. The rotation movement of the wrist is taken by Beethoven to its extreme consequences, up to a considerable extent. Beethoven adopts this pattern for the left hand, and Karl Czerny will develop this exercise in the Studies Op. 740 – “The Art of Finger Dexterity”.



Example 5. Kafka F. 55v, II. 14–17



Example 6. Sonata Op. 90, first movement

Kafka Miscellany, f. 39v, l. 15. Conformity level 4

In this example, the coherence level is 4, since the correspondence is partial and for the right hand only. The presence of the same fingering in all verified sources is particular.



Example 7. Kafka Miscellany, f. 39v, l. 15



Example 8. Sonata Op. 31 No. 3, first movement

Wielhorsky published by Fischmann in 1962. Conformity level 5

In this case, the level of coherence is 5, since the correspondence is limited to the use of the chord by parallel motion like thematic material.



Example 9. Wielhorsky published by Fischmann in 1962



Example 10. Sonata Op. 2 No. 3, fourth movement

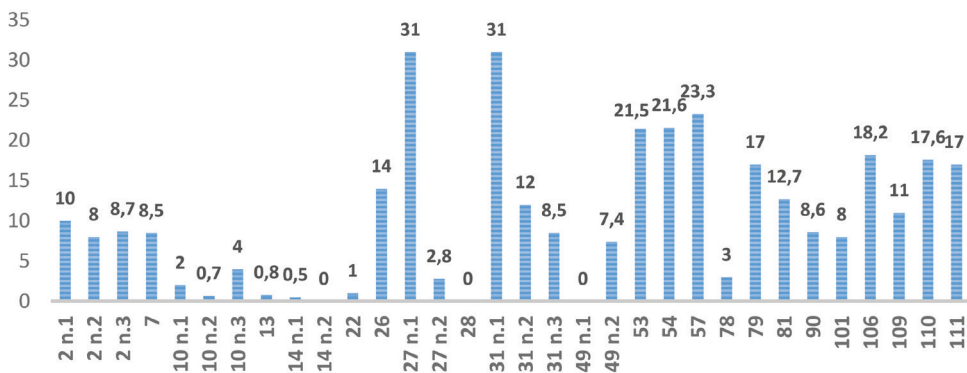
RESULTS AND CONCLUSION

The data obtained, therefore, come from the analysis of about seventy figurations chosen from the Wielhorsky, Kessler, and Boldrini collections, and among other loose sheets, and they are related to the detection of their presence in Beethoven's 32 sonatas according to five degrees of similitude. This has made it possible to proceed with a quantitative and qualitative analysis, noting for each figuration examined the work number and placement within the sonata, the movement in which it was detected and the formal section, the exact number of measures containing it, and the level of compliance.

Such a procedure has allowed to obtain a percentage index of the presence of the exercises in the sonatas, and to describe the characteristics of the most representative exercises with particular interest in timbral and gestural aspects. The characteristics of the examined figures are extremely diverse, hardly attributable to schemes or paradigms; the rhythm indications are present at times, various keys are used, there can be a division between the bars or not, indicated with a simple or double bar; the number of bars is variable, from one to about twenty; some exercises have fingering indications. The agogic, dynamic and articulation indications are, in most cases, absent, but, at times, present and extremely relevant. Additional indications often appear, such as *usw (und so weiter)*, comments, or images, and the form in which they are presented is extremely heterogeneous and encompassing.

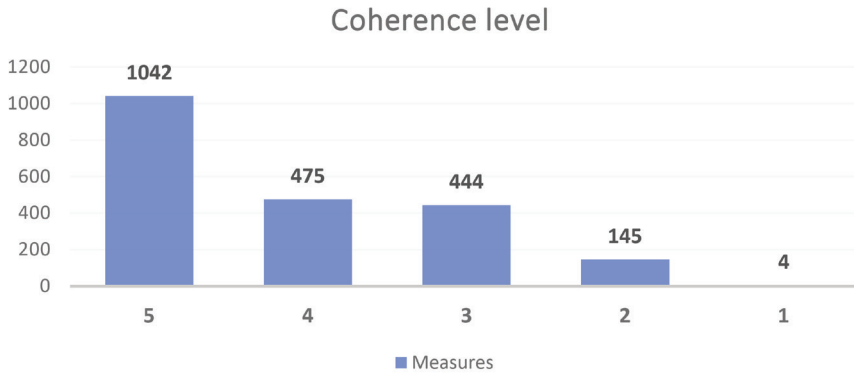
Graph no. 1 represents the distribution of the 70 figures in the corpus of the sonatas and shows the number of measures including traces of the sketches in percentage values in each sonata. It also highlights how certain of them, much more than others, reveal the presence of figurations, such as Op. 27 No. 1, or Op. 31 No. 1, while others, like Opp. 53, 54, 57, 79 and Opp. 106, 110 and 111 seem much less involved in these procedures.

PERCENTAGE VALUES



Graph 1. Percentage values

Figures represented in a number of bars equal to or greater than 10 were considered relevant in order to manage the large number of data, not all of which were significant. In this first phase of the study, we limited our analysis to presenting a description of the exercise distribution without giving any statistical details.



Graph 2. Levels of coherence found in the comparison between figurations and fragments of the sonatas

The levels of conformity of the figures retrieved in the sonatas are significant only at levels 3, 4 and 5 and confirm that we are not in the presence of specific sketches: that is (i.e.), they are not clearly part of the compositional material belonging to a particular sonata. However, the traces objectively highlighted in all the sonatas, and more clearly in a number of them, testify to a significant presence of the figurations and identify a function of theirs oriented towards the invention of an innovative sound and gestural language. This aspect suggests the existence of a phase in Beethoven's compositional and performative life in which these two aspects were deeply linked and belonged to his personal sound glossary. Beethoven's musical and gestural palette, therefore, arises from those bars often scribbled on scattered sheets, where the Maestro experienced his own pianism, different from what was considered canonical at the time, and well described in the C. P. E. Bach's and Clementi's methods. The type of figurations retrieved in the 32 sonatas allows us to highlight timbral and gestural elements that obviously interested Beethoven, such as the presence of pulsating, oscillating or undulating sound bands opposed to extremely contrasting parts from a timbral or structural point of view; as well as the existence of rather typical gestural patterns in his writing, such as octaves and broken arpeggios used elsewhere in his compositional material.

Exercises and sketches reveal the patient research that Beethoven carried out without achieving a piano method of his own. Beethoven had announced his plan to write a method for the piano to his friend Gerhard von Breuning, but it remained only an intention. If this goal had been achieved, today we would have an absolutely innovative method compared to C. P. E. Bach's and Clementi's works.

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