CHAPTER 5 - Conclusions *DE INVENTIONE*

If they had to choose the most iconic, standard-bearing musical instrument for mainstream Classical music in the 21st c., most people would, without hesitation, point to the violin. The leader of the modern orchestra, it has dominated concert halls since the 19th c. and earlier. Yet many would be equally hard-pressed to give an account of that instrument's origins in the 16th century. This part of the modern violin's story has been notoriously difficult to pinpoint for organologists and music historians, and many words have been written in attempts to clarify the historical picture.[1]

To undertake a coherent summary of research regarding the violin in the 16th c. would be a daunting task by all accounts. I mention violin research as a comparative example, so that the reader may understand that such an unraveling of violin matters in the 16th c. would prove far less challenging than an in-depth summary of general medieval chordophone research, which typically has covered a much larger body of material, a much wider time span and a much wider geographical field than Italy. Rather than attempt to summarize all published research on the cetra until now, research publications of relevance to this study will be referenced as footnotes below.

As a final summary, the previous four chapters on the origins, identity, morphology and part-by-part dissection of the cetra will now be formulated in the following 20 conclusions, achieved primarily through the analysis of the iconographical data presented in **Chapter 3** (Catalog of Sources in the Visual Arts) against a background of contemporary sources of music theory and general world view:

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[1] See for example the voluminous bibliography offered on the history of the violin at MGG: https://www.mgg-online.com/article?id=mgg16216&v=1.1&q=violin&rs=id-959b7be9-4bc4-dfc8-6ddb-c9ea96540359 (accessed 18.03.18.).

1. By sometime in the 11th c., possibly earlier, a necked chordophone was being cultivated on the Italian peninsula which carried a Christian association. It was sanctioned by the Church, who fostered the use of its image in the visual arts and in Scriptural commentary.

2. The rise of this short-necked, gut-strung chordophone had partly, if not mainly, to do with the importation of Byzantine fashion, including musical instruments, into Italy from the 9th - 10th c. and perhaps earlier. This fashion included the use of the bow on short-necked chordophones of oval or waisted shape, which had previously been exclusively plucked instruments.[2]

3. Possible influences for the body shape of the proto-cetra were two: the late Byzantine pandura and the late Byzantine-Carolingian lyre, both instruments of Christian culture. The elongated, spatulate-bodied pandura, with disc-shaped peg-head, shown in the 9th-c. Stuttgart Psalter, occupied miniatures that were copied from "a model that was the work of the seventh or eighth century from the Milanese region", as has found general acceptance among Carolingian art historians.[3]

4. The horns were first seen as shoulder ornaments on a handful of Eastern Roman(Byzantine) *pandurae* from the 6th-8th centuries. It is not clear whether they first appeared on the pandura as references to the chelys-lyre-horns or kithara arms, or whether that referential meaning became

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[2] Some researchers have asserted that the early vielle led to the development of the medieval cittern, as for example Curt Sachs: "Die mittelalterliche Sister ist nichts anderes als eine gezupfte und zum Zupfen umgebildete Fiedel vom Typus des 10. bis 12. Jahrhunderts", Sachs 1974 (1919), 206. Winternitz opposed the view of Sachs (Winternitz 1961, 228), while others embraced it (Segerman 1999, 77).

[3] Schapiro 1980, 111.

fashionable much later. The horns had become standardized on the cetra by the 12th c., possibly referencing a heritage of earlier Roman/Christian instruments, but also labeling this chordophone as a Latin "plectrum cetra", rather than one that was played in Byzantine style, on the shoulder, with a bow.[4]

5. The iconography of the cetra antedates the earliest citole iconography, as confirmed by a close examination of 11th- and 12th-c. manuscript illustration of Italian provenance.[5] Pilgrim traffic, particularly to Santiago de Compostella, facilitated the dispersal of Latin fashion and culture to the west and north, including the cetra of the 11th-early 13th centuries. The confrontation of the Latin instrument with cultures outside of the Italian peninsula, for example in northern Spain and southern France, produced a local response, the citole, which quickly became fashionable in northwestern Europe.

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[4] The importance of the research of Winternitz, in particular in his publication of 1961, is that he gave an account of the presence of horns on necked chordophones over many centuries of European culture. He clearly went too far in seeing the instruments of the Utrecht Psalter as "evidence of the transformation of the ancient kithara into an instrument with stopped strings" (Winternitz 1961, 35). No instrument was "transformed"; the Utrecht Psalter instruments are Christianized pandurae featuring shoulder ornaments which have to do with multiple aesthetic elements, including a possible reference to kithara-lyre horns.

[5] Many publications have asserted that the citole preceded the cetra, illustrating an important weakness of research patterns in 20th-c. historical organology and music iconography: namely, the propensity of early and not-so-early researchers (Schlesinger 1910, Galpin 1910, Panum 1915, Sachs 1913, Behn 1918 et. al.) to make pronouncements concerning the origin and evolution of instrument types without the necessity of providing any credible reference other than their own claims. This fact has not prevented their work being taken as authoritative by later generations, who, too often, uncritically recycle commonplaces such as "the citole preceded the cetra", without undertaking the tedious exercise of checking the sources to see whether the commonplace is, in fact, true (for one of many examples using this general method, see Burzik 1994).
Publications taking the citole-first view include: Panum 1915 (1971), 459; Dart 1948, 50; Winternitz 1961, 226 (calling the citoles in the 14th-c. Queen Mary Psalter "citterns"); Wright 1977, 31; Stauder 1979 sees the citole becoming the 15th-c. cittern, with the earlier cittern of Antelami being influenced by the *tanbur* (which he does not clearly define) and the vielle; Burzik 1994, 438; Ivanoff 1995; Segerman 1999; Tyler, 2001.

6. The cetra went through three distinct phases of cultivation in Italy which may be termed Romanesque (c.11th c. - c. 1230), Franciscan (c. 1230's - late 14th c.) and Humanist (later 14th - c. 1530's). For the purpose of this study, the Humanist cetra period ends with the disappearance of kollopes-frets (block frets) c. 1530.

7. The Romanesque phase was defined by a synthesis of Byzantine fashion and exotic novelty, nuts-and-bolts music theory and a humble, popular, guitar-like instrument, all deeply embedded in Christian culture. It was cultivated by monks and tradesmen alike, and the Church realized it could appeal to all levels of society as a Christian ambassador.

8. By around 1200, probably earlier, the Italian chordophone was known by the vernacular term "cetra" or a related variant such as "cetera", "citara", or other possibilities.

9. The Franciscan period gave the cetra a more sharply focused Christian identity, thanks to an association with the most successful Saint of the Middle Ages, St. Francis.[6] As an attribute, the cetra was to the Saint what the Rickenbacker guitar was to John Lennon. The first question to ask about the context of any cetra depiction, in any part of Italy after c. 1220 is: is the artist working in a Franciscan context?

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[6] This is the reason why the Lower Church of San Francesco in Assisi has a cycle of 16 meticulously detailed cetra images, in addition to two by Cimabue directly above these, one floor higher, in the Upper Church. It is very likely the reason that the Brescian music theorist Lanfranco remembered in 1533 that the cetra was the instrument "of the Perugians" (Assisi), and, indeed, a high density of monuments containing images of the cetra are found within a 50-km radius of Lago Trasimeno in Umbria.

10. A possible (albeit inconclusive) "export manifestation" of the cetra outside of Italy and during the Franciscan period is the *guiterne latine* mentioned in 14th-c. Parisian literature and treatises.[7]

11. The features of the Humanist cetra were referencing (1) Classical authors such as Aristotle, Pollux and many others who commented on and described specific parts of the kithara, and (2) ancient Roman monuments showing the kithara, including the parts mentioned in literary works, from the last decades of the 14th and first decades of the 15th century.

12. The Franciscan cetra had existed concurrently with the citole, thus the citole was not the predecessor of the cetra.[8] Later, on selected examples from c. 1470/1480-c. 1520, a manifestation of two ornamental features, the neck "hook" and a tapering resonator depth, recalled the Antique kithara and/or the citole of the Chivalric past.[9] The latter association might be seen in the name form given uniquely by Tinctoris c. 1480, *cetula (*mixing "cetra" with the Spanish "cítola") and later, Galilei's remark in 1581 that "the English were the first to use the cetra".[10] These are hints that seem consistent with the Italian fascination with epic tales from Carolingian/Arthurian literature during the second half of the 15th / early 16th century. No examples of a necked

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7 An untenable view on the meaning of *guiterne mouresque* and *guiterne latine* is presented in Wright 1977, 22-23, and Burzik 1994, 389, 410-412, who unfortunately adopts Wright's view. Two Parisian drawings from the 1360's and 1370's must be considered as candidates for the *guiterne latine* (see Appendix I, 24, 25).

8 See also Conclusion 5 above.

9 For arguments connecting the morphology of the cetra with the citole, see Wright 1977, 31. Wright's assertion has thus far received general acceptance (Ivanoff 1995).

10 Equally, many publications use "citole" and "cetra" interchangeably and as synonyms, another commonplace in musicology and internet culture of 2018. Ivanoff 1995 and Tyler 2001 (online encyclopedias *MGG* and *Grove Online* respectively) are but two examples of "authoritative" sources of music history disseminating, in this instance, non-factual information regarding these terms.

chordophone with a thumb-hole, as found on the citole, have thus far been unearthed in Italian iconography.

13. The Romanesque cetra had three or four strings (or string pairs), pointing to a choice between Biblical symbolism and Boethius. This remained the situation during the Franciscan period, with the exception of three important and related monuments, **CE 8, 10** and **14**, with twelve strings (3 x 4). The Humanist cetra could have four, five or six string-pairs, although the classic model is represented by **CE 32** and the contemporary text of Tinctoris: in both cases, a four-course instrument. Any sources c. 1500 or later showing twelve pegs do not usually show a corresponding string grouping. By Lanfranco (1533), the cetra has six string-pairs.

14. The introduction of metal strings was a new feature on the Humanist cetra, driven in part by textual references to commentaries upon Classical authors, and on the practical side, by substantial technical progress in the manufacture of drawn iron strings in Germany. The Romanesque and Franciscan cetra very likely had gut strings, because a stringing in metal is thought to have been technologically hardly viable, and because the cetra from c. 1250-1330/40 often had a bordun string, which otherwise is only known from the gut-strung vielle of the same period.[11]

15. There are four different fret types, defined by shape, size and period of use. All were of wood, allowing for exceptional possibilities such as bone or some other dense material. Slat-frets are seen during the Romanesque and Franciscan periods, while triangular-profile wooden segments constitute the

[11] According to Segerman 1999, 84, before the late 14th c., "the iron wire available was too difficult to draw, and so was wrought (hammered into shape). This made it too uneven in thickness to be usable for musical purposes".

second fret type, limited to selected Franciscan sources. After c. 1400 come kollopes-frets (large block-frets) which project beyond the upper edge of the fingerboard; the fret ends are thus non-functional but are formal attributes which identify the instrument's tie with the Classical kithara. The fourth type features saw-tooth or inclined, scalloped contour of the fret surface sloping up to the actual fretting edge. Its period of use begins at the end of the 15th century.

16. Across the spectrum of iconographical sources for our period of study until c. 1500, depicted fret block tops appear to be flat, of uniform height, with the exception of the fourth type mentioned above.[12] A fret block was used to play a note by pressing the finger down over the space directly behind it, in other words, the space on the nut-facing side of the block.[13] A second possibility is to use the nail of the left-hand finger to press down on the flat surface of the block, close to its bridge-facing edge, to stop a note (see **Chapter 6**, section 6.3.3).

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[12] Allworth 1978, 26, proposed a saw-tooth profile for the tops of cetra frets, but there are no depictions in the Catalog until scalloped frets c. 1500 which show such a profile for the frets. Segerman 1978, 56, criticized Allworth: "We conclude that Mr. Allworth has misinterpreted the data…", but later proposed a more shaky interpretation (Segerman 1999, 85), arguing that the tops of the fret blocks were "gently curved" to allow precise finger placement to control intonation. Additionally, he contends that the humped tops produced a buzzing sound like a bray harp. Segerman gives no explanation for the spaces in between the blocks, and seems unaware that the relief-carved, detailed *cetre* in Rimini (CE 25) have flat-topped fret blocks, including one that can be examined from floor level (CE 25a). His proposal would create a uniquely regulated stopped-string instrument in European music, without precedent before or since.

[13] For an opposing view with a fundamental lack of evidence of any kind, see Segerman 1999, 85.

17. The frets were fixed to the fingerboard; they were not "moveable".[14]

18. The preliminary conclusion regarding the disposition of frets on the cetra has been that they were diatonic until c. 1300 and that cetra players needed only the scale of *musica recta* which diatonic frets could provide. The earliest unequivocal chromatically-fretted cetra depiction is found c. 1315 (**CE 15**), allowing chromatic pitches which had previously been hardly required in the musical practice associated with the cetra (primarily devotional laude, popular songs and dances).[15] Images from the 15th and first quarter of the 16th c. are generally suggestive of chromatic frets, with candidates for diatonic fretting fewer but persistently present.
Following a period of playing the constructed cetre described in Chapter 6, I now feel that this conclusion should be revised: diatonic and chromatic fret systems should not be thought of as either-or and mutually exclusive. It is in

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[14] Some authors have asserted that the frets were inserted into slots in the neck for the purpose of allowing different fret systems to be interchanged (Tyler 1980, 16; Segerman 1999, 85; Burzik 1994, 424; Tyler 2001). Tyler 1980, 16 (Caption to a reproduction of what is here published as CE 30b): "Notice the fret system, shown as alterable wooden 'block' frets which can be re-arranged for different tones and semitones in contemporary *intarsia* pictures". Tyler provides a rather novel response to the problem that some cetra fingerboards seem diatonic and others chromatic, with slotted, interchangeable frets, the player can easily switch between both…but unfortunately, this idea is generated from studying later 16th-c. metal-fret fingerboards of citterns which mix diatonic and chromatic fretting, a possibility posing no technical difficulty for a fingerboard with fixed metal frets of different segment lengths, as these had.
Objective evidence for such a claim is therefore fully lacking. Authors such as Burzik 1994, 424, seem quite content to recycle such "authoritative" information as fact, without making any real contribution to the historical picture.

[15] The same phenomenon is contemporaneously documented by Jerome of Moravia concerning vielle playing in Paris c. 1300, an instrument which shared features with the 14th-c. cetra: string configuration (including bordun strings), string material (gut), possible open string tunings, and chromatic notes on the fingerboard. For more on Moravia, see Page 1979.
Musicologist Louis Grijp wrote that the "medieval cetula" had a "fully diatonic fretting" but did not say when chromatic fretting began; he notes that in the *intarsie* from the period of Tinctoris, "we cannot discern any difference between major and minor seconds, an important argument against fully diatonic fretting" (Grijp 1981, 91).

fact possible to play chromatic pitches on a diatonic set of flat-topped frets, as pointed out in Conclusion 16 above.

19. The tuning of the four-string Humanist cetra could not avoid being connected with the four-string cithara in the treatise of Boethius. The Berkeley treatise provides evidence for this claim, and Tinctoris' account of the tuning of the cetra, as it has invariably been understood today, is highly problematic and must therefore be carefully reconsidered within the Boethian background and context of Latin-language music theory. Additionally, the string material of the Humanist cetra (brass and iron), through physical limitations of tensile strength, restricted the tuning range of the open strings; the foundations for 16th-c. cittern tunings were thus established.

20. The tunings of the 16th- and 17th-c. cittern forms are all related to the Humanist cetra and, by association, the Boethian *cithara*.