I, Albert Mühlböck, hereby submit this original work as part of the requirements for the degree of Doctor of Musical Arts in Piano.

It is entitled:
Recovering the Clavichord for the Modern Pianist

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Recovering the Clavichord for the Modern Pianist

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ABSTRACT

This document examines the history of the clavichord, explores similarities between clavichord and piano technique, and makes suggestions about the respects in which traditional principles of clavichord playing can improve the playing of pianists and piano students. For centuries the clavichord was considered the basis from which all other keyboard instruments could be approached. After a time of relative obscurity in the second half of the nineteenth century, followed by a revival in the twentieth century, the clavichord again enjoys enough dissemination and familiarity to resume that noble role. This study finds, through examination of ancient and contemporary sources, that especially a pianist’s sensitivity of touch and clarity of playing can be improved by playing the clavichord. Practical suggestions are also given.

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CHAPTER 1 -- INTRODUCTION

Besides the organ, the clavichord was the indispensable keyboard instrument for the development of European music. Although it maintained a low profile, it was all the more influential. The fact that it derived from one of the oldest documented musical instruments, the monochord, gave the clavichord an ancient and fabled pedigree that made its history one of the leading threads of Europe’s musical legacy.

Simple in mechanics and construction, the clavichord was an essential item in many a musician’s home. As the most responsive among the keyboard instruments in touch and reaction to the player’s actions, it was appreciated as an instrument of intimate expression, as well as an exponent of European culture and art.

Despite the sophistication of the mechanics and the construction of the modern piano, many musicians consider the human voice to be the ideal instrument, and singing the theoretical and imaginary ideal of music making. This is because of the unlimited possibilities of inflection of the human voice as well as the fact that the vocal tone production is achieved by the human body itself. Therefore, the vocalist experiences a direct connection between the body and the “instrument.” The wind and string instruments can be considered as close approximations to the human voice. The modern pianist often already thinks and imagines the tone colors of other instruments as he/she plays.\(^1\) The clavichord enables the keyboardist to experience an instrument that allows him/her to shape the tone in many ways and to experiment with an instrument that is much more responsive than the modern piano. One critically important difference from the piano is that the player can modify the tone even after the attack. Moreover, the player experiences a much more direct connection between finger and vibrating string. In other words,

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it gives the player a physical experience and feedback that occurs only in the imagination when the player is playing the modern piano.

This paper is intended for accomplished pianists and piano students who are not acquainted with the scholarship on the clavichord, and who have little experience with and have not attained mastery on the clavichord. Similar to many string and wind instruments, it takes considerable time to achieve even a basic, satisfactory tone quality on the clavichord, and it therefore requires a lot of patience, especially in the first stages. It is important to always listen carefully to the tone quality. An equally important consideration is not to progress too fast, even if the literature is almost sight readable, for example the early Mozart compositions in the Notenbuch für Nannerl. This study leads the way to explore the clavichord, gives suggestions and guidance on playing and shows how a pianist on the modern piano can improve by engaging with the clavichord.

As a first step towards gaining familiarity with the clavichord, this paper begins by introducing its construction and the manner and mechanism of tone production. The two main features of clavichord technique, the Bebung and Tragen der Töne, are explained. Then a very short outline of its history is given. Important composers who are associated with the clavichord by either composing for it (J.S. Bach and C.P.E. Bach), or having used the clavichord for an extended time in their formative years (Mozart, Haydn and Beethoven), are given special emphasis.

The actual playing of the clavichord is relatively simple to explain but difficult to achieve, largely because of the sensitivity of the instrument. Most of chapters two and three are carefully selected quotations that I hope will inspire the player, giving him/her different points of view from several accomplished clavichordists, and help him to get over the difficult first stages.

The goal of this paper is to facilitate and encourage access to the clavichord for persons with prior knowledge of other keyboard instruments. For pedagogical reasons, I focus mainly on establishing the physical relation with the clavichord, e.g. the touch, everything that is different from the modern piano.
Questions on fingering, embellishments and stylistic features are generally not covered, or, if so only with respect to how they differ from the modern piano. The connection to the modern piano is mainly established by testimonies in the fifth chapter, above all by world famous pianist András Schiff, who is also a passionate proponent of the clavichord. The main profit the modern pianist can gain from dealing with the clavichord -- increased sensitivity of the fingers and of the ears -- is achieved over an extended stretch of time, and requires patience and perseverance. This paper is not so much a manual with step-by-step instructions, as a companion, which should give encouragement to the task of learning a new instrument. It is hoped that the player will uncover hidden qualities of the modern piano that one never would have expected.
CHAPTER 2 – THE CLAVICHORD

Construction of the Clavichord

The basic shape of a clavichord is rectangular (Fig. 3), and the keyboard often protrudes from the front of the clavichord (older instruments, Fig. 9), or is sometimes enclosed within the box (newer instruments, Fig. 3). The right side from the player’s perspective is occupied by the soundboard (Fig. 5), the left side with the action (Fig. 4). The action consists of key levers with the keys on one side and the tangents on the other (Fig. 7). The tangents are metal blades that are attached perpendicularly to the key levers and strike and hold on to the string when the key is pressed down. The strings are stretched from left to right. The sounding length of the string is determined by the bridge on the right (which is glued to the sound board) and the tangent on the left (or by the hitchpins and the damping cloths if in resting position). The key levers are usually guided by rack tongues, so that the only possible movement is vertical. Most of the clavichord is built in wood, while only the tangent, the tuning pins, hitch pins and balance pins are made of metal. The damping cloth which is wrapped around the left end of the strings and which dampens the sound if the tangent does not strike the string, is made of felt (Fig. 8).

1 Chapters 2 and 3 about construction and history of the clavichord only give a general view over these topics. Unless otherwise mentioned in the footnotes, the content is obtained from the following book: Bernhard Brauchli, The Clavichord (Cambridge: Cambridge University Press, 1998).
Fig. 1. Tangent Action of the Clavichord, Carsten Ludwigsen, http://home.arcor.de/c.ludwigsen/tasten/klavier/kap122.htm

The pitch of a sound is determined by the (vibrating) length of the string, its linear density, and its tension. In most models, there are two strings per note, but there are also examples of single-strung or triple-strung instruments. The tangent produces the tone by striking the string, and also determines its pitch by delimiting the left end of the sounding length of the string. Older instruments were therefore typically constructed with one string (or a pair of strings) serving two or more tones, the respective tangents striking on different positions. These instruments are called fretted instruments (Fig. 2). The first unfretted clavichords with a different string set for each pitch are mentioned at the turn of the 18th century. However, it is generally accepted that both versions co-existed for a long time, as both had their advantages.
Fig. 2. This figure shows the keys, key levers and positions of the tangents. For visibility reasons only F and C strings are shown. Created by the Clavichord Application of The Stockholm Music Museum, http://clavichord.se/.

The advantages of a fretted clavichord are that it has fewer strings, is lighter and easier to tune, and is more sensitive because of the shorter string band (distance between highest and lowest string), resulting in shorter key levers. It also has more immediacy of attack and promptness of “speech”. An unfretted clavichord on the other hand, is musically more flexible. With a different string assignment to each distinct pitch all possible harmonic tone combinations can be played simultaneously, while with the fretted instrument, this is not possible, since tones which use the same string cannot be played simultaneously. By being able to adjust to different tuning temperaments it also permits the musician to

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play in more tonalities as the strings can be tuned independently. The fretted clavichord usually has a predetermined temperament due to the fixed position of the tangents that belong to one string.4

The sound volume of the clavichord is limited mainly because of the small tension that can be applied to the strings as they are delimited just by the tangent on the left side. Although performances are only possible in selected venues, high quality clavichords have been used successfully in quite large venues. The essential thing considered is the carrying power, which is a different quality than the loudness per se. Richard Troeger, one of the advocates of the clavichord and author of several books and recordings, remembers:

I listened to an original Hass on the stage of a small auditorium. Standing back, I found that it had a much wider range of timbral effects than up close: the sound waves did strange and wondrous things across twenty feet or so, in addition to carrying extremely well. . . . A fine Friederici copy by Paul Irvin (Chicago) . . . filled a large, crowded room and carried all the way to the back, I'm told. Certainly it sounded loud and full up close, but it had such integrity to the sound that it reached out very well. That is what is important.5

4 Ripin, 43.

5 Richard Troeger, “An Interview with Clavichordist Richard Troeger.”
Fig. 3. View of the clavichord from above
Fig. 4. View of the keys, the key levers, tangents and strings
Fig. 5. View of the Soundboard, the bridge, and the tuning pins
Fig. 6. View of the tangents, above in rest position, below with one key depressed
Fig. 7. Key lever with tangent and key

Fig. 8. The damping cloth at the left side of the strings
History of the Clavichord

Before 1500

The clavichord is a direct descendant of the monochord, an instrument with a single string whose sounding length is limited by fixed bridges at each end and which is played by plucking the string with the fingers. A third movable bridge is used to change the sounding length of the string. The monochord, allegedly invented by Pythagoras in Greece, was first used as a theoretical instrument, showing relations between string length and pitch. In the middle ages, a sound box was added to strengthen the resonance. ¹ Although a monochord was very impractical without a keyboard or a mechanism to pluck the strings, historical evidence shows that it was used for actual performances together with lyre and zither. ² Several instruments were developed from the monochord. One of them, the organistrum, possibly a predecessor of the hurdy-gurdy, was an instrument with strings sounded by a wheel. It was played by a keyboard which guided small bridges under the strings to change the pitch. The monochord was in such high esteem (especially in Spain) that even after the actual clavichord was invented and became common, it was still often referred to as a monochord.

The oldest clavichord still in existence today is from 1540. However, according to Brauchli, “all elements necessary to the conception of the clavichord existed by the fourteenth century, if not earlier. These elements were:

- the idea of producing several conjunct notes by striking a string, or a pair of strings, in different locations, thereby determining various respective speaking lengths (this principle is the essence of the monochord);

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² Ibid., 13.
The concept of an instrument composed of several strings stretched parallel on a resonating box, as on the psaltery;

- The keyboard, a concept already developed on primitive organs.\textsuperscript{3}

These considerations, together with some iconographical evidence from as early as 1400, and the important treatise of Arnault von Zwolle from the 1440s, all lend support to the hypothesis that the clavichord was already common before 1400. In the first half of the 15\textsuperscript{th} century, the instruments had all strings “of the same gauge, material, and tension, and hence [were] all tuned to the same pitch, as if the instrument had multiple copies of only one string.”\textsuperscript{4} (Fig. 9) The pitch was determined just by the different placements of the tangents. In order to extend the range of the clavichord, but also to keep the instrument from getting oversized, the strings were later tuned to different pitches.

Fig. 9. The clavichord by Arnault Zwolle had strings of the same length, gauge and material, and were tuned in unison. One can clearly see the wide distance between the tangents in the bass register and the small distance in the treble. Theodore Robertson, http://www.robertsonharpsichords.com/harpsichords2.asp (accessed May 14, 2012)

\textsuperscript{3} Brauchli, 20.

\textsuperscript{4} Baruchli, 31.
Although the clavichord belongs to the keyboard instruments, and to the percussion instruments in tone production, it is often considered to be related to the genre of plucked instruments: The clavichord’s predecessor, the monochord, was plucked after all, and its crisp sound quality supports associations to a plucked instrument. Early Spanish composers classified the harp, vihuela and the clavichord together. This affinity was confirmed by Jacob Adlung, who wrote in 1726: “... a good clavichord should sound in the manner of a harp.”

The 16th Century

In the 16th century the compass of the clavichord was extended; the bass notes were usually unfretted, so they would not contribute to an impractical enlargement of the instrument. Semitones would have to be quite a distance apart in the bass register when struck on the same string. The left red arrow shows the distance between the D and D# in the small octave, the right red arrow shows the distance in the one-line octave. Because a fretting of the great octave would cause the distance between DD and DD# to be double of the distance between D and D# (double the length of the left red arrow), the size of the instrument would increase dramatically. Therefore, as you can see on Fig. 10, the great octave has a separate string for each chromatic tone.  


Fig. 10 This figure shows the distance between the tangents for d and d# in two different octaves. Would the clavichord be fretted in the lower octave, the difference between the two tones would be doubled and would have increased the size of the instrument considerably. For visibility reasons only F and C strings are shown. Created by the Clavichord Application of The Stockholm Music Museum, http://clavichord.se/.

While the treatises in the 15th century dealt mainly with clavichord construction, in the 16th century we also encounter instructions on how to play. The earliest example is by Thomas Santa Maria (1565) and describes a hand position with low wrist and knuckles. This suggests playing “with the balls of the fingers,” which is definitely derived from the organ technique of the period. In 1610, Girolamo Diruta, in a method better adapted to the idiosyncrasies of the clavichord, stressed the relaxation of hands and arms and advocated a higher wrist position.

Interestingly, evidence exists to support the use of clavichords in Japan during the 16th century and in China during the beginning of the 17th century. These instruments were given as official gifts from missionaries to Asian regents, showing the importance and status of the instruments. In periods of

cultural openness, these countries favored the reception of western music which included the clavichord. In the middle of the 18th century, however, the political climate changed and western music went out of favor.\textsuperscript{8}

\textbf{The 17th Century}

The 17th century brought developments such as: enlargements of the soundboard, extensions of the compass to often more than 4 octaves, fretting systems with not more than two notes per string pair, and in 1693, the first mention of an unfretted clavichord. The \textit{Ars magna consoni et dissoni} by Johann Speth did not describe the unfretted instrument as a new achievement, which suggests that it might have been around even earlier.\textsuperscript{9} In order to be able to increase the length of the strings without increasing the size of the clavichord, it became customary to position the strings diagonally, from the upper left side to the lower right side. In one special case, the clavichord described by Fabio Colonna in 1618, divided the whole step into 5 equal parts by inserting half-keys (divided keys) and adding a second manual. This particular clavichord was in the shape of a harpsichord and was constructed so that the enharmonic tones were played on the same string. By using the principle of fretting, it was possible to incorporate 31 tones per octave without increasing the number of strings. Because the enharmonic tones were never played simultaneously, they could use the same string, and the fretting was never a restriction of the use of the instrument. A harpsichord with one string per tone would have had 31 strings per octave. In anticipation of further development in the 18th century, new compositions became more idiomatic, although it was still common to use whatever keyboard instrument was available.

\textsuperscript{8} Ibid., 411.

\textsuperscript{9} Brauchli, \textit{The Clavichord}. 101.
The 18th Century

The 18th century witnessed the golden age of the clavichord. With the development of the musical language, unfretted clavichords became even more common, although they never superseded the diatonic fretted clavichord as both had their respective advantages. Diatonic fretted clavichords are instruments that are using the same string for chromatically altered tones, e.g. c and c# would be on the same string. Instrument builders tried to increase the volume and range of clavichords, but the instruments were often softer than the older clavichords. This is because an increased weight of the soundboard requires more oscillating energy from the string to induce its vibration.

Different styles of music in European regions also influenced the spreading use of the clavichord. In Italy, France and England, the clavichord was not commonly used other than for domestic use. It did, however, bloom in the Iberian Peninsula (Spain and Portugal), Germany, and Scandinavia. In the second half of the 17th century, in Germany, when the sensitive style encouraged the expression of intimate feelings and emotions, the clavichord was the ideal instrument, expressly favored by its main representative, C.P.E. Bach.

During the previous centuries, the clavichord was often made by carpenters, due to its simple construction. However, in the 18th century, professional instrument makers considered the clavichord on par with the harpsichord and organ. Their best clavichords exhibited an individual character and personality. The fortepiano, invented in the beginning of the 18th century, became the direct rival of the clavichord because it challenged the monopoly of the clavichord to be able to vary dynamics by the way the keys are pressed down. The fortepiano also had immense influence on the continued development of the clavichord because builders had to compete with the much bigger sound of the piano and tried to increase the volume of the clavichord as well.
In the beginning of the 18th century, the popularity of the instrument increased with musicians, writers and poets as they associated its sound with subtlety, expression, and tenderness.\(^{10}\) The clavichord was taken to be the instrument of the independently thinking, sensitive and educated citizen, while the harpsichord was sometimes equated with a superficial personality.\(^{11}\) The Moravian colonies in North America even associated the clavichord to the Holy Spirit.\(^{12}\) Some scholars believe that this ideal congruence of \textit{Zeitgeist} (spirit of the age) and instrument made it impossible to adapt when the musical tastes changed.\(^{13}\) The clavichord was too closely associated with the character of the 18th century to be able to graceful accommodate when the next era dawned.

The new sensitive musical style was closely associated with the literary \textit{Sturm und Drang} movement, a German proto-Romantic cultural upswelling. Both of these cultural fashions advocated the free and deep expression of human feelings. Several songs (with texts by H.W. Gerstenberg,\(^{14}\) C. W. Weisse,\(^{15}\) P. von Gatterer Engelhardt\(^{16}\) and others) glorify the clavichord as the intimate confidant of the (mostly female) protagonists. The following poem by H.W. Gerstenberg was set to music by Ernst


\(^{15}\) Ibid., 32.

\(^{16}\) Ibid., 33.
Wilhelm Wolf sometime before 1762 and “describes intense communication with the clavichord and that instrument’s unique performative characteristics.”  

Annette Richards elaborates: “The clavichord is endowed here with strange powers, no longer a mere machine, a box of strings, it metamorphoses into a quasi-human presence, a trusted confidant, consoling friend and potential intermediary. Rarely has an instrument been asked to endure so much.”

Phyllis an das Clavier  
(Heinrich Wilhelm von Gerstenberg)

Bestes, kleines Klavier  
Schalle, schalle  
Lauter Liebe!  
Lauter süße Liebe  
Sei dein schmelzendes Saitenspiel!

Dear, little clavichord,  
Resound, resound  
With nothing but love!  
Pure sweet love  
Be your melodious string-music!

Denn ich fühl’s, ich fühl’s,  
Dieser Busen  
Schmilzt vor Liebe.  
Ach! wie wallt, wie wallt er.  
Unaussprechlich empfindungsvoll!

For I feel it, I feel it,  
This bosom  
Melts with love:  
Ah! How it seethes, it boils,  
Inexpressibly full of emotion!

Aber Theon, du weinst,  
Nennst mir kälter  
Als das Eismeer:  
Und, Grausamer! siehst nicht,  
Wie ich zitter dich anzusehen!

But Theon, you weep,  
Call me colder  
Than the arctic ocean:  
And more cruel! You do not see  
How I tremble to look at you!

Wie die Wange mir glüht!  
Und die Stimme  
Itzt dahin stirbt!  
Und der Finger bebend  
In die Töne hineuberfliegt.

How my cheek burns!  
And my voice  
Now dies away!  
And the quivering of my finger  
Is translated into the realm of sounds.

Weh mir! wenn er nun kommt!  
Und nun sprachlos  
Horcht und seufzet,  
Und nun meine Seele  
Ganz im Feuer der Liebe strömt!

Woe is me! If he should come now!  
And if he speechless  
Listens and sighs,  
Whilst my soul is  
Gushing entirely in the fire of love!

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18 Ibid., 164.
Welchen leisesten Ton
Soll ich, Himmel!
Soll ich wählen,
Der doch ganz ihm sage:
Bester Jüngling! ich liebe dich!

Ach! die Wange wird glühn,
Und die Stimme
Wird verstummen,
Und der Finger bebend
In die Töne hinüberfliehen.

Und der silberne Laut,
Zitternd wird er
Auf der Saite,
Noch ersterbend sagen:
Bester Jüngling, ich liebe dich!

Which softest tone
Shall I, O God!
Shall I choose,
With which to tell him truly
Dear youth! I love you!

Ah! My cheeks will flush,
And my voice
Will fall silent,
And the trembling of my finger
Will be translated into tones.

And the silvery sound
Will become a shivering
On the string,
Still saying as it dies away:
Dear Youth, I love you!

The same poet, Heinrich Wilhelm von Gerstenberg, crafted a recitative from Socrates’ “Apology” (as given by Plato) and the monologue from Shakespeare’s “Hamlet” in C.P.E. Bach’s fantasia H. 75. The recitative shows what powers of inspiration, communication and passionate expression were attributed to the clavichord. The following music example shows the beginnings of both monologues, Socrates in the first line, and Hamlet in the second line.

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19 Ibid., 162.

20 Richards, “C.P.E. Bach’s Farewell and the Speaking Clavichord,” 15.
Example 1. C.P.E. Bach, Fantasia in c minor with Socrates’ and Hamlet’s monologues, arranged by H.W. Gerstenberg.
Individual Composers

All of the composers in the classical period and many in the later periods, used the clavichord for practice and performances. As the music became more idiomatic, questions arose as to which instruments were intended for which compositions.

J.S. Bach

The music historian Johann Nikolaus Forkel wrote:

[Bach] liked best to play upon the clavichord: the harpsichord, though certainly susceptible of a very great variety of expression, had not enough soul for him; and the piano in his lifetime was too much in its infancy and still much too coarse to satisfy him. He therefore considered the clavichord the best instrument for study, and in general, for private musical entertainment. He found it the most convenient for the expression of his most refined thoughts, and did not believe it possible to produce from any harpsichord or pianoforte such a variety in the gradations of tones as on this instrument, which is, indeed, poor in tone, but on a small scale extremely flexible.

This seemingly unquestionable statement has a serious flaw: Forkel did not know Bach personally. Therefore, advocates for the harpsichord, like Wanda Landowska and others, questioned Bach’s preference for the clavichord. Forkel was, however, well acquainted with Wilhelm Friedemann Bach and Carl Phillip Emanuel Bach, so his testimony comes from persons with very intimate knowledge of the Bach family.21

During Bach’s time, performers were still very flexible with their choice of keyboard instruments. Questions arise, whether the Well Tempered Clavier was intended to be played on the clavichord. If one uses unfretted instruments (which at Bach’s time were available, but not widespread), the performance is not problematic, even though occasionally bass notes have to be played one octave higher. On diatonically fretted clavichords, there are only a few occasions when minor 2nds are not executable and

would therefore change the musical meaning of the thematic material, if omitted.\textsuperscript{22} Other pieces, like the *Clavier-Übung*, can also be performed without problems on the clavichord, even if more musically effective on the harpsichord (like the “Italian Concerto”). Some scholars propose that various organ pieces could have been intended for the pedal clavichord, which is in principle a double clavichord consisting of a standard clavichord and a Pedalboard connected to a separate clavichord action. It was very common during this time period and it served as practice instrument for many organists (Fig. 11).\textsuperscript{23}

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{23} Francis Knights, “Johann Sebastian Bach und das Clavichord,” *Neue Zeitschrift für Musik* 151, no. 11 (1990): 17.
\end{itemize}
\end{footnotesize}
Fig. 11. Pedal clavichord and a double manual keyboard. There are actually three clavichords in this picture. The pedals are connected to the levers of the clavichord action in the big box. Two more clavichords are stacked on top of each other. Carl Wolff Fine Keyboard Instruments, [http://a3.ec-images.myspacecdn.com/images02/2/ea28853bd313406ebc10f0db886cc325/l.jpg](http://a3.ec-images.myspacecdn.com/images02/2/ea28853bd313406ebc10f0db886cc325/l.jpg) (accessed May 14, 2012).

C.P.E. Bach

By far the composer who wrote most idiomatically for the clavichord was C.P.E. Bach. Supported by the contemporary music style of *Empfindsamkeit* (sensitive style) and its parallel trends in the other arts, which encouraged free and deep expression of feelings, there are plenty of contemporary sources of his affecting and passionate playing. The clavichord was his preferred instrument, and although he
recommended that all players possess both a harpsichord and a clavichord, he writes, “It is at the clavichord that a keyboard player may be most exactly evaluated.” His book, *An Essay on the True Art of Playing Keyboard Instruments*, written between 1753 and 1762, is an essential source for performance practice from Bach's time period. His compositions constitute an extremely useful compendium; they will be explored more deeply in the following chapters.

*Joseph Haydn:*

Because of his long life, Haydn encountered many stylistic changes in music, including those accompanying the development of the pianoforte. Howard Pollack (after thoroughly researching the instruments at Haydn's disposal and examining his compositions in terms of aptness for the clavichord) suggests that Haydn's early piano compositions (before 1765) were written for harpsichord. However, Pollack allows that Haydn likely possessed a clavichord for private use. Pollack also suggests that Haydn compositions written between 1765 and 1780 were specific to the clavichord, since their writing demonstrated textures that suggest a clavichord performance. It was during that time that Haydn also became acquainted with the works of C.P.E. Bach, whom he admired very much. After 1780, Haydn's writing leans more toward the use of the pianoforte. After 1790, it is fair to say that his compositions were intended to be performed on the piano, although these periods may have overlapped. Haydn’s frequent use of the clavichord may possibly explain his preference for the light pianoforte action.

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25 Ibid., 87.
26 Ibid., 82.
27 Ibid., 88.
28 Ibid., 89.
W. A. Mozart:

W. A. Mozart was in possession of several clavichords (including a travel clavichord), which he used for composing and occasionally for public appearances. In 1781, while lodging with the Webers (his wife’s family), Mozart wrote to his father: “Now I am off to hire a Clavier, for until there is one in my room I can't live there.” He obviously regarded it as an essential piece of equipment for his private study, and therefore, the expressive possibilities of the clavichord may have influenced his keyboard compositions. Mozart favored clavichords that had characteristic and individual colors in the different registers; he preferred the bass to be “like trombones” and the treble “like sweet violins.”

Ludwig van Beethoven:

Although Beethoven’s music was written for the pianoforte, and significantly expanded the limits of the instrument, it is reported that Beethoven valued the clavichord highly. As Joseph Fischhof, pianist and composer (and well acquainted with the circle of Beethoven’s friends) writes in 1853, “…of all the keyboard instruments, it was only on the clavichord that one had almost total control of the sound.” Christian Gottlob Neefe, Beethoven's teacher in Bonn, was very fond of the clavichord. Considering the fact that only a few of Neefe’s students had fortepianos or harpsichords in their homes, the clavichord

32 Maunder, 212.
33 Brauchli, The Clavichord, 224.
34 Brauchli, The Clavichord, 249.
35 Brauchli, The Clavichord, 228.
might have been the default instrument among his students. The young Beethoven reportedly practiced until long after midnight, which is possible only when he used a clavichord. Beethoven’s keyboard technique may have been heavily influenced by the clavichord technique for playing, as Tilman Skowroneck writes: “A part of his conception of what fortepianos ‘should be able to do’ might have been derived from the instrument he initially had been accustomed to, the clavichord.”

After 1900

In the 19th century, the clavichord slowly disappeared from public view, since its sound was too weak for the new, large-scale public events. However, it was by no means forgotten. Many composers such as Mendelssohn, Bruckner, Schumann, Brahms and others continued to possess and use the clavichord for performances in front of small audiences. Attempts were made to correct the problem of its weak sound by expanding the range and lengthening the strings. In Scandinavia, where the decline of the clavichord was almost nonexistent, production of larger clavichords with compasses of up to 6 octaves and enlarged soundboards could almost match the sound of the pianoforte. Issues with increased string tension and practicality, however, put a limit on these efforts. Other areas where the clavichord remained important in the 19th century were Germany and the Iberian Peninsula.

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37 Ibid., 154.

38 Judith Conrad, e-mail message to author, November 8, 2010.


Experimental acoustical research suggests that the fortepiano with its moderator stop (a felt cloth between the wooden or leather-covered hammer and the strings), can be regarded as a connecting link between the old keyboard instruments (clavichord, harpsichord) and the modern piano with its felt hammers. Although the felt cloth reduces the volume of the sound and makes moderated sound on the fortepiano more similar to the clavichord in terms of volume, analysis of the sound spectra shows that the un-moderated sound of the fortepiano shows similarities with the clavichord and harpsichord, whereas the moderated sound compares to the modern piano.  

The middle of the century, often labeled “the dormancy” of the clavichord, still saw widespread usage of the clavichord. As the term dormancy suggests, in contrast to the harpsichord, the clavichord was never really forgotten. This is evident in Christian Friedrich Gottlieb Thon’s book “Über Klavierinstrumente” (about keyboard instruments), which was a companion with suggestions for purchase and maintenance of keyboard instruments. This book was published in 1817, with the last edition in 1843. By describing and recommending the clavichord as late as 1843, the article suggests that the use of the clavichord was still widespread. He even discourages the purchase of harpsichords in favor of clavichords, possibly indicating that the harpsichord was even less common than the clavichord during this time. Although unfretted instruments were very common at the end of the 18th century, diatonically fretted instruments were still discussed in this publication. Occasionally public performances for the

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42 Alan Caro, 138


44 Ibid., 75.

45 Ibid., 73.
clavichord occurred; e.g. Alfred Hipkins played J.S. Bach’s Chromatic Fantasy and Fugue on the clavichord in 1886. The renowned playwright George Bernard Shaw was also a vocal supporter of the clavichord.⁴⁶ Although most sources seem to confirm the existence and use of the clavichord in the 19th century in Europe, there are exceptions. In Poland, where the pianoforte was used very early on, the term Klavikord was used for square pianos (probably referring to the often-occurring conversion of clavichords into square pianos). Reports that Chopin played on a Klavikord meant that he used a square piano, not a clavichord.⁴⁷

The 20th and 21st century saw a strong revival of clavichord use, after being previously introduced by Arnold Dolmetsch in the end of the 19th century. He was a French-born musician and instrument maker who spent much of his working life in England and was a leading figure in the 20th century revival of interest in Early Music. Many artistic movements at the turn of the 20th century expressed rebellion against industrialization and encouraged introspection. Individualism, therefore, made the clavichord very appropriate as it was known to be the instrument for expression of deep and intimate emotions. Also at that time, different nationally-coined styles of playing established individual characteristics in performance, which were dependent on the available clavichords. In England, where Tom Goff’s clavichords emphasized tender playing, Bebung (a technique which involves gentle rocking on the key with the fingers in imitation of the vibrato) was used to a great extent, since the clavichords required a light and legato touch. The Bebung, a feature unique to the clavichord will be explained in detail in the third chapter. In Spain, the clavichord was often played with a full and vigorous sound which matched the clavichords designed by Merzdorf and Verwolf. In Germany and Austria, the personal union of

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harpstochordist and clavichordist was very common. Teachers emphasized the sensitivity of the fingertips and tried to teach this skill by inventing special exercises for their students.

Unfortunately, Wanda Landowska, who contributed the most to raising the popularity of the harpsichord during this time (and indirectly, raising the awareness of pre-classical music) did not consider the clavichord important and considered it a primitive instrument. However, during the second half of the 20th century, development in clavichord building, as well as newly available copies of older instruments, helped refine clavichord performances. As previously mentioned, during the first half of the 20th century, public performances on the clavichord were the exception and it was still considered a private instrument (analogous to its situation before in the 18th century). It is now considered “one of the last early keyboard instruments to be resurrected for public performance.”48 This consideration influenced the development of clavichord building (bigger instruments able to withstand heavy performances) and the technique for playing (especially subtle nuances like Bebung, which have to be exaggerated or avoided).49

There are also present-day musicians who extend the repertoire of the clavichord by either composing pieces specifically for it (e.g. Herbert Howell’s Lambert’s Clavichord50) or by using it for pieces they consider appropriate (e.g. Bradley Lehman recorded Schoenberg and Bartok).51 Occasionally,


49 Ibid., 255.


the clavichord even ventured into jazz and popular music and was used in recordings by Oscar Peterson in his album *Porgy and Bess*\(^52\) (1976) and Paul McCartney in the song “For No One”\(^53\) (1966).

The status of the clavichord in society is also occasionally reflected in literature. The clavichord is mentioned in Pushkin’s *Eugen Onegin* (published in 1825) and serves as symbol of lost dreams and misplaced fragility. Ivan Turgeniev, in his novel *Fathers and Sons* written in 1862, depicts the clavichord as a symbol of wasted energy, corresponding with the historical low point of interest in the clavichord.\(^54\) John Galsworthy, in his 1926 novel *The Silver Spoon*, depicts the clavichord in a more appreciative light and Ezra Pound, in his book *Pisan Cantos* \(1948\), uses it as a symbol of delight for him in his otherwise dismal world. Pond actually possessed a clavichord; presumably, then, he wrote from his own experiences.\(^55\)


\(^{55}\) Ibid., 146.
CHAPTER 3 – PLAYING THE CLAVICHORD

There is a close relationship between the clavichord and other keyboard instruments. However, its playing technique involves elements more characteristic of other instruments. One skill required is that of controlling the pitch of the tone after its attack. It is also possible to bend the pitch on purpose, which enables the *Bebung*, a means of expression unique to the clavichord. Because there is only one rigid mechanical part transferring the action of the finger from the keyboard to the string, the mechanical description is very straightforward. However, the way each clavichordist achieves a singing tone that projects, with clear articulation, is anything but simple. The means to this goal are diverse and individual. It takes a relatively long time to familiarize oneself with the instrument, since the clavichord reacts to every tense, uncontrolled arm or finger movement with a jarred, out-of-tune sound. In the latter part of this chapter, I will let the artists speak themselves and tell us in their own words about their approach and experience with playing the clavichord.

Historical Treatises and Instructional Literature

The first written instructions expressly for the clavichord (“…las teclas del Monacordio”) are contained in the book *Libro Llamado Arte de taner* (1565) by Tomas de Santa Maria. It advocates using a low wrist and low knuckles, playing essentially from beneath the clavichord. Santa Maria also requires:

- A compact hand
- Fingers always remaining on the keys, even when not playing
- Elbow close to the body, except when playing scales inwards (right hand down, left hand up)
- Striking the key with the ball of the fingers, the finger nail should not touch the key
- Fingers must be raised perpendicularly
Some of Santa Maria's suggestions (like the constant connection of the fingers with the keys) currently remain essential for playing the clavichord, while others (like the low wrist position -- likely a borrowed technique from the way a portative organ is played\(^1\) -- and the perpendicular raising of the fingers) were later altered and adjusted to changing musical styles and more sophisticated literature. Compositions gradually became more idiomatic to the different kinds of keyboard instruments, as the differences between organ, harpsichord and clavichord techniques became more articulated.

Within a few decades, Girolame Diruta in his *Transilvanio* (1593) disagrees violently with the low wrist position, stressing relaxation of the hands and arms. Although Diruta does not specifically write about the clavichord, his suggestions pave the way for a technique that strives to eliminate all muscular bodily tension and promote a relaxed way of playing. This became a basic principle in clavichord technique, as well as keyboard instruments in general. Diruta also advises the player to “depress” the keys, not to “hit” them, and to strive for a light and supple arm, which will guide the fingers to their place.

In 1723, Pablo Nassarre also advocated a similar way of playing: “…they must hold themselves straight, without any movement of the head, or any other member of the body, except the hands.” He also gave guidance on the legato articulation, defining it as “…raising one [key] when the other strikes.”

The treatises by Friedrich Wilhelm Marpurg and C.P.E. Bach, the *Anleitung zum Clavierspielen* (1755) and *Versuch ueber die Wahre Art das Clavier zu spielen* (1753 & 1762) respectively, describe the conventions of their times (e.g. embellishments), but deviate little from previous treatises in terms of finger and hand position. Detailed suggestions concerning the touch were not given in these works. However, in 1785 (in the foreword of a later edition of C.P.E. Bach’s *Versuch*), E. W. Wolf gave methodical advice on tone production. His advice on the way to release a key has fundamentally changed compared to that given in the treatise of Tomas Santa Maria: while Santa Maria recommends

\(^{1}\) Brauchli, *The Clavichord*, 255.
perpendicular upward motions, Wolf recommends a scratching way to release: “…draw the finger back towards the player so that it slides off the front end of the key…”

The German scholar, Friedrich Konrad Griepenkerl published an edition of Bach’s *Chromatic Fantasy and Fugue* in 1819. In the foreword, he gives a detailed description of Bach’s clavichord technique:

The mechanism of the hand is intended for gripping, *(das Fassen)*. On gripping, all fingers with the thumb bend towards the inside of the hand, and express within this movement all the strength and steadiness which may be available…

A finger may be placed upon a key to serve the finely measured weight of the arm as a support, not stiff and rigid, but with a constant intention to draw it in, so that it would immediately spring back into the hand, if for the moment the weight of the hand, for this purpose relatively increased, did not hinder it, or also vice-versa if the strength used in the drawing in of the fingers against the pressure of the arm was not too weak.

If next to the first finger one is now to strike a second, no matter which, so must this intention first be consciously brought under control, and the finger placed in position to be able to support as with the first. Therefore, before it strikes the key, it will already be hovering with a certain tension over the key which it is to touch. Then the supporting strength which the first finger has previously performed as described must be transferred with the greatest speed to the second, which is accomplished in no other way than that the first is drawn in with resilience and the second springs onto the key with the same weight.

Griepenkerl’s teacher was Johann Nikolaus Forkel, who in turn had close contact to and possibly studied with C.P.E. Bach and Wilhelm Friedemann Bach; therefore, he considered himself familiar with J.S. Bach’s playing techniques.

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4 Ibid., 49.
The *Bebung*  

The *Bebung*, a special technique that imitates the vibrato of the human voice, is exclusive to the clavichord and is essential for the performance of works written in the *Emfpindsamkeit* style. There are several definitions of the *Bebung*, the technique most unique to playing the clavichord. C.P.E. Bach describes it as “. . . a rocking on the key with the finger remaining on it.” Also called *balancement* or *tremolo*, it can be described as a repetition of a note of the same scale-degree with the difference that the repetition is not done by new articulations, but by a movement made with the end of the finger.\(^5\) E. W. Wolf explains:

The execution of the *Bebung* is distinguished by a rather slow quivering of the finger on the key. Its fullest effect, which gives a feeling of uneasiness, apprehension and earnest zeal can only be achieved on those instruments whose tangents can raise the strings in the air without damage.\(^6\)

The *Bebung* is also often compared to the tremulant registration on the organ.\(^7\) Several Authors also point out that the *Bebung* should be relatively slowly executed. Mozart writes in 1778:

The human voice trembles naturally - but in its own way - and only to such a degree that the effect is beautiful. Such is the nature of the voice; and people imitate it not only on wind instruments, but on string instruments too and even on the keyboard. But the moment the proper limit is overstepped, it is no longer beautiful - because it is contrary to nature.\(^8\)

C.P.E. Bach also suggests employing *Bebung* on the second half of a longer note.\(^9\)

The notation of the *Bebung* was very inconsistent. Often marked by dots above the notes (Fig. 12), some composers equated the number of dots with the number of finger quivers the performer was

\(^6\) Christopher Hogwood, “A Supplement to C.P.E. Bach’s Versuch,” 151.  
\(^7\) Brauchli, *The Clavichord*, 271.  
\(^8\) Ibid., *The Clavichord*, 274.  
\(^9\) Ibid., *The Clavichord*, 357.
expected to make, while other composers did not specify and allowed the performer to determine this. As the Bebung was considered an embellishment, it was employed even when not expressly notated. Sometimes the words Bebung, tenuto or tremolo were printed in the scores.

Fig. 12. Notation of Bebung

The written direction to employ Bebung was a reliable indication that a composer preferred to have a piece performed on the clavichord. Very soon, however composers avoided notating Bebung since it restricted the number of potential buyers of sheet music. As the number of people possessing harpsichords or forte-pianos steadily increased, composers and publishers were eager to sell their music to them as well as those who possessed clavichords. This technique is first mentioned in 1599, but was not notated until the second half of the 18th century. The Bebung was considered an embellishment, usually not notated, and its practice was commonly left up to the taste and experience of the performer. This indicates that it may have been used much earlier than the earliest written sources suggest.

Derek Adlam points out another possible effect when the player uses Bebung: because the two strings in a dual-strung clavichord are in unison, but do not have equal length (because the bridge on the right end of the string is usually not parallel with the hitch-pin block on the left side of the string), the


11 Ibid., 174.

12 Ibid, 270.

13 Ibid., 171.
raising of the tangents and the consequential increase in string tension results in slightly out of phase tones when the keys are depressed maximally. This is perceptible not only as a rise in pitch, but also as brightening and swelling of the tone.\textsuperscript{14}

\textit{Tragen der Töne}

\textit{Tragen der Töne}, the second expressive technique unique to the clavichord among the keyboard instruments, combines slurring and extra key pressure. E.W. Wolf explains:

After striking the first note, one applies an additional pressure to the key with a stiff finger, and then holds the note for its full length at a constant strength, all subsequent notes are struck in a similar fashion, and as far as possible, without changing finger, so that the tone sounds as if the consonants t’h were sounding along with it.\textsuperscript{15}

It is also called \textit{appoggiato} or \textit{portato} and is notated by dots in combination with a slur.\textsuperscript{16}

E. W. Wolf describes a combination of the two techniques, demonstrating that the clavichord opens a wide field of experimentation for the performer: “In adagio and cantabile movements, two nuances can be made on a single note: one strikes the key more strongly at first, then relaxes the finger pressure immediately so that the tone goes on resonating more softly.”\textsuperscript{17}

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\textsuperscript{15} Christopher Hogwood, “A Supplement to C.P.E. Bach’s Versuch,” 150.

\textsuperscript{16} Brauchli, \textit{The Clavichord}, 273.

\textsuperscript{17} Christopher Hogwood, “A Supplement to C.P.E. Bach’s Versuch,” 153.

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Different Articulations: *Legato, Detaché and Staccato*

While these articulations are not unique to music written for the clavichord, but can be applied to all early music (with an infinite number of nuances and subtleties), the control the player has over the duration of the tone makes it necessary to pay closer attention to how to release the tone. E. W. Wolf has again detailed instructions:

"*Detaché*: …strike the key with a stiff finger, then immediately draw the finger back towards the player so that it slides off the front, and the key quickly springs back up. Sounds like *t’nt* rather than *t’t*…"\(^{18}\)

"*Legato*: …one holds the finger down on the note where the slur begins, until after the next note has been struck, and only then releases it gently. . . . Where the slur ends, however, and a new one begins, the finger leaves the key on the last note of the slur before the next."\(^{19}\)

The *staccato* will be similar to the *detaché*, but with reduced length of duration. The *detaché* articulation was usually employed and used when no other indication was written. In order to play smooth scales, this touch was mandatory for fretted clavichords. (Connecting two tones that use the same strings with *legato* will result in an ugly, clanking noise.) Some scholars believe that the enforced *detaché* on fretted clavichords was one reason why the fretted clavichord could co-exist with the unfretted for such a long time. It was a perfect training instrument for the "normal" playing style at that time.\(^{20}\)

The non-legato touch, as enforced by the fretted clavichord, was, however, not the reason for the establishment of *detaché* articulation as the "normal" way. It was rather the close relationships between

\(^{18}\) Ibid., 146.

\(^{19}\) Ibid., 148.

\(^{20}\) Stuart Frankel, e-mail message to author, November 11, 2010.
speech and musical line, with the spaces between the notes corresponding to consonants. The instruction to use detaché, unless otherwise instructed, was very common in the literature of the period. It was used for all instruments, not only keyboards, and can be observed in mechanical instruments from that time. A barrel organ from Handel’s time exactly imitated detaché articulation in its engravings. This interesting first-hand document is all the more credible, as there is evidence that builders of barrel organs observed and imitated very closely the articulations on the diverse keyboard instruments.

Testimonies

No one has described the character of the clavichord and the perfect attitude towards the clavichord better than Ralph Kirkpatrick:

… A sound on the clavichord that is unrelated to a musical context has nothing with which to recommend itself to the ear. It offers no sensuous beauty; it is ineffective in those percussive rattlings that can lend a certain rhythmic vitality to other keyboard instruments; it cannot sustain or fill the ear with sound like the organ; it can only create illusions; and these illusions are only possible in an utterly musical context dominated by a musical imagination.

The very limitations of its volume can help to sharpen that imagination. But within these limitations, no infractions of proportion can be tolerated. Starting at whatever the clavichord’s greatest level of volume may be, the progression from there into silence must be smooth and susceptible of every nuance within those narrow limits… No one, I myself strongly feel, in spite of considerable historical precedent, should regard the clavichord as a practice keyboard for an absent harpsichord.


The fact that the contact between string and finger is established only through the key lever makes descriptions of the mechanics of the clavichord simple, but useless for those who want to study playing the clavichord. The responsiveness of the clavichord and the dependence on the musical context mentioned above require extensive, individual adjustment to the clavichord. Richard Troeger explains:

> The clavichord is second to none in the degree of control which it demands of the player. In common with bowed instruments rather than with other keyboard instruments, the player requires a certain level of control to produce even a uniform and basically acceptable quality of sound, let alone refinements of legato, dynamic and articulatory shading and vibrato. On the clavichord, any inequality of the fingers is immediately apparent in distorted tone quality, dynamics or pitch level.²⁴

Instead of methodical descriptions and exercises, in the later part of the chapter I would like to give a collection of testimonies which are as diverse as the personalities of the performers and the structure of the clavichords. Together with the description about posture and the basic playing methods, these testimonies might serve as inspiration for future performers. Students should experiment with all these approaches and then by doing so, find their own personal relationship to the instrument.

Many clavichordists deem it necessary to emphasize that, although the clavichord might have a small dynamic range compared to modern instruments, playing involves considerable muscular activity and strength. The famous epigraph *Plus fait Douceur que Violence*²⁵ (more is achieved by gentleness than by violence), with which the great reviver of the clavichord, Arnold Dolmetsch, signed his clavichords, has often let people equate the soft sound of the clavichord with light, delicate or even flimsy finger

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action. In reality the clavichord requires a great amount of finger weight and energy to produce a pleasing, singing tone.\textsuperscript{26} As Christopher Hogwood states, one can quickly

\ldots discover that although the volume of the clavichord is essentially always going to be low in decibels, the sonority you get out of it is not achieved by a delicate process. It is quite a forthright process, but you have to be sure what it is that you are doing.\textsuperscript{27}

Laurence Libin stresses the tone control necessary to play the clavichord: The light touch (especially in comparison to the piano)

\ldots alleviates any tendency to pound the keys. A heavy hand won’t wear out the instrument, but the intonation will suffer if the tangent pushes the strings too high. At the same time clavichords allow a firm deep touch so long as the finger pressure remains uniform from key to key. An insecure finger will cause the tangent to leave the string for an instant… producing an instantly apparent choking sound.\textsuperscript{28}

“Weight from the arm, conducted through a pliant wrist, can be used to sustain the tone, draw out volume or make vibrato. The requirement of relaxed weight for a fundamental fluency is one of the clavichord’s most useful techniques in relation for other keyboards.”\textsuperscript{29} Richard Troeger differentiates between the weight at the moment of attack and during the sustain:

Although the use of weight can help the clavichordist to achieve both power and relaxation, weight must never be directed into the attack but only into the sustaining of notes, it is important in forte and piano passages. The weight on a tone tends to increase the sustain, which is because a firm hand is “adding” to the mass of the key lever and forcing more of the string’s energy into the soundboard.\textsuperscript{30}


\textsuperscript{30} Ibid.
In contrast to the harpsichord, a weighty touch is often necessary.\textsuperscript{31} Although there is almost no sense of resistance in the touch of the clavichord, the player is directly engaging all of the strings made to sound at a given time for the full time of their vibration. This “hands on” participation in the sound is the most direct and stimulating way a keyboard player can experience it. One must not only overcome the string’s resistance, but manipulate them into as much resistance, whether soft or loud, as the acoustics of the instrument allow.\textsuperscript{32}

Christopher Hogwood joins in and offers another view and personal description:

The instrument teaches the player not to work from above the key, but from the key and going under the key level. There is much more variety in clavichord technique than in harpsichord technique or piano technique, because clavichords are much more diverse… The clavichord asks one to glue oneself a little bit more to the keys and then use that power to create a cantabile and then you discover that quite a lot of power could be used. In Peter Williams’ words: approach them ‘like a pub piano’, just play them solidly, no point in being dainty.\textsuperscript{33}

As Kirpatrick mentioned above, the clavichord tone without a musical context is irrelevant for performance. Therefore many clavichordists rely on an imaginary orchestration to describe their sound ideal.

Imagining how the clavichord would be orchestrated, imagine the instruments, and the rhetoric adjusts to the fuller version. . . . Wonderful things don’t happen by accident on a clavichord, whereas with organs and harpsichord sometimes just a flashing of the hands over the keyboard can produce wonderful momentary effects.\textsuperscript{34}

Hogwood notes another essential prerequisite that should be self-evident for all musical activity, and which can be trained magnificently on the clavichord: “Listening” to one’s own playing:

The most important aspect…we can learn from the clavichord is to create the sound in a way comparable to many other instruments such a violin, flute… the instrument can actually tell you what to do, because bad sound production is much more obvious on the

\textsuperscript{31} Ibid., 60.
\textsuperscript{32} Ibid., 61.
\textsuperscript{33} Christopher Hogwood, “An Interview with Christopher Hogwood. Part 1”: 39.
\textsuperscript{34} Ibid.,
clavichord.\textsuperscript{35} Especially the upper notes, where most melodies occur need a sustained, firm attack with the player carefully listening (!) from one note to the next.\textsuperscript{36}

\textsuperscript{35} Häkkinen, 24.

\textsuperscript{36} Ibid., 26.
“A painter paints pictures on canvas, but musicians paint their pictures on silence.”¹ This *bon mot* by Leopold Stokowski reminds us of a truth that is all but overlooked today. Silence is essential, maybe the most characteristic part of clavichord music. The cultivation of silence and of “almost silence”, the appreciation of the events that happen between the tones, is what the clavichord can teach better than anything else. The fact that Stokowski, a musician who was at home in the great romantic tradition and did not have much in common with the typical clavichord enthusiast, puts so much emphasis on the lower end of the dynamic spectrum, shows the universality of this statement. The rest of this chapter will introduce applications of this fragile, but inspiring instrument, the clavichord, into the daily life of a pianist.

Close research shows that astonishingly, many pianists, among them Ferrucio Busoni and Claudio Arrau were acquainted with the clavichord and suggested that their work on the clavichord did indeed enrich their musical experience in many different, individually diverse ways.²

Greg Crowell, in his article *Every Player’s First Grammatica*, defines the position of the clavichord with respect to other keyboard instruments. It is not a “stepping stone” towards the technique for other instruments, but it contains their very essence.³ The other instruments can be considered “dialects” of the clavichord. It contains the seed, a repertoire of techniques which can be applied to the other instruments.⁴


² Richard Troeger, “An Interview with Clavichordist Richard Troeger.”


⁴ Ibid., 55.
This chapter deals with touch control, sensitive listening, economy of playing and interpretive choices: different ways the clavichord can influence and help the interpretation and performance on the piano.

Sensitivity and Control of Touch

The eminent pianist, András Schiff, is one of many pianists who advocates the use of a clavichord in order for pianists to improve their quality of sound on the piano:

Pianists would play in a different manner if they had experienced playing the clavichord. I find the tendency for pianists to produce a harsh sound quite horrible. . . . The clavichord could play an important role in counterbalancing this tendency. I can’t emphasize enough how important this is for me – and it has always been so . . . Their touch would become different, they would play with much more sensitivity, and we could immediately hear what an important role the clavichord might have today.5

Richard Troeger admits that practicing the clavichord can sometimes feel like a “kill or cure remedy” for pianists who have trouble maintaining evenness on the piano.6 It advocates close contact between finger and key, and almost every tone is produced from the surface of the key. Ralph Kirkpatrick mentions exceptional cases where attack from above is viable:

Virtually all control of clavichord sound . . . depends on playing from the surface of the keys. Any attack of a note or a chord from above the key is desirable only in case of a very loud chord or of a very strong attack of a single note followed by a vibrato, but in all cases every precaution must be taken to avoid giving the impression of playing out of tune.7

5 András Schiff, “‘An Upbeat is an Upbeat’ An Interview with András Schiff,” interview by Miklos Spanyi, Clavichord International 6, no. 2 (2002): 34.


7 Ralph Kirkpatrick, 305.
Because sensitivity of touch is a main prerequisite for a beautiful and expressive tone on the piano, several clavichordists recommend for children to start on the clavichord and later change to the modern piano. “It is relatively easy to go from the clavichord to the piano, the fingers just have to develop strength,” writes Laurence Libin. Compare C.P.E. Bach’s rather drastic statement: “learn clavichord for interpretation, and harpsichord for finger strength.” There are also other advantages that may recommend an early start on the clavichord. Joan Benson suggests that the size of a clavichord keyboard is much more suitable for tiny hands (she even suggests that clavichords for children could be built, an easy task, considering the relatively simple construction), and the child’s hand position does not need to be distorted like on a modern piano. Further, “a child who begins with the clavichord avoids so many bad habits, including the use of the sustain pedal to hide technical problems.” Joan Benson also describes a difference in attack between the clavichord and the modern piano. “There is a lot of pulling with the fingers and none of the percussive, striking action that you employ on the modern piano.” This pulling action encourages the gradual and natural development (particularly the first two joints of each finger) in strength and independence, which are essential for voicing chords on the modern piano.

An interesting nuance with important ramifications for the pianist is the fact that the clavichord player has to distinguish between the vigor and the depth in which the key is depressed. The vigor determines the volume, which is more or less equivalent to the speed of the finger. On the modern piano,

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the hammer is catapulted to the string and beyond influence of the player after the initial attack.

Therefore, the depth is not relevant and not variable on the piano, encouraging the free use of the arm and the whole hand. On the clavichord, however, the depth of the depression determines the pitch. The depth is not independent from the vigor (speed); a key depressed at a fast speed will bend the string more and raise the pitch. Therefore, especially fast (loud) attack needs to be controlled after the initial contact of the string by the tangent and precaution has to be taken that the weight (pressure) stays the same even though the speed of depression varies with the dynamics.

The pianist who practices these details on the clavichord can be more comfortable on the piano because he/she can consciously adjust and determine the weight (which is essential for piano playing because of its heavy action) and the fine adjustments done with the finger tips (which is especially beneficial in polyphonic playing and voicing). Richard Troeger considers the clavichord “second to none for clearly delineating contrapuntal lines.”

Tomoko Miyamoto, one of the pioneers of the clavichord in Japan, describes what she calls the point of departure for clavichord study:

When they [the students] are able to make some sound on the clavichord, I make them play some early Haydn sonatas and Mozart works. They immediately see the music differently. . . . they will realize how important it is to shift their weight for each note. More precisely, first we practice with only one finger; if they play some passages of Bach or Mozart with their middle finger alone, they re-realize the distance between the keys. I make them play the phrase as connected and smooth as possible. Through this experience, (with a lot of patience, I must say!), they open themselves up to how insensitive their finger/hand movements were before.

Concerning the results of this teaching, she recounts:

When pianists are exposed to the clavichord, with time all types of organs, harpsichords and different kinds of fortepianos are open to them. To prove this, I take my graduate students at the end of the year to the Hamamatsu Instrument Museum to have them play all kinds of keyboard instruments. They are really amazed at how different they all are

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from what they are used to playing, but even more amazed that they have the technical means to control them. Without the clavichord experience, this would not be possible.¹⁴ Harald Vogel adds: “The clavichord is a bridge to the romantic period not only aesthetically, but also technically. . . The clavichord is the instrument where a subtle application is necessary and where, as a student of this technique, you can go in every direction. On one hand you can go in the direction of the very light application of weight in the French harpsichord aesthetic and on the other hand you can go in the direction of playing very heavy actions of 19th century organs.”¹⁵ That means that after acquiring the “essence” of keyboard technique on the clavichord, the player has at his disposal all elements necessary for the whole variety of keyboard instruments, including harpsichord, organ, fortepiano and the modern piano.

Listening and Increasing Sensitivity of the Ears

The clavichord has one of the smallest dynamic ranges of all instruments. This forces the interpreter to focus more on differentiation within this restricted range and to appreciate the predisposition towards the softer dynamics. Because there are an infinite number of nuances available between sound and silence, this ability to appreciate sounds that are almost disappearing makes the ears and the mind ready to appreciate and follow the normal piano tone. “…The pianists could become aware that they need to keep listening after the tone begins, since the piano and the room itself affect the sound at that point, even if the player has little further control,” as Sandra Mangsen mentioned.¹⁶ Joan Benson considers the clavichord an excellent cure for a prevalent deficiency she discovers in contemporary pianists “…One

¹⁴ Tomoko Miyamoto, e-mail message to author, November 21, 2011.


¹⁶ Sandra Mangsen, e-mail to the author from July 15, 2010.
problem with pianists today – not enough subtlety, not enough attention to what can be done with the quieter end of the dynamics spectrum. For that reason, I recommend the clavichord as a training tool for pianists.\textsuperscript{17} Tomoko Miyamoto suggests that it is important to

be able to produce a soft, but intense sound of the piano. That’s what I feel after dealing with the clavichord so long. Maybe that is what the clavichord can teach us most. It may take many hours to create this intense, soft yet vibrant sound from the clavichord, but it is a rewarding experience to cultivate it.\textsuperscript{18}

This urge and compulsion to listen to the sounds created will kindle the fire of imagination in musicians. Richard Troeger mentions that “on the clavichord you have to listen to more in the music, and to what you are doing with it, than any other instrument requires.”\textsuperscript{19} And the doyen of the clavichord, Ralph Kirkpatrick, talks about his experience: “My musical approach was instinctive and guided for the most part by what I heard coming from the instrument. Nothing has ever done more to sharpen my ear, not even the experience of choral singing, than my unremitting listening to what I was producing.”\textsuperscript{20} With concentrated listening, the obvious limitations of the instrument start to disappear and the listener and performer can adjust themselves and create quite wonderful illusions: “It [the clavichord] requires the player to listen carefully. After 10 minutes, the instrument seems to have grown louder and once one becomes accustomed to the tone and touch, it is fully as satisfying to play as a concert grand.”\textsuperscript{21}

Edith Picht-Axenfeld reports about on studies with Anna Hirzel-Langenhan: “…From her I have learned to create a tone from a minimum of accomplished, deliberate energy, from a maximum of feeling and sensibility of the sense of touch, but also from the ideal of the inner listening for the most tender

\textsuperscript{17} Bargreen, 144.

\textsuperscript{18} Tomoko Miyamoto, e-mail to the author from October 29 2011.

\textsuperscript{19} Richard Troeger, “An Interview with Clavichordist Richard Troeger.”

\textsuperscript{20} Ralph Kirkpatrick, 296.

\textsuperscript{21} Laurence Libin, “Teaching the Clavichord Today,” 14.
sound, which should be present, but evoked from silence.”22 Anna Hirzel-Langenhan was a student of Leschetizky and an eminent piano pedagogue. She also wrote books23 about piano playing, in which she emphasizes the musical imagination, inner listening, and also the importance of the physical touch on the keyboard. The use of her books, together with practice on the clavichord, will definitely improve any pianist’s tone and technique. A very early publication about the clavichord and the piano by Arthur Whiting summarizes the inspiration pianists can gain from the clavichord: “It is reasonable to believe that modern artists may gain a wider view of music and of the higher possibilities of the pianoforte by a study of the introspective and spiritual qualities of this unique instrument.”24

**Supplement: Anna Hirzel-Langenhan**

Anna Hirzel-Langenhan (1874 - 1951) was a Swiss pianist and piano pedagogue. She studied at the conservatory in Zürich and with Leschetizky in Vienna. As internationally recognized solist, she performed in extensive concert activity. From 1898, she lived in Munich; from 1926, in Lugano; and after 1934, at Schloss Berg. For a large international circle of students, she was an excellent teacher.25

Students include: Hans Leygraf (*1920, pianist and pedagogue at Mozarteum Salzburg, Austria); Hermann Abendroth (1883 – 1956, conductor, president of Conservatory Coln, Germany); Edith Picht-Axelfeld (Pianist and Pedagogue, 1914 – 2001, Freiburg, Germany); Werner Egk (1901 – 1983, Composer, conductor, Germany); Erich Doflein (1900-1977, Musicologist, Germany); and Mary Labned (1863 - ?, pianist and teacher, Buffalo, NY)


The above mentioned books by Anna Hirzel-Langenhan “Briefe an Meine Schüler” (Letters to my students) and its new edition under the name “Greifen und Begreifen” (Grasp and Understand), are very difficult to obtain, and only available in German. Therefore, I am including some excerpts so that the reader might get an idea about the mindset and the method of her piano pedagogy. The reader will see that much advice cited from the previous chapter about clavichord playing appears here too in only slightly modified form, so that the use of the clavichord seems natural and will enhance the results of these exercises. This would make the benefit mutual: Anna Hirzel-Langenhan’s method not only facilitates the change to the clavichord as Edith Picht-Axelfeld recounts above, but the regular use of the clavichord also accelerates the gain of the sensitivity and finger strength that her exercises strive for.

In the foreword to Greifen und Begreifen Picht-Axelfeld writes:

Langenhan’s method is the most consequent training of the hand that I know for all tasks of piano playing... It arises from a certain aesthetic, from the love to the piano sonority . . . and mirrors herein the personality of Mrs. Langenhan. In the center is Frederic Chopin’s work as the complete pinnacle of the pure piano sound and corresponding zenith of beautiful piano playing . . . The player’s sound-fantasy wants to find every finger awake, conscious and ready to communicate the sound imagination to the key and so to the vibrating string. The hand should be reared to carry out two- and even three voice polyphony in a singing, multicolored sound. The method does not give an indifferent recipe of mechanical finger training, but is rather an advanced ‘universal school’ of sound creation. All exercises were designed to solve a certain musical assignment for an individual hand; only in the course of years, completely unintentionally, a ‘method’ was established.26

The concentration on the main purpose, the polyphonic training of the hand, is the main strength of the Langenhan method. Dogmatism is completely alien to this method. I think nowadays we must find a synthesis of methodical insights. That means to me, that we have to practice Langenhan’s exercises in a hovering, balanced poise that is centered in the center of gravity of the body, feeling the fingertips being immediately connected from the back. And during the “meditative” practice sessions we should not forget to tune our whole body into an instrument, which wants play and blend with the piano.27

26 Anna Hirzel-Langenhan, Greifen und Begreifen (Kassel: Bärenreiter-Verlag, 2008), 5. Translated by Albert Mühlböck.

27 Ibid., 7.
The following excerpts are from Langenhan’s own writings, describing exercises to increase the sensitivity of the fingers.

Resistance exercises: [these are exercises where one finger is held still on the key, either depressing it or just touching the surface without depressing, and neighboring fingers are playing] By “resisting” a certain finger is strengthened more than by movement, as it resists the temptation to be moved by the neighboring moving fingers. It even strengthens the moving fingers, which now has to press down the key without help from its neighbor fingers and therefore only can use its own muscles. There are two kinds of resisting: “holding stiff” (Starrhalten) and “pegging to the key” (Anklammern).

“Holding stiff”: means that the finger should feel the keys with its tip, but should not press it down nor leave it, but stay completely motionless… Each finger should touch the key with light tension. Four fingers should stay totally motionless, while one finger pulls cautiously up (cautiously because it has to leave the other four fingers motionless), then goes back to the key, feels it, presses it down and then goes back to the first position. The following mental images might be helpful: When lifting, the finger would have to lift a “pillar of air” and when pressing down should gently squeeze a small air balloon… The necessity of continuous and careful observance excludes mechanical practicing; on the contrary, it trains concentration.28

“Pegging to the key”: Here, one or more fingers are pegged to the keys after pressing them down, and the first joint of the finger should not move. This kind of resistance is the best training for legato playing, prevents the following finger from hitting the key roughly, and is therefore very important for melodic playing.

The pegging must emanate from the feeling of grasping, which must be intended and felt from the back of the body through the arms as far as the fingertips. It must not be understood as a pressing, and great attention has to be given to the elbows, which should not interrupt the impulse from the shoulder blade.29

The following excerpt, from the collection *Briefe an meine Schüler* about touch, is central to her understanding of piano playing, and also shows how important a controlled touch is for beauty of sound:

What we call *Anschlag* (keystroke), the French call *toucher* (touch) which is much more appropriate for the activity the finger are engaging in to produce the tones on the piano. …The hammers [of the piano] are intermediaries, which are prompted by the keys to make the strings sound. That this sound is not some empty noise, but appears to our ears as virtually living sound, depends on the way the key is pressed down. A sensitive player will out of his own initiative demand a good-sounding tone. Untrained fingers will however not be able to satisfy the demands of his ears. The player needs to be

28 Ibid., 11.

29 Ibid., 12.
in complete command of the key as the intermediary to the string. His total command is enabled through complete consciousness. This consciousness can be taught to each hand and is the foundation of our piano technique. It enables the finger to create the desired sound. The finger will feel connected with the key and will use the key as executor of its intentions. The finger will not hit the key, but press it down in a feeling manner. When the player consciously touches the key, he is completely sure about the character of the tone he wants to produce. I am talking about the first tone. When this tone is consciously sustained by the finger, while another finger that already has the “sensation of the tone internalized” while it is being raised, presses down the key, then a beautiful tone is easy to achieve. [When this tone is consciously sustained by the finger, the next finger should already have the “sensation of the tone internalized” while it is raised and preparing to press down the key. Then a beautiful tone is easy to achieve.] “Has the sensation of the tone internalized” means that the following finger can gain its pre-sensation through the gentle, slow elevation if it is supported by the previous finger which has to sustain its tone. The finger gains the power and therefore the consciousness for the sound creation – from pp to forte – during this elevation. This smooth tension needs of course be sustained until the key is pressed down. No finger should be raised unconsciously if it wants to be in command of the touch. This is required for cleanness, precision, singing tone and brightness of the sound character.

Economy of Playing, Avoidance of Unnecessary Motion or Tension

The sensitivity with which the clavichord reacts to any superfluous activity strongly motivates or even enforces utmost economy of movement and relaxation of all parts of the body that are not involved in playing. Joan Benson finds that the clavichord “minimizes any unnecessary motion or tension in the playing apparatus, since awkwardness is magnified on this delicate instrument.” It requires a good concentration on each note, as Bernhard Brauchli recommends, and “the student quickly learns the feedback control.”

32 Bernard Brauchli, “The Clavichord as the Key,” 60.
The fingering receives new consideration, too, as the guidelines for choice of fingering are changing slightly. Richard Troeger writes:

At the clavichord the hand must focus its feeling of ‘center’ on whatever fingers are momentarily employed . . . The player’s movements are centered in the fingers. The hand and wrist must be relaxed and serve primarily to guide the fingers through changes of position. All changes of hand position must be carefully managed on the clavichord. The finger’s need to feel a central support before sounding any note necessitates smooth, graceful changes of hand position, together with the fingering that will accomplish them.33

Thus the criterion for choice of a fingering is not only the economy in movements, but also the necessity to keep the depth of the key at a certain, controlled level. “Fingerings must be chosen carefully in order to minimize the inequalities or to turn the natural inequalities of the fingers to best advantage. . . . The fingering seems to take its point of departure from great flexibility on hand and finger, and in relation to the clavichord, careful hand positioning to ensure finely controlled quality of tone.”34

In the beginning of the 19th century, Friedrich Conrad Griepenkerl, a student of Johann Nicolaus Forkel, suggests “the use of the weight of the arm achieved through the corresponding minimum tension of all muscles except those of the finger depressing the key. The concept that the finger in use should support the weight of the arm encourages a relaxed, tension free manner of performance.”35 To make a tone sound free and physically unencumbered is for Griepenkerl the real goal of the right keyboard technique.36 This is even more significant since he traces back his lineage of teachers to J.S. Bach and his sons C. P. E. and W. F. Bach. In 1850, Griepenkerl’s student Eduard Eggeling tried to adapt some of

36 Spanyi, 50.
Griepenkerl’s (and potentially Bach’s) ideas. He transferred them to the piano in the form of a quite well known series of finger exercises, where he purports to use “J. S. Bach’s method” to achieve finger independence. For him, finger accuracy, ease and freedom are most important for performance.\(^\text{37}\) While Eggeling does not mention the clavichord, the similarity with Griepenkerl’s description is obvious, all the more since he was Griepenkerl's student. Together with the fact that during the middle of the 19th century, the clavichord was not completely extinct, and with the inclusion of similar exercises in Franz Liszt’s *Technische Übungen für Klavier* and Alfred Cortot’s *Principes rationnels de la technique pianistique*, this technique, which might be inspired by the clavichord and emphasizes economy of playing as well as avoiding unnecessary motion or tension, is still a valid way of performing pre-romantic music.\(^\text{38}\)

Arthur Whiting writes about the clavichord:

> The clavichord requires at all times a light and sympathetic touch by which, with a free wrist and forearm, its fullest and sweetest voice may be called forth. It refuses to respond to anything other than a pressure stroke, and if that is not elastic, the upper notes of the instrument become unpleasantly sharp. It calls for some of the best principles of modern pianoforte technique and resents every moment that is stiff and hard, so that its daily use by pianists is beneficial mechanically and musically.\(^\text{39}\)

Laurence Libin, who recommends to start clavichord lessons from an early age, suggests that “when a student starts with the clavichord, he develops independent fingers and a good legato because the upper arm muscles, back and shoulders remain relaxed… all body motions are conservative and the student’s attention is directed where it should be, to the music.”\(^\text{40}\)


\(^{38}\) Ibid., 42.

\(^{39}\) Arthur Battelle Whiting, 6.

\(^{40}\) Laurence Libin, “Teaching the Clavichord Today,” 14.
Even an internationally established pianist like András Schiff avows, “I perceive a growing consciousness in the ways I now play the piano. I play a great deal on my clavichord, and this leads to a different approach to the piano.”¹⁴¹ Christopher Hogwood was inspired and “prepared” for the clavichord by Walter Gieseking, an eminent pianist in the great romantic tradition: “Gieseking was a fantastic pianist and very light handed, and his style showed me that keyboard playing is elegant and natural, not physical and brutal. It set up a space in my mind where the clavichord and the fortepiano fit quite nicely.”¹⁴²

To elaborate on this observance, I will include a few excerpts from Walter Gieseking’s article “Moderne Anschlagsprobleme” (“Modern Problems in Piano Touch”) at the end of this chapter. These excerpts also show stunning similarities to the main focus for clavichord playing.

Ulrika Davidsson’s experience in teaching clavichord (at the Eastman School of Music and The Hochschule in Bremen, Germany) affirms that “clavichord playing is demanding, and develops the playing technique most significantly. The students learn to relax much more while playing, and they learn to use their playing apparatus in a much more conscious way than before.”¹⁴³ An extreme example that confirms this approach is given by Paul Simmonds, who recounts his own experience: “I had an 18-year period of not playing the organ (my main instrument at one time) at all. On returning to it two years ago, I found that my own technique had improved. I now use a pedal clavichord as a practice instrument, and this has increased security and sensitivity in the pedal area greatly.”¹⁴⁴

¹⁴¹ Schiff, 36.
¹⁴² Christopher Hogwood, “Music that Changed me – Christopher Hogwood,” interview by Stephen Moss, BBC Music Magazine 12, no. 4 (December 2003): 122.
¹⁴³ Ulrika Davidsson, e-mail message to author, October 28, 2011.
¹⁴⁴ Paul Simmonds, e-mail message to author, November 17, 2011.
Excerpts from “Moderne Anschlagsprobleme” (“Modern Problems in Piano Touch”) by Walter Gieseking:

... The formation of a beautiful piano sound cannot be completely explained. It is especially interesting to observe the very different results when there is opportunity to compare several excellent pianists playing on one and the same piano in the same hall. It is also very notable that technically not-advanced players, e.g. amateurs, often produce a very beautiful sound, whereas some virtuosos with stunning technique sometimes play unpleasantly harsh. I think it is unnecessary to seek the reason for a beautiful tone in the hand or finger positions. The only way to learn beautiful playing is systematic training of the ears. The perpetual self-control and self-critique by the ears has to sensitize the nerves of the player, so that every harsh punching on the piano causes an inner protest. These protests of the nerves can of course influence the touch only if the entire technique is based on muscular relaxation. Unnecessarily tensed muscles are an obstacle to the conversion of the tone’s mental imagination into the physical activity of playing...

I would actually define the gesture of the keystroke as a “falling” motion. In fortissimo the arm falls down massively, and with diminishing loudness more and more tenderly. Finally in pianissimo the finger, which is already lying on the key presses it down by cautiously transferring onto the key the weight of the arm which was held in equilibrium before the stroke. With this touch all joints of arm and hand stay passive and function only elastically. Karl Leimer calls this the “stroke with the whole arm”, and I agree that this is the touch that is most versatile. The long lever of the relaxed arm enables maximum elasticity and therefore, the best control and security of touch in every dynamics. The fingers are only removed very little from the key before the stroke, which is also beneficial for accuracy, and in pianissimo, they virtually stay in continuous contact with the keys. The keys are essentially only pressed down by translocation of the weight of the arm onto the respective striking fingers. This “playing with fingers that are in contact with the keys” (Kontaktspiel) enables the finest nuances even within a chord that is held with one hand (voicing). With complete command of this method of playing, it is sufficient to think of the tones that should be emphasized as causing the fingers to execute the desired emphasis...

In my opinion, this degree of dependability can be reached not by hour-long practicing, but only by educating the ears to a control device that registers even the slightest unevenness or lapse while practicing. The ear is the most important organ in music making; and in the mind, not in the fingers, the technical ability has to be developed.45

45 Walter Gieseking, So wurde ich Pianist (Wiesbaden: F.A. Brockhaus, 1963), 89. Translated by Albert Mühlböck.
Interpretation (Choice of Tempo, Dynamics, Articulation)

The fact that the clavichord was around when most of pre-romantic music was composed can help the pianist receive some insight about the context of the literature. Even if the clavichord was often not the first keyboard choice for performances, its ubiquity suggests it might have influenced the creation of many piano works, more than commonly assumed.

The question of a composition’s original version or original instrumentation can often not be answered with complete clarity, especially in pre-classical music. “With Bach, often there is no real final idea or version in his composition; his works are versions that are often changed in their scoring,” Christopher Hogwood states. “For example, in the third Brandenburg Concerto and Cantata 174: It’s different instrumentation, which one is the original? Therefore, the choice of the keyboard instrument is dependent on the circumstances, and there is no ‘better’ or ‘worse’ way. Certainly some works are more idiomatic than others for a specific instrument (e.g. the Italian Concerto for the harpsichord).” He further adds that because the “instruments will respond with nuances you are not immediately aware of [when you are new to the clavichord], the player has to change his mind concerning what he is looking for. As suggested in Bach’s inventions, the player needs to cultivate the refined sense of cantabile playing, of playing a line… the clavichord changes the sort of questions you ask of music and the way you look at it.”

This “delving deeper into the music” and finding new perspectives not only enhances the player’s interpretation, but sometimes also discovers the deeper intentions of the composer. Many composers used the clavichord at home when composing, even though the intended instrument may have been the harpsichord, fortepiano or modern piano. During the creative process, the composer might have


spent more time with the clavichord than with the intended instrument, which could easily have influenced him, even if it happened unconsciously.

Tilman Skrowroneck, in his article about keyboard instruments, writes of the young Beethoven: “His teacher [Christian Gottlob Neefe] was very fond of the clavichord. Beethoven is reported to have practiced until late night, which was possible only with the clavichord.” His interesting conclusion: “We can assume that the basis for his later keyboard technique was laid at this early stage, and that part of his conception of what fortepianos ‘should be able to do’ derived from the instruments he initially had been accustomed to.”

The clavichord might be a key to the understanding of Beethoven’s late sonatas, which, it is often said, transcend the possibilities of the piano.

Joseph Haydn is another composer that, although the later works are definitely meant for the fortepiano or the harpsichord, derived much influence from the clavichord. Derek Adlam finds: “We know that Haydn composed at the clavichord, so many of his musical textures seem to have been worked out in terms of that kind of sound, and that kind of density of sound. Certainly an instrument of that kind, (the 1763 Hass …) is capable of a very wide dynamic range and a very wide range of tone color. That reflects the drama inherent in so much of Haydn’s keyboard music.” He suggests that Haydn's orchestral works are influenced by and bear marks of his relation with the clavichord:

Haydn was using his keyboard writing as a kind of laboratory or workshop for the elaboration of his larger symphonic forms… I think it quite likely that many of his large orchestral structures probably owed much to his improvisation at the clavichord, and the working out of formal designs in the sonatas. There is an evolution of form in the sonatas, where you get an increasing creative freedom. None of that would have come about if they had not had keyboard improvisation as their starting point. The listener is aware of the sense of a dramatic ‘scena’, with its creative tensions and their resolution.

48 Skowroneck, 154.

J.S. Bach reportedly loved the clavichord. Forkel and his students wrote about his playing and seemingly effortless technique, as shown in the previous chapters. Paul Simmonds says that for polyphonic music, it is important not to be “tempted to put too much emphasis on one part at a given time.” Although he thinks that the harpsichord and the organ are better fitted for polyphonic music because of their invariant dynamics, other clavichordists, like Joan Benson, find that “the variability of the tone enables control of the individual voices and their combined balance.” Ralph Kirkpatrick writes, “the differences in medium, in sound, the differences in devices [clavichord and harpsichord] that have to be used to accomplish the same fundamental musical ends can be very revealing, not only to the player, but also to the listener. Thus, when the time came to record the WTC [Bach’s Well Tempered Clavier], I insisted on playing it complete on both clavichord and harpsichord. I felt that neither instrument alone presented an adequate picture.”

Tomoko Miyamoto considers it a “translation” if the repertoire and the instrument are not compatible:

As an organist, I know that when the instrument and the repertoire match, a lot of freedom becomes possible in performance. When I have to play French music on a German organ, I have to translate. …I think the modern piano has a lot of possibilities, maybe too many possibilities. If pianists have a good idea of knowing from which area they are translating or if they are speaking in native languages the quality of piano performances will improve, I believe. We perform Shakespeare in Japanese and it is OK. However, to know the language and the sound spoken and used at the time of Shakespeare will indeed help to deliver the works in Japanese better.

The most inspiring argument for the clavichord comes again from Arthur Whiting: “When the Forty-eight Preludes and Fugues (of Bach) are transferred to the pianoforte, the loss of meaning is not so great [than

52 Richard Troeger, Playing Bach on the Keyboard, 34.
53 Tomoko Miyamoto, e-mail to the author from October 29 2011.
if transferred to the harpsichord], but when a musician studies them at the clavichord, he is convinced that
the pianoforte gives him but one-half of the original: that is, not the drawing, but the painting, of Bach."\(^{54}\)

There are several interpretative choices that can influence a pianist in a more historically-informed way if he is familiar with the clavichord. Concerning tempo, Richard Troeger writes: “The clavichord’s range of effective tempos is more limited, and it can guide the player to the outlines and often the refinements of an interpretation. The piano is too open-ended to lead the player to definite conclusions in the early repertoire.”\(^{55}\) Pianist András Schiff agrees fully:

I cannot give you concrete examples [of what exactly I changed through the familiarity with the clavichord], but one important thing is that the tempi are changing. The tempi always move between certain limits and one reacts to what one hears. People who only play the modern piano and never touch the clavichord or the pianoforte often race through the fast movements. Maybe a still bigger problem is what I’d call, the almost post-romantic ‘representation of the slowness’ in the slow movements. The aim of earlier composers was not to prove how fast it was possible to play on their instruments. This would have been considered vulgar. Early instruments often require a light touch, but clear articulation has its limits, too. It is possible to play extremely fast in an unarticulated way on the modern piano. The clavichord is different, it offers resistance. It denotes the limits: ‘up to this point, and no further’.

And what is the tempo of a piece? It’s determined by the harmonic rhythm of the piece. The ear must be able to comprehend the harmonic changes. This is the clue to the right tempo. For me the clavichord has been a great help in reconsidering the tempi.\(^{56}\)

On a separate note, there are also occasions when the clavichord is used for repertoire that is commonly considered piano music. Edith Picht-Axelfeld occasionally performs Beethoven and Schubert on the clavichord\(^{57}\) and Mendelssohn’s “Songs without Words” also work very well on the clavichord.\(^{58}\) Bradley

\(^{54}\) Arthur Battelle Whiting, 11.


\(^{56}\) Schiff, 36.

\(^{57}\) Pietsch, 36.

Lehman recorded excerpts from Bartok’s *Mikrokosmos*, Debussy’s “Le petit negre” and Schoenberg’s Piano Piece Op. 19/2 on the clavichord.\(^59\)

CONCLUSION

I hope this document can shed some light on the history and praxis of the clavichord, inspire keyboard players of all genres to get acquainted with the clavichord, and, through the clavichord, to experience a new dimension in sensitivity and subtlety. The document teaches the musician to maintain a pure relationship with the instrument, by only accepting aesthetically pleasing sounds that are demanded by the character of the musical piece. The player is further encouraged to be aware of intonation, a feature foreign to the other keyboard instruments and an excellent training for the ear. Because of the missing sensual beauty of the clavichord tone per se the player is exhorted to consider the musical context to make sense of a particular note. Finally, because of the fragility and sensitivity of the instrument the pianist learns to keep his mind on fluid and smooth movements as anything awkward will distort the tone.

In the appendix, I want to include the complete “Nine Precepts for Clavichord Players” by Ralph Kirkpatrick as a guideline for instruction, motivation and inspiration. May it be a companion on the journey, which I hope many pianists will embark upon. The second appendix consists of the results from the survey sent to musicians who use the clavichord in their teaching. Some of the answers are incorporated in the text. It gives an idea of the position of the clavichord in the academic world. In the third appendix, time-lapse photos illustrate the different modes of articulation. A detailed practice suggestion for the Invention in B-flat Major by Bach will help students to meet the challenges that the exploration of the clavichord poses.
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Appendix 1

Nine Precepts for Clavichord Players by Ralph Kirkpatrick

1. Never allow yourself to produce any sound from the instrument which is not pleasing to the full extent of its possibilities or which is not relevant to the sound demanded by the music you are playing.

2. Never practice on a clavichord that is the least bit out of tune. If unisons are not in tune, it is impossible accurately to judge the sound one is producing. If octaves or other intervals are out of tune, it is impossible to develop the sensitivity of touch which insures against the everpresent danger of playing sharp in the upper registers.

3. It follows then that a good clavichord player must be his own tuner. This principle goes far beyond the mere setting up of the temperament and the accurate tuning of octaves, since there are minute differentiations that can be set up in the tuning of unisons when and if desirable by tuning one string infinitesimally higher. This often serves to give a certain life and warmth to the upper registers of the instrument that will help to balance its weaknesses against the overspun strings of the bass. None of this should be perceptible to the ordinary listener, and its application varies greatly from instrument to instrument.

4. Virtually all control of clavichord sound, or at least of that sound which is desirable, depends on playing from the surface of the keys and on curving the fingers in such a way as to be playing on the forward extremity of every key, whether or not it be a natural or a sharp. Any attack of a note or a chord from above the key is desirable only in case of a very loud chord or of a very strong attack of a single note followed by a vibrato, but in all cases every precaution must be taken to avoid giving the impression of playing out of tune. The movements of the fingers in successful clavichord playing are infinitely smaller than those applied to any other keyboard instrument, since the dip of the keys is many times less

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1 Kirkpatrick, 305.
than that of the piano, the organ, or of the average harpsichord. This means that excess motion can only bring about bumpy, inaccurate and unreliable playing, which brings us to our next precept.

5. Virtually all movements in clavichord playing must be contained within the hand. Until complete control is achieved over all fingers in a five-finger position both with respect to evenness and to gradation of sound, leaps and extended scale and arpeggio passages with thumb crossings are better avoided.

6. Any note, even if merely part of an exercise, benefits by being given a context. This makes it much easier in later stages to give the illusion of continuity and depth to the delicate fabric of clavichord sound.

7. All movements of the hand and fingers should be supple and fluid, and completely interrelated. (This is in direct contrast to my technique of harpsichord playing in which the back of the hand remains flexed and unchanging as a basis for the pivotal action of the fingers in overcoming the resistances of the plectra in passing the strings. In clavichord playing it remains at all times soft and malleable. In my case the difference between the two styles of playing is so great that they can hardly be recognized as emanating from the same hand.)

8. It goes virtually without saying that fingering should be carefully organized and consistently maintained.

9. Sight-reading should be approached with extreme caution, especially in the early stages, as productive of unwanted sonorities and disruptive of habits that should have been carefully established and maintained.
Appendix 2

Practical and Institutional Applications (Survey)

The following paragraphs are results from a survey sent to several clavichordists, harpsichordists and organists who are teaching either privately or at universities. The questions referred to the application of using the clavichord for teaching in each individual situation:

This is the letter asking for information:

Dear

I am a DMA student at the University of Cincinnati, College Conservatory of Music, writing my dissertation “Recovering the Clavichord for The Modern Pianist” about the clavichord and its usefulness for pianists and piano students. My main advisor is Dr. Vivian Montgomery. I have got knowledge that you have experience and are actively applying the clavichord in your professional teaching. I would really appreciate your making available some of this knowledge for my study. Your contribution will of course be quoted according to scholarly standards.

- How do you incorporate the clavichord in your teaching? Please describe your practice in a manner as detailed as possible.

- For students, how intense is their exposure to the clavichord? How much time do they spend with the clavichord? Are they performing on the clavichord (at least within their studio, if not publicly)?

- Which experiences did you have? What exactly do you feel your students gain from practicing on the clavichord? Please describe with detail any specific techniques and practices as well as any unsuccessful attempts, if you are comfortable doing so.

- Is there any official curriculum that requires the students to study the clavichord?

Thanks for taking time to consider and answer my queries.

Yours sincerely

Albert Mühlböck

I sent 16 inquiries and received 10 very detailed responses that assist in completing the picture drawn by the previous parts of this chapter. Unfortunately, among the people s questioned, there were no pianists (on the modern piano) who use the clavichord in teaching. Because of the previously mentioned
arguments about the universality of the keyboard touch, I hope it will inspire some pianists to consider recommending the clavichord for students, if they are in an appropriate situation.

The following four pedagogues have used the clavichord within their teaching at their universities:

- Dr. Sandra Mangsen, University of Western Ontario (Canada)\textsuperscript{158}
- Dr. Ulrika Davidsohn, Eastman School of Music and Hochschule für Künste Bremen (Germany)\textsuperscript{159}
- Greg Crowell, Grand Valley State University\textsuperscript{160}
- Tomoko Miyamoto, Ferris University, (Japan)\textsuperscript{161}

Below are the answers to the inquiries from the survey. Many of the answers to question three have already been incorporated in the previous part of the chapter. For the sake of completeness, I have included them in this list:

Question 1: How do you incorporate the clavichord in your teaching? Please describe your practice in a manner as detailed as possible.

Sandra Mangsen: In a course (one semester) in historical keyboard, the students were introduced to clavichord, fortepiano, and harpsichord; however, most of their time was spent at the harpsichord.

Ulrika Davidsohn: I teach mainly organ students at the Eastman School of Music in Rochester, NY and at the Hochschule für Kunste, Bremen, Germany. I don't normally teach pianists. In Rochester I teach keyboard technique to all first year organists (all programs) where we spend half that time

\textsuperscript{158} Sandra Mangsen, e-mail message to author, October 10, 2011.
\textsuperscript{159} Ulrika Davidsohn, e-mail message to author, November 28, 2011.
\textsuperscript{160} Greg Crowell, e-mail message to author, October 10, 2011.
\textsuperscript{161} Tomoko Miyamoto, e-mail message to author, October 21, 2011.
learning to play the clavichord. It is in a group format, with appr. three students per group. All second year students get one semester of individual clavichord lessons. This is regarded as an extension of their organ studies. We use a two manual and pedal clavichord for the study.

Greg Crowell: I require all harpsichord students to study some clavichord, including the preparation of one or more Bach Inventions.

Tomoko Miyamoto: At present, I have a 90 minute weekly performance practice class for our Master's Degree students in which I teach so-called 'early music performance'. I have about 10 students, 1 organ major, 1 flute major, 1 voice major and the rest piano majors. All of them have already been exposed to organ playing in the undergraduate level, at least for one year, playing 4 voice hymns and easy pieces. However, it is their first experience to go over systematically the practice from Buchner's Fundamentum on in this class. I use the Harald Vogel's new edition of P. Sweelinck commentary and Laukov's book to give them an overview of early practices. After they are exposed to the basics of A. Paired fingerings B. Position fingerings C. Leap over fingerings, as Harald Vogel categorizes, with the example pieces on the organ, I take them to the Hass Type Clavichord and have them play some Bach as well as Haydn and Mozart.

First, I have them try the Bach's hand written Invention/Sinfonia on the Clavichord which is tuned lower than they are used to. It is already quite an experience for them from this stage. I try to place their thinking as pianists back into the stream of history of the keyboard music.

Then, when they are able to make some sound on the clavichord, I make them play some early Haydn sonatas and Mozart works. They immediately see the music differently. From the early performance practice, if demonstrated well, they will realize how important it is to shift their weight for each note. More precisely, first with only one fingering; if they play with their middle finger alone, some passages of Bach or Haydn or Mozart, they re-realize the distance between the keys. I make them play the phrase as connected and smooth as possible. Through this experience, with a lot of patience, must say!, they open themselves up how in-sensitive their finger/hand movements were before. I consider this the point of departure. Besides this graduate level class, I have clavichord minors with whom I spend 15 minutes or 30 minutes every week.
Question 2: For students, how intense is their exposure to the clavichord? How much time do they spend with the clavichord? Are they performing on the clavichord (at least within their studio, if not publicly)?

Sandra Mangsen: In my experience over 22 years at the same institution, only 2 or 3 students became interested enough in the clavichord to perform on it, usually in the context of an informal lecture recital. About 50 students had taken that historical keyboard course.

Ulrika Davidssohn: See above. The students have to play a jury program of 10 minutes both the first and the second year of their study. Some students occasionally perform on the clavichord in other contexts as well, e.g. demonstration of the instrument for music history classes. In Bremen, the work is demonstrated in one or two public recitals per year.

Greg Crowell: My teaching situation does not permit for requiring the students to perform on the clavichord, rather to use the clavichord to improve their touch on the organ and harpsichord.

Tomoko Miyamoto: Before the semester exam, they spend some time in my studio practicing the clavichord, but I really do not know how long. They do have a very intense exposure in the 90 minute class, this much I know.

Question 3: Which experiences did you have? What exactly do your feel your students gain from practicing on the clavichord? Please describe with detail any specific techniques and practices as well as any unsuccessful attempts, if you are comfortable doing so.

Sandra Mangsen: More careful approaches to touch and attentive listening, especially to tuning.

Ulrika Davidssohn: The clavichord playing is demanding, and develops the playing technique most significantly. The students learn to relax much more while playing, and they learn to use their playing apparatus in a much more conscious way than before.

Greg Crowell: Most valuable for me is to expose the student to the experience of having to produce a tone. This requires them to learn how to transfer weight from note to note and from finger to finger, and greatly sharpens their listening skills.
Tomoko Miyamoto: Most of the students who experience the clavichord tell me that their sensitivity level increased when playing the piano.

As an organist, I know when the instrument and the repertoire match, a lot of freedom becomes possible in the performance. When I have to play some French music on German organ, I have to translate.

When the pianists are exposed to the clavichord, they stand at the door from which the paths to all types of organs, harpsichords and different kinds of forte pianos are open to them. To prove this, I take my graduate students at the end of the year to Hamamatsu Instrument Museums to have them play all kinds of so-called PIANOS. They are really amazed at how different they all are from what they are used to playing, but even more amazed that they have the technical means to control them all. Without the clavichord experience, this would not be possible.

Most of all, I believe that the modern piano has a lot of possibilities. Maybe too many possibilities. If pianists have a good idea of knowing when they are “translating”, or speaking in “native” languages, the quality of piano performances will improve, I believe. We perform Shakespeare in Japanese and it is OK. However, to know the language and the sound spoken and used at the time of Shakespeare will indeed help deliver the works in Japanese better.

Question 4: Is there any official curriculum that requires the students to study the clavichord?

Sandra Mangsen: No

Ulrika Davidssohn: Yes, this study is mandatory in the organ department at ESM. At the Hochschule fur Kunste it is not mandatory, but all organists in the early music program participate and 25-50 % of the church music students do so as well.

Greg Crowell: Not at my school.

Tomoko Miyamoto: All organ majors are required to take clavichord lessons, and all non-organ majors were required to take a year of organ class lessons up until 2004. But now, we have changed the
curriculum so that, the more they are interested in the clavichord, the more they can study, on a private basis. The graduate level clavichord/organ class started three years ago.

Currently, clavichord instruction is only required at Eastman School of Music and Ferris University. However, at all four schools, it is highly encouraged and incorporated by the respective organ or harpsichord teachers.
Appendix 3

Time-lapse photos and detailed practice suggestions

Time-lapse photos of *detaché* articulation from 2\textsuperscript{nd} finger to 3\textsuperscript{rd} finger

![Time-lapse photos of detaché articulation from 2\textsuperscript{nd} finger to 3\textsuperscript{rd} finger](image)

Preparation of the 3\textsuperscript{rd} finger while the 2\textsuperscript{nd} finger is still playing.

![Preparation of the 3\textsuperscript{rd} finger while the 2\textsuperscript{nd} finger is still playing.](image)

The 2\textsuperscript{nd} leaves the key, being drawn back towards the player. The 3\textsuperscript{rd} finger is hovering above the key, resulting in a slight separation.

![The 2\textsuperscript{nd} leaves the key, being drawn back towards the player. The 3\textsuperscript{rd} finger is hovering above the key, resulting in a slight separation.](image)

The 2\textsuperscript{nd} finger is fully drawn back, and the 3\textsuperscript{rd} finger depresses the key.

![The 2\textsuperscript{nd} finger is fully drawn back, and the 3\textsuperscript{rd} finger depresses the key.](image)
Time-lapse photos of legato articulation from 2\textsuperscript{nd} finger to 3\textsuperscript{rd} finger

Preparation of the 3\textsuperscript{rd} finger while the 2\textsuperscript{nd} finger is still playing.

The 3\textsuperscript{rd} finger touches the key, the 2\textsuperscript{nd} finger still fully depressed.

Both keys are depressed.

The 2\textsuperscript{nd} finger starts to leave the key.
The 2<sup>nd</sup> finger leaves the key.
Playing a chord on the clavichord (B-Flat, D with the right hand)

Preparation: the finger touch the keys with relatively flat fingers.

The playing occurs by drawing the fingers towards the player. Thus the speed (vigor) of the drawing back can determine the loudness of the tones, whereas the weight can stay constant to avoid raising the pitch.
Right hand: Here it is important to achieve a smooth legato for the first 5 tones. The three fingers should already be on the keys before the piece starts. The execution has to be according to E.W. Wolf, so that only after the next note has been struck, the previous note is released gently. The sixteenth notes in the second quarter of the measure allow different choices of articulation, but in any case, the leaps up (fifth and sixth) and down (third and fourth) have to be anticipated with the finger to achieve a controlled performance. The articulation then depends on the manner and the moment the playing finger is released. The following photo shows the finger position at the beginning of Bach’s B-Flat Major invention, right hand.

When playing the d (third note in the right hand), one can see that the next 2 notes are completely prepared on the key, to achieve a smooth legato.
Left Hand: The tones of the arpeggiated B-Flat Major chord have to be separated, but the performer has to avoid any staccato playing with the arm (although this would work on the piano without problems). A vertical arm movement would easily bend the pitch, because the momentum of the weight of the arm, even if delicately used, would press down the key further than it should go, especially in a faster tempo. Therefore, again, E.W. Wolf’s suggestions for *detaché* playing need to be used, i.e. drawing the finger towards the player shortly before the following tone is played.