

The Bulletin of the Boston Clavichord Society Number 42, Fall, 2017

### Consistency and Inconsistency in Historical Keyboard Fingering

#### David Schulenberg

Fingering is one of those fundamental elements of technique that most musicians learn at an early stage of their training and subsequently think about as little as necessary. Yet those who play historical instruments, including the clavichord, understand that even these fundamental approaches to performance have varied over time. Changing how one uses

the fingers can be a physical challenge but can also suggest new approaches to interpretation.

Modern scale fingering, in which the thumb passes under the other fingers to insure Bernardo Cavallino c. 1650



even legato playing of small note values, is well documented only since the mid-18th century. C.P.E. Bach was the first to offer a systematic exposition of "thumb-under" scale fingerings, in his Essay of 1753. He still allowed the so-called "paired" fingerings described by earlier writers, which were based on the alternation of two fingers (typically 2 and 3, or 3 and 4) while avoiding use of the thumb. But neither C.P.E. Bach nor anyone else explained how or whether fingering relates to articulation or other aspects of musical interpretation. Nor do the rules and scale fingerings given in books fully explain how the diverse figuration of real music, which comprises far more than simple scales, was actually performed.

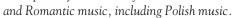
Only in some traditions do musicians seem to have been concerned with developing regular approaches to keyboard fingering. (Continued on p. 5)

## An Interview With Maria Erdman

Maria Erdman

aria Erdman is a Polish organ and clavichord player and a music theorist. She studied at the Academy of Music in Warsaw and at the Conservatorium van Amsterdam. In 2006. Acte Prealable released her début triple album with recordings of melodies collected from the 1768 hymnal of the Poor

Clares monastery in Stary Sacz. It constituted the first Polish recording of clavichord music. Maria Erdman teaches clavichord at the Kraków Academy of Music, and pipe organ and clavichord playing at the Frederic Chopin State School of Music in Warsaw. Erdman plays concerts at music festivals in Poland and abroad. Her special focus is early



Interviewer Katarzyna Kluczykowska is a Polish harpsichordist and Fulbright Scholar, currently studying at The Juilliard School. An article about her appears on p.4 of this issue of Tangents.

You studied both organ and theory of music at the F.Chopin Academy of Music in Warsaw. How did your clavichord adventure begin?

One of my most important teachers, Christopher Stembridge, introduced me to the clavichord in about 1997. Thanks to his advice and my parents' support, I obtained a clavichord "after Hubert" made from a kit produced by Bolton in England. That instrument provided my first clavichord experiences and led me to ask questions. My dad played a vital role in that story. First, he sent me to a course with Christopher. Later, he found on the internet a magazine (which was then a nouveau) entitled Clavichord International and got me in contact with the editor, who was then Koen Vermeij. Koen, after receiving photos of my clavichord, helped to find a temperament for my kit and gave me a lot of his attention, asking often about how I was doing with that rare instrument. It was he who suggested that I go study the clavichord and got me in touch with Menno van Delft in Amsterdam. The email I wrote to Menno was the first email I ever wrote. Never would I suspect that it

would be not only the first email, but the opening of a new chapter in my life.

How did you come up with the idea of studying in Amsterdam?

That was just what came next after having acquired a clavichord. I wanted to be able to play that instrument, which, from

the very beginning, I was finding wonderful. But studying abroad in 2000 was not that easy, you know, as Poland was not a member of the EU ... Well, it was Koen's idea!

How does clavichord, in your opinion, distinguish itself from the other keyboard instruments?

The more experience I have with the clavichord, the more I can

understand the way Carl Philipp Emanuel Bach put it. Playing the clavichord requires that you stroke the keys, while the cembalo is very good for the strength of your fingers. This comment seemed strange to me at the beginning, but now I understand what he had in mind. The clavichord requires rhythmical precision, similar to the organ, as well as freedom in shaping musical phrases, which is essential for expressive playing on the harpsichord.

How would you describe clavichord technique? What is it based on? What are the main problems your students have to deal with?

Just to make the instrument sound as it should is the most frequent problem students deal with - but producing the sound on the clavichord is quite a complex task. The core of it is built with conscious, energetic finger-work, supported by relaxed hands and body. Fingers ought to make the string vibrate and stay in close contact with the strings.

(Continued on p. 3)

# INSIDE THIS ISSUE Nordic Keyboard Festival. . . . p.3 A Young Polish Keyboardist...p.4 Grills Plays Muffat....p.4

# Nordic Keyboard Festival 2017

Anna Maria McElwain

he sixth Nordic Historical Keyboard Festival took place in Kuopio, Finland, May 22-30, 2017. Residents of Kuopio have become familiar with the clavichord, thanks to the decades of pioneering work of Pekka Vapaavuori, which I have continued. Kuopio is a town of 100,000 inhabitants and there may still be some who have not heard of the clavichord, but clavichord concerts have a fair chance of attracting a good-sized audience. There are more clavichords and clavichordists in Kuopio per capita than anywhere else in the world. The clavichords in use at the recitals were my own Specken-Svensson built by Stig Lundmark in 2010, the Specken-Svensson by HansErik Svensson owned by the Sibelius Academy Kuopio, and a Silberman copy by Pentti Pelto owned by the Kuopio conservatory, all five-octave unfretted instruments. Because of programming, none of the many fretted instruments of Kuopio were used in recitals. Most of the fretted instruments are copies of the popular Wåhlström 1756 model. Copies of this model are often built in classes in Finland on clavichord construction.

My own close relationship with the clavichord was reflected in the program, with twelve of the sixteen recitals featuring the instrument in some way. The clavichord was heard as a solo instrument, in four-hand and two-clavichord recitals, in interdisciplinary performances I presented with both dance and poetry-reading, and in the final recital, together with traverso and bass recorder. This year's clavichordists included Christopher Grills, Albert Mühlböck, Zsombor Tóth-Vajna, Claus Köppel, Joel Speerstra and me.

Grills is currently working on a doctoral degree in Boston under the tutelage of Peter Sykes, with an emphasis on the clavichord. Sykes performed in Kuopio a few years ago. Grills played a recital of Muffat, C.P.E. Bach, Haydn and Mozart. His interpretations are deep and soulful, true clavichord playing without influences from other instruments. Grills also gave an interesting lecture recital on the Muffat Partitas, which was well received by the audience. Mühlböck is originally from Austria but resides in Taiwan. He distinguishes himself as a pianist but does a lot with the clavichord and has mastered clavichord technique as well. He performed works of J.S. and C.P.E. Bach, playing with great concentration and seriousness, immersing himself in the music in a way that left the audience nearly in a trance. Joel Speerstra's fine recital at the Kuopio Art Museum was accompanied by his very interesting commentary about the program, with the intriguing title: Orpheus and the Birds.

Zsombor Tóth-Vajna, a young Hungarian multi-keyboardist, delighted us. His organ recital titled Journey of Orpheus was impressive and inspiring. I had great fun playing Haydn's Il maestro e lo scolaro with him on a copy of a Stein fortepiano. He is a charismatic player and a pleasure to hear. I also had the joy of playing duos with Grills and Mühlböck, Kozeluch with the former, Mozart and Beethoven with the latter. I played a two-clavichord recital with Claus Köppel of works by J.S. Bach, Händel and Krebs. Köppel is a long-time active member of the German Clavichord Society. In the same recital I also premiered We Grew Into Mountains by Adam Al-Sawad, a young composer from Kuopio, who is mainly a cellist but has also taken clavichord lessons for several years in his childhood. (He also happens to be my son.) The piece is a touching portrayal, by means of variations, of the growth and development of a human being. I find Early Music closest to my heart but always feel honored when a contemporary composer dedicates a piece to me. I have been very fortunate that the pieces which have been written for me have all been very beautiful. One exciting event under consideration for the seventh Nordic Historical Keyboard Festival, which will take place the last two weeks of May 2018, is a composition competition for the clavichord. This would be arranged in collaboration with the Finnish Clavichord Society in anticipation of the society's 20th anniversary the following year.

I especially enjoyed the amazing harpsichord recital of 16th century Italian music played by Finnish harpsichordist Marianna Henriksson. The festival offered, in addition, one harpsichord-organ recital of Bach, and a duo composed of fortepiano and classical cello that offered a program of *Music from Beethoven's Salon*.

Because the clavichord is easy to transport, the recitals were spread out around town in eleven interesting venues. These

### T A N G E N T S

The Bulletin of the Boston Clavichord Society, published by The Boston Clavichord Society, P.O. Box 540484, Waltham MA 02454.

ISSN 1558-9706 http://www.bostonclavichord.org

The Boston Clavichord Society is a nonprofit organization dedicated to the promotion of the clavichord and its music. For information on becoming a Friend of the Society, please write to the above address.

TANGENTS is published biannually, and is sent free to Friends of the BCS. Single copies and back issues can be obtained by writing to the address below.

Editor: Beverly Woodward P.O. Box 540484, Waltham MA 02454 Phone: 781, 891-0814



included churches and museums, as well as historic government buildings, such as the the Town Hall and the hall of the State Administrative Agency of Eastern Finland. Aino Järnefelt, the daughter of a governor, and the wife-to-be of Jean Sibelius, lived in the latter during her adolescence. My personal desire is to make the clavichord available to all, and for this reason most of the recitals were free of charge. This seems to have a positive impact on attendance.

Kuopio continues to amaze international visitors with its beautiful nordic landscape. It is a town surrounded almost entirely by lakes and forests. Very often, an evening of fine clavichord playing finished with lake-side saunas and dipping into the freshly melted lakes.

The composition competition at the seventh Nordic Historical Keyboard Festival will take place in the company of a nice crowd of clavichordists performing in Kuopio, with both old faces and newcomers. I am a long-time fan of Jocelyne Cuiller from France and am delighted she will join us, as will Jan Weinhold from Germany. The diploma exam in clavichord performance of Eija Virtanen will also take place during the festival. It will be the third one in the history of the Sibelius Academy. The program of the festival will be up on the http://www.nordicclavichord.org/website by March 2018.

(Erdman Interview, cont. from p.1)

Your clavichord class at the Academy of Music in Krakow is the first and the only clavichord class in Poland. What kind of instruments do you work on? Do students show a lively interest in playing clavichord?

Yes, I really cannot complain. We have applications every year and some students want to extend their program to two or even three years, instead of one, which we offer as the standard. The school has a big unfretted clavichord after Friederici, made by Martin Schwabe.

Which clavichords are your favorites (considering the builder, the sound, etc.)? What kind of instruments do you play on at home?

Well, the historic instruments I like the most. I played some and that was always a unique experience. But we are really lucky now having such fantastic copies. For the last 15 years, the skills of the builders have significantly improved. I respect many builders, love some, am friends with a few and am in happy possession of two clavichords so far – an unfretted one after Horn, made by Martin Kather, and a tiny Hubert by Koen Vermeij.

In 2006 you made the first clavichord recording in Poland. Could you tell us more about it-how did it come about and how was this recording received?

I had known about the collection from Stary Sacz, the so called "Fabiańska Book," before I ever even touched the clavichord. After starting to play the clavichord, I just found the repertoire waiting for that medium - historically justified and also beautiful. My project got the interest and support of the Acte Préalable label. I was able to record the material for 3 CDs. I find it tricky to report about the reception of the recording; however, it received positive comments.

What kind of music do you most prefer to perform on the clavichord?

I find it necessary to occupy myself with the widest scope of repertoire possible. This leads to knowledge about different clavichords and is really worth the effort. But if I start thinking of "my favorite composer," I always come back to Johann Sebastian Bach. Are there any contemporary pieces written for clavichord? Which of the clavichord's features do composers value the most?

Yes, though the modern repertoire is far less extensive than that for the harpsichord. The already classic "Lambert's Clavichord" by Herbert Howell, shows that interest in early music instruments goes back as far as 1928 (note also Sonata no. 1 by Ernst Pepping, written in 1938). After World War II, we have a number of pieces for the clavichord, by composers such as Andriessen, Brent Galvean, Robert Moran and David Loeb. In Polish music the interest in the clavichord is slowly increasing. We have a piece by Tomasz Sikorski, for a narrator reading a text by Samuel Beckett. Aleksander Kościów wrote a diptych portraying two great painters, Rubens and Picasso. The newest experiments, pairing the clavichord with the grand piano and the accordion, were made by Rafał Augustyn, Andrain Foltyn and Michał Moc. They require amplification and some special effects, such as playing directly on the strings. I cannot escape the impression that the best moments of the "modern clavichord," are yet to come...

What are the things you learn from playing the clavichord?

Awareness? Control? Structure? Emotion? As with any other instrument, you learn tons of facts about yourself. The clavichord is not peculiar here. The difference, however, is in its quiet, but extremely flexible sound, grasping your attention to an extreme--letting the player hear more.

What is your favorite clavichord recording or your favorite clavichord player?

There are a lot of interesting recordings in the "clavichord market," and the number is constantly growing. I have never come across a clavichord recording that was uninteresting. Either it presented new repertoire, or a unique instrument, or superb playing. I love how Menno van Delft plays. It is always so full of imagination combined with his fantastic technique and sound. But I also admire Matthieu Dupuis and Ilton Wjuniski. It is good to see the constant increase in the number of really good clavichord players, the list of which would be long.  $\Omega$ 

# Large unfretted clavichord for sale / Preethi de Silva.



The highly reputable clavichord maker, Lyndon J. Taylor of Redlands, CA, made this instrument at my request, obtaining the construction plans for it from the Grassi Museum in Leipzig, Germany. No person other than I has used it. It is in an almost pristine condition.



Based on the makers description: This large clavichord is a reproduction of an instrument of ca. 1775 made by Christoph Gottlob Hubert, Ansbach, Germany. The range is FF-a'''; it is unfretted with soft iron strings in mid and treble ranges. Tuned at a'=415 Herz. Width: 158 cm; depth: 42.2 cm; ht: 14 cm. It has a case of fir and a three-panel lid and four screwed-in legs. A music desk and tuning key are included.

Decorative options included: Hubertstyle herringbone veneer in French walnut and oak; naturals of highly attractive cocobolo; and skunktail sharps.

Suggested special price to Boston Clavichord Society members: \$7,500. The instrument is in California. If interested, please leave a message at: 909, 624-0638



### Katarzyna Kluczykowska Polish Keyboardist

Beverly Woodward

Kasia, is currently studying clavichord and harpsichord with Peter

Sykes at the Juilliard School. In this issue of Tangents she interviews her fellow Polish keyboardist, Maria Erdman. I spoke with Kasia recently about her own musical training in Poland and how she became acquainted with the clavichord and the harpsichord.

Kasia, at the age of six, began her keyboard studies on the piano, using an upright piano

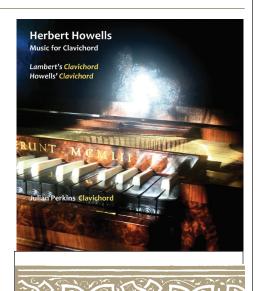
in her parents' home. While growing up, she completed two six-year intensive music study programs. Eventually the harpsichord came to her attention. Given her interest in the music of J.S. Bach, and early music in general, she decided to learn to play this instrument.. At the conservatory where she studied there was a spinet, but no harpsichord. However, she found a teacher who had a harpsichord, Professor Lilianna Stawarz, and she began lessons with her.

About this time Kasia became acquainted with a student who played the organ, the harpsichord, and the clavichord.



be the clavichord. As Kasia says, Menno is a true "clavichord evangelist." The conservatory at Hamburg had a small fretted clavichord. While she was there, this was moved to the C.P.E. Bach museum in Hamburg. After that, practicing and performing took place in the museum.

Kasia hopes to soon acquire a clavichord for her apartment in New York City. She knows that she will not need to worry about disturbing the neighbors with her new instrument.  $\Omega$ 



### Partitas by Georg Muffat

Christopher Grills

any of the keyboard works of Georg Muffat (1653-1704) have remained in virtually complete obscurity until the twenty-first century. The only keyboard works Muffat published during his lifetime were the Apparatus musico-organisticus (Salzburg, 1690), a collection of organ works containing twelve toccatas, a ciacona, a passacaglia, and two sets of themes and variations. A number of manuscript sources attributed to Muffat exist in archival collections, most notably the Berlin Sing-Akademie archives. However, issues of authenticity make creating any sort of authoritative edition and recording of the "complete" keyboard works of Muffat an arduous task yet to be carried out. Siegbert Rampe, who was the principal editor of the Muffat/Eberl Bären reiter edition, and created an ambitious Georg Muffat: Complete Clavier Works album of 2004 (which includes a piece performed on the clavichord) leaves out a vital manuscript now available online at IMSLP and first published in a modern edition by Edition Walhall in 2014. This manuscript is comprised of six partitas composed by Muffat in the following keys: C major, F major, E major, F major, D minor, and E major.

On March 5 of this year, at Gore Place in Waltham, Massachusetts, I performed the first partita in this manuscript collection. It begins with the indication, Prelude del Signore Giorgio Muffat. This partita was unrecorded until that date, and that performance was quite possibly the U.S. premiere. The live performance can be heard at the following link: https://soundcloud.com/christopher-grills/sets/boston-clavichord-society-presents-christopher-grills-live

### Michael Kennedy

Michael Kennedy is a composer based in the wilds of Southern California's canyon country. He studied music composition at CalArts and Duke, and is a recent winner of the Traynor Competition, for *Hume's Plea*, inspired by the life of Scottish composer Tobias Hume. Currently, he and his wife Rachel are living perched on a hill among Los Angeles's bears and bush mallow. Ω

## Herbert Howells, Music for Clavichord

Terbert Howells Music for Clavichord I performed on clavichord by Julian Perkins has been released by Prima Facie Records. The two-CD set contains all Howell's published music for clavichord: Lambert's Clavichord, op. 41 (HH 165) and Howell's Clavichord (HH237) Books I and II. This is the first complete recording of this music. Lambert's Clavichord and a selection of eight pieces from Howell's Clavichord were recorded on clavichord by Ruth Dyson (1917-1997) and released on an LP in 1981. This new recording is dedicated to her memory in her centenary year. The recording will be available on iTunes, Amazon, Google Play Music, Spotify and at primafacie.ascrecords.com (where payment can be made with PayPal). Ω (Fingering, cont. from p.1)

For instance, from the mid-16th to at least the early 18th century, English players consistently placed fingers 1, 3, and 5 on "good" (consonant or accented) notes. Fingering numerals written into manuscripts of music by Byrd, Bull, and composers from around 1600 make this clear, although the first printed account seems to have been that given in Purcell's posthumously published *Choice Collection* (1696). The music in question may have been most commonly played on organ or virginals, but there is no reason to think that the same approach to fingering was not taken on the clavichord.

Two Italian authors contemporary with Byrd and Bull suggest similar consistency in fingering, but they differ as to which fingers were used for "good" notes: Diruta (1593) prescribes 2 and 4, whereas Banchieri (1608) urges 3. The idea of writing fingering numerals into actual music seems, however, to have been unknown in Italy; when Alessandro Scarlatti finally provided his pupils with a toccata intended to teach fingering, he indicated the latter through symbols. These are "translated" in modern editions, which show that by 1700 or so, something like modern fingering was coming into use, at least in the Scarlatti circle.

This leaves us with two fundamental questions: what fingerings did earlier Italian (and other) players, such as Frescobaldi, use? and does the choice of fingering make for any musical differences? To approach the latter question first: it used to be supposed that "paired" fingerings led to audible groupings of paired notes. Thus a typical 3-4-3-4 fingering for the ascending righthand scale at the opening of Byrd's C-major fantasia would produce two-note slurs, each starting on an accented note. But there is little evidence that players did this consciously, and it is possible (with practice) to produce either a continuous legato or an even non-legato while employing paired fingering. Doing so is facilitated by holding the hands high and turning each hand in the direction the notes are moving, as seems to be illustrated on the title page of Parthenia (ca. 1612).

It is usually easy to fit paired fingerings to the figuration in Elizabethan keyboard music. It is less easy to do so in contemporaneous music from northern Europe, such as Sweelinck's, and not at all for music from further south, such as that of Frescobaldi

and his German pupil Froberger. Even the many examples of Italian keyboard music given as illustrations by Diruta are hard to play with the type of fingering which he prescribes. The figuration in these pieces simply does not fit well with his system of paired fingering, particularly when accidentals (especially B-flat) occur. Diruta himself admits that some players used the thumb or placed 3 (not 2 or 4) on good notes. This suggests that Italian players (and their northern students) were less consistent in their practices than their English contemporaries.

Does any of this matter musically? I have trained myself to use English fingering in Elizabethan music. This facilitates the

process of learning pieces (once one understands the system), and keeping the thumb off the keys encourages a light touch. Unless one consciously endeavors to play otherwise, notes do tend to be grouped into pairs that start on the beat; on the clavichord this is due to subtle dynamic accents on the "good" notes (played by fingers 1, 3, and 5) rather than from the imposition of actual slurs.

The apparent *absence* of consistency in historical

fingering for other repertories is telling. Diruta prescribes different types of groupings for the two hands: 2-3-4-3-4 for ascending scales in the right hand, 4-3-2-3-2 for descending ones. But whereas the left hand mirrors the right for ascending scales (4-3-2-3-2), it descends with 2-3-2-3-2-3. This last pattern groups notes in two starting on the beat, but in the other patterns each group (after the first) begins off the beat and ends on it.

"Countermetrical" grouping of the latter sort might reflect a tendency for figuration in Italian music to move from upbeat to downbeat. Yet even if there is any such tendency, there remain plenty of figures in music from Merulo to Scarlatti that begin on the beat. I have concluded that in Italian-style music only an eclectic approach can succeed. Any audible grouping of notes due to fingering is very subtle, all notes being detached to some degree, never slurred.

In music by Frescobaldi and other Italians (and related northerners such as Froberger),

I do use 2-1-2-1 or 1-2-1-2 for some lefthand passages, occasionally even modern fingerings. Yet as in Elizabethan music, keeping the thumb off the keys helps assure a lightness and evenness of articulation. Quick scales in 32ds (already used by Bull and common by the time of Froberger) can sometimes be fingered 2-3-4-5-2-3-4-5, although there is little documentation for this in historical sources. Still, even in the second half of the 18th century, W.F. Bach is reported (by Türk) to have played scales and arpeggios without using the thumb. This is not as impractical as it may seem to one trained in modern technique. Even if one uses such fingerings rarely, practicing them

facilitates performance of the occasional passage in which one has no other choice—as when the thumb is tied down by holding a sustained note in an inner voice.

These considerations apply only to linear figuration in small note values. For slower-moving notes, and for chords, it is clear that players used whatever fingers were needed to grasp all the notes. Some went out of their way to avoid using the thumb, but use of the latter is unavoidable in any repertory

that most of us care to play today. Except where slurs were actually notated, legato may not have been valued before the 18th century, when Couperin advocated the use of finger substitution to connect chords in a seamless legato. C.P.E. Bach objected to the use of this device, implicitly criticizing Couperin for advocating it—which suggests that, having been trained on the clavichord, he had little sympathy for the French love of sustained harpsichord sonority. Today we can enjoy the latter in French music while taking a different approach in other repertories.

For further reading: Mark Lindley's article "Keyboard Fingering: 1. To 1750" in *Grove Music Online* (oxfordmusiconline.com) is a succinct but thorough and thoughtful summary, with many helpful music examples. Harold Vogel offers many suggestions (relevant to all instruments) in commentaries to his editions of various organ pieces, especially *Samuel Scheidt: Tabulatura nova*, vol. 2 (1999). Ω



# Carole Cerasi in Recital and a New Clavichord by Douglas Maple

n Sunday afternoon, May 7, members of the Boston Clavichord Society had an unexpected treat. As they assembled for a house concert by visiting artist Carole Cerasi, they did not know – and until the morning of the concert no one knew – that they would hear the performance on a newly completed clavichord made by Douglas Maple, of State College, Pennsylvania, based on instruments in Berlin and Nuremburg attributed to J H Silbermann.

Although Carole had arrived in Boston several days before her concert, scheduling complications prevented delivery of the new instrument until 9am Sunday morning, so she prepared for the concert expecting to play on one of the fine instruments in Peter Sykes' collection. When the new clavichord arrived that morning, Carole found an immediate rapport with the instrument, and proposed using for her recital that afternoon, if we were game. The instrument was sufficiently similar in touch and tone to Silbermann-based clavichords made by Peter Bavington that she had played recently, that she was willing to risk it.

In the event, the concert was a wonderful success, revealing Carole's extraordinary gifts as a clavichord player – her firm and agile control of the instrument, stylistic breadth, sense of drama and architecture, and graceful integration of phrase and gesture, combined with a seemingly infinite depth of detail and nuance. To all these, the new clavichord showed itself to be a fine and responsive match, with a rich and plastic tone, wide dynamic

range, and clear articulation. The program, which included works by J S and C P E Bach, Müthel, and Haydn, stayed well within the comfort zone of the late-18th century design, but suggested that earlier and later repertoire could also work well.

Douglas Maple had this to say about his approach:



Clavichord by Douglas Maple, based on instruments attributed to J H Silbermann.



Detail of the Douglas Maple clavichord

Having made a decade ago a clavichord based on the antique example attributed to J.H. Silbermann in Nuremberg, I came away with the feeling that this unusually compact design was generally successful and worthy of reproduction. I wasn't entirely happy with the sound and feel of the low bass, however, due to the short tangent-to-hitchpin distances and the extremely short lengths of the lowest strings.

Recently, I decided to revisit the compact Silbermann design again to see if I could adjust a few details slightly in order to improve the low bass region, while at the same time preserving the excellence of the rest of the instrument. In my adaptation the treble portions of the bridge, soundboard and keyboard are left exactly in the original configuration of the compact design. The case length, however, is extended by 10 cm: 5 cm at the left end to include a tool box with cranked bass key levers, and 5 cm at the right end, which allows the soundboard and bass end of the bridge to be lengthened somewhat.

As a result, the general proportions of the case and the shape of the bridge are improved visually, and the feel and sound of the lowest strings are significantly improved. And importantly, the essential characteristics of the Silbermann design seem to remain unchanged – a lively overall resonance, with good sustain and interesting colors.  $\Omega$ 

