Clavecin Roïal Project: Timbres and Fantasy of the Sublime

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Abstract: The performing research project about the Clavecin roïal, that I propose, involves the first worldwide copy of said instrument by the German organologist and keyboard instrument maker Kerstin Schwarz. The project involves the facsimile of the instrument, a book about the research, and a CD recording of it. The aim of the project is to contribute to the new point of view in musical research by using instruments and performance praxis as primary sources, putting together organology, biomechanics in performance and musicology. The Clavecin roïal was a sort of fortepiano in clavichord-form with mutations invented by Johann Gottlob Wagner in 1774. It was influenced by Hebenstreit's timbre aesthetic; that is to say by the pantalon's tradition - the very German fortepianos - that has nothing to do with the Cristofori tradition. Wagner's craftsmanship created a sensitive keyboard with rich sound mutations operated by pedals, allowing whimsical sonorities. Similar to the extra drama that we get in the theatre when we have a good lighting engineer, those sound mutations can be linked with the musical Sublime and the "Fantasia Principle". This kind of fortepiano was directly connected with C. P. E. Bach's ideal sound for improvising, emphasized in his Versuch. We can find the idiom of the instrument on Bach's Kenner und Liebhaber rondos and fantasias. The Clavecin roïal's construction was widespread at least until c.1800, having been built by numerous instrument makers. Wagner's workshop built not lesser than 805 in a span of 25 years. Like Johann Zumpe's square piano, Wagner's Clavecin roïal played an important role in piano history that has yet to be demonstrated. It provides important clues about North German fortepiano music of late 18th century.

Keywords: Clavecin roïal project; J. G. Wagner; musical Sublime; timbres and fantasy; C. P. E. Bach

Music is a physical fact that needs at least a human body and an object to make a sound. I believe that experiencing music is intimately linked to that physical-fact. A musical instrument offers and restricts sound possibilities, both technically and acoustically. I would go so far as to claim that to reach deep understanding of instrumental music we must know as much as possible about how the instrument is, or was. In the piano music repertoire from the age of Mozart and Bach's sons we still rely, more or less, on the instrumental parameters that a Steinway Grand piano has (even in performances on Stein or Walter pianos). This is mainly due to the thoughts on piano playing in terms of touch control, dynamics and power. The *Clavecin roïal* was "a sort of fortepiano", in that period, full of other expressive alternatives based on timbre changes. British organologist Michael Latcham (2006) points out:

Our understanding of eighteenth-century keyboard-instrument making and playing would benefit from more open attitude to the instrument then available, especially in the last thirty years of the eighteenth-century. [...] We should also acknowledge that all too often we have little idea of how the instruments of the day were used (p. 178).

The reason for writing this article came from the interdisciplinary research project *Clavecin roïal: timbres and fantasy of the Sublime*, which I am developing with German organologist and keyboard instrument maker Kerstin Schwarz. This project was born under the unavoidable presence of the physical-fact in music, namely from the necessity to experience music physically on a special instrument. The project involves three aims:

- 1) making the first worldwide copy of the *Clavecin roïal* for artistic research purposes;
- 2) publishing a book with the musicological and organological research;

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3) recording on the *Clavecin roïal* music by composers, surrounded by the Sublime in music and the "Fantasia Principle" in North Germany (Ottenberg, 1987; Richards, 2001, 2006; and Hogwood, 2006).

This project, running from 2011 and to be concluded in 2019, brings together organology, musicology and historical performance praxis with the aim of experiencing these instrumental possibilities, far from Steinway's ones. Thus the main goal of the project is to give an extensive presentation on the relationship between instrument and music in the German areas surrounded by the Kantian Sublime.

Hence, the project that will be presented here embodies a recent approach in musicology by using instruments and performance praxis as primary sources that recently has earned a Spanish prestigious "Leonardo Grant". This article is a brief and updated overview of the project.

The Research on Wagner's Clavecin Roïal. A Brief Synopsis

My first *vis* à *vis* with the *Clavecin roïal* was by chance during my MAS research. I was investigating, from the perspective of music gestures, the body-instrument relationship in the music of Carl Philipp Emanuel Bach and the instruments in his surroundings. In 2011 I visited the Instrumentenmuseum in Berlin, looking for the playable Johann Heinrich Silbermann fortepiano from 1776. In the museum in Berlin there is a fine specimen of *Clavecin roïal* from 1788 with the serial number 640. It is an impressive instrument that aroused my interest and many questions, too; In terms of the square piano (*Tafelklavier*), it is:

- too big to be small enough for domestic purposes only;
- too fine to be cheap and inconspicuous;
- too strange and sophisticated, with special action and stops, to be part of the mainstream idea of the "Mozart-Period" fortepiano.

In summary, it is too special to be almost unknown in the history of the piano and its repertory. In fact, only six years before, in 2006, Michael Latcham had devoted the first deep research to the *Clavecin roïal*; an extensive article to put it in context, which is still now the main reference.



Figure 1. Clavecin roïal No. 640 (June 12th, 1788) in Berlin, Staatliches Institut für Musikforschung Preußischer Kulturbesitz Musikinstrumenten-Museum inv. no. 1174 (photo by the author).

The *Clavecin roïal* is a large German square piano with five octaves invented in 1774 by Johann Gottlob Wagner (1741-1789). It was built by him, together with his brother Christian Salomon (1754-1812), in Dresden. The instrument has a hammer action of the intro *Stoßmechanik* type developed with an escapement by Wagner. But the most special feature it has is the ability to change its voice by means of four stops, or registers, easily operated by pedals (knee levers in the surviving specimens). As it was described in its announcement, by Wagner himself, the *Clavecin roïal* can produce six sound mutations (*Veränderungen*). Wagner describes these mutations by combining the stops as follows:

- I.[...] the instrument just by itself [...] has the full strength [sound] of a *Flügel* or *Clavecin* [both terms for the harpsichord], with the difference that the bass keeps on sounding for far longer [...] the most pleasant harmonies there are to be heard [namely, this resonant undamped sound is very appropriate for the free fantasia] [...]
- II.[...] pedal No. 2 [...] the same [sound] as a *Flügel* or *Clavecin*, just as strong in sound, and can be used to good effect with a complete music [in ensemble playing] and for the accompaniment of the recitative [...]
- III.[...] pedal No. 1 [...] the sound of a harp, completely rich and natural [...]
- IV.[...] pedal No. 1 and taking with it pedal No.3 the sound of a lute is created [that] can quite easily persuade a person listening from a distance that he really does hear a lute [...]
- V.[...] pedal No.3 [...] the sound of the *Pantalon* [...] those to whom the *Pantalon* is not entirely unknown would agree that the sound is very similar.
- VI.[...] pedal No.3 depressed and take pedal No.2 [...] the so-called *Piano forte* comes into being [...] because the sound this stop produces is very similar to that which the instruments known to date by the name *Piano forte* have in common [...] (Wagner, 1775)

The three pedals for allowing these mutations are, from left to right, the harp stop (No. 1), damper stop (No. 2) and lute stop (No. 3). The fourth one is a dynamic device, a cover [Deckel] of cardboard, lined with green silk cloth over the soundboard (so-called in English the swell, or lid swell). This device allows effects for crescendo and diminuendo, and also for the *subito fortissimo*. All these sound mutations are possible due to two opposite features of Cristofori's piano tradition:

- 1. To have the under dampers ordinarily off, namely not resting on the strings (fig.2);
- 2. To have bare wooden hammerheads, i.e. without any kind of cover (see fig. 2 and 6).



Figure 2. Under dampers and bare wood hammer head of the *Clavecin roïal* No. 640 in Berlin (photo by Kerstin Schwarz).

Nevertheless Wagner, like Cristofori, was thorough in his work on the action in looking for its best response. Wagner asserts in his announcement that:

Just through a strong or a weak touch at the keyboard he [the musician] has at his command the *Gradation* of *pianissimo*, *piano* [and] *forte* [...] The touch is as light as that of a clavichord; a child of 6 years old can play it with the least application of the strength of his fingers, clearly annunciating all the tones with the great dexterity. (Wagner, 1775)

The Clavecin roïal was built by Wagner's workshop in big quantities until at least 1797, the last dated existing original by C. S. Wagner, numbered 805. This number surpasses the 700 keyboard-instruments (fortepianos, clavichords, harpsichords and other keyboards) of Johann Andreas Stein that Ernst Ludwig Gerber estimated in his Lexicon in 1814 (Gerber 1814, col. 264; see also Latcham 2016, p. 66-67). At that time, Wagner's Clavecin roïal was as notorious as Friederici's Fortbien or Stein's fortepianos; notorious enough, as a matter of fact, to appear, in 1794 in Trieste, in the Italian business essay II mentore perfetto de negozianti by Andrea Metrà: "Giovanni Amadeo Wagner, the so

industrious [and] renowned maker, builds not only excellent harpsichords, but the much sought after, and known Clavecin Rojal [sic][...]" (1794, p. 184). Indeed both, instrument and maker, deserved entries and descriptions in important volumes in eighteenth and nineteenth century, such as Forkel's *Musikalische-kritische Bibliothek* (Gotha, 1779) and *Almanach* (Leipzig,1782), Cramer's *Magazin der Musik* (Hamburg, 1783), Türk's *Klavierschule* (Leipzig/Halle,1789), Kläbe's *Neues gelehrtes Dresden* (Leipzig,1796), Koch's *Musikalisches Lexicon* (1802), Gerber's *Biographisches Lexicon* (Leipzig, 1792) and *Neues Biographisches Lexicon* (Leipzig,1814), Choron & Feyolle's *Dictionnaire des musiciens* (Paris, 1811), Thon's *Abhandlung* (Weimar, 1817) Fetis' *Biographie universelle des musiciens* (Brussels, 1844), and reprinted editions during the nineteenth-century of some of these works.

The *Clavecin roïal*, was so widespread in the last quarter of the century, that in a criticism in Cramer's *Magazin* in 1783 it is stated that in Germany, "especially in the southern provinces" one could "encounter twenty good Pianofortes, Fortbiens [*Fortpiens*], Clavecin royal [*Clavecinroyals*], or whatever else these Hackbrett types are called, for a single serviceable clavichord". The exact places in the "southern provinces" are not known, since from that time, there are no accounts or surviving instruments from those provinces. Nevertheless, one can see that the *Clavecin roïal* was built by other renowned makers in Saxony, such as Christian Ernst Friederici in Gera (Schniebes 1792); Johann Gottlob Horn in Dresden; or Johann Gottfried Zabel in Tangermünde. It was built by anonymous makers, too; up to now, we know of two surviving instruments, whose makers are unknown as well as the place of production. I have done an up to date account of 13 instruments by Wagner's workshop. Between them one from 1783 was destroyed in World War II, but we can see its mention in Kinsky's catalog (1910, pp. 131, 280-281) and another is unsigned but probably made by Wagner and dated around 1782-1783.

Updating my research until now, it can be asserted, too, that the *Clavecin roïal* was widespread also in the very north, throughout the German towns on the Baltic Sea coast from Danzig (Gdańks/Poland) to Reval (Tallin/Estonia) and some Scandinavian cities. On the Baltic Sea, the numerous makers could spread out the *Clavecin roïal* by means of the older Hanseatic commercial-routes between the Baltic and the North Sea. Probably an incentive for that business could have been the transit of celebrated musicians and their music from cities such as Berlin, Hamburg, Hannover or Lübeck to Danzig, Königsberg, Riga, and Reval (see below).

Danzig is – under my research on the sources at the date – the city with the largest number of makers of Clavecin roïal, and, actually, it was offered profusely. We can see their announcements in the *Danzinger Nachrichten* from 1765 (according to Hingelberg – see below) to 1803 (Vogel, 2001, 2006a, 2010). In Danzig, the instrument makers that made and sold the *Clavecin roïal* were: Friedrich Rudolph Dalitz (Delitz) (Vogel 2000), Jakub (Jakob) Machowski (Makowski, Machowsky), Georg Wilhelm Rasmus, Ernst Jonathan Sheeffer (Sheefer), Benhard Hübner y Johan Daniel Weber (in Vogel 2010). Reval was another centre of production and sale of *Clavecin roïal* in the Baltic Germanarea. The *Revalsche Wöchentliche Nachrichten* is informs us about *Clavecin roïal* sales from 1781 to 1796, and its makers and sellers such as; Johann Friedrich Gräbner (Grebner), J. C. Neidhardt (Neihart or Neidhart), Peter Johann Greinert and Jürgens & Company (*RWN* in Heinmaa, 2017, pp. 206-214).

In addition, we can also find references of the Clavecin roïal in the very north, e.g. in Scandinavian cities such as the German/Danish Duchy of Schleswig, where builder Johann Christoph Jürgensen was mentioned in Cramer's *Magazin* in 1783 (see English translation in Latcham 2006, p. 184); in Copenhagen where, as late as 1822, the Gade

brothers offered a *Clavecin roïal* (Falcon Møller, 1976, p. 200); in Stockholm Pehr Lindholm and Mathias Pehr Kraft (although it must be prudently examined).

Whether Wagner was the true inventor of this kind of instrument or not, became uncertain, since Johann Gottfried Hingelberg stated in his *Über Danziger Musik und Musiker* in 1785 that Friedrich Rudolph Dalitz made a similar instrument in 1765, which served to Wagner as a prototype for his *Clavecin roïal*. This becomes puzzling in the history of the *Clavecin roïal*, since Hingelberg apparently was privileged witness of both instruments (see Vogel, 2000, 2010). Dalitz and Wagner probably made similar instruments, both with several timbre changes; but, what is quite clear, is that Wagner's Clavecin roïal was born into the timbre aesthetics after Hebenstreit's dulcimer (Hackbrett), that is to say, from the *pantalon's* keyboard tradition – the very German (speaking-areas) fortepiano tradition (see Cole 1997, 1998, 2004).

The *pantalons* are stringed hammered keyboards. As a matter of fact, this is the quality they share with the fortepiano. Nonetheless, it is to be said that this is a feature used to conceptualise them as early fortepianos in the piano history, but at the cost of disdaining other special features, although their tradition and sound aesthetics are really different. Cramer uses that concept in a description of Jürgensen's instruments (*Clavecin-Royal*, *Bellesonore* and *Bellesonorereal*). He says: "[...] the *Fortepiano*-type of instruments, i.e. those small hammers [...]" (Cramer's *Magazin der Musik* I, 1783 – see English translation in Latcham 2006, p. 184). But this is a wide-ranging idea to differentiate them from the instruments whose sound is produced by quills (harpsichords, spinets or virginals) or brass tangents (clavichords). There are different kinds of *pantalons* with regional features in shape (most of them in clavichord, or laying-harp form), action (both, *Prellmechanik* and *Stoßmechanik*), or stops. But they share at least the following features:

- Bare wooden (bone or even metal) hammerhead without soft cover
- No dampers (or with a device to connect/disconnect them)
- Registers (stops), like the "Harfenzug" (harp stop); "Lautenzug" (lute stop or moderator - or if any of this kind, another set of hammers with soft cover); and in the case they have dampers, a "Pantalonzug", the device to disconnect/connect them.



Figure 3. Pantalon (with retro Stoßmechanik type action) in Berlín (Musikinstrumenten-Museum, inv. no. B.8 (photo by the author).

To sum up, they are: resonant and enriched with several timbre changes by stops. Their dynamic gradation, is limited and secondary, due to their habitually simple actions. It has nothing to do with the Cristofori piano tradition. At this point it might be better to call the pantalon a "hammer-action type" than a "Fortepiano-type". Michael Cole (1998) states:

Great caution should be used when describing some of these [hammer-action instruments] as pianofortes. It is clear that the concept of the *Pantalon* persisted until the end of the [eighteenth] century, resulting in instruments with characteristics that place them outside mainstream pianoforte history (p.177).

On the other hand, we can also see the opposite in the same Magazine by Cramer, instead of "Fortepiano-type", "Hackbrett types" is used (see quotation upper and footnote 10). As we can observe, the Clavecin roïal, invented, or at least developed, by Johann Gottlob Wagner in 1774, is very consistent with the pantalon features. Although Wagner was thorough in finding a fine action to produce dynamic gradation with, – as I have indicated before – it has to be demonstrated whether his action model is based on the Cristofori tradition or, looking for the clavichord expressivity, on the pantalon tradition with intro Stoßmechanik.

In these terms and context, the *Clavecin roïal* certainly is a sophisticated *pantalon*, having all the *pantalon* features and sublimating a long tradition that was born following the timbre aesthetics fashioned by Pantaleon Hebenstreit and his enormous dulcimer. Indeed, Wagner made the *pantalon* more sophisticated with:

- 4 pedals or knee levers (fig. 4) instead of hand levers;
- an special dynamic device (fig. 5);
- a fine action for expressive touch (fig. 6).



Figure 4. Knee levers of the Clavecin roïal No. 640 in Berlin (photo by the author).



Figure 5. The lid swell of the Clavecin roïal No. 640 in Berlin (photo by the author).



Figure 6. The Wagner-action of the Clavecin roïal No. 640 in Berlin (photo by Kerstin Schwarz).

Therefore, in this timbre aesthetic context we can say, following Michael Cole's explanation, that the Clavecin roïal by Wagner was an "extraordinary phenomenon absolutely of its era" (Cole 2004, p. 85); and embodied a superb example of the timbre aesthetics of the pantalon tradition. Notwithstanding, contrasting the bibliography, Michael Latcham (2006), in his long article about the Clavecin roïal, explains a distinct view, locating it in another context. As it was presented before, in Wagner's announcement, he describes carefully which instruments the Clavecin roïal can imitate by combining stops. For instance, the *Pantalon* sound is described in mutation V, but this mutation is referred, here, explicitly to Hebenstreit's dulcimer sound – albeit imitating only the dulcimer sound produced by soft beater on metal strings. Thus, it appears to be one special instrument that can combine others, the initial sound being that of the harpsichord, but resonant and with expressive playing. Latcham's argument, which is based on that capability of the Clavecin roïal to imitate other instruments, ascribes it to the tradition of making combined instruments (harpsichord-piano). He also classifies it specifically into the category of "a piano action combined with a means of imitating the harpsichord" (Latcham 2006, p. 139), belonging to the German school in the tradition of combining instruments. Indeed, Latcham (2006) emphasises that:

From our point of view, the *Clavecin roïal* was technically a piano because it had hammers. From Wagner's point of view it may have been a piano but it was also a harpsichord – an expressive one – producing soft and loud through touch alone. We define the instrument in terms of its action, Wagner defined it in terms of its sound (p.132).

My point of view differs slightly from Latcham's, although his reasoning is always instructive and interesting, and opens our mind to new approaches on piano history. Most of these questions may be experienced in playing an instrument in very good conditions. Hence, the facsimile copy of the project – that I am going to describe below – becomes a crucial element for the performing research. At the very least it should shake-up the mainstream thoughts of the early piano history (Mozart-Period) and its repertory in German areas.

The Facsimile and the Performing Music Project

After my visit at the Musikinstrumenten Museum in Berlin in August 2011, I proposed to Kerstin Schwarz, specialist at that moment in the pianos of Cristofori and Silbermann, to make a facsimile of the *Clavecin roïal*. It offered her an exciting challenge, since the *Clavecin roïal* belongs to another hammer-action tradition. In the year 2012, we began the first steps in making a facsimile copy: the organological research and a meticulous comparison between surviving original instruments. The copy is based mainly on two instruments:

- for the action and structural parts, the Clavecin roïal in Berlin No. 640 June 12th, 1788 (Staatliches Institut für Musikforschung Preussischer Kulturbesitz Musikinstrumenten-Museum Inv. No. 1174 – see fig. 1);
- and for the case construction in plain oak the *Clavecin roïal* in Eisenach, No. 666, December 12-, 1788 (Bachhaus, Inv. No. 185 Restored by Wolfgang Wenke see fig. 7).



Figure 7. Clavecin roïal No. 666 (December 12th, 1788) in Eisenach, Bachhaus, inv. no. 185 (photo by Kerstin Schwarz).

The construction drawings, in scale 1:1, were made by Kerstin Schwarz following the original *Clavecin roïal* in the Berlin museum were taken from the instrument in Berlin. Up to now, we have also visited, together or individually, other instruments by Wagner and also the one by Horn:

- No.324, November 16⁺, 1783 (Collection Museum für Kunst und Kulturgeschichte der Hansestadt Lübeck, inv. no. 1968 Catalogue p.68).
- No. 533, July 1s, 1786 (Germanisches Nationalmuseum, Nuremberg, inv. no. MIR 1701).
- No. 587, July 10th, 1787 (Kunstgewerbemuseum in Schloss Pillnitz, Dresden, inv. no. 37620).
- No. 652, July 17th, 1788? [the year is erased] (Gemeentemuseum, Deen Haag [The Hague] inv. no. 1991-0007).

• Johann Gottlob Horn 1786 (Kunstgewerbemuseum in Schloss Pillnitz, Dresden, inv. no. 48121).

Currently, the facsimile is still under construction. During the building of the copy it is possible to discover many special aspects of fine craftsmanship in Wagner's *Clavecin roïal*.

The case copy, whose dimensions are 1730x650x225 (in millimetres), is made in plain oak wood, with dovetailed corners as the Eisenach *Clavecin roïal*. The base-board and parts of the inner construction are of spruce wood, wrestplank in beech wood (see fig. 8) and the hitch pin blocks in oak (in fig. 9).

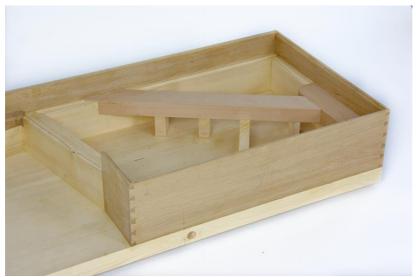


Figure 8. Case, dovetails and wrestplank of the facsimile (photo by Kerstin Schwarz).

As it is in the oak case model, the nameboard and the toolbox lid are veneered with walnut and yew inlays (fig. 9). This type of finish is the third option Wagner offered in his announcement and it cost 28 ducats. The first option is veneered in rosewood (as No. 640 in Berlin) or yew (as No. 533 in Nuremberg), that cost 36 ducats; and the second finish option is of walnut (as No. 587 in Pillnitz), that cost 30 ducats.



Figure 9. Nameboard, toolbox lid and hitch pin rail of the facsimile (photo by Kerstin Schwarz).

The soundboard has two holes where the rosettes are enclosed. The two holes with the rosettes appear habitually in most of the surviving instruments. Nevertheless, the only two surviving small-size *Clavecin roïal* and one of the large-size do not have any hole. Another large-size instrument has only one hole. The soundboard also has a special way of placing the ribs. In fact, the ribbing is very distinctive but also found in clavichords by Friederici's Workshop (fig. 10).



Figure 10. Underside soundboard holes and ribs of the facsimile (photo by Kerstin Schwarz).

The rosettes are made of non-acid cardboard, like the original. This kind of rosette is distinctive of Saxony; they were habitually present in clavichords from that region. They can be seen in Horn's *Clavecin roïal*, too.

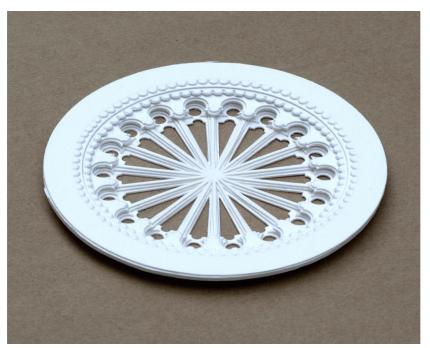


Figure 11. Rosette of the facsimile (photo by Kerstin Schwarz).

The action frame (fig. 12) with its keyboard (fig. 13) are already finished and waiting to be coupled with the special Wagner-action (hammers, dampers and escapement system).



Figure 12. Action frame of the facsimile (photo by the author).



Figure 13. Keyboard of the facsimile (photo by Simon Chinnery).

For research purposes and understanding, Kerstin Schwarz previously made a model of the action. We were analysing different aspects of the Wagner-action through that model. Before the construction of the whole action, we have tried to understand every component in the model, in looking for its maximum efficiency. One method was comparing the Wagner-action with other intro *Stoßmechanik* such as the Cristofori and Silbermann actions (with intermediate lever), and also the Zumpe action (without escapement). A special device for the adjustment of the action emerged; an 'adjustable escapement system' that verifies Wagner's thorough intention for finding a good response of the action for expression purposes by touch. The regulation of the action is done by the adjustable escapement system. We have tested this system in the model,

looking for the best location of the escapement, in relation to the hammer, for dynamic response.



Figure 14. Model action of the facsimile (photo by Simon Chinnery).



Figure 15. The 'adjustable escapement system' of the *Clavecin* roïal No. 640 in Berlin (photo by Kerstin Schwarz).



Figure 16. Kerstin Schwarz testing the 'adjustable escapement system' in the model (photo by Simon Chinnery).

The performing music project involves the German composers related to the Sublime in music and the "Fantasia Principle" (the habitually so-called *Sturm und Drang* music style, derived from the *Empfindsamer Stil*). In that music the leader composer was C. P. E. Bach. The relationship between C. P. E. Bach's style and Hebenstreit's timbre aesthetic legacy, present in the *Clavecin roïal*, clearly appears in Bach's *Versuch* II in 1762. There he praised the undamped stop of the Fortepiano as the most pleasant and delightful for improvising fantasias (see footnote 7). That relationship turned into a fact when (quite probably) in 1781 C. P. E. Bach bought a *Clavecin roïal* made not by Wagner, but by old Friederici (Christian Ernst) in Gera (Schniebes, 1790). Emotions and abrupt effects were a constant in C. P. E. Bach's music, absolutely linked with his improvisational skills and delight for free fantasias. In his music we can find intriguing effects in great quantity, especially in the last rondos and fantasias from his *Kenner und Liebhaber* collections. Sound effects in C. P. E. Bach's music run in the Kantian sublime concept, and fit together with *Clavecin roïal*'s sound qualities and effects.

Johann Georg Sulzer, close friend of C. P. E. Bach, describes in his *Allgemeine Theorie der schönen Künste* (1771-1774) the sublime as the highest in the art:

[...] the sublime works powerfully on us, carries us away and irresistibly seizes our emotions. When a charming landscape is compared to the awesome prospect of high mountains, or the soft tenderness of Zidli is compared to the raging love of Sappho, the beautiful is compared to the sublime. The latter is the highest ideal of art and must be used where one intends to affect strongly human emotions, where admiration, ambition, deep desire, arrogance, as well as terror and fear are to be stimulated, everywhere that one wishes to greatly charm or move the soul, or where one wishes to suppress these emotions with violence (in Kroesbergen and Wentz, 1994, p.494 – see also Richards, 2006).

The Clavecin roïal was developed in a time, when in Germany, the Sublime grew up as an aesthetic concept after Immanuel Kant's essay *Beobachtungen über das Gefühl des Schönen und Erhabenen* published first in 1764 in Königsberg. Admirer and friend of C. P. E. Bach was Johann Friedrich Reichardt, who also studied with Kant in the University of Königsberg; his music shares many effects and contrasts with C. P. E. Bach's music as Carl Wilhelm Podbielski, also in Königsberg, or Johann Gottfried Müthel, organist in Sant Petri in Riga and pupil of C. P. E. Bach (all they called the "Bachists" in Hogwood, 2006). As I have shown before, Danzig, Königsberg, Riga and Reval were the main German cities in the Baltic Sea connected by the commercial routes and the transit of musicians, where there was a great activity surrounding the *Clavecin roïal* production. For instance, we can know that in Danzig "in 1794 [...] C. A. Reichel [...] executed Mozart's piano concert on a *Clavecin Royal*" (*DaNa 1794, nº 12, p. 152*, in Vogel 2001, p. 153). The *Clavecin roïal* was very present in the birthplace of the Sublime concept, too. The Clavecin roïal, full of timbre contrasts, embodies such a Sublime concept in musical instruments. Wagner wrote in his advertisement:

If he [the musician] is good in improvisation, rich in imagination and knows how to use the long sound of the bass artfully, he will be able to play the most pleasant harmonies there are to be heard. (Wagner's advertisement, 1775)

How could such an instrument influence the composers and their music? Or on the other side, how could be the instrument apt for that music? I propose a new approach, through the musical gesture and tempo, linked with the aesthetics of resonance and change of timbre as near as possible to the Sublime concept in the German late Eighteenth-Century (see Gómez Ábalos, 2016). This should be experienced and rethought on the facsimile of the *Clavecin roïal*.

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