Bulletin of the *Transilvania* University of Braşov
Series VIII: Performing Arts • Vol. 17(66) Special Issue – 2024
https://doi.org/10.31926/but.pa.2024.17.66.3.10

The old keyboard musical instruments at the beginning of the Musical Baroque

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Abstract: *The topic of our research deals with a theoretical, aesthetic, as well as stylistic, interpretative approach to old keyboard instruments, from the beginnings of the Musical Baroque. In order to develop this theme, we considered it necessary, in a first chapter, to take a general look at the Musical Baroque era, with all its attributes, forms and genres, and then something about the style of its instrumental music. In a new chapter, namely, that of the evolution of keyboard instruments, through the analysis of some principles, findings or observations related to the construction of keyboard instruments, through their various examples, our research opens the perspective of musicological-interpretive investigations, which is not - could have achieved, without consulting a vast bibliographic material.*

Key words*: music, soloist, musical instrument, polyphony, instrumental music*

1. Introduction

The style characteristic of the arts of central and western Europe, between the end of the 16th century and the middle of the 18th century, is known in the history of universal culture as *Baroque* or *pre-classicism*. The style of pre-classical music is individualized through several own coordinates constituted as stylistic permanences present in the three phases of the Baroque (*early, developed* and *late*), regardless of the personalities and genres that populated it and that presented it in this way. "These are: homophony, tonalism and instrumentalism to which are added - but in the background - polyphony, symmetry of rhythmic pulsation and thematism" (Iliuț 1996, 284). Baroque imposes itself in the evolution of the musical language, through its own, distinct profile, the instrumental bill distinguishing it from that of the Renaissance, which has a vocal character par excellence. The unfolding framework of this music belongs to tonal harmony, unlike the modal framework of Renaissance music.

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2. Objectives

One of the objectives of our research focuses on Musical Baroque period, where the polyphonic organization leaves the field of plurimelodical vocalism, transforming its old conquests in favor of the fertile ground of tonal harmonic instrumentalism and gradually builds a new climax represented by Bach's creation. Instrumentation, tonal harmonic framing and the creation of a new polyphony are specific attributes of the Baroque, ensuring the stylistic unity of the entire era. Another important objective of our research consists in the discovery of keyboard musical instruments from the beginning of the Musical Baroque era and their improvement.

3. Material and methods

3.1. Overview of the Musical Baroque Period

The Musical Baroque is the period that, over time, has been given different names, determined by certain particular attributes: the era of the concerto style, *the era of the general bass, the pre-classical era.* The main points of reference in the delimitation of the musical Baroque era: the musical Baroque - as well as the other arts - is the stylistic era that succeeds the Renaissance, to which it is closely related and from which it draws its roots; As in the Renaissance, in addition to the specific musical features, some general influences of the era can also be felt in the Baroque. Thus, the tendency towards monumentality in architecture and the visual arts is also present in music, starting with the polychoral writing and the extensive vocal-instrumental combinations of *Giovanni Gabrieli* from the beginning of the period and ending with the grandiose oratorios of *Bach* and *Händel* at the end of it. Also, the inclination towards drama and movement materialized through an appreciable development of opera and ballet music, from *Monteverdi, Pergolesi, A. Scarlatti,* to *Lully, Rameau, Purcell and Händel,* leading to the creation of the theatrical style, along with the instrumental and the choral, it represents one of the three basic styles of the era. Excessive ornamentation also made its way into music, especially through the art of the English virginalists and later through that of the French harpsichordists, necessitating the creation of explanatory tables, as for example in *Fr. Couperin*, where 27 such ornamental figures are found. "To all this is added a rational spirit, with the vision of the whole in an ordering and ranking, whose unity is achieved through the development of some initial thematic elements. The generating cell is a true emblem of baroque music, which reaches its peak of significance in the art of J.S. Bach" (Comes 1984, 113).

3.2. Essential characteristics of the Musical Baroque

One of the essential properties of Baroque music is the symmetry of the organization. The metrical rhythm consists in the equal division of the musical discourse into sequences of time, either binary or ternary, grouped around a dividing accent. Even if it had already penetrated into the music of the Renaissance through the influence of popular and dance music, it intensified in the Baroque, especially through the use of groups of sounds with short durations. This notation, based on the fourth, introduced by the Italian madrigalists around the middle of the century the16th century, it becomes in current use in the Baroque era. «"*The black writing"* gives a modern look to the scores, in contrast to the long duration "white writing" typical of the "ancient style", as it was called in the Baroque era the style of religious polyphony"» (Comes 1984, 117).

Another new element is the measuring bar, carrying metric strokes, which give rise to regular sequences in the unfolding of the musical discourse. The principle of symmetry is also reflected in the proportions between the component parts of the form, increasing its action in the instrumental Baroque under the influence of dance music. Compared to the asymmetric form of the Renaissance music, in that of the Baroque, repetition, varied repetition and sequential repetition are used at all levels, creating symmetrical constructions of the form. On larger portions, the symmetry is manifested by the appearance of the halves, little used in the Renaissance. A second support pillar of the Baroque style is the total harmonic framework. At one point, only the melodic line of the soprano's voice and the sounds of the bass were written down, which, with the help of ciphers, indicated the harmonic structure they supported. This abbreviated notation is called *bass cipher, general bass* or *basso continuo*, hence the name of the general *bass era* (*Generälbas – Zeitalter*) given to the Baroque. "The old polyphony, however, did not disappear, but continued to coexist, under the name of *prima prattica*, with the new type of writing called *secunda prattica*" (Comes 1984, 119). The old style survives primarily through church music - *stilo antico* - but also through its transplantation into instrumental music (for example *the ricercar* was born from the instrumental transposition of the Renaissance motet.) In the construction of the new cyclic instrumental forms, such as the *suite*, *the sonata* and *the concerto*, some parts of the same piece have an imitative polyphonic structure, and others, a homophonic one. In the construction of the Baroque, contrasts begin to be realized between the dynamic plans, between the instrumental groups, between the agogica of the different parts. The new polyphony was born by achieving the harmony indicated by the cipher bass, with the help of the component sounds of the chords and some connecting melodic notes. Bachian polyphony appears as a delayed echo of Renaissance art, through its pronounced linear character, through the constant structure of the number of real voices, through the maximum speculation of all species of canons and through the

apotheosis of the imitative technique within the fugue. Usually, in terms of polyphony, Bach is compared to Palestrina, considering that each of them is the most authoritative exponent of a style: the Renaissance, respectively the Baroque. It is said about Bach - as well as about Palestrina, regarding the Renaissance - that his style is the key to understanding the entire Baroque era.

The Bachian style is considered the cornerstone of the development of European cultured music, an opinion expressed by the words of *Albert Schweitzer:* "all roads lead to Bach" (Comes, 1984, 123). In Bach, the modal framework of the polyphonic structure is replaced by the tonal-functional one, the vocal melody by the instrumental one, the asymmetry of the free rhythm by the symmetry of the metrical rhythm, and the priority of melodic linearism and intervallic vertical compatibility, by the prefigured harmonic support. In appearance, these differentiations seem extreme, opposite, but in reality Bachian polyphony comes from the evolution of Palestrinian polyphony.

3.3. Musical forms and genres

"The transition from the Renaissance to the Baroque was musically a period of morphological effervescence that led, on the one hand, to the adaptation of some patterns to new aesthetic conquests, on the other hand to the creation and improvement of new forms and genres" (Iliuț 1996, 315). In the Baroque era, musical forms with a specific instrumental character, new or derived from those of the Renaissance, begin to crystallize. Thus, in addition to the *prelude, toccata, fantasia, ciacona, passacaglia, symphony, invention, rondo*, etc., there is also the notion of a *concert,* in the sense of a collective performance, in which the opposition between the soloists and the instrumental ensemble is present, and it crystallizes cyclical forms such as the *suite*, made by stringing together some dance songs, and the *sonata,* made up of several contrasting parts and accompanied or not by the obligatory bass (*cypher bass*). *The ricercar* develops on an instrumental level the old sequence of melodic phases with an imitative beginning of the polyphonic motet, paving the way for the appearance of *the fugue*, the pinnacle conquest of the polyphonic art. In the Baroque, the place of *a cappella* polyphonic choral music was taken by solo vocal singing called to promote and ensure the expressiveness of the text in genres such as: *opera cantata* and *oratorio* and by pure instrumental singing (detached from the text) which determined the appearance and evolution genres and forms such as: *sonata, suite, quartet, toccata, overture, symphony*, etc.

3.4. Style of Instrumental Music

Instrumental music separates from vocal music, thus producing the transition from vocal music (*concretely national*) to instrumental music (*abstract*). Works written for

1-8 instruments (even more), were performed by: one polyphonic instrument (*lute, organ, harpsichord*); a small group of instruments (*chamber music*); a larger group of instruments (*orchestra*); The differences between vocal and instrumental genres are starting to be specified in scores, like this: *da cantare* for the works intended to be sung vocally and *da sonare* for the works that were to be sung (sounded) instrumentally. Instrumental music from the Baroque era, starting from the Italian masters - *Frescobaldi, Corelli, Vivaldi, Scarlatti* and many others - to be perfected in the hands of the Germans - *Bach, Händel, Telemann* - created a new era in terms of the complexity of its composition. In the promotion of instrumental music from the the 17th and 18th centuries, the first beneficiaries are the keyboard instruments, mainly *the organ* and *the harpsichord*, while the violin, with its entire family, continues its triumphant career that began in the 18th century. The stringed and wind instruments are perfected, reaching a richness of expression never seen before. Soloist instruments, instrumental ensembles begin to be used, the orchestra is formed, creating a repertoire intended only for instrumental music.

The emancipation of the instruments is mainly due to the genre of dance music, in the form of sequences of dance movements (*pavana, gagliarda, couranta, sarabanda*, etc.) and instrumental interludes that were performed during the breaks between scenes and acts of dramatic performances. These led to the appearance of the forms of the following centuries (*suite, sonata, symphony,* etc.). Another genre that facilitates the development of instruments is *the concerto* (known in *Italy* in the 16th century). It was a vocal genre par excellence, but sometimes an instrumental formation is added to it, consisting of the dialogue between voices or between voices and instruments.

Over time, through the improvement and diversification of instruments (17th - 18th centuries), when voices were replaced by instruments or groups of solo instruments, *the concerto grosso* (perfected by Johann Sebastian Bach – *Brandenburg Concertos*) was born and then *the classical concert (W. A. Mozart).*

4. The Evolution of the Keyboard Musical instruments

Instrumental progress knows a first fulfilment, in the 17th century: “The lute remains in the foreground, enduring the double assault of bowed and keyboard instruments; it should be noted, however, that the central figure remains that of the little singer, the only one who does not raise his eyes from the score.” (Denizeau 2000, 57) (Figure 1)

Instrumental music knows the progress, through the keyboard instruments (*organ, clavichord, spinet, virginal, harpsichord*) engaging the whole of music on the path of ever-increasing digital virtuosity.

Fig. 1. *Nicolas Tournier (1590 -1639), "The Concert" - Oil on canvas*
Paris, Louvre Museum

Among these instruments, *the organ* and *the harpsichord* know a period of great brilliance, to which in 1711 was added *the piano with hammers* also called *gravicembalo con piano forte*; the piano called *Kielflügel;* the new *pianoforte* and other instruments that pave the way for the modern piano.

4.1. Organ

Until the 16th century, the organs were built identical throughout Europe. At the end of the same century, they start to differ from one country to another. *Italy, Spain* and *England* have their own style in the construction of organs, different from that of other regions, instead the countries of *central Europe* influence each other. *The Spanish Organ* is characterized by the row of trumpets arranged horizontally as at *Escurial Organ* (Figure 2).

Fig. 2. *Organ from Escurial (Spain)*

Fig. 3. *The Organ from the Klosterkirche in Birnau*

"The French organ stands out through the two keyboards, through the system of small pedals and through a sound palette that is not conducive to polyphonic playing, in contrast to the German organ, whose system of large pedals and timbre subtleties favors virtuosic execution and the clear production of the most complex pieces (especially those of Johann Sebastian Bach); as for the Italian and Spanish organs, they show, despite their great merits, less ambition" (Denizeau 2000, 57). The organ therefore continues to develop throughout the 17th century in the Germanic countries, especially in Northern Germany (Figure 3).

In Latin countries, the organ is oriented towards an instrument with 2 keyboards (corresponding to the 2 bodies of the instrument, but separated from each other) and with a complete pedalboard (with registers separate from the manual registers) that could emit all the chromatic notes.

During the 17th century and with its debut in the 18th century, the organ underwent important improvements, through: *Arp Schnitger* (1648–1718) with his

two brothers: *Andreas* (1678–1734) and *Gottfried* (1683–1753) and through *Silbermann* (he distinguished himself later, in the field of pianos). *German organs* have an arrangement of registers arranged in bodies *of main manual, expressive manual, positive manual* and *pedalboard.* They are quite balanced from the point of view of sonority, tuning and intonation. The German organ school reached its peak through *Bach.*The crystallization of the tuning is due to the organ builders who took over the theoretical principles of *Guido D'Arezzo* and other theorists who contributed to the establishment of the tempered tonal system.

"Now the optimal scales for organ whistles are being determined. By natural tuning in perfect fifths and fourths, an untempered tuning is achieved. For this reason, the tuning tables, which are now elaborated, provide not only tuning in fourths and fifths, but also in thirds. Later, major and minor chords are used, in which the fifth is slightly lowered and the fourth slightly raised. Through this tempered tuning system, similar to piano tuning, the organ will fully join the instruments concerts" (Roșca 2002, 146). However, due to sonic incompatibilities, especially in the registers of *aliquots* and *mixtures,* the standard tuning after the note LA = 440 Hz was not accepted, but many organs, especially those of the romantic period, were tuned almost a semitone lower. The most famous German organ builder from the beginning of the Baroque is *Arp Schnitger* (1648–1718). An example of a baroque organ whose layout was built by *Arp Schnitger,* is the organ in *St. Johannen's Church* in *Magdeburg* (built between 1690-1694).

"The way in which this organ is made, the balance between the component parts of the organ, the arrangement of the registers, which are mostly arranged in the main manual, the upper manual and the positive manual, with a certain variability by adding manuals such as the pectoral manual or the back manual, will give birth to *baroque organs.* The pedalboard is built as a compact body with a layout of at least two octaves, with registers of *Principals, Flutes* and *Mixtures,* to which *the Anciilor family* is added." (Roșca 2002, 146).

In this way, the organ reached impressive dimensions, incorporating in its construction all the important elements of the medieval and renaissance organ, of course, with the modifications and new concepts of intonation, construction of whistles and arrangement of registers.

"The baroque organ reached monumental proportions, like the instrument of the Hohestifskirche cathedral in Halberstadt: 5 keyboards, a pedalboard, 73 registers, mechanical or pneumatic traction controls" (Bărbuceanu 1992, 186).

From now on we can speak of a large concert organ, an organ capable of playing a dialogue of musical voices embedded in various musical forms, from prelude to fantasy and with multiple possibilities of musical expression.

4.2. Clavichord

A solitary, melancholic instrument, the clavichord has some virtues that elevate it above the harpsichord and forte - piano, especially if it is built by masters such as: Frick, Spath or Stein. “Through the pressure of the fingers, through the vibration of the strings, through the stronger or lighter participation of the hand, not only the local musical colors can be achieved, but also the intermediate shades, the amplification and extinction of sounds, the caressing trill that fades under the fingers, as well as portamento - in - one word, all components of feeling, can be defined on this instrument” (Schubart 1983, 255). In the century 17th century, the clavichord was no longer so widespread, except in Germany. The effects of the clavichord, Bach's favorite instrument for a long time, allowed some dynamic effects, which imposed more expressiveness on the execution, being a percussion instrument. After the piano appeared in the 18th century, Beethoven composed a sonata for clavichord. Today, for its execution, an old clavichord is being sought. Noted for its qualities, which include both its small size and light weight, the clavichord was usually placed on a table to be played. "It is said that the young Haydn, tired of the noise made by his boarding school mates, took a clavichord under his arm, took refuge in the attic and spent hours there alone with his music. Unfortunately, today's pianists no longer have this possibility” (Anfilov 1962, 36). After a series of refinements in the 18th century, a clavichord with independent strings was reached (a key for a single, double or triple string, tuned identically). Considered one of the ancestors of the piano, the clavichord enjoyed appreciation in Germany, where it was frequently used as a musical teaching instrument. The instrument has been known since the 15th century and was also known as the *equiquier*[2].

Today, clavichords have reached their peak, with a span of five to six octaves (F – F5). At the same time, this this instrument is noted for its ability to play legato and the art of vibrato. Clavichords are tied[3] (Figure 4) or untied, with or without lute registers. Thus, the sensitive interpreter could hardly wish for any further improvement of this instrument.

[2] *Echiquier (*fr. *eschiquier,* Eng. *chekker,* sp. *escaque, exaquier, wide escacherium) =* Old instrument with plucked strings and keyboard, about whose shape there is no description or any graphic representation. Mentioned between sec. XIV - XVI, it was often confused with the spinet and the clavichord.

[3] Thanks to a device, the strings of the tied clavichord are divided, and the tangent hits a certain point on the string. Thus, a single string can produce many different sounds (Schubart, Christian Friedrich Daniel (1983) – A History of Universal Music, Bucharest Music Publishing House, p. 255)

Fig. 4. *The Tied Clavicord (early 18th Century)*

4.3. Spinet

An instrument with plucked strings and keyboard, the Spineta dates back to the 14th century, being known in Italy, France, Germany and England. It is assumed by some organologists, that it was the invention of the Venetian G. Spinetti (at the end of the 15th century). "The oldest known and preserved instrument dates from 1493 and belongs to the builder Pasi from Modena. In the following centuries, in Italy and France the term spinet was accepted to define various types of keyboard instruments, such as *harpsichord, clavichord, celesta, harmonium* and very rarely *organ.* The spineta remained in musical practice until the end of the century. XVII, when it was replaced by the harpsichord" (Bărbuceanu 1992, 235).

The resonance box of the spinet, made up of beautiful pictorial decorations, had various shapes: triangular (like a harp positioned horizontally), rectangular and even asymmetrical pentagonal. The instrument has a single row of simple strings, and with the help of a harpsichord mechanism, these are plucked by small triangular raven feathers.

Fig. 5. *Spinet (1766)*

The spine can be portable or fixed. Supported on 3 - 4 legs decorated with wooden sculptures, it differs from the harpsichord by its smaller dimensions and the simplicity of the mechanism. Depending on the size of the instrument, the keyboard can include between 31 and 49 keys, corresponding to four chromatic octaves (Figure 5).

4.4. Harpsichord

"It would be a mistake to think that in harpsichordists we could discover the true primitives of the piano. The harpsichord is not an imperfect form of the piano of our days, but an instrument with its own, well-defined characters" (Bălan 1966, 8). Those who bring remarkable improvements in the evolution of this instrument are: in Paris – the musical instrument builder Jean Marius who reveals in 1716, a harpsichord with wooden hammers; in Germany – G. Schröder from Dresden, G. Silbermann from Freiburg, to which is added the name of S. Érard (harp reformer). From the second half of the century 18th century, the harpsichord no longer meets the increasingly varied requirements and gradually gives way to the piano. The best harpsichords known to this day were built by: Friederizi, Silbermann or Stein. The harpsichord lends itself more to allegro than to adagio rather to the interpretation of virtuoso pieces than expressive pieces.

Silbermann was the one who deeply felt the imperfection of the harpsichord, which either could not reproduce the musical coloring at all, or reproduced it in strong contrast, by changing the registers.

In order to better understand the possibilities of this tool, we will explain very briefly both its construction and the mode of operation:

Fig. 6. *Harpsichord attributed to Jacques Resnois (ca. 1780) Auch, the Jacobin Museum*

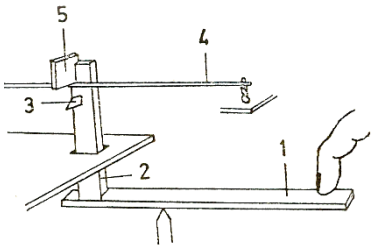

Fig. 7. *Mechanism*

4.4.1. The construction of the harpsichord includes: *The harmony plate* - on which the strings are arranged; *Strings* – which are stretched between tuning pegs and a wooden or metal frame; *The keyboard* - (or the two keyboards) that act on supports provided with claws and felt - sound stopper; *Pedals* – which allow the coupling of registers, varying in number.

***4.4.2. Mode of operation**:* By pressing a flap (1), the vertical piece of wood equipped with a crow's feather (3) or a strip of leather (currently made of synthetic material) is actuated, which pinches the string (4). By falling, the felt fixed on the support (5) stops the sound. The drawback of this system is the following: all the sounds they have a fairly uniform appearance, because it is difficult to obtain intensity and color sound through a feather. That is why the harpsichord has two keyboards and a register coupling system.

4.4.3. The Registers – each flap activates: a string; a second string of the same height, but with a different timbre; one chord at the lower octave and one at the higher octave. The four combinations meant as many registers (there were others, such as the lute register), which allowed a better variation in the quality and intensity of the sound. The registers can be engaged at will, through two systems: pedals and levers. Thus, a single keyboard could command all the registers simultaneously: this representing the "full register".

4.4.4. The possibilities of the harpsichord: As with the piano and the organ, the possibilities of this musical instrument are among the richest: *Harmonic possibilities* – chord progressions, arpeggiated chords, *cipher bass execution*[4].

Melodic possibilities – when the melody is slow, with sustained notes, the musicians decorate it with very varied ornaments, because the support of the instrument's sonority, without ornaments, would die out very quickly; when the song is fast, the clarity and precision of the harpsichord can be appreciated; *Contrapuntal possibilities* – consist in highlighting several overlapping melodic lines by combining the two hands, the two keyboards and registers. In the century 17th and 18th centuries, the harpsichord, a solo or accompanying instrument, is present everywhere: in the opera, in the church, in the courtyard and in the salons. It is the favorite instrument of these times. From the year 1750, little by little, it was abandoned in favor of the piano, the reason being the impossibility of the harpsichord to achieve nuances of intensity, of interpretation, compared to the piano where the power of the sound consisted in the force of attack, thus resulting consisted in the force of attack, thus resulting in an infinite range of nuance possibilities.

***4.4.5. Other variations of the harpsichord**: The contrabass harpsichord (Schnarrwerk)*; *Portable harpsichord; The positive harpsichord.* These last musical instruments listed above were never appreciated.

4.5. Forte Piano

This instrument is an invention of the Germans, Silbermann, looking for means to

[4] The composer indicates the chords that support the upper voices, with the help of a conventional cipher, and the instrumentalist performs this cypher bass, improvising the required chords.

give this instrument the colors, together with his successors, was the author of this invention. With this instrument, it was possible to obtain forte and piano only byhand pressure, even under conditions of high speed, without resorting to the use of registers, whose manipulation took too much time. The instrument was thus perfected, with the possibility that, in addition to the effortless modification of the intensity of the sounds, with the foot, the charm of the music could be obtained primarily through the elastic force of the fingers. There were instruments that had ten twelve, even twenty registers. A great inventor from Mainz, endows a forte-piano with the sound of flute, violin, bassoon, oboe, horns and trumpets. The best forte-pianos known even today are those built by Spath from Regensburg, Frick from Berlin, Silbermann from Strassburg, Strouth from London and Stein from Augsburg. Compared to the feathered harpsichord which calls for only a light touch, the forte piano required real shocks or impulses. In conclusion, this instrument can reproduce the musical coloring, but still not all its nuances.

4.6. Pantaloon

It is a kind of small forte-piano, an instrument operated by a light touch, which must constitute a stroke rather than a kneading. The percussive elements of the instrument are the tangents, which consist of hammers. "With this instrument it is possible to achieve a perfect vibrato. The reproduction of feelings fails, however, due to the lack of intermediate nuances. The eternal jumps, like a sparrow, from one sound to another, without the possibility of filling the gaps, the rumble, the clanging, the rattle of this instrument are the reason why few circles of society still endure it and at the same time predict his near end" (Schubart 1983, 255). This old instrument with strings and keyboard is a type of large Hackbrett, built and perfected by Hebenstreit Pantaleon (1669 – 1750) of Mersenburg in the year 1697. "Out of respect and appreciation for the inventor, Louis XIV changed the German name of instrument in *Pantaleon.* P. can certainly be considered one of the ancestors of the piano with hammers" (Bărbuceanu 1992, 192 - 193)

4.7. Melodica

The melodica is a musical instrument invented by Stein of Augsburg, which has all the qualities absent from the harpsichord. Thanks to some springs with which the keys are provided, it gives the instrument the possibility of realizing intermediate nuances, of merging sounds. The keyboard of this instrument is equipped with a steel spring that allows it to respond to the lightest touch. "This instrument would be almost perfect, if it were not reduced exclusively to whistling. Therefore, the upper limit of the possibilities of this instrument consists of a very good execution

of the flute - nothing else. In short, it's an instrument that allows the realization of color, but not the creation of new melodies - an excellent brush, which does not take into account a good drawing" (Schubart 1983, 256).

4.8. The Piano with Hammers

Instrumental music requires an interpretation with more and more subtle and frequent nuances of intensity, which the harpsichord could not cope with, the few sound planes that were recorded. Thus, three constructors passionate about finding new means of improvement, invented the piano with hammers almost simultaneously - without knowing the other's existence - Bartolomeo Cristofori from Florence in 1711, Jean Marius in Paris, in 1716 and Christoph Gottlieb Schröder in Dresden, in 1717. Bartolomeo Cristofori (1655 – 1731) was an administrator at a museum of musical instruments in Florence. He spent his whole life among harpsichords and clavichords and constantly thinking about how they could be perfected, he found in his mind, the invention whose fate had given him a grand future, only towards the end of his life. The idea was simple: there was no need to pluck the strings as in the harpsichord, nor to press them as in the clavichord, but it was much better to strike the strings with a mallet, because the force of the strike could be varied, and therefore, the intensity of the sound given by the string also varied. The idea was not really new, because even with the old cymbal the strings were made to vibrate by percussion. "The problem was to connect the movement of the hammer hitting the string with pressing the key. A strong stroke of the finger on the key was supposed to attract a strong stroke of the mallet on the string, and a gentle touch of the finger on the key was to be matched by a light, delicate stroke on the string. That was the main goal that was being pursued" (Anfilov 1962, 41)

After many attempts, models which were destroyed by Bartolomeo because they did not satisfy him, he finally decided to mount to each key, a combination of two ingenious systems of wooden levers, finished with a light hammer, wrapped in leather. Thus, the mallet struck the string, and a soft felt damper stopped it from vibrating when the finger was taken off the key. "In 1709, an illustrious visitor to the museum in Florence saw the four harpsichords equipped with the new mechanism. They were Bartolomeo Cristofori's instruments. The talented craftsman had also given them a name: gravicembalo con piano e forte, which means harpsichord with weak and strong sound. That's how the instrument called the pianoforte or, if you could say it like that, weak-loud appeared." Cristofori did not want to spread to the world the discovery of his great invention, which was not yet finished, but a music magazine spread the news in such a way that the inventor received a visit from Johann Sebastian Bach himself. It is not known what was the opinion expressed by him, but, after the visit of the great composer, the Italian took an axe with which he mercilessly smashed the "piano e forte" harpsichord he was just building. However,

Bartolomeo Cristofori took his invention to perfection. On the piano with hammers (1711) named by Cristofori: *gravicembalo col piano forte,* the role of the tongues or goose feathers was therefore assumed by the hammers wrapped in leather, which hit the string directly. Although he did not have several keyboards, he could play both the piano and the forte (from where the name pianoforte came later). Christoph Gottlieb Schröder (in 1717) and a little later Gottfried Silbermann, obtain a *Hammerklavier*. Manufacturers from Germany, France and England continuously perfected this instrument, soon called *pianoforte,* then simply *piano.*

4.9. Other keyboard instruments

4.9.1. *Sambuca Lincea (Pentecontachordon)* - Instrument with plucked strings and keyboard representing a type of harpsichord, which was built by Fabio Colonna (1567 – 1650*)*;

4.9.2. *Cembalo d'Amore (it.)* - is a variety of harpsichord, equipped with one or two keyboards. Its strings are twice as long as those of the harpsichord and are split in two the mouth pieces to produce the same sound. The instrument was built in 1722 by G. Silbermann;

4.9.3. *Lute harpsichord (engl.); Lautenklavizimbel (germ);* – Instrument invente din 1740 by the organ builder: Z. Hildebrand, after an idea by Bach. This hybrid instrument resulted from the combination of the lute and the harpsichord. The lute had 3 rows of strings, two of which were made of wood, and one of which was covered with brass wire.

4.9.4*. Kielflügel (germ.)* is a piano that involves in its instrumental technique an influence of the organ technique. It is actually a variety of harpsichord made in Germany. Through certain mechanisms coupling is achieved, being able to sing the melody one octave higher, one lower, or in octaves.

5. Results and discussions

In the didactic-professional musical activity, both as a soloist and as an accompanist, the contribution of the pianist is to convey to the public o wided palette of colors, feelings, thoughts, messages, but this cannot be done without highest musical instruments quality or without the consummate talent and hard work of the pianist (soloist/accompanist) of many hours by study. Therefore, both the musical instrument and the soloist, the accompanist, represent a factor of active participation in the process of interpreting a musical work.

6. Conclusions

The development of genres and forms of instrumental music that is reflected in the growing number of compositions, the enrichment of instrumental music literature, the contribution of musical instrument builders to the development and improvement of instruments, but also the contribution of performers (soloists, accompanists) and teachers, all these lead to the formation of new generations of lyrical artists/instrumentalists/pedagogues and causes the interpretation technique to evolve rapidly, gaining in speed and expression.

7. Acknowledgements

This article represents only a part of a chapter from my doctoral thesis, coordinator being: Prof. Dr. Nicolae Brânduş, pianist, composer (from the National University of Music in Bucharest and Member of the Union of Composers and Musicologists (UCMR) from the same town. Therefore, an important role in obtaining the results of this paper, belongs especially to him, whom, unfortunately, I can't no longer thank him, because he passed away in the 2023 year. But, I thank to all the institutions that represent him and I hope that publication of this article, to remain in his remembering...

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