

# Harpsichord & *fortepiano*

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Musical Instrument Research Catalog  
(MIRCAt)

# CHAMBONNIÈRES VERSUS LOUIS COUPERIN: ATTRIBUTING THE F MAJOR CHACONNE

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By Francis Knights, Dan Tidhar and Pablo Padilla

Jacques Champion de Chambonnières (1601/2-1672), “*gentilhomme ordinaire de la Chambre du Roy*” and the founder of the French clavessin school, is today probably more honoured in musicological histories than he is performed. Despite his attested importance, which was as clear to his contemporaries as it is to modern scholars, the music perhaps lacks something of the melodic appeal and harmonic richness that came to characterize the best of the late 17th-century French harpsichord school. His older contemporary Marin de Mersenne thought very highly of him: “After listening to the harpsichord played by the Sieur de Chambonnières ... I can only express my feeling by saying that one should hear nothing afterwards, whether one desires lovely melodies and fine accompanying parts mingled together, beauty of rhythm, fine touch or lightness and speed of hand ... it can be said that this instrument has met its ultimate master.”<sup>1</sup>

Constantijn Huygens was another devotee, at least before they actually met; later, he reports something of a decline in Chambonnières as composer and player, adding “The situation of the Marquis de Chambonnière would be pitiable if he had not put on such airs in the past.”<sup>2</sup> At his death, having been superseded at court as a keyboard player (he seems not to have been able to read figured bass...), his somewhat modest estate included four keyboards: a spinet, a regal and two harpsichords.

Regardless, he was a strong supporter of the younger generation of talent, and many later French harpsichord composers owed a considerable creative debt to him. David Fuller sums up his music thus: “What Chambonnières failed to achieve in life informs his music: the aristocracy of concealed means, where effort seems remote and pedantry is scorned.”<sup>3</sup>

As well as a certain stylistic narrowness, Chambonnières operated within a very small group of genres. The vast majority of his 150-or-so extant pieces are suite movements: allemandes, courantes, sarabandes and gigue; and astonishingly, half of the total are courantes. There are no preludes, and only a handful of pavaues, chaconnes and dances. 60 of the pieces, in 11 suites, appear in the two published volumes dated 1670.<sup>4</sup> Of the 20-odd manuscript sources, the late 17th-century Bauyn Manuscript (Paris, Bibliothèque nationale de France, Rés. Vm7 674 and 675)<sup>5</sup> is the most important, with the first third of the collection being devoted to Chambonnières. Other manuscripts include unattributed works, even unmeasured preludes that might possibly be his work too.<sup>6</sup>

One of the pieces found in Bauyn is a particularly splendid *Chaconne en rondeau* in F Major. This has a melodic grace and harmonic richness which seems to lie outside Chambonnières’ normal mode of expression in his published suites. Although the manuscript is quite clear that this is Chambonnières’ work (see ex.1), and it was

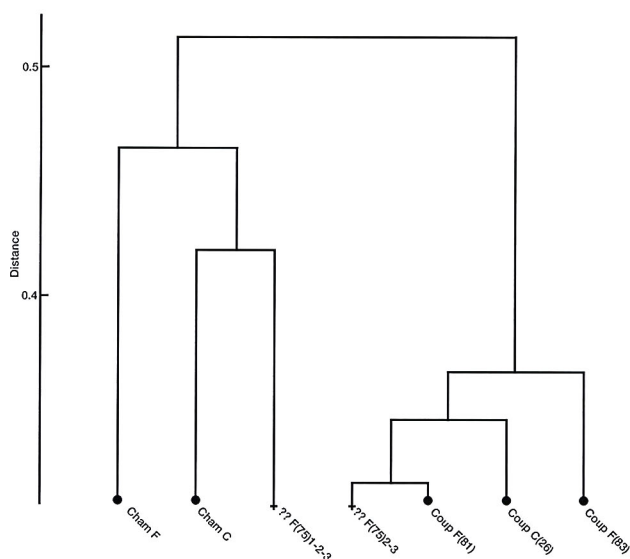


Ex.1 Chambonnières, Chaconne in F Major (opening), Bauyn MS f.45v

published as such in his collected works<sup>7</sup> and as a separate work in Howard Ferguson's influential eight-volume nationally-organized 1960s keyboard series for OUP,<sup>8</sup> it has become very familiar through its appearance in Alan Curtis' complete clavessin works of Louis Couperin for Heugel a few years later.<sup>9</sup> There, it appears as part of a fine suite in F, and is headed "[Chambonnières?/Louis Couperin?]"; as the volume contains no critical commentary, the only justification found is a short note in the introduction, where Curtis puts the case rather strongly: "Chambonnières is best known today for a chaconne which did not appear in either of his published volumes, if attributed to him only in the Bauyn MS, and on the overwhelming evidence of style, must certainly have been written by Couperin."<sup>10</sup> This ascription has been accepted without comment by many players, and the Chaconne has often been performed as a "Louis Couperin" work since then. A more recent editor, Bruce Gustafson, demurs, and his complete Bauyn edition is clear on the matter: "...the present editor does not accept Curtis' attribution".<sup>11</sup> Aside from the matter of leading experts in the field disagreeing on the authorship of a work on unspecified stylistic grounds, there are two other complications: Louis Couperin may not be a viable candidate in any case; and a different source gives two further couplets to this Chaconne which are problematic.

The Couperin family, which would become the greatest musical dynasty of France, from an early stage appeared to breed musicians and composers, and it therefore comes as something of a surprise to discover that, with one exception,<sup>12</sup> no first names appear in any "Couperin" source from the seventeenth century which would help distinguish the different members of the family. Despite the fact that the word "Louis" is completely absent from any sources, all of the surviving "Monsieur Couperin" or "Couperin" works have, since the nineteenth century,<sup>13</sup> been attributed to Louis Couperin (1626-1661), a known and respected composer who was organist of Saint-Gervais in Paris from 1653-61.<sup>14</sup> In terms of style — and allowing for the genre difference between liturgical organ works and stringed keyboard suites — the organ works attributed to Louis on the basis of the date and position cited in the Oldham manuscript<sup>15</sup> seem to be rather different to (and earlier than) the magnificent corpus of 130-odd pieces for harpsichord. As a result of this, and with much other interesting supporting evidence, Glen Wilson has convincingly argued that these are the works of two different composers, noting "the composer of the organ pieces is in every way less competent than that of the harpsichord works".<sup>16</sup> He instead proposes as a very plausible candidate for the latter corpus Louis' younger brother Charles (1639-1679), a professional keyboard player and known composer.<sup>17</sup> This Couperin was of course father of Couperin "le Grand" (1668-1733).

The "Chambonnières" Chaconne in F includes three couplets in Bauyn and in a contemporary manuscript, Brussels 27220.<sup>18</sup> However, a third 17<sup>th</sup>-century source in Paris (which also has a number of concordances with Bauyn),<sup>19</sup> adds two further couplets. Curtis evidently (and rightly) considers these of inferior quality, and prints them in



Ex.2 Dendrogram comparing selected major-key chaconnes by Chambonnières (Cham) and “Monsieur” Couperin (Coup); the upper-case letter following refers to the original key, and the number in parenthesis after Coup to the work number in the 1972 Curtis edition. The “Chambonnières” Chaconne in F is labelled “?”, and separated into rondeau-plus-couplets 1-3, and couplets 4-5 alone

small type. They certainly appear to be later additions, which may not derive from the original composer. Analysis should make possible some conclusions as to whether they belong to the main work.

In order to provide evidence from a different methodological perspective for the issues of attribution raised here, a methodology designed as part of the current research project “Formal Methods in Musicology”<sup>20</sup> has been applied. This uses standard statistical analysis to assess the likelihood of, say, two pieces being by the same composer, by applying simple yet powerful computational tools. One of the most effective of these consists of hierarchical clustering applied to pitch transition matrices. These are 12 x 12 matrices representing the 12 possible chromatic semitones on each axis, and expressing the probability of one note following another; it turns out that a great deal of discernible stylistic information is encoded just in melodic patterns. As a basic

example, a matrix representing plainchant and one representing a piece by Schoenberg look very different. From these matrices, data can be processed and compared, to look for patterns, similarities and differences. The process works best at present with single lines, so the data is prepared via Sibelius files, which are then transposed<sup>21</sup> and exported as MIDI and serve as input to code written in Matlab.<sup>22</sup> Normally both the top and bottom melodic lines are prepared and compared separately, but the latter component is not relevant for compositional comparison where chaconnes are concerned, so just the melodic material is considered here. The pitch transition matrices are calculated using the MIDI Toolbox,<sup>23</sup> and are created with duration and metrical weightings according to Richard Parncutt’s perceptual model.<sup>24</sup> The matrices, one per piece, form a basis for various clustering and outlier-detection algorithms which we implemented in Matlab to explore the stylistic relations between them.



For this experiment, the melodic lines of major-key<sup>25</sup> chaconnes by Chambonnières and “Monsieur” Couperin were processed, run in Matlab and then output as a dendrogram (ex.2), which creates a hierarchical visualization, where proximity on the horizontal axis represents stylistic distance. From this, it can be seen that the F Major chaconne (rondeau and couplets 1-3) is located next to two authenticated Chambonnières chaconnes, while the couplets 4-5 appear closer to the Couperin works. Based on experience interpreting such data while examining stylistic, attribution and chronological issues in other Couperin, Bach and Haydn works as part of the “Formal Methods in Musicology” project, it seems clear to us that the F Major chaconne attributed to Chambonnières in Bauyn is indeed by that composer, and also that the added couplets are unlikely to be by him, and might even be by Charles Couperin, the likely composer of the comparison chaconnes in ex.2.

As we have observed elsewhere,<sup>26</sup> stylistic comparison, even by the most expert of scholars, needs to be raised above the level of simple assertion to be convincing. Such are the complexity of the components making up a musical style, and the subtle interactions between them, that by-hand comparison between works in very similar styles and genres has either been excessively laborious, or hardly possible. These newly-emerging computational methods of analysis offer a way forward, where high-level mathematics, statistical methods, graph theory, machine learning and neural networks can all be used to delve into the music itself, then compare, cluster and display patterns and components that might not even be visible to traditional musicology. In this spirit of sharing a new method, we are preparing for public release both some of the code used, and a book explaining from first principles how to apply these to various sorts of musical data, so that anyone can make use of these powerful new research tools.

<sup>1</sup> Marin Mersenne, *Harmonicorum instrumentorum libri IV* (Paris, 1636).

<sup>2</sup> Quotations from David Fuller, *New Grove Dictionary of Music and Musicians*.

<sup>3</sup> Fuller, *New Grove Dictionary of Music and Musicians*.

<sup>4</sup> Jacques Champion de Chambonnières, *Les Pièces de Clavessin* (Paris, 1670).

<sup>5</sup> The complete source is available both in facsimile (Fuzeau), and edited by Bruce Gustafson, Paris, *Bibliothèque nationale de France, Rés. Vm7 674–675, the Bauyn Manuscript*, 4 vols, (New York, 2014).

<sup>6</sup> For a summary, see Fuller, *New Grove*. A source catalogue is given in Bruce Gustafson, *French Harpsichord Music of the 17th Century: a Thematic Catalogue of the Sources with Commentary* (Ann Arbor, 1979), updated in Bruce Gustafson and David Fuller, *A Catalogue of French Harpsichord Music, 1699–1782* (Oxford, 1990).

<sup>7</sup> Paul Brunold and André Tessier (eds.), *Jacques Champion De Chambonnières, Oeuvres Complètes* (New York, 2/1967).

<sup>8</sup> Howard Ferguson (ed.), *Early French Keyboard music*, vol. 1 (Oxford, 1966), 22.

<sup>9</sup> Alan Curtis (ed.), *Louis Couperin, Pièces de Clavecin* (Paris, 1972).

<sup>10</sup> Curtis, *Louis Couperin*, ix.

<sup>11</sup> Gustafson, *Bauyn Manuscript*, vol.4, 101.

<sup>12</sup> The two organ masses issued by François Couperin ‘le Grand’ in 1690.


<sup>13</sup> From at least Louise Farrenc (ed), *Le Trésor des pianistes* (Paris, 1872), vol. 20, onwards, where 19 works by Couperin were printed as by “Louis” without comment.

<sup>14</sup> Jean Le Gallois, *Lettre de Mr Le Gallois à Mademoiselle Regnault de Solier touchant la musique* (Paris, 1680), p.74, says that Louis “excelled in composition” and had a “manner of playing ... full of harmonies and enriched with beautiful dissonances, design and imitation”.

- <sup>15</sup> Guy Oldham (ed.), *Louis Couperin, Pièces d'orgue* (Monaco, 2003). A large number of works give date and place of composition, from between 1650-1659; see for example Oldham, *Louis Couperin*, p.40: "Couperin Org<sup>re</sup> de S<sup>t</sup> Gervais le 4<sup>e</sup> Juillet 1653 a paris". The manuscript was acquired by Oldham in 1957 but not published for nearly half a century.
- <sup>16</sup> Glen Wilson, "The Other Mr Couperin", *Early Keyboard Journal* 30 (2013): 6-25.
- <sup>17</sup> A third Couperin brother, François (c.1631–c.1710), seems not to have been a composer
- <sup>18</sup> For details, see Gustafson iv, 54 and 101.
- <sup>19</sup> Bibliothèque Sainte Genèviève MS2348; see Gustafson iv, 59.
- <sup>20</sup> <http://formal-methods-in-musicology.webnode.com/>. For an outline of the processes, see Pablo Padilla, Francis Knights, Dan Tidhar and Adrián Tonatiuh Ruiz, "I: Identification and evolution of musical style I - Hierarchical transition networks and their modular structure", *Journal of Mathematics and Music* (forthcoming).
- <sup>21</sup> Experience has clearly shown that major and minor must be treated separately; and all works must be normalized to C Major/A Minor respectively, in order for any comparisons to be useful.
- <sup>22</sup> <https://www.mathworks.com/products/matlab.html>.
- <sup>23</sup> Eerola and Toivainen, "MIR in MATLAB: The MIDI Toolbox", ISMIR 2004.
- <sup>24</sup> Richard Parncutt, 'A perceptual model of pulse salience and metrical accent in musical rhythms', *Music Perception*, 11(4) (1994): 409-464.
- <sup>25</sup> Those in F (the original test key), and the adjacent key of C, both normalized to C.
- <sup>26</sup> Pablo Padilla, Francis Knights, Dan Tidhar and Adrián Tonatiuh Ruiz, "The attribution of Taverner and Tye's *O Splendor glorie*" (forthcoming).

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