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A Clavichordist's View of the Chopin Preludes

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ABSTRACT

The topic of this work is the collection of 24 Preludes Op. 28 by Frederic Chopin from the point of view of clavichord playing. Chopin lived from 1810 to 1849 and wrote his music for the piano. However, at that time clavichords were still, if not widely in use, readily available and familiar to people. Clavichords were in use commonly during the 17th century, though they were mentioned in historical sources as early as the 1400s and were still built in the 1800s. Thus, at Chopin's time the mindset was not very far from clavichord thinking. Even though the piano was Chopin's instrument, we must bear in mind that the piano of his time was not what it is today. Chopin composed his 24 Preludes at a time when he was deeply immersed in the music of J.S. Bach, and his Preludes have even been compared to Bach's Well-Tempered Clavier. Even though there is hardly any stylistic connection or similarity of content to be found between the two collections, it is interesting to try how Chopin's Preludes work on an instrument of earlier periods. This study has been conducted on five-octave clavichords ($F_1 - f^3$) built by Pekka Vapaavuori and HansErik Svensson in the model of the Specken clavichord, as well as a 19th century Lindholm with the range of 5.5 octaves ($F_1 - c^4$), taking even larger models into consideration. The Preludes have been analyzed in the light of the technical and musical capacity of the clavichord. In each case several aspects are considered in determining whether or not they can be played on the clavichord. Some of these aspects are: range, adjacency of notes or chords, speed, and whether a sustaining pedal is needed for a relevant outcome. A further analysis is done giving the strengths and difficulties of each Prelude in terms of the clavichord, with solutions, conclusions, and advice, as well as what the specialities of the clavichord have to offer in terms of performance. This study offers a clavichordist additional repertoire with advice on how to get the most out of it on the clavichord. It gives the pianist a new approach to the Chopin Preludes. Even though certain aspects of the clavichord do not apply to the piano, still bearing in mind what the clavichord has to offer can be enriching also for the interpretation of these pieces on the modern piano. The purpose of this study is to test the limits of the clavichord in playing the Chopin Preludes on it and to see what the clavichord has to offer the music of a composer later than those usually played on the clavichord.

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1. INTRODUCTION

The clavichord is first mentioned in historical documents as early as the 15th century¹. Their most active period dates from the 16th to the end of the 17th century². Clavichords were still built in the German cultural area in the beginning of the 19th century and with a new revival in the 1890s begun by Arnold Dolmetsch³. 20th century compositions for the clavichord amount to 200 pieces with a very wide range of styles from neo-Elizabethan to neo-baroque and avant-garde⁴. During the 1900s clavichord was used mainly as a personal instrument and they were built and played as a specialty⁵. Today it appears more and more also in concert situations. The clavichord has much more to offer than is taken for granted. Often people seem to have the misconception that clavichord should be used exclusively for music composed during its time of popularity, or even a more limited time period. However, there is a handful of composers today who are exploring the possibilities of this instrument and composing for it. There is an equally small group of clavichordists who explore music which is traditionally considered exclusively for the piano. Considering that the development of the piano was still on-going in the 19th century, the pianos which the classical and even romantic composers used were different from the pianos of today. It is also known that composers of the classical period owned and used clavichords⁶. Even composers of the early romantic period were familiar with the clavichord; while the modern piano was something which they did not know of. Clavichords were still built at the time of the romantic composers, such as Chopin, even though they had fallen out of common use. They were even built in Poland during Chopin's time.⁷

Mozart, Haydn and even Beethoven lived during a time when clavichords were still in common use. Both Mozart and Haydn owned clavichords and Beethoven too must have started his career at the clavichord, as was typical during the period. A considerable number of Haydn's clavier sonatas were written at a time when he had not yet been acquainted with the fortepiano. I found it only natural, as a clavichordist, to venture into the sonatas of these composers. I noticed that the possibilities of the clavichord in playing classical sonatas were

¹ Brauchli (1998), p. 17

² Vapaavuori (2001), p. 19

³ Brauchli (1998), p. 145

⁴ Bedford (1993), p. 259-262

⁵ Benson (1993), p. 255-256

⁶ Brauchli (1998), p. 213-214

⁷ Vogel (1993), 209

rich in both character and expression. I was able to explore the musical intent of the pieces in a totally new way. After experiencing several Beethoven sonatas at the clavichord I was inspired to go further. After all, music which was written for different kinds of clavichords, harpsichords, as well as fortepianos, is performed on modern pianos today without any question. Similarly, in principle it should not be less suitable to try out music written for piano on earlier instruments, which are after all the ancestors of today's pianos. This thought inspired me to play the music of romantic composers on the clavichord. I ventured on to experiment with Chopin Mazurkas. A great many of them work perfectly on the clavichord. Only those with a very disjunctive left hand could not be played due to the absence of a sustaining pedal. The Chopin Preludes were my next exploration, and I analyze them at length in this study from the point of view of clavichord playing.

Chopin was a composer who composed almost exclusively for the piano. His relationship with the clavichord can only be speculated upon, based on the historical facts of the role of clavichord during his time⁸. However, the relationship which Chopin had with the music of J.S. Bach cannot be disputed. He wrote his 24 Preludes Op. 28 at a time when he was deeply immersed in the music of J.S. Bach. He studied Bach's works carefully, and even though no similarity of content or style exists between the two collections, the Chopin Preludes have even been compared to Bach's Well-Tempered Clavier.⁹ It is interesting to try out Chopin's Preludes on a predecessor of the piano. I have used three different editions of the Chopin Preludes in my study, the Paderewski edition¹⁰ which claims to follow the original manuscripts, as well as Kalmus and Peters editions, for comparison.

This study has been conducted on two five-octave clavichords which were built by Pekka Vapaavuori and HansErik Svensson. They were designed by HansErik Svensson after the four-octave Specken clavichord. Svensson developed this five-octave instrument in the spirit of the late Swedish clavichords, and it is a good example of Swedish clavichord ideology. The instruments which were used have the range of F_1-f^3 . The data was collected in the year of 2007–2008 mainly by playing the Preludes on these instruments. In each case the Preludes were played repeatedly over a period of time both on my own and under the guidance of my clavichord teacher, Pekka Vapaavuori. However, the possibilities of even

⁸ Vogel (1993), p. 212

⁹ Kresky (1994), p. xvi

¹⁰ Chopin complete works I Preludes, Ed. Paderewski. Copyright 1949 by Instytut Fryderyka Chopina, Warsaw, Poland

larger clavichords were taken into account, mainly the Lindholm clavichords from Sweden, the largest of which ranges between C_1 and c^4 as well as clavichords built by the Kunz brothers in Czech with range of F_1 and f^4 . We travelled to Musikmuseet in Stockholm to play the Preludes on an original 5.5 octave Lindholm clavichord with the range of F_1-c^4 . As far as it is known, no Kunz clavichords remain in playable condition. The Preludes were also played for comparison on three different German clavichords, a copy of a late North German clavichord, a copy of a Silberman of the South German tradition, and a clavichord built by the Zuckermann Company which is designed after 18th century central German models, all with the range of five octaves.

Several aspects were considered in determining the suitability of each piece for the clavichord. These considerations were range, adjacency of notes or chords, whether a pedal is needed or if a similar outcome may be produced by other means, and the performing tempo, also relevant as very fast speed can be produced on the piano satisfactorily, when the same speed would result in a dry rattling sound on the clavichord as there would not be enough time for each note to sound. There is further advice given for the performance of Chopin Preludes on the clavichord as well as ideas of how the possibilities of the clavichord can be utilized to the optimum.

The purpose of this study is to test the limits of the clavichord, to demonstrate its possibilities, and to extend clavichord repertoire to include later composers and to offer advice on how to get the most out of these pieces on the clavichord. This study also gives the pianist a new approach to Chopin Preludes. Even though some of the possibilities of clavichord do not apply to piano, still bearing in mind the ideas given in this study may be enriching also in interpreting these pieces on the piano. After all, according to the unquestioned opinion found in musical treatises starting from the 15th century¹¹, the basis of all keyboard playing is to be found in the clavichord. According to Virdung it is most profitable to start one's keyboard training at the clavichord because everything which is learned at the clavichord can be learned to play well and easily on the organ, harpsichord, virginal and other keyboard instruments as well.¹²

My own experience in teaching piano and clavichord has taught me that the above is not

¹¹ For example Paulus Paulirinus de Praga (15th century), Sebastian Virdung (1511) and Michael Praetorius (1611)

¹² Virdung (1511), Ei

only true of the relationship between clavichord and other keyboard instruments of Virdung's time, but it is valid today as well in relation to the piano. My students who have studied technique and interpretation at the clavichord have noted that it has been of immense help and improvement to their technique and interpretation of the piano. To be able to play the clavichord well one must be very careful with positioning of the hand, proper use of the weight of the hand and arm, as well as keeping all tension away. A beautiful tone must be coaxed out of the instrument; it is not produced automatically by pushing down the keys. The same methods may be applied to improving the sound and technique of piano playing. The clavichord requires its player to have a fully controlled touch and to listen more carefully to what is being played than any other keyboard instrument¹³. Learning these two things and applying them to the playing of other keyboard instruments, such as the piano, is a valuable lesson that can be taught by the clavichord.

¹³ Vapaavuori (2001), p. 189

2. BACKGROUND

2.1 Brief history of clavichord

The earliest references to the clavichord date back to 1404, and the last dated instrument of the so-called “historical period” was made in the 1839’s by Klemenz Kunz. It is generally accepted that the clavichord evolved from the monochord, which in its most primitive form was only a rectangular plank with one single string. A tangent was fitted to the back of each key, which when raised contacted the single string producing a sound.¹⁴ This instrument was developed further, several strings being added, until eventually we recognize the clavichord. By approximately 1400 the clavichord had about ten strings and two notes or more were produced from one string or pair of strings by making two or more tangents contact the same string or pair of strings at different points. This type is termed fretted.¹⁵ A later type which became more common by mid-18th century, in which each note has its own string, or strings, is called an unfretted clavichord, which makes all semitone dissonances and chords possible.¹⁶

J.S. Bach and especially his son Carl Philip Emmanuel, along with Haydn and Mozart, to name just a few composers, have used the clavichord as a compositional tool as well as a valued instrument of performing and pedagogy.¹⁷ Clavichord was an important instrument in the whole of Europe until the end of the 1600s. Though clavichord had lost much of its popularity, clavichords were still built to some extent in the beginning of 1800s in the German cultural area, that is, Germany, Poland, Czech and Scandinavia, as well as Spain and Portugal. Among the largest were the Lindholm clavichords from Sweden, the building of which started in the second half of the 18th century¹⁸. They were built with the ranges of F_1-a^3 (from 1776), F_1-c^4 (from 1783) and C_1-c^4 (from 1794).¹⁹ Large clavichords (F_1-f^4) were also built in Czech by the Kunz brothers during the first half of the 19th century²⁰.

In the late 19th century a revival of the clavichord was begun by Arnold Dolmetsch²¹ and

¹⁴ Brauchli (1998), p. 8-9, 16

¹⁵ Vapaavuori (2001) p. 26-27

¹⁶ Vapaavuori (2001), p. 127-130

¹⁷ Brauchli (1998), p. 214-228

¹⁸ Vapaavuori (2001), p. 40

¹⁹ Helenius-Öberg (1986), p. 264-266

²⁰ Císek (1996), p. 33-42

²¹ Benson (1993), p. 255

since that time several composers have written works for the instrument. There has been an awakening desire to create a modern language while still respecting the qualities and possibilities of the instrument, which could be considered one of the most intimate of musical instruments²².

There have been claims that the sound produced by a clavichord is not audible enough for public performances and its use should be limited to practise and private study.

Contemporary experiments with historical copies have spoken for the contrary. Modest sized halls with decent acoustics have proven it to be an excellent instrument for concert performances. It has been used successfully for chamber music together with flute, violin or voice as well as a clavichord duo but remains most important as a solo instrument²³. The importance of clavichord as a pedagogical instrument should not be undervalued. There is a vast array of historical evidence of preference for the clavichord in pedagogy, such as Michael Praetorius, J.S. Bach, C.P.E. Bach, D.G. Türk, and so on, as well as lamentations on the diminishing importance of clavichord²⁴. It has also been my own observation as a teacher, that a clavichord is the most revealing of keyboard instruments in terms of touch, relaxed and effective technique, as well as interpretation and articulation. Where a piano will produce a sound even with bad technique, a clavichord will not. It is not possible to play the clavichord without the most controlled touch. Thus learning to play a clavichord properly will result in being able to play other keyboard instruments properly as well.

2.2 Possibilities of the clavichord

The clavichord has many qualities which other keyboard instruments do not possess. It is an instrument on which it is possible to affect the sound by touch in more versatile ways than on any other keyboard instrument. There is the dynamic side which ranges from giving a note an imperceptible start to approaching a note with a biting and apparent *sforzando*. The upper limit of attack depends on the tension of the stringing along with powerful action. By applying too much pressure the strings can be pushed too hard resulting in too sharp pitches

²² Bedford (1993), p. 259–262

²³ Knights (internet source)

²⁴ Vapaavuori (2001), p. 494-52

and playing which seemingly is out of tune. At the quiet side the limit is only with the ear²⁵. Even though clavichord cannot compete with the piano or even harpsichord in the level of volume, still the dynamic range of the clavichord is worthy of mention.

In 1753 C.P.E Bach emphasized the quality of *Bebung* (finger vibrato) in comparing clavichord with other clavier instruments, and the possibility of prolonging a single melodic note to some extent. The duration of sound may range from perhaps 2–6 seconds on such instruments. The speed of decay can vary considerably depending on the clavichord. It is typical that there is an illusion of longer sustain than the actual one. The finger vibrato can also be used in interpretation when special emphasis is wished on a certain note.²⁶ J.S. Bach seemed to share his son's love and preference for the clavichord. According to J.N. Forkel in his 1802 biography of J.S. Bach, the latter considered it the most soulful instrument with the possibility of greatest variance in nuance and most suitable for expressing his finest ideas.²⁷

The clavichord is an instrument with rich overtone series. The string of the clavichord is pushed into resonance by striking it exactly at one end of the resonating fraction because the tangent serves both as hammer and as second bridge. Thus, the overtone series which are formed are perfect. On the other hand, this makes the sound very quiet as a whole, because one far end is the weakest possible point in setting the string in motion. In addition, the Swedish clavichord models were designed in a way that the length of the string from the bridge to the wrest plank was longer than in German models bringing a so called sympathetic sound to the sounding area of the string. This together with the rich overtone series colour and prolong the sound and are a significant way of enriching the sound, which is a significant purpose of the pedal of the piano. When the pedal is used on a piano, it allows the open strings to resonate with the ones which are played, in other words artificial overtone series are formed. The freeing of the hands to move to another part of the keyboard is actually a secondary purpose of the pedal. The richness in overtone series on the clavichord together with the sympathetic sound of the Swedish models diminishes the necessity of a sustaining pedal in comparison to the sound of the piano, which is closer to pure tone and less rich in overtones than the clavichord. In this way differences in clavichord building may result in various different types of sound and make some instruments more suitable for later periods of composition than others. For example

²⁵ Korhonen (1993) p. 31

²⁶ C.P.E. Bach (1753), p 8-9, Einleitung § 11

²⁷ Forkel/Müller-Blattau (1802/1925), p.34-35

properties such as range, the tension, length, material and thickness of strings and their angle on the bridge, the dimensions of the keys etc. bear significance to the sound and qualities of the instrument²⁸. Thus, it is possible to attain with the means of the clavichord something, which Chopin has pursued in his sound ideology, even with the absence of the sustaining pedal.

Even though solo music of the Renaissance and Baroque period can be played on both harpsichord and clavichord it does not mean that the instruments are totally interchangeable or played with the same technique. C.P.E. Bach stressed this in his *Versuch über die wahre Art das Clavier zu spielen* saying that whoever plays the clavichord well can also do the same on a harpsichord but the same does not work the other way around²⁹. In this way you may consider clavichord the mother of other keyboard instruments.

Much music which was written for organ or piano can be made to work on the clavichord. For example music by Nielsen, Chopin and Albéniz has been used in recitals³⁰. The kind of texture which could be considered less suitable for a clavichord and which is at least more difficult to get to work properly are thick chords, long sustained notes, very disjunctive or fast passages. Nevertheless, a look at the centuries of repertoire shows a broad variety of successful approaches, thick or thin textures, melodic writing or counterpoint, long lines or fragmented voicing can all be made effective.

2.3 Swedish and German traditions compared

It is relevant for this study to look briefly into the differences in clavichord building and especially the differences between German and Swedish building traditions. The way in which a clavichord is built has great significance as to how it sounds, which in turn has significance on what type of music best suits a particular type of instrument.

Germany was traditionally an important centre for clavichord building. There was much musical interaction between Germany and Sweden. A great many composers and instrument builders came to Sweden from Germany and Swedish clavichords were built after the German models. Sweden became the primary Scandinavian country in clavichord manufacturing in the 1700s, even though clavichords were used in Sweden already

²⁸ Vapaavuori (2001), p. 184-187

²⁹ C.P.E. Bach (1753), 10-11, Einleitung § 15

³⁰ Knights (2008)

centuries earlier, the earliest iconographic source being from 1470. The instruments were built in the German model, but beginning approximately in 1740 an independent tradition of clavichord building began to form in Sweden. The Royal Academy of Science was founded in Stockholm in 1739 and had great influence on Swedish clavichord building. It strived to investigate the physical and acoustic features of instruments and develop them further, and it had a significant role in developing a distinctly Swedish model of the clavichord, as opposed to the German models. Ideas of mathematics and mechanics were put into use in Swedish keyboard instruments in general, not the clavichord exclusively. These developments in clavichord building which adapted the instrument to the requirements of the time greatly increased its popularity in Sweden.

Among the new modifications to be found in the Swedish model, as compared to the German clavichords, is positioning the bridge as well as the wrest plank in such a way that the part of the string which is left between the bridge and the pins is long and their sympathetic sound which resonates along with the main portion of the sounding string is strong.³¹ Traditionally in German models the bridge and the wrest plank were shaped and positioned in a way that the portion of string between them was as relatively short and did not vary between different strings. The German clavichord-building tradition upheld the ideal of a drier sound, suitable for clear and articulate performance of polyphonic music. In Swedish models, the bridge and wrest plank were usually positioned in such a way that they together formed a v-shape which widened towards the higher pitches. Thus the length of string remaining between the bridge and the wrest plank widened towards the higher pitch strings producing more sympathetic sound, which not only gives the instrument a more audible sound but a richer sound and colour to the harmonies.³² However, this is not a uniquely Swedish invention, but it seems that the matter came up in Germany and Sweden approximately in the same time period. In a study by the German Adlung published in 1768, he discussed in detail the matter of the length of strings between the bridge and the wrest plank and the so-called sympathetic sound which is produced.³³ Where German builders of clavichords chose to remain with their original sound ideology of shorter ends of strings and clear, dry sound, Swedish builders decided to go with the longer ends of strings and sympathetic sound. This quality enables more pianistic textures of music to be played on Swedish clavichords and, for instance, reduces the need for a sustaining pedal, and makes them more suitable for playing music of their contemporaries of the late classical and even

³¹ Helenius-Öberg (1986), 21-28

³² Vapaavuori (2001) p. 146-147

³³ Adlung (1768), p. 154

early Romantic period.

In other words, Swedish clavichords were developed in a more pianistic direction with scholarly study and instruction from the Royal Academy of Science, with an apparent intent of having clavichord as a cheaper and more easily maintained substitute for the piano. It seems that their aim was to develop the clavichord to the point where it could compete with the ever growing popularity of the fortepiano, and in fact clavichords gained importance and popularity in Sweden in the first half of the 19th century. The same instrument builders were building clavichords and square pianos and the Swedish clavichord and square piano differed from each other considerably less than it is thought.

Bernard Brauchli points out that in Germany a repertory composed specifically for the clavichord flourished in the second half of the 18th century, whereas in Sweden, where clavichord building flourished at the time, very little was composed specifically for the clavichord. Swedish composers of the period did not differentiate their compositions specifically for the clavichord, which was considered a keyboard instrument parallel to the square piano.³⁴

Below are pictures of three different clavichord models showing the difference in positioning the bridge and wrest plank. Picture 1 presents a copy of a clavichord of the late North German tradition. Picture 2 shows a Swedish Specken-Svensson and Picture 3 a Silberman of the South German tradition. It is apparent that where in the late North German clavichord the distance between the bridge and the wrest plank is only a few centimeters in the highest strings, and a little more so in the Silbermann, whereas the correlating distance in the Specken-Svensson is nearly 40 cm.



Picture 1. Late North German

³⁴ Brauchli (1998), p. 179



Picture 2. Specken-Svensson, Swedish



Picture 3. Silbermann clavichord, South German

There were several other features besides which distinguish between Swedish and German clavichords. The grain direction of the soundboard in the Swedish model runs diagonally from the front of the instrument crossing the bridge more or less at a right angle. The bridge is rather elongated with a curve either at both extremities or often only at the treble end. The strings make only a small angle against the bridge-pins eliminating unnecessary pressure on the bridge. The scaling was generally calculated mathematically by doubling down the string length to c , then by increasing by half a length and, in the bass, increasing by a quarter of length per octave. The culmination of Swedish clavichord building resulted in very large instruments, for example the Lindholm clavichords, with very long bass strings and sound boards with a large surface area.³⁵

It has been generally considered that the weakness of the clavichord is that it has a quiet sound and thus it is not suitable for chamber music or to be played in large spaces.

Interestingly, the Swedish clavichord, especially the large Lindholm models with their

³⁵ Brauchli (1998), p. 177-179

significantly larger body and iron strings, measured up to the volume of the square piano of the time, which thrived in Sweden together with the clavichord. This point gave them much more equality in function compared to the clavichords and pianos in Germany.

The most famous Swedish builder of clavichords was Pehr Lindholm who was a genuine representative of the Swedish clavichord and his instruments were among the largest ever made. They were built starting in the last quarter of the 18th century. They had the range of F_1-c^4 and even up to the range of C_1-c^4 . Clavichords with wide range were also built in Czech by the Kunz brothers (F_1-f^4) in the first half of the 19th century. While original Lindholms remain in playable condition and reproductions are built as well, to my knowledge there are no playable Kunz originals or reproductions. I have not been able to find enough information on Kunz clavichords to be able to determine if they had the same qualities as the Swedish clavichords. However, large clavichords must have been built for a purpose in the 19th century. It seems probable that their function was not to play only traditional clavichord repertoire but to accommodate for compositions of their own time-period as well.

2.4 Chopin, clavichord and piano

There are some historical references to the connection which Chopin might have had with the clavichord. Karol Stromenger is among those researchers who were of the opinion that the clavichord was the first instrument which Chopin had in his home in Warsaw³⁶. This has been disputed by other scholars based on the confusion over terminology in Poland. There was a tendency of using the term *kławikord* not only to refer to the clavichord, but to other instruments of the piano family as well, mainly the square piano, which, to make matters even more confusing, was also called a spinet.

Clavichords were an important part of Polish musical culture for several centuries, up until the 19th. They were made in abundance by Polish instrument builders and commonly used in practice. We know that Johann Schindler of Krakow built clavichords as late as 1804–1814, around Chopin's birth. There are even later instrument builders who are claimed to have made clavichords, but it is assumed that in their case the term is misapplied³⁷. With all

³⁶ Stromenger (1935), p. 4/ quoted from Vogel (1993), p. 212

³⁷ Vogel (1993), p. 212

this in mind one can make the assumption that it is as likely as not that the clavichord was Chopin's first instrument. If not, there still is a strong likelihood that Chopin was familiar with the instrument we know as clavichord. There seems to have been nothing strange in knowing of and playing the clavichord still at his time. It seems very likely that Chopin's mindset must have been still affected by clavichord thinking.

Chopin lived between 1810 and 1849, which was the time when clavichord was just falling from being a popularly used instrument, with the piano replacing it. Chopin was among the first composers who devoted himself to exploration of the possibilities of the piano and the development of his compositional style depended on one technical factor of the piano, the existence of the pedal. However, when we are talking about Chopin being a composer for the piano, we must remember that the modern piano is only the current end product of a long period of evolution which began in the first years of the 18th century. The current form is a product of the 20th century and is very different both in sound and appearance from the so-called pianos of Mozart, Haydn and Beethoven. In fact, the modern piano differs significantly even from the 19th century pianos of Liszt, Chopin and Brahms. While it is fine to play music of these composers on our modern piano, it must be remembered that the resulting sound, as well as the technique used to produce it, is different from what would have been experienced in the composer's own time. Playing Chopin on a modern piano is different from playing it on the Pleyel and Erard pianos which Chopin commonly used while living in France.

Even though the modern piano can be successfully used to interpret music which was written for the fortepiano as well as other earlier keyboard instruments, still there are many scholars and musicians who recognize that we may benefit from exploring the music of earlier composers on instruments corresponding to those of their time. Accordingly, the player today will do well to remember the difference and possibilities of the instruments which the music of 18th and 19th century (or earlier) was written for and adjust playing accordingly even on a modern piano.

2.5 Chopin and Bach

While there is not much reference for Chopin's connection with the clavichord, Chopin's devotion to J.S. Bach can not be disputed. It is known that Chopin held two composers in

the highest of esteem and those were Mozart and Bach³⁸. Before playing in a concert Chopin used to shut himself up in a room and prepare for the concert by playing – not Chopin but Bach³⁹. He was of the opinion that absolute finger independence, touch discrimination and colour are to be gained by playing the Preludes and fugues of Bach⁴⁰. Chopin studied these Preludes and Fugues thoroughly before writing his Preludes. He admired the perfection of form and harmony in Bach's composition. When Chopin wrote his Preludes Op. 28 he had the works of Bach on his writing desk⁴¹. He corrected the Parisian edition of Bach for his own use, and made his pupils also study Bach's Suites, Partitas, and Preludes and fugues. Chopin taught his students always to work on Bach, which was, according to him, the best means of making progress⁴². Chopin had a Bachian attitude towards composing; he did for the Polish dances what Bach did for the older forms of dance⁴³.

2.6 Chopin Preludes

Chopin's Preludes Op. 28 is a collection of 24 pieces. The term prelude refers to an introductory piece, but in the case of Chopin's Preludes they are independent compositions in themselves. Chopin's Preludes were written between 1835 and 1839 at a time when Chopin was deeply immersed in the music of J.S. Bach, and they have in fact been compared to J.S. Bach's Preludes in the Well-Tempered Clavier⁴⁴. Both collections are written in all the major and minor keys. Chopin's Preludes follow the cycle of fifths (C major, A minor, G Major, E minor, etc.) whereas Bach's Preludes, each of which is followed by a fugue in the same key, are arranged in rising chromatic steps (C major, C minor, C# major, C# minor, etc.). In spite of Bach's example, however, Chopin created something completely new.

³⁸ Hunecker (1976), p. 87; Niecks (1888), p. 230

³⁹ Hunecker (1976), p. 24; Niecks (1888), p. 213, 230

⁴⁰ Hunecker (1976), p. 24

⁴¹ Niecks (1888), p. 184, 230

⁴² Niecks (1888), p. 230

⁴³ Hunecker (1976), p. 33

⁴⁴ Kresky (1994), p. xvi

3. DISCUSSION OF THE CHOPIN PRELUDES

It is obvious that Chopin wrote his Preludes for the piano. This is indicated by range, in many cases, as well as pedal markings, which cannot be applied to a clavichord. There has never been built a clavichord with a range that could accommodate playing the entire collection of Chopin Preludes Op. 28. There are also cases where the musical texture is filled with leaps which would be difficult if not impossible successfully to play on a clavichord. However, there are many instances in the history of music where transcriptions of a certain piece have successfully been made for another instrument. In such cases one cannot expect that the same means can be used for a coherent result, but one must consider the individual possibilities of the instrument which the transcription is made for to produce good results. I have approached the Chopin Preludes from the point of replacing pianistic means and expectations by those implied by the clavichord, and thus attempted to produce meaningful music of the pieces in question on a clavichord. My findings may be of interest for both clavichordist and pianist.

In my study I have used three different editions of the Chopin Preludes: the Paderewski, Kalmus (ed. Mertke) and Peters (ed. Eigeldinger). Since the purpose of my study is not to make a comparison of different editions I do not go into their differences. I have merely wished to use the most authentic score which is closest to the original idea of the composer, which the Paderewski edition claims to be, and I have referred to the other two for comparison. The Paderewski edition notes that Chopin was usually careful and precise with his pedal markings. There are passages which Chopin has not marked the pedalling and that is generally explained by the fact that the pedalling required in them is self-evident. In any case, the pedal markings which I refer to in the text are Chopin's original ones.

The clavichords which I have considered in the following data in terms of range and playability are the six-octave Lindholm (C_1-C^4), the 5.5-octave Lindholm (F_1-C^4), the Kunz (F_1-F^4) and the five-octave clavichords (F_1-F^3), i.e. the Specken-Svensson which was in my use. From a practical point of view considering the Kunz is rather hypothetical, since as far as it is known, no Kunz clavichords remain in playable condition. Also, even though the Lindholm clavichord did challenge the piano of its time, still the six-octave Lindholm can be considered more of a specialty.

No. 1 in C major

The first Prelude is short and agitated and over in half a minute. It revolves around some basic chords with some exploration of accidentals. The range of the piece is C–d² which would fit any clavichord of five octaves or more. In the beginning, just looking at the Prelude and playing it through a few times, I was of the opinion that it was not an ideal piece for the clavichord. The more time I have spent playing it, the better it seems to fit the instrument. I thought that there were some places where a note had to be omitted, that is, the left hand f in measures 8 and 26, or either played by the right hand. I decided that omitting them would not considerably effect the sound negatively, while trying to play them with the right hand would be slightly more difficult, though possible as well. After playing the Prelude more I was successful at playing it without omissions.

There is a pedal marking for each measure in the score. However, with some practise the piece can be made fluent enough to attain a perfect legato in the absence of the pedal to sustain the chords. Also the fact that a clavichord's overtone series is stronger than on a piano is of value in replacing the pedal. The sympathetic sound found in Swedish clavichord models is also an important contributor in absence of the pedal. Also emphasizing the bass note and keeping it down as long as possible enhances the natural pedal effect. Everything else should be built upon this bass note, which on the clavichord may be played with a heavy hand, and especially on a Lindholm clavichord, almost dropping the full weight of the arm on the key.

The piece is marked *Agitato*, which refers more to the atmosphere than the actual speed, thus it can be taken at a tempo in which the sound is still full and healthy on the clavichord. The agitated effect may be emphasized by entering into the musical motifs eagerly. This can also be attained by giving emphasis to the motifs which logically demand it, that is, the first note of each measure and the quarter note – eighth note motif in the second half of the measure in the top voice allowing the intensity to grow upwards. The bottom and top edges of the musical texture need to have more volume while the texture in between them should be played as lightly as possible, as if just wiping the keys, and searching how lightly one may play without losing sound quality. The intensity grows not only from the beginning of the measure to the end, but also in longer stretches, to begin with, in the first six measures, and some extra time is given when the final point of the ascent is reached. In this way one can replace the raw dynamics of the piano with agogics.

No. 2 in A minor

This slow and musically very meaningful Prelude in its simplicity is an excellent piece on the clavichord. It has the range of $E_1-c\#^2$ and would fit as it is on the six-octave Lindholm. By omitting the E_1 appearing in the next to last measure it can be played on the three other clavichord models as well. Omitting the low E did not in my experience diminish the effect of the chord since it has two E's remaining in a cluster together with several other tones so with this minor alteration the piece can be played even on a five-octave instrument.

The left hand requires practise for fluency and needs some special attention. First of all, it is written at such a low range that it does not become clear due to a cluster of over-tones, as they are stronger on a clavichord than on a piano, unless the first interval is played more lightly than the second interval. The lowest note of these intervals should be played with special lightness and the second interval can have more emphasis on it. The lowest and highest pitches (lower note of the first interval and higher note of the second interval) cannot be played in legato, but with the absence of pedal a legato affect is required and can be produced by having a good legato between the notes which can be tied, i.e. those which are closer together (that is, the higher note of the first interval and the lower note of the second interval). This covers for the necessary articulation between the less adjacent notes. I noticed that by considering carefully the movement of the left hand the best result could be achieved. The movement of the hand should be flexible from one position to the next, yet avoiding all unnecessary movements so that the sound will be clear and unbroken. The touch should go all the way to the bottom, but as lightly as possible. It is best for the hand to circle rather high and for the fingers to play from the very surface of the keys without being lifted high. All these techniques are typical ways of getting a good sound from the clavichord, but I was forced to think of them more carefully with the difficult texture I faced in this Prelude. The first two measures of the left hand need to be taken as an entity without a break between them, and as something leading forwards.

The right hand has some difficulties too. The melody moves partly in very long notes, even up to whole notes. Since the tempo is slow it is hard to get these notes to sound up to their full value. This can be enhanced by an effect which cannot be done on a piano or fortepiano, the *Bebung*. That is, when a long note (for example the first E which measures nearly up to the whole measure) is pressed down, its sound can be extended by pressing the tangent further on the pair of strings immediately afterwards and then rhythmically again several

times towards the end of the measure. In this way the note which is starting to fade away regains some of its sound. In some instances even a short pressing down of the key will be adequate though a more continuous vibrato works the best. Prolonging the long notes in the right hand can be helped also by the left hand in playing the figure more quietly in the first half of the measure and increasing volume towards the end to cover up for the fading long note in the right hand. It is important to play the right hand with courage and to keep in mind that the right and left hands have a very different function in this piece and the right hand must adopt a much more voluble sound. The motion downwards must be rapid enough to avoid too much pressure.

There is only one pedal marking in this piece, which is between the 18th and 19th measures. Apparently the purpose of the marking here is to show the anomaly in the pedalling crossing over the bar line.

To sum things up: the best result is produced with absolutely no tension anywhere. This is something which cannot be repeated enough during my analysis of the Preludes as well as clavichord technique in general and of course applies to piano playing too.

Prelude No. 3 in G major

This Prelude has the range of C–d⁴ and range-wise fits the Kunz clavichord. It may be played on both Lindholm models and on the five-octave by omitting a quarter-note's worth of sixteenths from the third measure from the end. Since it is a question of a motive which is being repeated in several octaves, omitting the last one does not noticeably detract from the piece. To preserve the rhythm of the third to last measure it is advisable to repeat the motif in the second quarter of the bar in question. In the case of such modification it can be considered that this is a transcription of the piece for the clavichord.

There are no pedal markings in the score of this piece. However, the notes in the Paderewski edition say that Chopin did not always write pedalling when it was obvious, so it is likely that he means for this piece to be played with the pedal.

This is a Prelude which suits the clavichord beautifully. The left hand must be kept as light as possible. This is easier if some points of articulation are given emphasis in each measure, and logically that would be the first and third quarters and to emphasize these two further, a slightly less emphasis can be given to the sixteenth-notes which precede them. This gives

the left hand rhythm and form and makes it easier to keep the rest of the sixteenth-notes even and light. If the sixteenth note which precedes the bar-lines is approached with adequate time there will be no sense of rush. The low bass note should get the most emphasis as well as time, and remain down as long as it is possible for a pedal effect. The note immediately to follow the low bass notes should be as quiet as possible and then grow from it and work in waves. Working out passages like this without a sustaining pedal has brought to mind how Bach wrote his solo sonatas for the violin and cello. They are rich with arpeggiated cords, and Bach did not seem to care about the fact that the bass notes in the arpeggios could not be held down. And yet he wrote with the thought that the bass notes would sound longer than they actually did. In this way he aimed, in a way, to fool the ear of the listener.

The right hand has an articulate melody, which in my opinion should be played rather sharply on the clavichord to give it more character. It can be played in a sharp motion of the key down and then lightening the touch so as not to affect intonation, but get an unbroken sound. The melody has long time values, but since the tempo is a *Vivace* there is no danger of the notes not sounding fully to the end, especially if they are played sharply to begin with. The right hand chords in the beginning of measures 7 and 9 sound better as quick arpeggios which then lead to a slower arpeggio in the beginning of measures 8 and 10. Taking the second arpeggio slower will serve two purposes, first it will allow the left hand to have adequate time to jump down to the lower register where it will continue to, secondly it will allow the little finger of the right hand to have enough time to prepare the high a, the top pitch of the chord, and extending it will allow it to sound better and more full. If the sixteenth notes in the right hand are played with no rush and giving them as much time as possible the result seems even better. In principle, the piece should be played following the musical rhythm of the right hand and letting the left hand follow it. Even though it is a fast piece it works best with a rather peaceful atmosphere, not a rushed one. Nothing should be forced.

No. 4 in E minor

This Prelude is a slender, almost monotonous but chromatically enriched melody over a rich, slow-moving chordal accompaniment which is chromatic as well. It has an air of

despair, and it was suitably played together with Preludes 6 (also with the melody in the left hand) and 20, by the famous organist Lefebure-Wely, at Chopin's funeral service at the Madeleine Church in Paris, where Mozart's Requiem was also performed. This Prelude might be considered one of the most famous pieces written by Chopin. At first glance it might be considered rather easy, but to produce its full meaning and music on the clavichord is not that simple.

The range of the piece is E_1-c^3 and fits as is the six-octave Lindholm clavichord. By omitting the E_1 in the last measure (there are three other occurrences of the note E left in the chord in question) it fits also the 5.5-octave Lindholm, the five-octave, and Kunz clavichords as well.

There are only three pedal markings in the score, in measures 17 and 18. Here the pedal is used in places where the left hand makes a large leap which is not possible to tie with the fingers. However, giving the note preceding the leaps some emphasis as well as extra time makes the leaps fluent. Also the strong over-tones of the clavichord add to the missing of the pedal. It may be surprising to note that otherwise this piece lacks any pedal markings. However, traditionally the piece is played on the piano with pedal from beginning to the end, which must have been the intent of Chopin, since the use of pedal in this piece is self-evident.

The left hand, which has repeated chords throughout the piece, should be played as close as possible, with hardly allowing the keys to return to surface. imagining that the hand is applied with springs on which it smoothly wipes the keys. The player may wish to arpeggiate some of the chords for emphasizing changes in harmonies, especially in cases of dissonances. Agogics and dynamics are another useful device to bring out the changing harmonies. The dotted minims of the right hand call, at least at times, for some finger vibrato to extend the notes and give them colour.

No. 5 in D major

I determined at first, without playing this very short and rapid Prelude with cross-rhythms, that it is not suited for the clavichord due to the very disjunctive left hand. I thought that it would require a pedal to produce fluency in such leaps at such a rapid speed (*Allegro molto*). The left hand consists almost entirely of octave leaps which continue on over the

octave the smaller leaps. This cannot be produced in anything remotely regarded as legato with a normal human hand. However, when I started out with a slower tempo, little by little increasing it, and giving more time for larger leaps, I noticed that time was on my side and by accurate use of time this piece could also be made work on the clavichord. I also noticed that during bigger leaps in one hand the other hand was usually written in a way that was possible to play in legato. As long as one hand could always play a legato there was an appearance of legato even when the other hand was actually not played in legato. With slower tempo it was easier to locate and bring out the underlying musical motifs, as the piece is much richer polyphonically than first appearance may reveal. Thus, from the pianist's point of view, it may be of interest to try out this Prelude in slower tempo than is commonly played on the piano and try to bring out the complex polyphony instead.

The range of the piece is D–f#³ and thus fits as is on both the Lindholm and Kunz instruments. To play it on the five-octave one must take the f#³ of the third measure from the end an octave lower. That note is the highest note in the piece and much higher than the texture in general, so lowering it does somewhat diminish from the musical intention.

The score of the entire piece is heavily accompanied by the pedal, which is quite understandable. However, taking into account my notes above and remembering the clavichord's strong over-tone series, it may be possible to make this piece work well on the clavichord, though my final observation was that the disjunctiveness makes it a great challenge for the clavichord. The best possible result is acquired in this, as well as the other faster Preludes, by playing it as lightly as possible.

No. 6 in B minor

This Prelude is a famous piece with a cello-like melody in the left hand and accompaniment in the right. It is slow (*Lento assai*) and has a sorrowful character. The range of this Prelude is B₁–f#² and fits the five-octave clavichord and of course the other three models as well.

This Prelude is marked as *sotto voce* with no other dynamic markings, and is a good piece to demonstrate the quiet range of clavichord dynamics. Arpeggiating some of the chords in the right hand is a nice spice to sound and so is a slight touch of vibrato in the left hand melody, especially on notes of importance as a means of articulation.

Pedal markings in this piece seem to accompany the ascending sixteenth-note arpeggios. However, none of these are disjunctive enough that they could not be played successfully with finger legato without the aid of pedal. Thus, their purpose must be in wishing to play the arpeggios not only in legato but in a way that the whole cord is sustained. This may be produced at least partially on the clavichord by letting as many fingers remain down as long as possible. Also the strong over-tone series on a clavichord give an appearance of more lasting harmonies than if played on a piano without pedal.

As is the case of other Preludes which proceed slowly and contain long notes, the *Bebung* is a useful effect. The right hand must be played from as close to the keys as possible, with the idea of pulling the notes towards oneself. Also the idea of springs in the hand is helpful, as always when playing repeated cords on the clavichord. In playing the left hand it helps to imagine using the full bow of the cello and a strong vibrato.

No. 7 in A major

Another popular Chopin Prelude consisting of only 16 measures is written in the style of a Mazurka. Its range is $A_1-c\#^3$ thus posing no problems range-wise for any clavichord models in question. It has pedal markings throughout the piece. However, it can be played on a clavichord successfully. The repeated chords on the second and third quarters of measures 1, 3, 5, 7, 9, 11, 12, and 13 can be given additional character by giving more length and emphasis on the first chord as well as playing the last quarter of the above-mentioned measures shorter than the previous quarter with a strong sense of leading to the first beat of the next measure. Thus, by using the possibilities of clavichord and clavichord articulation one may get a coherent and musical result.

No. 8 in F-Sharp minor

The eighth Prelude is considered a more difficult piece in the set to play on the piano. The right-hand melody is played by the thumb and chromatic inner voice in written smaller notation. The Prelude is marked *Molto agitato*.

Range-wise (B_1-a^3) the piece fits either a six-octave Lindholm or Kunz and I played it with slight modification successfully on a 5.5-octave Lindholm as well. It cannot fit a five-octave instrument with modification as this would require measures 21–23 to be played an octave lower, thus flattening the climax of the piece where not only the range goes high but also volume is marked as *ff*. There would not be a coherent place of switching to an octave lower and back to higher either.

I experimented by playing this piece on a Lindholm clavichord. It was a challenge to get it to sound well, but with care and practice the piece could be played on the instrument in my opinion. The weight of the hand and arm had an important function in bringing out the melody which lies inside the musical texture. The accompanying texture should be played as lightly as possible, especially the first of the group to distinguish it from the melody. As many notes as possible should be left down and played from as close to the keyboard as possible. The left hand should be played with brave sound and by throwing the arm.

No. 9 in E major

This Prelude is a composition of merely 12 measures in length, but it is a harmonically rich work, consisting of 48 different chords. It has an air of infinite grandeur.

This piece has the range of C_1-ab^1 . It fits the six-octave Lindholm clavichord and with minor modification also the Kunz, 5.5-octave Lindholm, and five-octave instruments. This is merely a question of either playing some of the left hand octaves an octave higher or leaving out the lower note of the octave. One may consider this amount of modification questionable, but it is justifiable when considering it a transcription, the main point of course being the end result, which in this case is good. The texture is thick enough that the slight modifications do not drastically diminish the effect.

The short piece starts out in fortissimo, quiets down to a piano and concludes in fortissimo once again. The left hand seems to have rather great melodic importance not to be forgotten under the more harmonic right hand. In playing the piece on a 5.5-octave Lindholm clavichord I made the observation that the high and low voices need to be given more melodic emphasis, using them to play the forte and giving the bass especial weight yet being careful to avoid too much pressure. This is produced by playing without tension from

the edge of keys and keeping the wrists high. It should be a quick motion to the bottom with a speedy return to avoid going out of tune. A touch of *Bebung* enhances the effect of grandeur. The trills in the bass must be played slowly so that they will get full sound.

No. 10 in C-Sharp minor

This Prelude is over in a blink, and needs the lightest of fingers. At first glance and considering the tempo (*Allegro molto*), the range of the right hand scales, and the rather disjunctive left hand, I concluded that this is not a piece fit for the clavichord. Range-wise ($G\#_1-c\#^4$), the piece fits a Kunz clavichord. I tried playing it on a five-octave by bringing the right hand down an octave in the four descending groups of figures (measures 1–2 including upbeat to measure 1, measures 5–6, 9–10, and 13–14), but this clearly interferes with the character of the piece and brings the right hand too close to the left. One may suppose that this piece can be played on a Kunz with success, but since no such instrument in playing condition exists at present we are not able to try it out. There are pedal markings accompanying the left hand chords, which are to be arpeggiated as well according to the score. They are not too disjunctive that they could not be held down with a medium hand and since there is only one pedal marking per cord one does not suppose that there could be any kind of extra resonating effect wished for. One may suppose that the function of the pedal in this piece is not for legato but for freeing overtones and enriching the sound.

No. 11 in B major

This Prelude is a short excerpt of graceful poetry and a blink of sunshine. Even though it is marked as *Vivace* and that in itself gives some doubts about the suitability of the piece for the clavichord, I would still recommend it as a clavichord piece. The range ($F\#_1-b^2$) works well even on a five-octave instrument and with a slightly reserved tempo compared to how it is usually played on the piano, clavichord is able to do justice to the spirit of the piece. It is not very easy to play though, as both hands need great amounts of finger legato to bring out a smooth touch. The voices in both hands work their way across the keyboard in large webs and in the absence of a pedal to tie the notes together a very good, wide hand and

legato technique is necessary. It does not help at all to have the piece written in five sharps, but it is perfectly possible to get this difficult key to sound well on the clavichord. In playing the piece on a Lindholm clavichord, I observed that it should be played as close to the keys and as lightly as possibly as if just trying to wipe the keys. A sense of ease in playing will result in the best possible sound. This piece is a good example of discovering musical materials when the tempo is not too fast, which I have found a useful thought when playing this Prelude on the piano as well. It is musically relevant to bring out the melody in the right hand from the underlying web so that the melody is clear and the sound is solid. I found the impression of *sotto voce* useful in this Prelude.

No. 12 in G-Sharp minor

This Prelude is a powerful and despairing work which features a constant switching of the left and right hands. Technically the piece is rather treacherous even on the piano due to the rapid hold-and-release of quarter and eighth notes. It takes a bit of practise to make it work on the clavichord, but there is no question about its suitability for the instrument. Range wise (D₁–a₂) this piece fits the six-octave Lindholm clavichord. With slight modification (i.e. leaving out the lower octaves when the limit of the instruments is exceeded) it can fit the five-octave, 5.5-octave Lindholm and Kunz clavichords as well.

Nearly the entire piece is covered by pedal markings. The absence of the pedal can be covered by playing the left hand leaps as solidly as possible, trying to extend the length of the octaves as far as possible before relenting and playing the next one. It helps to move the arm first and let the fingers off the keys as late as possible, with the little finger being the last to let go.

The tempo marking of the piece is Presto, which again I would consider more in terms of character than tempo. It is more important to preserve an *attacca* effect in the touch which gives the piece an agitated feeling which seems suitable. A light and flexible approach gives the best result. The piece should advance eagerly with as little effort as possible. The change of finger in the repeated notes should be as smooth as possible and lifting fingers high should be avoided because it will make the transition less smooth. The fingers should just glide from key to the next without any tensions but with an active fingertip.

No. 13 in F-Sharp major

This Prelude has a nocturne character, and is a gem of lyric serenity, with a middle section. There are no apparent problems with range ($F\#_1-f\#^2$) even to be played as is on a five-octave instrument. The tempo marking is Lento, which enables smoothness even in the larger leaps, which according to the score are given the help of the pedal otherwise. The difficulty in this piece is having adequate legato produced by the fingers. It can be attained through practise. Some of the chords (for instance the three repeated triads in the first measures) need to be arpeggiated to produce more interest in the texture. A difference in arpeggiation when the same chord is repeated brings welcome variance as well.

One must take care when playing the left hand to strike the keys from the edge of the keys so that the sound will be the best, which is something that must be kept in mind in general when playing the clavichord. Since there are so many accidentals in the key in question, if the natural keys are played from the middle then the accidentals will be played also from the middle, which will not produce a good sound. The left hand should be played as lightly and smoothly as possible, starting the six-note figure with lighter touch with possibly a minute crescendo towards the end of the figure. The right hand must sing, but it cannot be forced but rather coaxed into doing so.

No. 14 in E-Flat minor

This is a fragment of an Etude-like gloomy mood in which the right and left hand proceed in octaves. It does not exceed the range of the six-octave Lindholm clavichord with its range of Eb_1-gb^1 . It can be successfully played with the three other clavichord models in question by playing the final eb in the left hand an octave higher. This does not significantly change the intent of the composition.

There are no leaps which would even require a joining pedal. In fact, the piece has no pedal markings, but that may be due to the fact that the pedal used in it is self-explanatory. I found that the best way of producing music in this piece was to pick out notes of importance from the flowing masses by gentle emphasis, usually one note in a quarter but at times twice per quarter to emphasize a chromatic motion. This piece should not be treated as an etude, but

one should search for the polyphonies hidden in the texture and bring them out with emphasis and agogics. The agitato effect does not come from a fast tempo but by the eagerness with which one moves from one motive to the next. The tempo marking is Allegro, but the note in the Paderewski edition claims that Chopin himself had replaced the Allegro by Largo.

No. 15 in D-Flat major

This so-called Raindrop Prelude is the longest piece in the collection as well as the best known. It is a composition of ABA form. The A section is in D-Flat Major, but in spite of the major key has a melancholy character. The middle section is much darker and rather dramatic. The melody shifts from the right hand, where it is carried throughout the first section. In the middle section the right hand mostly repeats the G-Sharp – the key signature has changed to C-Sharp Major – first alone and then enforced in octaves. There is at first a feeling of suspense which soon turns into full agitation. The melody returns to the right hand as the volume increases and utilizes large chords. All this leads to a powerful climax before returning to the calm melody of the A-section.

This Prelude having a range of E_1 – bb^2 does not exceed the range of the six-octave Lindholm clavichord and with slight modifications in the bass doublings (bars 40, 41, 56, and 57 where the lower E can easily shift to a higher one) can be played on five-octave instruments, 5.5-octave Lindholms, and Kunz clavichords as well. This does not significantly diminish the effect of the composition.

This piece explores both the quiet and sweet side of the clavichord and the deep and powerful range in one piece and is an excellent exhibit of the possibilities of the clavichord. There are two difficulties in the piece, but they are a mere challenge and not preventive of using the piece on the clavichord. First, playing the repeated G-sharp in the B-section (and later on the G-sharp in octaves as well as some melodic tones which are entwined with those octaves) and playing them with a smooth legato requires some skill. This is achieved best by playing the notes as close to the instrument as possible and not allowing the key to return all the way up before pressing it down again, as if there was suction from the fingers towards the keys. In this way the key returns only half way before it is played again in a similar manner as the left hand chords were treated in Prelude number 4. This is a Prelude

where the fingers need to have absolute autonomy so that certain fingers may participate in a beautifully sounding melody while others need to be more subdued in the repeated notes of accompaniment.

No. 16 in B-Flat minor

The mood of the Raindrop Prelude is changed in the following one into an angry and more explosive piece, which is a virtuoso work on the piano. It may be a challenge to play a piece marked *Presto con fuoco* on the clavichord. The range of the piece (Eb_1-f^4) is not favourable for the clavichord either. There is no clavichord made with this range. The left hand poses a problem as well, as it jumps around too much to be held together coherently without the sustaining aid of the pedal. Thus, my conclusion is that this piece cannot be successfully applied to the clavichord.

No. 17 in A-Flat major

In this Prelude we find a colourful romance. It is one of the longest Preludes and a favourite of several musical personalities such as Clara Schumann and Mendelssohn, who wrote in its praise, "I love it! I cannot tell you how much or why; except perhaps that it is something which I could never at all have written."

Range-wise the piece fits the six-octave Lindholm clavichord well, having the range of Db_1-b^2 . With minor adjustments in the base of omitting lower notes of the octave it may be played on a Kunz as well as a 5.5-octave Lindholm and a five-octave clavichord.

Again a very disjunctive left hand with its leaps from a lower octave to a chord repeated an octave above would seemingly require the aid of a pedal to sustain the lower octave. It is not easy to make such leaps work on the clavichord, especially at a faster tempo. However, the piece is marked only as an *Allegretto*. Also, if the right hand is used as an aid to the left hand as much as possible music can be made out of this piece on a clavichord too. I played the piece as written on the Lindholm clavichord and concluded that it can be played on the clavichord, keeping in mind absolute autonomy of fingers so that melody can be brought

out from the accompanying layers.

No. 18 in F minor

This Prelude is a fiery recitative with three irregularly timed runs, each faster than the previous one, played in octaves. The piece ranges from C_1 to f^4 meaning that it exceeds the limits of any known clavichord. This might be taken as an indication that the piece does not fit very well into clavichord literature. It might be tried on Kunz clavichord by minor adjustments in the bass to make it fit the range of the Kunz. In this case I could imagine that the interpretation of the recitatives could be understood in the light of similar passages of Bach. Most importantly the piece should be played not with too much haste, despite the fact that it is marked as *Allegro molto* but more in the manner of *stylus fantasticus*.

No. 19 in E-Flat major

This is a beautiful and difficult piece with the tempo marking of *Vivace*. To play it through unscathed is an achievement on the piano. On the clavichord it is an even greater challenge. The range of the piece is G_1 – eb^4 meaning that it can be played as written only on the Kunz clavichord. The piece is full of leaps, largest of which measuring up to two octaves. At times the music is written so that one hand can play in legato, which diminishes the leaping effect of the other and sounds rather good, especially when choosing the right tempo and playing as lightly as possible. If this were a case throughout the piece there would be less challenge, but since there are portions where both hands leap simultaneously, I consider it a great difficulty to make coherent music of it on a clavichord.

No. 20 in C minor

The Prelude consists of twelve bars of chords advancing in a slow, quarter-note pace which is occasionally broken into a dotted eighth and sixteenth-note figure. This piece has a funereal atmosphere and both Rachmaninoff and Busoni used it as a basis for sets of

variations. It was written originally in two four-measure sections, but later on Chopin added a repeat in the last four-measure section to come as a quieter echo.

This piece suits the clavichord beautifully, though range-wise fits as written only the six-octave Lindholm clavichord. With slight modification it can be played on the Kunz as well as 5.5-octave Lindholm and even on the five-octave instrument by leaving out the lower note of the octaves which go below F_1 . This does not significantly change the intent of the composition.

The Prelude starts out with the nuance of fortissimo which should be taken as a relative concept more in reference of character than of dynamics. It can be emphasized by a touch of vibrato on some chords as well as some arpeggiation with a strong bass on the beat and the arpeggiated cord flexibly on top of it. More spice can be added at points of articulation by having a slower arpeggio on dissonances and a quicker one in their resolutions. This gives a welcome contrast to the following piano and pianissimo sections, where one might want to explore with differences in arpeggiation and emphasizing different voices or chords compared to the fortissimo section. I had good results on the Lindholm clavichord with this Prelude by arpeggiated each chord to achieve a lute-like sound. The quiet nuances worked well by emphasizing the top voice in contrast to the strong bass in the fortissimo, with a beautiful cantabile melody and continuing the arpeggiation.

No. 21 in B-Flat major

This is a Prelude with the atmosphere of a nocturne, a slow character and must be played as cantabile. It was written between F_1 and eb^3 which makes it suitable even for a five-octave clavichord as it is. The left hand with its double-note accompaniment requires a very close touch and solid legato. The right hand has fewer difficulties, though some double-note accompaniment as well, and the sound needs to be singing and carry well. Proper use of subtle dynamics gives interest and variety and avoids the left-hand rhythm from becoming monotonous.

Once the fingerings were considered with thought and changed from the ones which were marked in the edition I was using, it was possible to play this piece without the aid of the pedal as with right fingerings the finger legato was adequate. There are pedal markings in

the score, but they are most in places with large leaps (like between the two initial notes of the measure in most cases) or as in the case of the six-measure long pedal in measures 19–24 for a foggy atmosphere, otherwise the pedals are self-evident. The large leaps work fine without a pedal when the first note which precedes the leap is emphasized and lengthened slightly and more time is given to the leap. Also a slight arpeggiation between the right and left hands did away with the problem of the absence of the pedal. One must remember that in the case of the six-measure pedal marking, this would have sounded rather different on the piano of Chopin's time than it does on modern day instruments. Naturally the foggy effect cannot be produced on a clavichord. In the same passage I faced another problem, that of temperament. The passage in measures 19–24 is written in B flat minor. Many different tuning systems are in use for clavichords. To get a sound acceptable to the ear while playing the above passage it is wise to use a tuning system which is not too far from equal temperament. I have found that the Vallotti tuning system works well for music from different periods. This section sounds best on the clavichord when the right hand cords are slightly arpeggiated.

No. 22 in G minor

This Prelude is short and stormy, with left-hand octaves. Surprisingly it works very well on the clavichord and is able to bring out a powerful expression of the clavichord and exhibit the full range of volume and expression which the clavichord has. One must consider that the *Molto agitato* which the piece is marked as, can be produced by feeling and character rather than by speed. Playing this piece on a clavichord opens up the understanding of these tempo markings as characters, not merely tempos. Also, it should be remembered that the *forte* and *fortissimo* markings in the piece should be taken as relative values, rather than keeping in mind what a *forte* or *fortissimo* sound like on the piano. The *agitato* effect is best reached by prolonging the dotted rhythm in the beginning and then advancing eagerly from one motive to the next. In the right hand it is advantageous to take the resolution cords more quietly. In the octave leaps (for example measure 17 and 19 and the correlating measures later on) it is helpful to emphasize the first octave and give it some extra time.

This piece has the range of $C\#_1-g^3$ which does not exceed the range of the six-octave Lindholm clavichord. It is also possible to play it on a Kunz, 5.5-octave Lindholm, or a

five-octave clavichord by slight modification, that is in the third measure from the end where both left and right hand need to be brought an octave inwards. The right hand chord may be also taken in a different position on the five-octave instrument. This did not significantly diminish the intent of the piece.

No. 23 in F major

The problems of this piece in relation to clavichord are due to exceeding the range of the clavichord in the right hand with its rapid arpeggios as well as the disjunctive nature of the left hand. Upon further examination I determined that the range of this piece, C–f⁴, is such that it could be played on a Kunz clavichord. Since I did not have such an instrument at hand I did try playing this Prelude with the five-octave clavichord in my use, which goes up to f³, by bringing down the right hand an octave starting from the middle of measures 12 where the 8va mark begins. The right hand should play an octave below until the end of the 8va in measure 19. With this minor adjustment there was no problem in playing the piece on the clavichord, but such a change does diminish from the original intent of the piece.

The tempo marking of this piece is Moderato. The piece is additionally marked as *delicatissimo*. The given tempo does not pose any problems for the clavichord.

The score has a pedal marking in every measure of the piece. However, the right hand can be played as legato without difficulty and the left hand is conjunct enough as well, with no leaps larger than an octave and with ample time to produce the leaps where they occur. Considering that the over-tones of the clavichord are more audible than those of a piano, there is more of a natural sustaining affect. Thus, I did not miss a pedal when playing this piece. It would have been in fact very interesting to try out this Prelude on a Kunz clavichord if that had indeed been possible. From my above observations I conclude that it may have worked very well on a Kunz.

No. 24 in D minor

The last Prelude of Opus 28 opens with a passionate pattern in the left hand which consists

of five notes. These five notes are rather disjunctive, covering the range of a twelfth above the octave or more. This motive in the left hand never relents throughout the piece, except for the last four bars. The piece is marked *Allegro appassionata*, indicating a discharge of tremendous emotion.

After studying the piece carefully at the clavichord I came to the conclusion that it is an extreme challenge to play this piece on a clavichord in a remotely satisfactory manner. The range of the piece being D_1-f^4 there is no clavichord ever built which has such a range. I stumbled on the following difficulties as well, first of all the problem of the above described left hand. Where left hand is playing alone the right hand can be used to help, thus playing the highest pitch or two highest pitches with the right hand. These are the parts where the left hand is most audible and it is most important to have it sound as legato. In some measures where the right hand is playing its melody close enough to the left hand to be able to pick up the top note of the left hand figure, it can also be used to help out in those passages (such as the left hand A in measure 3). Where the right hand takes the lead and carries a melody, the ear might be able to forgive the fact, that it is more difficult to produce a tight legato in the left hand in the above mentioned ways. The left hand must be played as close to the instrument as possible and trying to lengthen the notes as long as possible to achieve a maximal effect of legato. Learning to play the left hand in such a way that it is coherent without the aid of a pedal is, however, a great challenge, which might even be considered impossible. The score is marked with pedals from beginning to end, which is well justified by the texture.

The right hand seemed to be problematic for the clavichord as well. It carries a powerful melody which is heavily decorated by trills, scales and arpeggios. These scales exceed the range of any clavichord. Thus, my conclusion was, that this piece cannot be played with or without modification on any clavichord.

4. CONCLUSIONS

The objective of this study was to examine Chopin Preludes in the light of clavichord playing. The Chopin Preludes were written for the pianos which were in his use during his lifetime. My reasons for examining them at the clavichord were firstly to test the possibilities of the clavichord, secondly to test myself as a clavichordist and finally, to draw from the wisdom of clavichord playing and, as a pianist, hopefully understand the Preludes better at the piano as well. All three of my reasons were well satisfied by my study.

The Preludes were examined practically on a clavichord to determine their playability on the instrument. Some of them could be played as they were, without the need for any specific considerations. Others were approached more from a transcripitory point of view, with the mindset that pianistic expectations should to be forgotten and instead the pieces be dealt with the means of the clavichord and achieving a coherent musical result. Finally, there were Preludes which, even with compromises, seemed to be out of the reach of the clavichordist. All this served as testing the limits of the clavichord as well as testing my own clavichord playing skills. The problems of clavichord playing were magnified during my quest; mostly it was not an easy task even to get a good sound out of the clavichord in such an atypical repertoire. I was forced to pay special attention to the means of successful clavichord playing, that is, the positioning of the hand, the looseness of wrists and arms, the location of key which was struck, the way in which my finger struck the key etc. I find that this process has improved my skills as a clavichordist more than more typical clavichord repertoire would have done. There are great challenges in playing music such as the Chopin Preludes on a clavichord. However, they served as a good lesson on methodology of clavichord technique. Where one needs less effort in getting a Bach Prelude to sound good on the clavichord, it takes more effort to get Chopin Preludes to work on a clavichord, but with the very same techniques.

I have dealt with each Prelude separately in the previous section and pointed out their difficulties in terms of clavichord performance. There were certain problems to be considered in determining whether the Preludes were playable on a clavichord, among them being problems of range, large leaps in one or both of the hands, the need for a pedal, or a fast tempo marking. I have given advice of possible ways of overcoming these difficulties, if possible, and how to get the best result of each piece on a clavichord. I have also given

some performance tips, which will aid the clavichordist in playing them with consideration of the character of the clavichord.

Table 2 shows the ranges of the Preludes and how they fit different clavichords. The alternatives are a five-octave clavichord with the range of F_1-f^3 , a 5.5-octave Lindholm clavichord with the range of F_1-c^4 , the six-octave Lindholm clavichord with the range of C_1-c^4 , and the six-octave Kunz clavichord with the range of F_1-f^4 . Naturally, any Prelude which fits a five-octave clavichord will also fit either Lindholm or a Kunz. I have also shown in the table whether a Prelude might fit one of the above instruments with minor alteration in range, i.e. leaving out a single note or transferring it to an existing pitch namely in the case of an octave doubling.

Table 2. Ranges of Preludes and how they relate to different clavichords.

Prelude Op. 28	Range	Fits as is	With minor alteration
1. C major	C-d ²	five-octave/others	
2. A minor	E ₁ -c# ²	6-octave Lindholm	Kunz/5.5-octave Lindholm/5-octave
3. G major	C-d ⁴	Kunz	6- and 5.5-octave Lindholm/5-octave
4. E minor	E ₁ -c ³	five-octave/others	
5. D major	D-f# ³	Lindholms/Kunz	5-octave
6. B minor	B ₁ -f# ²	five-octave/others	
7. A major	A ₁ -c# ³	five-octave/others	
8. F# minor	B ₁ -a ³	Lindholm/Kunz	
9. E major	C ₁ -ab ¹	6-octave Lindholm	Kunz/5.5-octave Lindholm/5-octave
10. C# minor	G# ₁ -c# ⁴	Kunz	
11. B major	F# ₁ -b ²	five-octave/others	
12. G# minor	D# ₁ -a# ²	6-octave Lindholm	Kunz/5.5-octave Lindholm/5-octave
13. F# major	F# ₁ -f# ²	five-octave/others	
14. Eb minor	Eb ₁ -gb ¹	6-octave Lindholm	Kunz/5.5-octave Lindholm/5-octave
15. Db major	E ₁ -bb ²	6-octave Lindholm	Kunz/5.5-octave Lindholm/5-octave
16. Bb major	Eb ₁ -f ⁴		
17. Ab major	Db ₁ -b ²	6-octave Lindholm	Kunz/5.5-octave Lindholm/5-octave
18. F minor	C ₁ -f ⁴		Kunz
19. Eb major	G ₁ -eb ⁴	Kunz	
20. C minor	C ₁ -eb ²	6-octave Lindholm	Kunz/5.5-octave Lindholm/5-octave
21. Bb major	F ₁ -eb ³	five-octave/others	
22. G minor	C# ₁ -g ³	6-octave Lindholm	Kunz/5.5-octave Lindholm/5-octave
23. F major	C-f ⁴	Kunz	
24. D minor	D ₁ -f ⁴		

Seven of the 24 Preludes were playable with a five-octave clavichord without any alteration. Of the 17 remaining, 10 could be played on a five-octave instrument with minor alteration, making a total of 17 Preludes playable, either without or with minor alteration, on a five-octave clavichord. Seven remaining Preludes could not be adjusted for a five-octave clavichord.

17 of the 24 Preludes could be played on a 6-octave Lindholm clavichord with no alteration and one additional one with minor alteration. Nine of them could also be played on a 5.5-octave Lindholm without alteration and eight with minor alteration, as well as a total of 12 of the 24 on a Kunz with no alteration. In addition 11 of the remaining Preludes could be

played on a Kunz with minor alteration. Only two Preludes did not range-wise fit any clavichord model. One of the two could fit a Kunz with minor alteration.

My second observation based on the previous was that the Preludes which had less tendency of fitting a clavichord range wise also had other compositional problems which made them more challenging to play on a clavichord.

In my analysis of the Preludes on the clavichord, I pointed out that the problem caused by the absence of the sustaining pedals was adequately dealt with by using a finger legato, arpeggiating chords to avoid gaps, or by agogics to achieve an illusion of legato. The rich overtone series of the clavichord were also of value in the absence of the pedals. I further noted, in trying out the Preludes on different clavichord models, that they were at their best played on Swedish models compared to the German ones, because of the difference in the length of the ends of the strings, i.e. their length from the bridge to the wrest plank, with Swedish models being built in a way that gives more sympathetic sound adding to the colour and richness of the sound and covering for the absence of the pedal. The German models have a much drier sound making them much less suitable in comparison for playing music from the Romantic period.

My observation relating to tempo was that in many cases it was wise to compromise to get all the notes to sound properly. By approaching the pieces with slower tempo than they are traditionally played by contemporary pianists, I also found much musical meaning underlying the surface of the piece and gained many musical aspects which often go lost or unnoticed in the speedy performance of the pianist, and which, undoubtedly, were meant by the composer to come out. This opens up the question if, perhaps, the Preludes were originally played at slower tempos than what is common these days.

This study might be of value also for the pianist in considering the performance tips which I have given. They might be of use also in piano performance, even though piano cannot produce all of the effects mentioned in the same way as a clavichord can, but keeping the possibilities of clavichord playing in the back of the mind, new qualities might be achieved also on the piano. These qualities might be new to the contemporary pianist, but considering that people during Chopin's time still had traces of clavichord mentality in their mind, being historically so close to the period of clavichord playing, that it should have had an effect on

their piano playing as well, unlike the pianists of today, most of whom are not familiar with the clavichord. Also considering that the piano of Chopin's time was rather different from what it has become in modern times, it might be valuable, even when playing a modern piano, to take hints of playing an older instrument from which the piano of both that time and of today has developed. As a pianist I have gained through my study a deeper understanding of tempos. It is a tendency among musicians to choose tempos according to their technical abilities rather than considering the requirements of the music itself. I have been forced to play the Preludes with fast tempo markings in slower tempos on the clavichord than what is customary on the piano. This has led me to observe the interesting musical material as well as bring it out in ways which are impossible in faster tempos, which often just show brilliance of finger technique. Another observation has arisen from working out the Preludes without the aid of a pedal. It is interesting to experiment on the piano as well to see how far one may in fact go and with what results, trying to use finger legato instead of routinely using the pedal to tie things. In this way the function of the pedal is more that of variance in sound, not merely an aid for playing in legato.

5. BIBLIOGRAPHY

- Adlam, Derek 1993. The Importance of the Clavichord in the Evolution of the New Musical Aesthetic in Eighteenth-Century Germany and in the Development of the Fortepiano and its Repertoire. (w:) *De Clavicordio. Proceedings of the International Clavichord Symposium. Magnano 1993*, Istituto per i Beni Musicali in Piemonte, 1994, p. 245–249.
- Adlung, Jakob 1768. *Musica Mechanica Organoedi*. Zweiter Band. Berlin. Facs. Documenta Musicologica XVIII 1981.
- Atwood, William G. 1987. *Fryderyk Chopin: Pianist from Warsaw*. Columbia University Press.
- Bach, Carl Philipp Emanuel 1753. *Essay on The True Art of Playing Keyboard Instruments*, tr. William J. Mitchell. New York: W. W. Norton & Company, Inc., 1949. Original title: *Versuch über die wahre Art, das Clavier zu spielen*.
- Bedford, Francis 1993. Twentieth-Century Clavichord Music. (w:) *De Clavicordio. Proceedings of the International Clavichord Symposium. Magnano 1993*, Istituto per i Beni Musicali in Piemonte, 1994, p. 259–263.
- Benson, Joan 1993. Clavichord Technique in the Mid-Twentieth Century. (w:) *De Clavicordio. Proceedings of the International Clavichord Symposium. Magnano 1993*, Istituto per i Beni Musicali in Piemonte, 1994, p. 255–256.
- Brauchli, Bernard 1998. *The Clavichord*. Cambridge.
- Císek, Bohuslav 1996. Clavichords in the Chech Lands. *DE CLAVICORDIO II Proceedings of the International Clavichord Symposium Magnano, 21-23 September 1995*. Ed. Bernard Brauchli – Susan Brauchli – Alberto Calazzo. Musica Antica a Magnano.
- Eigeldinger, Jean-Jacques 1988. *Twenty-four Preludes Op. 28: genre, structure, significance*. In: *Chopin Studies*. Ed. Jim Samson. Cambridge etc.: Cambridge University Press.
- Ferguson, Howard 1991. *Keyboard Interpretation, from the 14th to the 19th Century*. New York: Oxford University Press.
- Forkel, Johann Nikolaus 1802. *Über Johann Sebastian Bachs leben, Kunst und Kunstwerke*. Leipzig: Neuausgabe von Müller-Blattau, Bärenreiter-Verlag Kassel 1925.
- George, Marek R. & Gordon-Smith, Maria 1978. *Chopin. A biography*. New York, San Fransisco, London: Harper & Row.
- Hedley, Arthur 1947. *Chopin*. London: J.M. Dent & Sons Ltd.
- Huneker, James 1976. *Chopin the Man & His music*. Dover Publications.
- Kelzenberg, David 2000. *What are Historical Keyboard Instruments*. <http://www.mhks.org/whatare.htm> (Last read 11.23 am, 30/1/2008)
- Kirkpatrick, Ralph 1981. On Playing the Clavichord. *Early Music*, ix, pp.293–305
- Knights, Francis. Composing for the Clavichord; A Short Guide. <http://www.bcs.nildram.co.uk/guide.htm> (Last read 3.37 pm, 23/1/2008)
- Korhonen, Mikko 1993. *On the Clavichord*. Master's Thesis for Sibelius Academy.
- Kresky, Jeffrey 1994. *A Reader's Guide to the Chopin Preludes*. Westport, Conneticut, London: Greenwood Press.
- Letnanova, Elena 1991. *Piano Interpretation in the Seventeenth, Eighteenth, and Nineteenth*

Centuries: A Study of Theory and Practice Using Original Documents. Jefferson, N.C.: McFarland & Company.

Liszt, Franz 1890. *F. Chopin*. Leipzig: Breitkopf & Härtel.

Neupert, Hans 1955. *Das Klavichord*. Kassel.

Niecks, F. 1888. *Frederick Chopin as Man and Musician*. London: Novello, Ewer & Co. <http://www.chopinfiles.net/books/frederickniecks.pdf> (Last read 12.43 pm 30/1/2008)

Parrish, Carl George 1939. *The Early Piano and its Influence on Keyboard Technique and Composition in the Eighteenth Century*. Ph.D. thesis, Harvard University.

Samson, Jim 1994. *The Music of Chopin*. Oxford University Press.

Samson, Jim 1995. *Chopin Studies*. Cambridge University Press.

Samson, Jim 1996. *Chopin*. Oxford: Schirmer Books (Oxford University Press?).

Soinne, Paavo 2001. Klavikordin soitinhistoriallisesta sijainnista ja sen suhteesta fortepianoon. *Klavikordikirja*. Publications of the Church Music Department no 24. Ed. Pentti Pelto. Sibelius-Academy. Vammala

Siepmann, Jeremy 1995. *Chopin: The Reluctant Romantic*. London: Victor Gollancz.

Svensson, HansErik 2007. *Keyboard instrument making in Stockholm in the second half of the 18th century*. Lecture given at the Kraus Conference arranged at the Stockholm Music Museum in November 2007. <http://www.klavichord.se/resources/kraus.pdf> (Last read 1.10 pm, 15/2/2010)

Troeger, Richard 1987. *Technique and Interpretation on the Harpsichord and Clavichord*. Bloomington: Indiana University Press.

Troeger, Richard 1996. The Clavichord and Keyboard Technique. *The American Organist*, Vo. 30, No. 3 (March 1996), pp. 59–63.

Türk, Daniel Gottlieb 1789. *Clavierschule, oder Anweisung zum Clavierspielen für Lehrer und Lernende*. Leipzig: Schwickert, Hemmerde und Schwetschke, Halle. (Kassel: Bärenreiter, 1962; English translation *Clavier-School, or Instruction in Clavier-Playing for Teachers and Students, with Critical Remarks* 1982)

Vapaavuori, Pekka 2001. *Viisi muunnelmaa Anders Wåhlströmin teemasta: soinnin ja soitettavuuden muuttujat Wåhlström-klavikordin rekonstruktiossa*. A written part of the doctoral thesis (Applied Study Program). Helsinki: Sibelius-Akatemia.

Virdung, Sebastian 1511. *Musica getutscht*. Basel. Nachdruck nach dem Exemplar der Preussischer Staatsbibliothek Berlin. Bärenreiter, Kassel 1931.

Vogel, Benjamin 1993. *The Clavichord as an Instrument and as a Term in Polish Musical Culture*, (w:) *De Clavicordio. Proceedings of the International Clavichord Symposium. Magnano 1993*, Istituto per i Beni Musicali in Piemonte, 1994, p. 209–213.

Weinstock, H. 1949. *Chopin. The Man and his Music*. New York.