

Harpsichord & fortepiano

Vol. 23, No. 2 Spring, 2019

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Musical Instrument Research Catalog
(MIRCat)

BAROQUE KEYBOARD FINGERING AND PRESENT-DAY PRACTICE

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Introduction

Unlike other historical instruments, which are nowadays usually played with their traditional techniques, the harpsichord is still mostly played with modern fingerings. Of the players who use historical fingerings, quite a few employ hand movements that depart from historical usage. This article outlines the advantages of using the proper period technique on early keyboards, and also mentions promising recent progress.

Ask a present-day player of the gamba why use a gamba bow, handling and moving it in the traditional way, and the answer is well known: *the early*¹ instrument is used to convey not just the basic sound the composers had in mind, but also the instrument's attack, articulation and other nuances. These features add to the performance details that were not written down in music scores because these effects were common practice and therefore expected by both composers and contemporary audiences. In high Baroque music tailored for a specific instrument, such as the bass gamba and the harpsichord, it can be said that both the early instrument and the early playing technique are part and parcel of the musical work. In other words, using the appropriate instrument is not enough: a stylish performance requires that we play the period instrument with a period technique. Doing otherwise is likely to produce a departure from the performance style the composer expected.

However, if instead of viols, violins and wind instruments, we deal with harpsichords

and other early keyboards, modern thumb-based² fingerings are still chosen by many present-day players. The purpose of this article is to review their reasons, as well as the many advantages (established by widely known publications from the late 1970s onwards) of using traditional fingerings instead. We will also show the importance of using the correct traditional-fingering technique, employing either hand shifting or finger crossing as required by the music and implied in the historical sources.

Understanding the traditional keyboard fingering

The main problem we have with fingering technique from the harpsichord era (c.1470-1750) is that it is a lost tradition: the twilight of Baroque keyboard music and technique is marked in 1753 by the first part of the widely read treatise by C.P.E. Bach.³ For more than two centuries Baroque (and earlier) keyboard fingering was not practised, until it was resurrected in 1977 by the pioneering work of Maria Boxall.⁴

A few distinguished present-day harpsichordists have argued that great baroque keyboard players, such as F. Couperin and J.S. Bach, meant their treatises and fingerings (which do not include thumb-based techniques) for beginners, and that they "surely" used thumb-based fingerings for their most demanding works. However, this line of reasoning contradicts plentiful evidence from the sources, fully scrutinised and published since the 1970s in the works and anthologies by highly

respected scholars Lindley and Boxall.⁵ We will now give a short summary of this historical record.

As described in early texts and paintings, the Renaissance and Baroque keyboard fingering technique was based on the following finger and hand movements:

- 1) Finger Crossing. Scales were played using sequences of long fingers. After using two of them in a row (in the Baroque era alternatively three in a row if accidentals were involved), a finger crossing was performed. (See Fig. 1).



Fig. 1 - Self-portrait playing the virginal, signed Caterina de Hemessen 1548.⁶ The crossing of fingers is perhaps slightly exaggerated for demonstration: it is unlikely to represent real practice except for particularly long fingers. Very authentic are instead both the "L" shape of the left hand index finger and the straight fingers, both avoided in modern keyboard technique.

A typical right-hand ascending scale was played by crossing the 3rd finger over the 4th finger, while the descending scale was played by crossing the 3rd finger over the 2nd finger.⁷ Accordingly, if we denote with "x" the crossing movement itself, the scale was fingered

ascending: $3\ 4 \times 3\ 4 \times 3\ 4 \dots$,

descending: $3\ 2 \times 3\ 2 \times 3\ 2 \times \dots$

This was relatively easy if the scale had only naturals, but could be tricky if the scale had accidentals: in this case, in the Baroque era, alternative finger crossings were used such as

ascending: $3\ 4 \times 2\ 3\ 4 \times 3\ 4 \dots$

where in the first crossing the 2nd finger

crosses over the 4th. A very attractive and unique feature of this fingering system (not found in any other ancient or modern technique!) is that, when playing a scale, hand and wrist move laterally at a steady speed.

- 2) Hand Shifting. For passages other than scales, a hand shifting movement was often found to be more convenient: hand and fingers were raised, the hand was shifted laterally, and the playing proceeded by lowering hand and fingers in the new keyboard location.

For example, a passage with triplets in diatonic succession was fingered

$2\ 3\ 4 - 2\ 3\ 4 - 2\ 3\ 4 \dots$

where the hyphens denote the hand shiftings. This movement could be either slow or fast, sometimes even very fast, according to the type of passage.

- 3) Thumb and Little Finger. During the Renaissance and Early Baroque, thumbs and little fingers were only used when the hand had to play either chords or counterpoints in two or more parts: these fingers were never used in scales. Accordingly, for a right-hand ascending scale of 9 notes with no accidentals (for example from c^1 to d^2) a typical fingering was

$3\ 4 \times 3\ 4 \times 3\ 4 \times 3\ 4 \times 3$.

During the Middle and Late Baroque it became customary to use thumbs and little fingers also in scales, but only at either the



Fig. 2 - Ascending right hand scale from Saint Lambert's treatise, Paris 1702.⁸

Now the above-described 9-note scale from c^1 to d^2 was fingered

$1\ 2\ 3\ 4 \times 3\ 4 \times 3\ 4\ 5$.

This means that, paying better attention to

regularity in articulation, the player was now allowed to use fingers 1 and 5 (which are more difficult to control than the three central fingers), but only either at the beginning or end of a scale or passage.

The reduced number of crossings (from 5 down to 2 in this example) made playing scales easier.

4) Baroque technique includes many additional features. For example: (a) **Thumb passages:** The left hand ascending scales were fingered $2\ 1 \times 2\ 1 \times 2\ 1 \times \dots$. Both F. Couperin and J.S. Bach prescribe passages over the thumb also for the right hand, but only when after a descending scale the passage goes up again. For example, the sequence g-f-e-d-c-B-c-d-e-f-g would normally be fingered 5-4-3-2-3-2-3-4-3-4-5, but if the g needs to be held down, it is fingered 5-4-3-2-1-2-1-2-3-4-5. (b) **Universal Crossing:** If a hand plays a two-part counterpoint, the thumb plays one part, the little finger the other, and the middle fingers help either part as needed, sometimes with finger crossings. (c) **Substitution:** The finger that presses a key is substituted by another finger while the key is held down. (d) **Repeated Finger:** In some scales or passages, the same finger is used for two consecutive notes. (e) **Static Hand:** When the music brings the hand to different zones of the keyboard, even if gradually, the hand (unlike modern piano technique) should not move by small steps. The fingering should keep the hand as static as possible, until eventually it shifts to a new position up or down the keyboard.⁹

A full account of traditional keyboard fingering is available in modern publications,^{10, 11} and present-day scholars appear to show hardly any disagreement on this matter. We shall see later a few relevant details about finger and hand movement.

The modern revival of the traditional keyboard fingering

Once replicas of historical harpsichords became widely available in the late 1960s, the use of traditional fingerings was soon advocated by a few leading performers and scholars:

- In 1974 Kenneth Gilbert said: "Now... we had the instruments, originals and copies, and then the whole question of fingering becomes vital".¹²
- In 1977 Ton Koopman found it "foolish to try and play old organ and harpsichord music using modern techniques. If one regards old fingerings as means of articulation, they appear extremely refined and effective".¹³
- In 1982 Lindley and Boxall produced their already-mentioned and well known seminal work on early fingerings.¹⁴
- In 1984 a full account was available in a treatise in Italian.¹⁵
- Marie-Claire Alain in her later years recommended to her organ students the use of early fingerings when playing the Baroque repertoire.¹⁶
- For some years now, the *Italian Ministero dell'Istruzione* has made compulsory the use of early fingerings in the curriculum of harpsichord studies in the National Conservatoires throughout Italy.¹⁷ This was mainly due to the influence of Emilia Fadini.¹⁸

In view of this, why are so many harpsichordists worldwide still using modern fingerings? Let us scrutinise both their reasons and the musical consequences.

Why is modern fingering still common among harpsichordists

In spite of the viol example mentioned above in the Introduction, there is an important difference between early keyboards and other

period instruments: most of the latter can hardly be played at all using modern techniques. For example the baroque oboe, with its peculiar reed and flexible intonation, requires a special embouchure and wind emission. As for early bowed string instruments, their low-tension gut strings require the use of early bows and the associated hand-and-arm movements. But for early keyboards you can develop a very *convenient and safe* technique by slightly modifying modern piano technique, keeping its modern thumb-based fingering while just adjusting hand weight and finger movements to the requirements of the early instruments. And since many modern harpsichordists have started their musical life studying the piano, and play in public and to their students using modern fingering, this is the technique we still see quite often nowadays being transmitted through generations of professional harpsichordists.

Changing over to traditional fingerings

Players who use modern fingerings claim that they make study easier and public performance safer. Nevertheless, the author—in agreement with every single player who has embraced traditional fingerings for Renaissance and Baroque keyboard music—disagrees with the notion that modern fingering is intrinsically easier than traditional fingering when playing music from the harpsichord era. Certainly the two modern thumb-passing rules are much simpler than the multifarious Baroque finger crossings, but this initial difficulty is soon overcome.

Actually, the main reason for *not* adopting traditional fingering is quite obvious: any performer who has reached professional level using modern fingering will feel safer using this technique forever, while changing over to traditional fingering requires years of hard

work until the player feels safe enough to do it in public. At this point it is worth noting that the feasibility of such a change, and of playing with the old technique the most demanding works of a J.S. Bach, was demonstrated back in the 1970s and 1980s,¹⁹ and is even easier today after decades of experimentation, analysis, discussions, publications, teaching and practice.

The musical advantages of using traditional keyboard fingering

Even more significant than the authenticity and feasibility of traditional keyboard fingering are its unique advantages. The above-mentioned pioneers of the modern re-introduction of traditional fingerings specifically mentioned the compelling effect of fingering on articulation. Also very importantly, the use of traditional fingering guides the player valuably in other important aspects of interpretation such as rhythm and tempo. Let us analyse these matters individually.

- **Articulation:** Everybody agrees on the paramount importance of articulation as the main expressive tool in Renaissance and Baroque keyboard music. Given the absence of any elaborate system of articulation markings in most Baroque keyboard scores, the use of traditional fingering is a very important guide helping the performer to produce the articulation expected by the composers. As put aptly in the early 1980s by Lindley, “the more at home one becomes with old fingerings, the less one has to think about articulation”.²⁰ A few years later Lindley published a full account on this topic.²¹
- **Rhythm:** Early fingering is also of great value in the performance of many rhythmical manners of Baroque music, such as “hurried triplets” (where triplet quavers are played as two semiquavers

and a quaver), Lombard rhythm (where the second note of a pair is played slightly earlier than notated) and *notes inégales* (where the second note of a pair is played slightly later than notated). For example, it has been demonstrated that F. Couperin's paired fingerings show a clear tendency to facilitate the performance of *notes inégales*.²²

- **Tempo:** Scholars have devoted little attention to the relationship between traditional fingerings and tempo. Here the strict evidence is less obvious, but the author believes that, when studying a piece, traditional fingerings are sometimes very helpful in determining the tempo intended by the composer. Such deductions appear to be valuable, for instance, in J.S. Bach's *Goldberg Variations*.²³

Supposedly-authentic performance using modern fingerings

The main argument of players who use modern fingerings is that they find no real musical advantage in changing over to traditional fingerings. In online forums it has been argued that modern fingerings can be successfully used for an authentic-style performance: the player just needs to reproduce the articulation and rhythm implied by early fingerings. And indeed, *prima facie*, this looks deceptively plausible. The problem is, faced with a Baroque keyboard piece, how can a player who only uses modern fingerings discover the articulation implied by early fingerings?

Let us check the possible alternative ways:

1. In order to reproduce faithfully early-fingering articulation using modern fingerings:
 - (a) The player studies and masters early fingerings.
 - (b) The player applies these fingerings to a piece.
 - (c) In the process the player deduces the

required articulation and rhythm.

- (d) Finally the player studies and performs the piece using the safety of modern fingering, although trying to reproduce the effect of early fingering.

This cumbersome procedure certainly does not look like a sensible approach to authentic interpretation, or to professional study and performance either.

2. The player studies *general* texts about articulation, rhythmical alterations and early fingerings, then reads the score and tries to reproduce on the keyboard the general effects that early fingerings are supposed to produce. The problem is that the direct effect of early fingering on the player and the music has now been substituted by an intellectual elaboration. At this point the player is not using any of the all-important information—about the stylish interpretation of every passage—that she/he can gather from the tactile feeling and sound obtained by playing the score with early fingerings.

3. Possibly the most common way is the perpetuation of manners that students learn from teachers and recordings. This appears to be the prevalent present-day trend, whereby all sorts of "natural" or "expressive" fads (sometimes barely supported by historical sources from the harpsichord era) keep accumulating at an alarming rate.

Final arguments for the adoption of traditional fingerings

A recent piece of writing comments on the matter and is worth quoting here:

"... just as players (and the listening public) 40 years ago wondered whether early instruments could ever be played with complete mastery and beauty, as suggested by original commentaries, treatises, and the music itself, it just took time for modern players to digest all the information and

practice enough to make it happen. I suggest that the same is true with early keyboard fingering. Only those who completely commit themselves to cross-fingering and all the other techniques of the day, without compromise, will be able to discover the ins and out of it all.

“... the effects desired by players of any given instrument were similar to those sought by contemporary players of other instruments. I think it is invaluable to hear how similar passages sound when played on wind and bowed instruments, where tonguing and bow reversals produce the effect of small separations between individual notes, and also two-note pairs. Why would harpsichordists of the day be relieved of achieving these common effects? Would not their playing, except for what is uniquely idiomatic to their particular instrument, be in accord with the articulations of their fellow musicians?”²⁴

“... the middle three fingers were best suited to bring about the desired musical effects, and [they] used the little finger and thumb according to what they did best. ... ‘Avoiding’ the thumb must have been about avoiding a repeated disruption of what the primary fingers needed to do, and which the thumb, being a simple lever, can only mimic for a note or two.”²⁵

This completes the present discussion of modern versus traditional fingering. We have reviewed the compelling evidence showing that the only sensible way of reproducing early articulation and rhythms on historical keyboards is using the traditional technique.

Let us now deal with yet another common present-day departure from the traditional technique: an improper application of the hand-shifting movement.

Finger Crossing versus Hand Shifting

As already mentioned, both finger crossing and hand shifting are historical, and both are part and parcel of early keyboard technique. This was already acknowledged in the 1970s. More recent works explain in full detail (a)

the differences between the two procedures and (b) where each procedure should be employed.²⁶ Having described them above, let us review them again with more detail about the hand and finger movements involved.

Finger Crossing. In this movement a long finger crosses over another long one (while the latter is slightly retracted towards the palm of the hand) in order to play scales with groups of two fingers, or else sometimes three fingers in scales with accidentals. The finger-crossing movement was already described with remarkably full details in Renaissance sources (see Fig. 3),²⁷ as well as later in Baroque ones.²⁸ Its use for scales was consistently prescribed, with unmistakable terms such as the frequent French expression “*doigts croisés*”, up to the end of the Baroque era.



Fig. 3 - First lines and coat of arms from the title page of Fray Tomás de Sancta María's *Arte de Tañer Fantasia*, Valladolid 1565. This treatise includes the first ever detailed description of finger movements and crossings on the keyboard.

Some historical sources also suggested making the finger crossing easier by slightly turning the hand to the right in ascending scales, and to the left in descending ones. It is important to bear in mind that finger crossing is a procedure meant mainly for diatonic scales, where it produces very naturally a detached or non-legato articulation.

However, the finger-crossing movement also facilitates a full legato when so required: this was clarified in 18th-century sources.²⁹

Hand Shifting. Having played some notes

using a sequence of contiguous fingers, here we lift the hand in order to go and play another sequence further up or down the keyboard. This technique was used in passages such as Fig. 4, where in bars 5-7 a Scarlatti contemporary would finger with 4 3 2 every single right-hand triplet.



Fig. 4 - Initial great stave of Sonata VI from Domenico Scarlatti's Essercizi c. 1738, facsimile.

Unfortunately, some modern players use fast repeated hand shifting also when playing scales with paired fingerings, and hardly use the finger crossing movement at all: this is at present the prevalent technique in Italy.³⁰ As a consequence, true legato becomes impossible. Let me quote Daniel Jencka: "What I have found with hand shifting is that it inevitably wants to produce some kind of space between the two notes at the shift."³¹

We have now reached a contradiction, because a strict legato was an important part of the baroque keyboard articulation palette, as described both in treatises and in scores: well-known are the full details we find in François Couperin's editions of his own pieces, which include directions such as "*tres liés*". More importantly perhaps, the present author is not aware of any extant historical source prescribing hand shiftings when playing scales with pairwise fingerings.

Conclusions and recent progress

Playing early keyboards with early fingerings is feasible for the whole Baroque keyboard repertoire, and the benefit is a significantly more stylish interpretation. When playing a piece, the use of early fingerings is of great help for the player wishing to discover and reproduce the fine details of articulation—

and sometimes also rhythmic alterations—expected by the composer. Finger crossing and hand shifting were the two mainstays of keyboard technique in the Baroque era. Both techniques are historical and complementary: Finger crossing is the main procedure for scales, while hand shifting is best for other types of passage.

Playing both Renaissance and Early Baroque keyboard music with period fingerings has become the rule during the last few decades. In recent years we are happy to see that—at long last—period fingerings are being increasingly used also for High Baroque music, including technically demanding masterpieces by great composers such as F. Couperin, Rameau and J.S. Bach. A recent video is available online showing renowned British harpsichordist Richard Egarr playing the Prelude from J.S. Bach's Third English Suite using Baroque fingerings.³² A detail of the cross-fingering finger movement can be viewed in Egarr's recent video of the Allemande from Bach's Fourth French Suite.³²

1 Throughout this paper we use "early" for the Renaissance and Baroque musical eras, c.1500-1750.

2 By "thumb-based" we mean the prevalent use of the thumb—instead of cross fingering—for scales in both hands: this
3 technique was introduced from c.1730 onwards, but only became prevalent after c.1745, well after most of the Baroque
4 harpsichord masterpieces had been composed.

5 Carl Philipp Emanuel Bach, *Versuch über die wahre Art das Clavier zu spielen*. Part I. Berlin 1753, trans. & ed.

6 William Mitchell, *Essay on the True Art of playing keyboard* (London: Eulenburg,1974).

7 See Maria Boxall, *Harpsichord Method* (London: Schott & Co.,1977).

8 See for example Mark Lindley and Maria Boxall, *Early Keyboard Fingerings: an Anthology*. (London: Schott, 1982).

9 Catharina van Hemessen, *Girl at the Virginal*, 1548. www.wallraf.museum <https://commons.wikimedia.org/w/index.php?curid=39648296>

10 as shown in recent videos (F. Couperin recital, 2016) <https://www.youtube.com/watch?v=eHFI5J-3wZI> at 0:25, and
11 <https://www.youtube.com/watch?v=yP86A8XmZ7U> at 0:55.

12 Michel de Saint Lambert, *Les Principes du Clavecin* (Paris, 1702), p. 41. Trans. Rebecca Harris-Warrick,
13 *Principles of the Harpsichord* (Cambridge: Cambridge University Press, 1984): 74.

14 As soon as we try to play J.S. Bach's English Suites (c.1715-1720) with traditional technique, it becomes obvious that the
15 young Bach had already dispensed with the static hand principle. It held however for other harpsichordists, and only
16 became obsolete with the early fortepiano technique: see Pasquali, Nicolò. *The Art of Fingering the Harpsichord*.
17 (London: Bremner, c.1760): Plate IV.

18 For a general history with a full discussion of the preference for "strong/weak fingers in strong/weak notes" see Mark
19 Lindley, "Fingering" in *The New Grove Dictionary of Musical Instruments*, Stanely Sadie, ed. (London: Macmillan, 1984).

20 For a comprehensive description of the Baroque fingering system see Claudio Di Veroli, *Baroque Keyboard Fingerings: A Method*. (1st ed. Buenos Aires, 1983. 7th ed. Bray, Ireland & Lucca, Italy, 2016). <http://finger.braybaroque.ie/>

21 Edgar Hunt, "An Interview with Kenneth Gilbert", in *The English Harpsichord Magazine* 1/3 (1974).

22 Ton Koopman, "My Lady Nevell's Booke and old fingering," in *The English Harpsichord Magazine* 2/1 (Oct. 1977).

23 This article clarifies some misconceptions about historical fingerings that have been commonplace from the nineteenth
24 century up to the present day.

25 Lindley and Boxall, *Ibid*.

26 *Il Clavicembalo*, (EDT Torino, 1st ed. 1984, 2nd revised ed. 2005). Early fingerings are treated in the Quarta Parte
27 (Fourth Part, by co-authors Emilia Fadini and Alda Bellasich), which includes a detailed description of Renaissance and
28 Early Baroque paired fingering for scales.

29 This was personally reported to the present author by one of Marie-Claire Alain's students, the renowned organist Cristina
30 García Banegas. A few years ago the author found in YouTube a video of Alain in old age playing Bach on the organ using
31 finger crossings.

32 See the video produced by the *Ministero dell'Istruzione* in 2012, with Enrico Baiano (who teaches the harpsichord at the
33 Conservatorio in Avellino): <https://www.youtube.com/watch?v=Bdl-CgQ8UhU>. At 1:09:55 Baiano can be seen playing a
34 passage of J.S. Bach's *Concerto Italiano* with early fingerings.

35 See Fadini and Bellasich, *Ibid*.

36 For example, in the favourably-reviewed performance of the 5th Brandenburg Concerto in J.S. Bach's 300th Anniversary in
37 Buenos Aires in March 1985. The harpsichord part that the present author marked up with Baroque fingerings for the 1985
38 performance is now available for free download from <https://www.braybaroque.ie/harps/napo/>.

39 Mark Lindley, "An Introduction to A. Scarlatti's Toccata Prima", in *Early Music* 10/3: 333-339.

40 The quoted remark is on p. 339.

41 Mark Lindley, "Keyboard technique and articulation: evidence for the performance practices of Bach, Handel and Scarlatti",
42 in Peter Williams, ed., *Bach, Handel and Scarlatti: Tercentenary Essays* (Cambridge: Cambridge University Press, 1985):
43 207-243.

44 See Di Veroli, op. cit., 2016, Rule S, pp. 11 and 48.

45 See Di Veroli, *Playing the Baroque Harpsichord: essays on the instrument, interpretation and performance, with relevant
46 topics for the clavichord and organ*. (Bray, Ireland: eBook, 1st ed. 2010, 2nd ed. 2014), Section 5.7 Tempi for the
47 Goldberg Variations, 138-142.

48 In modern times this important concept was first put forward by Albert Schweitzer in his epoch-making book *J. S. Bach,
49 Le Musicien-poète* (Paris, 1904). In Ch. XXXI Schweitzer recommended using the articulation marks Bach wrote in his
50 scores for melodic instruments, as models to be applied to his keyboard scores, where such marks are very rarely found.

51 Daniel Jencka, "Re: early fingering in rapid passages", in HPSCHD-L online forum, <Online, 31 Jan 2016>.

52 HYPERLINK "<https://list.uiowa.edu/scripts/wa.exe?A2=ind16018L=HPSCHD-L&F=&S=&P=158886>"

53 <https://list.uiowa.edu/scripts/14-15>.

54 See Di Veroli, op. cit. 2016, 14-15.

55 See Fray Tomás de Sancta María, *Arte de Tañer Fantasia*. (Valladolid,1565), Part I, pp.38ff.

56 See Michel Corrette, *Les Amusemens du Parnasse. Methode courte et facile pour apprendre à toucher le Clavecin*.
57 (Paris, 1749). On Plate "DEMONSTRATION DU CLAVIER A RAVAILLEMENT" for an ascending scale with the right hand
58 scale, his advice is "passé le troisième doigt pardessus le 4e doigt alternativement" ("pass the third finger over the
59 4th finger repeatedly"). Interestingly, in the following page entitled "autre Maniere de doigter l'Octave", Corrette describes
60 the alternative fingering of scales with passings of the thumb, which were becoming increasingly fashionable as the
61 twilight of the harpsichord era was fast approaching.

62 See Carl Philipp Emanuel Bach, op. cit. (1753 / London, 1974) Chapter One: Fingering, par. 64.

63 The author has been told by Italian harpsichordists and organists that this is the technique introduced by Emilia Fadini
64 (and now being transmitted to the younger generations of players). Be this as it may, Fadini's and Bellasich treatment of
65 early fingerings, in their *Il Clavicembalo*, includes unmistakable historical finger crossing directions: on p. 249 by Sancta
66 María and on p. 292 by C.P.E. Bach (see our footnotes 27 and 29).

67 D. Jencka, op. cit., 3rd paragraph.

68 <https://www.youtube.com/watch?v=1CF-yA7dBJ4>, accessed Dec. 2018.

69 <https://www.youtube.com/watch?v=fpFe0NN9bks>, left hand, from 2:50 onwards, accessed Dec. 2018.