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The Hotteterre Flute: Six Replicas in Search of a Myth

By ARDAL POWELL

> We tend to discover the past we set out to find. This is not because the past is a willfully imagined fiction but because it is such a complicated and multifaceted reality.
>
> —Norman F. Cantor, *Inventing the Middle Ages*

A POWERFUL ICON of the highly stylized visual and musical culture of seventeenth-century France, the "Hotteterre flute" today betokens in a wider sense the "baroque" flute constructed in three sections, with a conical bore and a seventh tonehole controlled by a key. This flute, presumed to have been invented at the court of Louis XIV to replace the simpler, cylindrical-bored "renaissance" instrument, embodied new technical features generally credited to members of the Hotteterre family, renowned makers and players of musettes and other woodwinds.[1] Yet for all the legendary position of the Hotteterres in the history of woodwind instruments, nothing more than a fascinating accumulation of inference and rumor supports the claim that any of them made improvements in the flute.

The Hotteterre dynasty first attracted the attention of scholars in the late nineteenth century, when the study of early music, the collecting of musical instruments, and the replication of historical models engaged the interest of not only a worldwide network of

I wish to acknowledge a 1993–94 National Endowment for the Humanities Fellowship for College Teachers and Independent Scholars, which made possible my study of the Hotteterre flutes by funding travel to Belgium, Germany, and Russia for a project not directly related to this one.

[1] Howard Mayer Brown's article "Flute" in the *New Grove Dictionary of Musical Instruments*, ed. Stanley Sadie (London and New York: Macmillan, 1984), states the conventional view of this development. The present essay will explore the emergence of this view. An unconventional explanation appeared in Christopher Addington, "In Search of the Baroque Flute," *Early Music* 12 (1984): 34–47, but this fantastic account is invalidated by the large number of misconceptions and elementary misinterpretations of documentary evidence it contains. For a typical response to Addington, see Peter Riedermeister, "'Neueste Forschungen' auf dem Holzweg: Die 'Bachflöte,'" *Tibia* 9 (1986): 200–203.

specialists, but also an educated public of musical amateurs. During the same period, a monograph on the Hotteterres reproduced for the first time Bernard Picart's frontispiece to Jacques Hotteterre's flute tutor of 1707, now perhaps the best-known image in the iconography of the flute (Plate 1).[2] Several transverse flutes marked HOTTETERRE with the device of an anchor, discovered within the last hundred years or more, have provided actual specimens of the alleged result of the Hotteterres' efforts (Table 1).

Specialists in woodwind history are generally aware of three "Hotteterre" flutes—in Berlin (Bn in Table 1), St. Petersburg (P471), and Graz (G)—all of which closely resemble the one in Picart's engraving.[3] Though the cap of the Graz flute is shorter than those of the other two, all three share a distinctive ornamental turning style, especially in the ivory connector between the headjoint and the center piece, which sets them apart from the larger group of surviving three-joint flutes.[4]

[2] Bernard Picart (1673–1733), frontispiece to [Jacques] Hotteterre, *Principes de la flûte traversière* (Paris: Ballard, 1707). The reproduction appeared, also as a frontispiece, in Ernest Thoinan, *Les Hotteterre et les Chédeville* (Paris: Sagot, 1894).

[3] Phillip T. Young, *4900 Historical Woodwind Instruments* (London: Tony Bingham, 1993), 126, s.v. "Hotteterre (no initial)"; John Solum, *The Early Flute* (Oxford: Clarendon Press, 1992), 38.

[4] An attempt was made to list all surviving three-joint flutes of the late seventeenth and early eighteenth centuries in Ardal Powell with David Lasocki, "Bach and the Flute: The Players, the Instruments, the Music," *Early Music* 23 (1995): 9–29, at 21. Of the twenty-five entries in that list, seven represent instruments that are lost or of doubtful authenticity. One flute (listed as Heytz, Johann: Vienna Rothschild loan) was already considered questionable (n. 93); three flutes (Anonymous: private collection Engand; Hotteterre: private collection Paris; and Walch, Georg: unlocated) have not been located since they were reported; one (Denner, Jacob: Berlin Grosskopf loan) was lost during World War II; one (Anonymous: Bissonet) proves on examination to be an interesting forgery of a different type from those considered in the present article; and one (Bressan: Talbot MS) is known only from a seventeenth-century set of measurements. Another entry (Rippert: Dorgueille ex le Roy), however, represents not one but two flutes, one missing its long center piece. Thus the latest count of authentic three-joint flutes surviving to the present day is nineteen, of which two are incomplete. To date, I have been able to examine fifteen of these, as well as all the flutes, authentic and otherwise, described in the present study. On the distinctive turnings: most of the surviving three-joint flutes having turnings of a symmetrical design (for example the Panon flute illustrated in Powell and Lasocki, "Bach and the Flute," 9, fig. 1) feature a *single* bead in the center, separating two ogee-like curves which rise at their outer extremities to large, simple bead-and-step combinations; the Hotteterre type (here Plates 1 and 4), on the other hand, has a distinctive *double* bead in the center, the main curve describing a more complex shape and terminating in a small bead followed by disjunct and more complex bead-and-step combinations. The very wide range of technical differences between surviving three-joint flutes was outlined in Ardal Powell, "The Hole in the Middle: Transverse Flute Bores in the Late Seventeenth and Early Eighteenth Centuries" (paper read at the twenty-third annual meeting of the American Musical Instrument Society, Elkhart, Ind., May 1994).

TABLE 1

The Instruments in this Study

ST. PETERSBURG Museum of Musical Instruments, No. 471	
Abbreviation	P471
Provenance	Mahillon, Vol. 5 of *Catalogue*, published 1922; Snoeck *Catalogue*, 1894; 1902 Stackelberg purchase (undocumented)
Key	Round flap, very like St. Petersburg 472 and Berlin
Key-seat	Circular cutter, ca. 16 mm. dia.
Finish	Yellow, varnish, very sharp edges
Mark	HOTTETERRE/anchor, engraved
Examined	St. Petersburg, 9 October 1993
ST. PETERSBURG Museum of Musical Instruments, No. 472	
Abbreviation	P472
Provenance	1902 Stackelberg purchase (undocumented)
Key	Round flap, very like St. Petersburg 471 and Berlin, file print in back
Key-seat	Circular cutter, ca. 16 mm. dia.
Finish	Varnish, very sharp edges
Mark	None
Examined	St. Petersburg, 25 October 1993
GRAZ Landesmuseum Johanneum No. 08447 *1384	
Abbreviation	G
Provenance	Sowinsky, 1935
Key	Rectangular flap, flowing-formed touchpiece
Key-seat	Rectangular, made with file
Finish	Oiled wood, slight wear
Mark	Very clear stamp: HOTTETERRE/anchor
Examined	Graz, 25 March 1994
BERLIN Staatliches Institut für Musikforschung No. 2670	
Abbreviation	Bn
Provenance	Snoeck *Catalogue*, 1894; Sachs *Sammlung alter Musikinstrumente*, 1922
Key	Round flap, very like St. Petersburg 471 and 472
Key-seat	Rectangular, made with file
Finish	Yellow, varnish, some wear on edges
Mark	Clear but worn mark: HOTTETERRE/anchor
Examined	Berlin, 18 March 1993; 2 May 1994
LA COUTURE Musical Instruments Museum No. 11	
Abbreviation	C
Provenance	La Couture 1888 (oral tradition at La Couture)
Key	Rectangular flap, unusual touch form
Key-seat	Rectangular, made with file
Finish	Yellow, varnish, mint condition, very sharp edges
Mark	HOTTETERRE/anchor, engraved
Examined	La Couture-Boussey, 8 April 1994

TABLE 1 (*continued*)

BRUSSELS Museum of Musical Instruments, No. 3131	
Abbreviation	Br
Provenance	By de Vestibule ca. 1877; Mahillon *Catalogue;* Mahillon-DCM correspondence, 1923–24
Key	Round flap
Key-seat	Circular cutter, 16 mm. dia.
Finish	Hard varnish, mint condition, extremely sharp edges
Mark	None
Examined	Brussels, 6 April 1994
MILLER Dayton C. Miller Collection, Library of Congress, Washington, D.C., No. 428	
Abbreviation	M
Provenance	By E.-J. Albert, 1924, copied from Brussels 3131; DCM correspondence and accession register, 1923–24
Key	Round flap
Key-seat	Circular cutter, 16 mm. dia.
Finish	Hard varnish, mint condition, extremely sharp edges
Mark	None
Examined	Washington, D.C., 1 February 1994
STUTTGART Private collection	
Abbreviation	S
Provenance	Present owner from Tony Bingham, London, 1980
Key	Rectangular flap, La-Couture style touch; may be replacement for original round-flap key
Key-seat	Rectangular, made with file
Finish	Oiled wood, some wear
Mark	None
Examined	Stuttgart, 28 March 1994

Other three-joint flutes, even those of precisely the same type (the remainder of those in Table 1), share none of the fame of these three. Scholars now recognize the La Couture flute (C), once believed to be authentic, as a copy, and thus unworthy of further notice. For the same reason no attention has been paid other Hotteterre flute replicas (P472, Br, and M). Collectors and instrument makers have, in contrast, shown some interest in a recently discovered anonymous flute (S) similar to the "Hotteterre" type in appearance and acoustical design, which, though its origin around 1700 is beyond question, cannot be positively attributed since it is unstamped.

This article will examine the provenance, design, and manufacture of these eight known examples of the type of flute shown in Picart's engraving, those now known to be copies as well as those hitherto considered authentic. The study will demonstrate that six of them, including two of the three "authentic" examples mentioned above, are replicas made within the past twelve decades. That the two renowned

instruments have been widely accepted as authentic is perhaps symptomatic of the zeal with which scholars have sought to support the assumption that the Hotteterres made improvements in the flute. But now, an objective examination of the rise of the concept of the "Hotteterre flute," disencumbered of the weighty authority the misattributed instruments have lent it over the past century, reveals that received wisdom about the history not just of the flute but of all woodwind instruments remains open to doubt.

In detailing the history of the "Hotteterre flute" legend, we shall see how studies in the last century have left their mark on both the historical musicology and the organology of our own time, even though the common concern with musical performance these disciplines once shared has now grown into the discrete specialty of performance practice. In all three fields, then, and nowhere more so than in the sub-specialty of the flute, the dominant concerns, tastes, and opinions of scholars and collectors of the last century continue to reverberate today.

France has been the geographical focus of historians of the flute, not only because the strong tradition of the Paris Conservatory has exported the "French flute school" all over the modern world, but also because French scholars undertook the earliest biographical studies of their own woodwind makers. The first monograph on the Hotteterres, published by Jules Carlez in 1877, was based on documentation which, though it was not uniformly cited in a scholarly fashion, did provide the narrative with a foundation in recorded fact.[5] In 1894, Ernest Thoinan continued Carlez's work with his far more extensive biographical essay on the Hotteterres and Chédevilles, containing the first reproduction of Picart's engraving. Nicolas Mauger issued a third work on the Hotteterres in 1912, furnishing additional biographical details.[6] None of these writers made any claim that their subjects had been responsible for improvements to the design of the flute, nor did any musical reference work of the period disseminate such a claim.

Although Thoinan and Mauger had been aware that at least one specimen of an "Hotteterre" flute existed, the frame of reference provided by their books consisted in biographical documentation and the reproduction of the Picart engraving. Even the most enthusiastic

[5] Jules Carlez, *Les Hotteterre. Notes biographiques* (Caen: F. Le Blanc Hardel, 1877).
[6] Nicolas Mauger, *Les Hotteterre: Célèbres joueurs et facteurs de flûtes, hautbois, bassons et musettes des XVIIe et XVIIIe siècles. Nouvelles recherches* (Paris: Fischbacher, 1912).

flute collectors had little opportunity to see, still less to play, original instruments, and copies were almost as rare as originals. Only after he had secured an Hotteterre replica of his own (M) was Dayton C. Miller emboldened to state in 1935, "Hotteterre the Roman, wrote the first known book of instructions for the modern transverse flute (1707), and it was his father, perhaps, who made the earliest flutes of modern type, only one single specimen of which has survived."[7]

If this assumption occurred to other writers, it was not regularly committed to print until the passage of several more decades had accorded it a certain familiarity. In 1939, for example, Adam Carse implicitly acknowledged that the origin of the baroque flute was a subject for speculation, but he endorsed such supposition only with emphatic reservations:

> The new type [of flute] appeared during the second half of the seventeenth century. It is not known by whom or where it was first made; dates which are sometimes advanced may be taken as guesses which are probably not far wrong, yet which cannot be supported by incontrovertible evidence. . . . There is no definite proof that the one-keyed flute originated in France, yet it is highly probable that, in common with the jointed oboe, it owes its origin to that country, and it seems that the first well-known performers on the instrument were Frenchmen.[8]

In 1969, however, the myth came of age in Philip Bate's book on the flute.[9] In an argument heavily reliant on assumption and conjecture, Bate sketched out an analogy between the transformations in the flute, oboe, bassoon, and recorder. Noting some extremely broad technical similarities between the baroque recorder and transverse flute, he argued for their common origin not on any historical basis but solely from a desire to find a pleasing symmetry in the abstract concept of musical instrument development:

> These are the purely physical features which lead us to attribute the reformed flute to the Hotteterre group of workers, but in addition it seems unlikely on the basis of plain probability that the men who had

[7] Dayton C. Miller, *Catalogue of Books and Literary Material Relating to the Flute* (Cleveland: Published by the author, 1935), 109, s.v. "Thoinan, Ernest." On Miller's concept of the "modern" flute, see note 50 below.

[8] Adam Carse, *Musical Wind Instruments* (London: Macmillan, 1939), 83.

[9] Philip Bate, *The Flute: A Study of Its History, Development, and Construction* (London: Ernest Benn, 1969), 77–85.

successfully turned their attention to three of the most used woodwinds should neglect the fourth.[10]

Bate's presumption about the one-keyed flute's origins had become so widely accepted by 1984 that Jane Bowers was moved in an essay on the Hotteterre family to caution that "their leadership in [initiating extremely important changes that took place in the construction of woodwind instruments during the second half of the seventeenth century] cannot be proved and certainly should not be unequivocally stated."[11] Her exhortation, however, has had little impact on the view that the "baroque flute" was an Hotteterre invention, which on the contrary has by now become so commonplace that it no longer seems to merit serious scrutiny. Consequently, in the latest article on Martin and Jacques Hotteterre, Tula Giannini was alluding not merely to Jacques Hotteterre's important publications but to the established myth of the "Hotteterre flute" when she noted, with disarming understatement, that "Jacques Hotteterre le Romain

[10] Ibid., 80. The idea that the Hotteterres were responsible for the development of these instruments was based, when Bate wrote, on interpretations of documentary evidence that have recently been reexamined in Bruce Haynes, "Lully and the Rise of the Oboe as Seen in Works of Art," *Early Music* 16 (1988): 324–38; and Rebecca Harris-Warrick, "A Few Thoughts on Lully's *Hautbois*," *Early Music* 18 (1990): 97–106. These essays have shown that the work of Joseph Marx, current since the 1950s, contained serious inaccuracies and resulted in a false account of this period in the history of woodwind instruments. Solum (*The Early Flute*, 36) proposes that Amsterdam maker Richard Haka is due at least some of the credit for developing the one-keyed flute, but he does not consider the equally significant anonymous flute in Assisi (see n. 78 below). Though on p. 35 Solum cites Marx's discredited conclusions, in n. 5, p. 36, he draws attention to problems inherent in some recent expressions of the "Hotteterre flute" myth.

[11] Jane Bowers, "The Hotteterre Family of Woodwind Instrument Makers," in *Concerning the Flute*, ed. Rien de Reede (Amsterdam: Broekmans and van Poppel, 1984), 33. Despite Bowers's objection, the myth had already influenced her own usually prudent judgment. In an earlier discussion of the attribution of the "Hotteterre" flutes in her "New Light on the Development of the Transverse Flute between about 1650 and about 1770" (*Journal of the American Musical Instrument Society* 3 [1977]: 16), she had made no reference to the anchor stamp, or to Thoinan's suggestion, supported by Mauger, that this mark identified the work of Jean I, his successor Martin, and Martin's successor Jacques. Instead the discussion concluded inconsequentially that "the elegance of the flutes . . . suggests that they could well have originated in Jacques' workshop." Though Bowers's later article contained a more thorough discussion of the possible attributions, including consideration of the anchor stamp, its arguments too disclose a strong predisposition to find Jacques, rather than the less famous Martin, the most likely maker of the flutes marked HOTTETERRE (pp. 45–46).

has by now assumed an almost legendary place in the history of the flute."[12]

The provenance of the flutes described in this study is interwoven with the growth of interest in early musical instruments and performance, the activities of collectors, and the formation of the principal national institutions for the study of instruments. Much of our knowledge of the musical instruments of the last five hundred years comes from specimens held by important collections founded in the last decades of the nineteenth century. The collecting of instruments was a hobby eminently suited to the cultural priorities of this period: accumulations of curious and obsolete specimens illustrated the grand march of history toward a predetermined present, in which by a process allied to natural selection, the instruments of the symphony orchestra—the supreme musical ensemble, which played the most prestigious of musical forms—had reached a level of perfection that could scarcely be improved upon. In the musical instrument industry, large companies competed strenuously for superiority and excellence in an international marketplace. Distinctive schools of orchestral composition became a matter of national honor, while frequent exhibitions and awards in the instrument-making industry instilled a similar patriotic pride in instruments and their history.

At first, individuals rather than institutions collected instruments. One enthusiast, Eugène de Bricqueville, disparaged the hobbyists among his predecessors and contemporaries, naming Louis Clapisson, Auguste Tolbecque, Léon Savoye, and Georges Samary as "allured by the 'knick-knack' aspect of old instruments."[13] But at the same time, a few dedicated individuals interested in the performance of early music avidly pursued ancient musical instruments. Paramount among these was François-Joseph Fétis, one of the century's foremost musicologists and collectors. His activities focused on the study of

[12] Tula Giannini, "Jacques Hotteterre and His Father Martin: A Re-examination Based on Recently Found Documents," *Early Music* 21 (1993): 377–95, at 377. The legendary position of Jacques Hotteterre as a maker is called into question by one of the most surprising of Giannini's new documents, a posthumous inventory of his possessions in 1763, which, in contrast to similar inventories of makers' estates, contained no flutes, tools, or flute music at all (pp. 383–84, 395). An inventory of Martin's workshop in 1711, on the other hand, listed items more typical of a maker: ten transverse flutes ("*flutes traversiere*" [*sic*]) along with "*flutes*" [*sic*] (the French term probably referring in this case, as usual, to recorders) of various sizes, musettes, oboes, and bassoons (p. 390).

[13] ". . . séduits par le côté 'bibelot' des anciens instruments" (Eugène de Bricqueville, *Un Coin de la curiosité* [Paris: Libraire d'Art, 1894], 21).

original musical texts, and on specimens of instruments from earlier times.

As librarian at the Paris Conservatory, and emulating the example of his predecessor Henri Choron, Fétis had organized "historic concerts" devoted to sixteenth-, seventeenth-, and eighteenth-century music, or a particular musical genre, such as church music or opera.[14] Some of these concerts met with hostile and obstructionist responses from his colleagues, particularly from the Conservatory's director, Hector Berlioz. Fétis's final performance in Paris, on 2 April 1833, was spoiled by artists who failed to appear and by interruptions from an unfriendly audience. In spite of this Fétis continued to mount performances of historical music in Brussels, occasionally using antique instruments from his own collection, during his tenure there as director of the Conservatory from its foundation in 1833 until 1871.[15]

In 1877, Fétis's successor François-Auguste Gevaert formed the instrument collection of the Brussels Conservatory by combining two hundred items from the Fétis collection with acquisitions from the collections of Adolphe Sax and Auguste Tolbecque, the latter purchased by the Belgian state in 1879.[16] Victor-Charles Mahillon (1841–1924), whose father, Charles, had founded a woodwind instrument manufacturing company in Brussels in 1836, served as the first curator. Victor-Charles had entered into partnership with his father in 1865 and eventually took over the business. Throughout his career, the younger Mahillon undertook voluminous, painstaking studies in acoustics and related matters. He enthusiastically acquired old musical instruments for the Conservatory's museum and commissioned or made copies of the rarest specimens from other collections. Following

[14] Robert Wangermée, *Les Premiers Concerts historiques à Paris* (Brussels: Société Belge de Musicologie, 1948), 185–96.

[15] Wangermée (ibid., 185–91) gives a detailed and fascinating history of Fétis's historic concerts in Paris from April 1832 and in Brussels from January 1837. He writes in his article on Fétis in the *New Grove Dictionary of Music and Musicians:* "According to his theories, every society and every age invents its own artistic conventions, and therefore its own kind of music. Thus, the whole artistic past can be understood and appreciated by those who make the effort to discard ingrained ideas linked to the present or the very recent past. Fétis also wanted early music to be heard, and therefore organized the *Concerts Historiques*. . . . He wanted to prove that the music of the past could still arouse emotions and gain the admiration of the modern listener" (6:511).

[16] Malou Haine and Nicolas Méeus, eds., *Dictionnaire des facteurs . . . en Wallonie et à Bruxelles* (Liège and Brussels: Pierre Mardaga, 1986), 276, s.v. "Mahillon, Victor-Charles," by Malou Haine and Ignace de Keyser. See also Harry Haskell, *The Early Music Revival: A History* (London: Thames and Hudson, 1988), 25.

the example of Fétis, Mahillon made the museum's instruments available for concerts of early music, which Gevaert began in 1879.[17]

Musical craftsmen as well as private collectors and institutions of learning participated in the awakening interest in historical instruments. Mahillon's curiosity, for example, stemmed not merely from the needs of the Conservatory but also from his background as an instrument maker. And other makers shared his fascination with old instruments. Thus in 1888, the French woodwind-instrument-making town of La Couture-Boussey in Eure, Normandy, instituted a museum to record the heritage of its local craft.[18] For at least two centuries, the principal woodwind makers of Paris, including members of the Hotteterre family, had been born and trained in La Couture, and had retired to family farms there late in life. Not surprisingly, a significant number of the museum's founders were members of woodwind-making dynasties: Chédeville, Buffet, Godfroy, Leblanc, Lot, Noblet, and Thibouville.[19] The instrument that provided the germinal idea for the museum was a three-piece transverse flute in boxwood, with large ivory mounts and a silver key, stamped HOTTETERRE (C in Table 1).[20]

[17] Haine and Méeus, *Dictionnaire*. Margaret Campbell's *Dolmetsch: The Man and His Work* (London: Hamish Hamilton, 1975) contains an interesting account of the influence one of the *concerts historiques*—that of 23 December 1879—had on Arnold Dolmetsch, then a student at Brussels.

[18] Information on the creation and contents of the La Couture museum comes from a manuscript entitled *Historique sur la création du Musée d'enseignement professionel de La Couture-Boussey* (MS, Musée de La Couture-Boussey, 1888). Albert R. Rice is preparing an edition of the manuscript; it is in the museum's archive, which has no formal library system or call numbers. I am grateful to Dr. Rice for alerting me to the document's existence, and to Philippe Allain-Dupré for his help on a visit to La Couture in April 1994. A union of woodwind-instrument finishing workers was organized on 12 October 1887, and at its first general assembly on 29 January 1888 it resolved to create a museum of ancient and modern woodwind instruments (*Historique* MS, fol. 1).

[19] *Historique* MS, fols. 11–16. The connections of the Hotteterres with La Couture are detailed in Thoinan, *Les Hotteterre*, and Mauger, *Les Hotteterre*. Other documents are presented in Tula Giannini, *Great Flute Makers of France: The Lot and Godfroy Families* (London: Tony Bingham, 1992), and Giannini, "Jacques Hotteterre and His Father Martin."

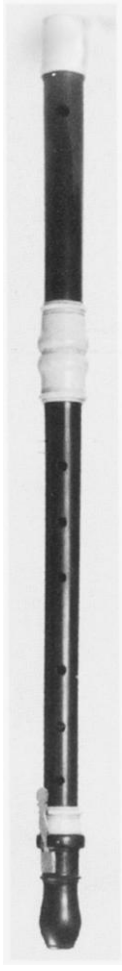
[20] Conversation with M. Nedé of the museum, who reported what he knew of the oral tradition of La Couture. Unfortunately a great deal of the museum's documentation, including any there might have been on the HOTTETERRE flute, was in the form of typed labels (*Historique* MS, fol. 2), most of which have deteriorated and been removed. The flute's authenticity was first questioned by Jeremy Montagu in "Comm. 9," *FoMRHI* [*Fellowship of Makers and Researchers of Historical Instruments*] *Quarterly* 1 (January 1976), and it was identified as a copy in Phillip T. Young, *Twenty-five Hundred Historical Woodwind Instruments: An Inventory of the Major Collections* (New York: Pendragon Press, 1982), 67 n. 2, s.v. "Hotteterre (no initial)."

Plate 1. Frontispiece by Bernard Picart (1673–1733) in [Jacques] Hotteterre, *Principes de la flûte traversière* (Paris: Ballard, 1707)

Plate 2. César Charles Snoeck as a student with his instrument collection (*Die Woche*, 16 June 1902; photo courtesy of Staatliches Institut für Musikforschung, Preußischer Kulturbesitz, Berlin)

Pl. 3

Pl. 4



Pl. 5

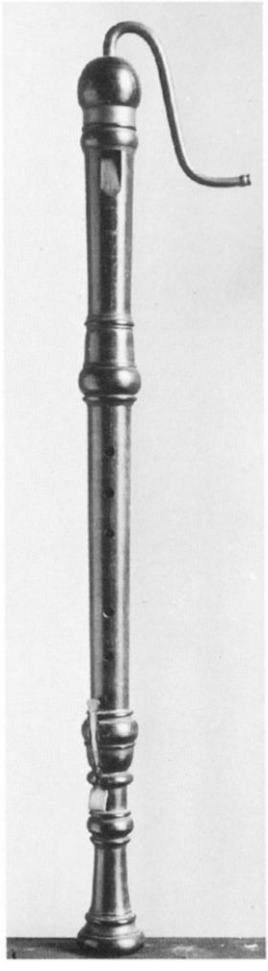


Plate 3. Engraving of Snoeck's flute, from Thoinan, *Les Hotteterre* (1894), p. 40

Plate 4. Anonymous flute of quasi-"Hotteterre" pattern. Stuttgart, private collection (photo: Tony Bingham).

Plate 5. "Denner" bass recorder, R-St. Petersburg 407 (photo: Felix Ravdonikas)

Though the records of the museum's creation fail to furnish details about every instrument, they do describe a number of occasions on which the La Couture workmen copied historic woodwinds for display in the museum. The first such entry was recorded in 1888:

> A request addressed by Mauger to Monsieur Ernest Thoinan, Parisian amateur, was followed by the receipt of ancient and very rare instruments which have been copied for the museum. Monsieur Thoinan did the museum the further favor of obtaining from Monsieur César Snoeck of Ghent the loan of several instruments from his important collection, which have also been copied.[21]

The instruments lent by Thoinan and Snoeck provided the first models for dozens of replicas of eighteenth-century woodwinds subsequently made for the La Couture museum. Numerous references in the museum's records to replicas acquired in 1888–89 provide the names not only of their makers but also of those who donated materials and those who provided the measurements of the originals. On other occasions, the museum loaned out its own replicas to serve as models for the construction of others.[22]

According to records of the late 1880s, the La Couture museum borrowed at least a dozen instruments from César Charles Snoeck (ca. 1825–1899), a Belgian attorney and musical amateur from Renaix (Ghent), whose ancestors included Ägidius and Marcus Snoeck, violin makers in eighteenth-century Brussels.[23] Fétis enthusiastically described Snoeck's musical instrument collection—already in progress for thirty years—as "one of the most beautiful that exists in Europe."[24] Specimens of a wide variety of instruments, "all in a perfect state of preservation," were disposed in several large, generously lit rooms.[25]

[21] "Une demande adressée par Mauger à Monsieur Ernest Thoinan amateur parisien fut suivie de la réception d'instruments anciens et très rares qui sont reproduits pour le musée. Monsieur Thoinan favorisa ensuite le musée en obtenant de Monsieur César Snoeck de Gand le prêt de quelques instruments de son importante Collection qui sont aussi reproduits" (*Historique* MS, La Couture, fol. 5 [undated entry between 20 January and 1 July 1888]).

[22] The extent of these activities argues against Haskell, who states, "Only Mahillon, [Auguste] Tolbecque and a few other craftsmen had seriously attempted to reproduce early instruments before [Arnold Dolmetsch], and then only as a sideline" (*Early Music Revival*, 30–31).

[23] François-Joseph Fétis, *Biographie universelle des musiciens, supplément et complément* (Paris: Firmin-Didot, 1880), 527, s.v. "Snoeck (César)." (The publishing firm is on the list of founding members of the La Couture museum, along with Thoinan, Mauger, Pillaut [see n. 42 below], and Snoeck himself.)

[24] Ibid.

[25] Ibid.

Snoeck not only possessed a formidable knowledge about the history of these instruments, but had also learned to play practically every one. Fétis described him as an energetic and single-minded collector undeterred by travel from pursuing anything he wished to acquire (Plate 2).

In 1894, Snoeck himself published a catalogue containing a detailed description of his collection, which he had begun in 1854 during his student days in Ghent.[26] His childhood friend Edmond Vanderstraeten, a musicologist, facilitated Snoeck's inquiries about old instruments, and Charles Meerens, a "learned acoustician," assisted with research and restoration. Of his fascination with old instruments, Snoeck wrote, "Thus it was that I was afflicted with *musicorganitis*! A slow and not a fatal disease, to be sure, for having suffered it for forty years I have taken pleasure in summing up, in catalogue form, the various phases of this illness."[27] The catalogue described one of the collection's jewels, an "Hotteterre" flute: "An example as rare as it is remarkably preserved, of a flute of the 17th century, built by the Hotteterres, famous flute makers and teachers of that time. It carries the stamp of Hotteterre above an anchor."[28] In this entry Snoeck made no more explicit claim about the identity or importance of his flute's maker (or makers) than the biographical monographs of Carlez and Thoinan could have justified. The personal links between Snoeck, Thoinan, and the La Couture museum were strong: both men were among the founding members of the institution, and although Thoinan did not mention the La Couture "Hotteterre" flute (C), he knew the Snoeck instrument (probably Bn) and illustrated it in his book.[29] In fact, Thoinan's engraving of Snoeck's Hotteterre flute, showing a three-joint instrument with large ivory mounts and one key, was the first reasonably accurate picture of a three-joint flute to be reproduced in modern times (Plate 3).[30]

[26] César Charles Snoeck, *Catalogue de la collection d'instruments de musique anciens ou curieux formée par C. C. Snoeck* (Ghent: I. Vanderpoorten, 1894).

[27] "C'est ainsi que je fus atteint de *musicorganopathie*! maladie lente et pas mortelle, certainement, puis qu'après l'avoir subie pendant quarante ans j'ai trouvé du plaisir à récapituler, sous forme de catalogue, les phases diverses de cette infirmité" (Snoeck, *Catalogue*, 2).

[28] "Exemplaire aussi rare que remarquablement conservé, d'une flûte du 17me siècle, construite par les Hotteterre, facteurs et profeseurs [*sic*] de flûte célèbres de l'époque. Elle porte la marque au fer de Hotteterre, surmontant un ancre" (ibid., 138, No. 670).

[29] Thoinan, *Les Hotteterre*, 18, 40.

[30] Ibid., 40. Richard Shepherd Rockstro, *A Treatise on the History, Construction and Practice of the Flute*, 3 vols. (London: Rudall Carte, 1890), 2:223 (para. 416), was

While French-speaking collectors and institutions spearheaded the growing interest in the history of instruments, their activities soon excited the rivalry of their neighbors. Collections of historical instruments had been discovered at several European conservatories, and in March 1885, expecting to find a new source of little-known specimens, the marquis of Hamilton addressed a request to the director of the Hochschule für Musik in Berlin for instruments to be loaned to the International Inventions Exhibition in London, which was to include a display of "obsolete instruments."[31] Though the Hochschule's president, Philipp Spitta, answered that the institution held no such collection, the request prompted the school to move toward parity with Paris, Brussels, and other foreign rivals who already possessed one. By January 1888 Spitta was negotiating with Paul de Wit to purchase the musical instrument museum of 240 objects he had opened in Leipzig less than a year earlier.[32] With the completion of the sale in that same month, the Berlin Hochschule had acquired the nucleus of its collection. Only two years had passed before de Wit had again assembled several hundred instruments to replace those acquired by Berlin. On behalf of the Hochschule, its new director, Oskar Fleischer, purchased de Wit's second group of instruments in 1890, and the Berlin museum, now containing both de Wit collections, opened under his direction in 1893.

In 1899, Snoeck's death made the acquisition of his instruments a matter of urgency among his heirs and Belgian, Prussian, and American collectors and institutions.[33] His executors apparently attempted to satisfy more than one suitor: as we shall see, some specimens found their way to museums in Brussels and St. Petersburg, while the major part of the collection was sold to Berlin. In his ef-

published four years earlier but is a simplified and rather inaccurate attempt to depict the flute shown in the fingering chart of Hotteterre's treatise, a copy of which, in a later edition, Rockstro had seen in the British Museum (Rockstro, *Treatise* 1:xxii). Rockstro followed Fétis in dating the first edition of Hotteterre's *Principes* to 1699, but Fétis's source was a publisher's announcement, not an actual copy of a 1699 print, of which no example has ever come to light.

[31] Haskell, *Early Music Revival*, 28. The instruments in the exhibition are recorded in Alfred J. Hipkins, *Musical Instruments Historic, Rare and Unique* (Edinburgh: Adam and Charles Black, 1888). Alfred Berner's "Die alte Musikinstrumenten-Sammlung in Berlin" (in *Wege zur Musik* [Berlin: Staatliches Institut für Musikforschung, 1984], 11–122) gives a detailed history of the Berlin museum.

[32] Berner, "Die alte Musikinstrumenten-Sammlung," 14. De Wit, born in Maastricht, The Netherlands, in 1852, had been trained as a cellist. A publisher and collector, he played the viola da gamba and lived in Leipzig, where he founded the *Zeitschrift für Instrumentenbau* in 1880.

[33] Berner, "Die alte Musikinstrumenten-Sammlung," 54–57.

fort to obtain funding for the purchase of the instruments for the Hochschule's museum, Fleischer capitalized on Prussia's sense of leadership with respect to German nationalistic feeling; it was finally "the particular wish of his Majesty the German Emperor" (Wilhelm II) that resulted in the Prussian government's purchase of the instruments for the Hochschule. In May 1902 five railway cars containing the Snoeck collection arrived in Berlin.

Because the museum had no facilities for storage, the instruments suffered inevitable damage from heat and cold, and another two decades passed before they were catalogued. By 1922, Curt Sachs, who succeeded Fleischer as director of the Berlin Hochschule in 1920, had compiled and published a new catalogue in which the Snoeck instruments received inventory numbers 2001–3145.[34] The museum had no misgivings about displaying facsimiles alongside original instruments: for instance, in the early years Berlin instrument maker Julius Schetelig devised replicas after the examples pictured in Praetorius's *Syntagma Musicum* of 1619/20 and after originals in the collection.[35] The Schetelig instruments are now recorded by the museum as having been lost in World War II.[36]

At the same time as the 1902 Berlin purchase, 363 Snoeck instruments made their way to the collection of the Imperial Court Orchestra in St. Petersburg.[37] The provenance and disposition of the Snoeck instruments deserves separate study: in the disorganized breakup of the collection, confusion arose which continued to plague the history of the "Hotteterre" flutes. In 1935, Ernest Closson, who had been Mahillon's deputy in Brussels at the time of the sales, recalled:

> It is known that a more important part of the Snoeck collection, around 1150 objects, offered for sale to the Belgian state, but unfortunately turned down by it on the unfavorable advice of V.[-C.] Mahillon, went to enrich the museum of the *Hochschule für Musik* of Charlottenburg-Berlin.

[34] Curt Sachs, *Sammlung alter Musikinstrumente bei der Staatlichen Hochschule für Musik zu Berlin* (Berlin: Julius Bard, 1922).

[35] Ibid., inventory numbers 1517–1520. Berner, "Die alte Musikinstrumenten-Sammlung," 92.

[36] I am grateful to Bernd Wittenbrink of the Staatliches Institut für Musikforschung for help with work in the Berlin collection. According to Herbert Heyde's *Flöten: Musikinstrumenten-Museum der Karl-Marx-Universität Leipzig. Katalog* (Leipzig: VEB Deutscher Verlag für Musik, 1978), 81, Schetelig's replicas of Quantz flutes are preserved in Leipzig (Nos. 1236, 1236a, and 1236b) and Brussels.

[37] James Coover, *Musical Instrument Collections: Catalogs and Cognate Literature*, Detroit Studies in Music Bibliography 47 (Detroit: Information Coordinators, 1981), 388, s.v. "Snoeck, César Charles."

> A last residue of the same collection was acquired by the Imperial Court of Russia, through the mediation of General Stakelberg. The group combined with the Brussels museum, thanks to the generosity of Count Louis Cavens, comprises no fewer than 132 [Flemish and Dutch] stringed instruments.[38]

Like the museum in Berlin, that in St. Petersburg has no accession list of Snoeck instruments, though its 1972 catalogue gives a short history of the collection.[39] A few instruments from the imperial collection, such as Czar Pavel I's flutes, were already on hand, but the arrival of the Snoeck accession provided the nucleus of a more substantial St. Petersburg collection.[40]

The great exhibitions of the late nineteenth century, in providing a public showcase for old instruments and replicas, reached a far wider audience than the institutions of music. The mingling of antiques and replicas in this forum was naturally countenanced for educational purposes. In 1889, four years after the London exhibition that had provided the impetus for the formation of the Berlin museum, the

[38] "On sait qu'une partie plus importante de la collection Snoeck, environ 1,150 pièces, offerte en vente à l'Etat Belge, mais malheureusement refusée par lui sur l'avis défavorable de V.[-C.] Mahillon, alla enrichir le musée de la *Hochschule für Musik* de Charlottenburg-Berlin. Un dernier reliquat de la même collection fut acquis par la cour impériale de Russie, par l'intermédiare du Général de Stakelberg. L'ensemble intégré au musée bruxellois, grâce à la générosité du comte Louis Cavens, ne comprend pas moins de 132 instruments à archet" (Ernest Closson, *La Facture des instruments de Musique en Belgique* [Huy: Degrace, 1935], 53 n. 1). See also Heino Jürisalu, "Die Leningrader Sammlung und ihre Flöteninstrumente," *Tibia* 5 (1980): 105–7. Closson stated that the St. Petersburg collection numbered 363 items, but that neither the second nor the third collection matched the quality of the first. This revelation that Mahillon allowed the Snoeck collection to leave Belgium raises a number of questions. Was the price too high? Did Mahillon himself receive a commission on the sale? Did he have a lower opinion of the collection's quality than Fétis? Who divided up the instruments, sending the "original" Hotteterre to Berlin and the copies to St. Petersburg?

[39] G. I. Blagodatov, *Katalog Sobraniya Musikalnich Instrumentov* (Leningrad: Izdatelstvo "Muzika," 1972). Mikahil Pietukhov's *Poyt sistematischeskogo kataloga instrumental'nogo muzeia S.-Peterburgskoi konservatorii* (St. Petersburg: V. Demakova, 1893) is a catalogue of the St. Petersburg Conservatory instruments and library, containing works in Russian and French. The holdings of the library, with catalogues and reports of the French exhibitions of the past thirty years, give a complete view of the state of historical musicology in France and Belgium. The conservatory collection, which included a rare catalogue of Fétis's instrument collection, was up to date with the works of Mahillon and Fétis. Pietukhov lists a program from a concert on historic instruments at the Brussels museum dated 13 January 1887 in which a "*flûte traversière* du XVIII[e] siècle" was played by a M. Dumon.

[40] The most important of the czar's instruments, the sole surviving Tromlitz 1785-system flute by Johann George Tromlitz (1725–1805), is the subject of Ardal Powell, *The Keyed Flute by Johann George Tromlitz* (Oxford: Clarendon Press, 1996).

Exposition Universelle de Paris[41] exhibited reconstructions of medieval instruments by Léon Pillaut, curator of the Paris Conservatory collection.[42] On display in "a veritable museum of musical archaeology"[43] were his rebec and lute, as well as a thirteenth-century harp "constructed by the Erard firm after a bas-relief at Chartres Cathedral."[44] Concerts on old instruments figured in the exhibition, though they were poorly attended; the famous flutist and Conservatory professor Paul Taffanel, who had been presenting such concerts for several years, played a Boehm flute but "modified the piercing sound . . . 'to give the impression of the old recorders.' "[45]

The mixture of replicas, reproductions, and modern instruments in great public exhibitions does not seem surprising; in collections like those of Snoeck and the Berlin and Brussels museums, however, the practice may have caused some confusion. During the years 1893–1922, Mahillon compiled a five-volume catalogue of the Brussels Museum of Musical Instruments, describing 330 instruments.[46] As we have noted, the Brussels museum filled gaps in its holdings with facsimiles, which Mahillon listed as such in the Brussels catalogue.[47] These include several after originals in the Snoeck collection. From the presence of replicas of Snoeck instruments in the Brussels museum, as well as from Closson's testimony that Mahillon turned down the collection on behalf of the Belgian state, we may be sure that he was to some degree familiar with the instruments Snoeck owned.

[41] At the earlier Exposition Universelle de Paris in 1867 a choral piece by Fétis had been presented at a historic concert as a composition by Lassus, just as a similar piece of musical forgery had been presented at Fétis's Paris concert of 24 February 1833 (Wangermée, *Concerts historiques*, 191).

[42] In May 1889 Pillaut borrowed tools from the museum at La Couture-Boussey for the Exposition (*Historique* MS, fol. 17). His *Instruments et Musiciens* (Paris: G. Charpentier, 1888) is concerned with the history of orchestral instruments. On p. 339 he compares French and German musical dynasties: the Philidors (N.B., not the Hotteterres) and the Bachs.

[43] Julien Tiersot, "Promenades Musicales à l'Exposition," *Le Ménestrel* 53 (9 June 1889): 1790–80, quoted in Haskell, *Early Music Revival*, 44.

[44] Ibid.

[45] Ibid.

[46] Victor-Charles Mahillon, *Conservatoire Royal de Musique de Bruxelles. Catalogue*, 5 vols. (Brussels: Conservatoire, 1893–1922).

[47] For example: numerous facsimiles of renaissance flutes (ibid., 2:316ff.); "*Flûte d'amour*. Fac-similé d'un instrument appartenant au musée Snoeck à Gand" (4:229); and "*Flûte traversière à 2 clefs*. Fac-similé d'un instrument ayant appartenu à Frédéric II, dit le Grand, et dont l'original est conservé au musée Hohenzollern, Berlin" (4:197).

And yet in the Brussels catalogue Mahillon apparently contradicted himself about the fate of the Hotteterre flute. In the listing for the museum's replica of the Snoeck instrument he wrote that the original (presumably P471) had been sold to St. Petersburg:

> *Flute.* Exact copy, made at the museum, of an instrument presently belonging to the Museum of the Orchestra of the Imperial Court of Russia and formerly in the collection of C. Snoeck. It is in maple wood with three large mounts of ivory, one in the middle, [i.e.,] at the bottom of the head, and two others at the extreme ends; one silver key. Mark: *Hotteterre* (n: attrib. Jean Hotteterre, d. 1678. See Carlez 1877 and the interesting work of Ernest Thoinan . . . 1893 [*recte* 1894]).[48]

In an earlier volume of the catalogue, Mahillon had written that the Snoeck collection "was transferred in 1902 to the Prussian government for the Museum of the *Hochschule für Musik*, of Berlin"—without mentioning the concurrent sale of 363 instruments, including the Hotteterre flute which he later claimed was the model for the Brussels copy, to St. Petersburg.[49] Thus with the proliferation of replicas, each institution, Berlin and St. Petersburg, had reason to believe that it had acquired a geniune Hotteterre flute—from a source which had never been known to possess more than one.

Mahillon's catalogue contained the only printed information about the fate of Snoeck's "Hotteterre" flute after Thoinan had described it in 1894. Dayton C. Miller, professor of applied science at Case Western Reserve University and an avid collector of everything to do with the flute, took a keen interest in the fate of the Snoeck "Hotteterre"; on 16 June 1923 he wrote to Mahillon about the Hotteterre and Quantz replicas in the Brussels collection, asking for his help in obtaining copies for his own collection:

> I have studied your catalogues of the Berlin [*recte:* Brussels] Collection not only with great interest, but with profit. In the last volume which you so kindly inscribed to me (Vol. V) are two specimens which are of very particular interest, No. 3131 on page 99, a reproduction of a flute by Hotteterre, and No. 3276, page 197, a reproduction of the flute by Quantz.

[48] "*Flûte.* Reproduction exacte, faite au musée, d'un instrument appartenant actuellement au Musée de l'orchestre de la Cour impériale de Russie et provenant de la collection de C. Snoeck. Elle est en bois d'érable avec trois gros anneaux d'ivoire, un au milieu, au bas de la tête, et deux autres aux extrémités; une clef d'argent. Marque: *Hotteterre*" (Mahillon, *Catalogue* 5:99, No. 3131).

[49] Ibid., 4:229n.

> I am taking the liberty of asking whether you would grant permission to have these specimens copied by some workmen in Brussels, perhaps in the Mahillon factories. These two flutes, naturally, form the beginning of my collection,[50] and, of course, it is quite impossible that I should ever be able to obtain the original instruments, as probably there is but the one of each in existence.[51] Of course, I appreciate how you prize these rare specimens and what advantage it is to have them on exhibition in your museum only. However, in some other instances I have noticed that replicas have been made for other museums, such as our Metropolitan Museum of Art,[52] and I am hoping that some such favor may be granted to me.[53]

In his reply of 10 July 1923, Mahillon wrote that it would be difficult to find a craftsman experienced enough to undertake such a highly skilled task:

> Unfortunately the workman I directed to do this work as far back as the formation of the museum, almost fifty years ago, died during the war, and given the sad financial situation of Belgium, we have not yet been able to replace him. Furthermore it would take years to succeed in training a workman of the same skill. I really do not see a way to render you the service you ask, as workmen like this are not to be found these days, not even in the factory presently directed by my children.[54]

[50] Earlier in the letter Miller had written, "I have considered that the modern flute begins with the time of Hotteterre and Quantz."

[51] In March 1930 Miller acquired an original Quantz flute. In August 1930 he began work on a paper describing all the surviving Quantz flutes he could locate, eighteen in all, together with three replicas that he knew of (MS, Dayton C. Miller Collection, Library of Congress, Washington, D.C.). I am grateful to Robert Sheldon, Curator of Musical Instruments at the Library of Congress, for help with materials in the Miller Collection.

[52] The copy of a flute in the Metropolitan Museum of Art that is still traceable to Mahillon is No. 89.4.2654, a *flûte d'amour* of very crude manufacture. I am grateful to Laurence Libin, Frederick P. Rose Curator-in-Charge at the Metropolitan Museum, for identifying this instrument. A better replica of a *flûte d'amour*, possibly copied from a Snoeck instrument, is in the La Couture museum.

[53] Dayton C. Miller to Victor-Charles Mahillon, 16 June 1923 (Dayton C. Miller Collection).

[54] "Malheureusement l'ouvrier que j'avais instruit à faire ces travaux dès la formation du Musée, il y a bientôt cinquante ans, est mort pendant la guerre et, étant donnée la triste situation financière de la Belgique, nous n'avons pu encore le remplacer. Du reste il faudrait des années pour arriver à former un ouvrier du même habilité. Je ne vois véritablement pas moyen de vous rendre le service que vous me demandez parceque des ouvriers de ce genre ne se trouvent plus de nos jours, même dans la manufacture dirigée actuellement par mes enfants." I am grateful to Valerie Winteler for help in interpreting Mahillon's handwriting in this passage.

The workman to whom Mahillon referred was Franz de Vestibule, a former employee of the Mahillon factory.[55] A close collaborator in Mahillon's scientific work, he had been responsible for the preservation, transportation, and repair of instruments at the Brussels museum.[56] With de Vestibule's death, the care and repair of the instruments came to a complete halt.[57]

Miller expressed his disappointment at Mahillon's reply in a letter of 26 July 1923:

> It is quite improbable that original specimens will ever be found. I fear that the *original Hotteterre* specimen which you describe as being in the "Musée de l'orchestre de la Cour Impériale de Russie" will be destroyed or lost. There may not be another example in the whole world!

However, without ever explaining how he came to change his mind, Mahillon had by October of the same year engaged a craftsman to make the copies for Miller: Eugène-Joseph Albert, the nephew of Eugène Albert, who had founded a workshop dedicated to making instruments in wood in 1846. Miller knew Albert by reputation and had visited his workshop in Brussels.[58] After the death of Mahillon, Ernest Closson assumed his place as broker and delivered the flutes to Miller in June 1924.[59] Though Closson claimed that "the copies are *perfect* to the millimeter," by today's more rigorous standards of precision their accuracy is at best that of second-generation replicas.[60]

Two three-joint flutes which have more recently come to light (G and S) share many of the attributes of the Hotteterre-type flute. In 1935 the Landesmuseum Johanneum in Graz, Austria, acquired a three-joint flute stamped HOTTETERRE (G) on loan from Schulrat Hans

[55] I am grateful to Ignace de Keyser, First Assistant at the Brussels Museum of Musical Instruments, for information and documents concerning de Vestibule, in conversations and in a letter to the author, 4 March 1994.

[56] Ernest Closson, "Victor Mahillon," *Bulletin de la Société "Union Musicologique"* 4, no. 2 (1924): 119.

[57] Memo of 25 May 1921 from Closson, then Conservateur en Chef, to M. Du Bois, director of the Conservatory, in the Archives of the Museum of Musical Instruments.

[58] Miller to Mahillon, 12 November 1923 (Dayton C. Miller Collection).

[59] Closson to Miller, 30 June 1924 (Dayton C. Miller Collection).

[60] An accuracy of one tenth of a millimeter is considered adequate in most areas of historical woodwind reproduction today. An X-ray photograph of Albert's replica and Miller's own Quantz flute appears in Michael Seyfrit, *Musical Instruments in the Dayton C. Miller Flute Collection at the Library of Congress*, vol. 1, *Recorders, Fifes and Simple System Transverse Flutes of One Key* (Washington, D.C.: Library of Congress, 1982), xxi.

Sowinski of Graz, who made its existence more widely known in an article of 1940.[61] In his will of the same year, Sowinski bequeathed the instrument to the museum and it passed into the institution's permanent possession upon his death in 1945.[62] The second recently discovered instrument (S), an unsigned three-joint flute having many close similarities with the Berlin, St. Petersburg, La Couture, Brussels, and Miller examples, came in 1980 into the hands of the London dealer in historical instruments Tony Bingham and thence passed into a private collection in Stuttgart, Germany (Plate 4).

The foregoing sketch describes the provenance of the flutes that have been or may be attributed to a member of the Hotteterre family, or that resemble the type shown in the Picart engraving. From the documentary evidence discussed above, we know of replicas in Brussels, La Couture, and the Miller Collection. The Graz flute's provenance, though undocumented, at least presents no confusing or conflicting details. The Stuttgart flute, though it too lacks documented provenance and differs from the other seven flutes in having a short cylindrical, rather than the larger and more ornate, cap, is similar enough in other important respects to deserve comparison with the others. But the provenance of the Berlin and St. Petersburg flutes presents serious difficulties. Moreover, the St. Petersburg museum in fact holds not one but two "Hotteterre" flutes, one signed and the other unsigned, of which the latter has hitherto escaped notice in the literature. All three of these instruments appear to have come from Snoeck's estate, but even this is not absolutely confirmed by any documentation.

[61] Hans Sowinski, "Steirische Volksmusikinstrumente," in *Musik in Ostalpenraumen* (Das Johanneum 3) (Graz: Steirischen Verlagsanstalt, 1940), 180–202, pictured in table 5a. Another photograph was published in Bowers, "Development of the Transverse Flute," 23. The Graz flute is not listed in the sixth edition of Lindesay G. Langwill, *An Index of Musical Wind-Instrument Makers* (Edinburgh: Published by the author, 1980). Berlin 2670 is listed on p. 83, s.v. "Hotteterre," and St. Petersburg 471 in the second "Addenda and Corrigenda" section on p. 314, s.v. "Hautteterre."

[62] I am grateful to Frau Dr. Monika Jaeger of the Landesmuseum Johanneum for documentation of the Graz flute's provenance. According to her recollection, Sowinsky's papers, which could conceivably include an accession register with details of how he acquired the flute, are in the collection of the Kunsthistorisches Museum in Vienna. In a letter to the author (1 August 1994), however, Prof. Gerhard Stradner, Director of the Collection of Old Musical Instruments at the Kunsthistorisches Museum, writes that his institute holds no Sowinsky papers. The Graz Hotteterre is listed in Gerhard Stradner, *Musikinstrumente in Grazer Sammlungen*, Tabulae Musicae Austriacae 11 (Vienna: Oesterreichischen Akademie der Wissenschaften, 1986), 25.

Snoeck's catalogue of 1894 fails to disentangle the provenance of the Berlin and St. Petersburg flutes. Sachs complained that not only had no inventory been made of the instruments that came to Berlin, but also a single listing in Snoeck's own catalogue sometimes covered as many as fifty objects.[63] And there are other examples of the difficulty of tracing provenances. In 1877, for instance, Snoeck bought a flute marked NAUST in the sale of Edmond de Coussemaker's estate.[64] A Naust flute from the Coussemaker collection figures in Snoeck's catalogue as No. 667 and duly appears in Sachs's as No. 2667. But No. 465 in the St. Petersburg museum, another three-joint flute by Naust, matches the description given for Berlin 2667 except that it lacks its footjoint. St. Petersburg 465 almost certainly came from Snoeck, who, if he owned it by 1894, may not have troubled to list it separately, especially if it was incomplete at that time. We may be quite sure that copies and repairs executed in La Couture found their way into the Snoeck collection, and thence to Berlin and St. Petersburg: the highly suspicious "Denner" bass recorder St. Petersburg 407 (Plate 5)—in mint condition, yet with a scale tuned so ineptly that it could never have been used, and with its mark scratched, not stamped, in the wood—is fitted with a windway block marked CHEDEVILLE, the name of a French dynasty of wind players, composers, and makers, five of whom were founders of the La Couture museum.[65]

Concerning the Snoeck flute or flutes, then, a number of vexing questions remain. How many Hotteterre-type flutes did Snoeck own? Where is it (or are they) now—in Berlin, St. Petersburg, both, or neither? Did Snoeck own an authentic instrument or instruments, or could he have mistaken for genuine something like the La Couture replica, a reconstruction, or a copy of a now vanished original? Documentary evidence alone provides no clear answers to such questions: indeed we cannot be quite certain that copies have not been substituted for originals at some relatively recent time. Nevertheless, a scrupulous examination of the surviving instruments, both those that purport to be originals and those that are certainly replicas, reveals important details that amplify the incomplete written evidence and provide a key to the maze of problems it presents.

[63] Sachs, *Sammlung alter Musikinstrumente*, v.

[64] The catalogue was reissued by Buren: Frits Knuf, 1977. The flute was lot 27 in the sale.

[65] Bellemère, Charles, François, Jacques, and Léopold Chédeville are named in the La Couture *Historique* MS, fol. 12. All but the first are described as "luthier à la Couture-Boussey."

TABLE 2

Benchmark Dimensions

Abbreviation	*Location*	*a*	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*
Measured Values													
Bn	Berlin 2670	128.25	42.33	81.60	120.55	184.25	223.00	260.60	88.95	159.50	280.20	102.10	72.65
M	Miller 428	127.25	42.70	81.35	120.33	185.30	223.90	261.55	90.80	159.50	281.09	102.30	73.04
Br	Brussels 3131	127.85	42.75	81.75	120.40	185.65	224.35	261.55	90.12	159.07	281.59	102.45	73.00
P471	St. Pet. 471	128.60	42.60	81.80	120.60	185.70	224.70	262.30	88.65	160.80	281.60	101.86	71.90
C	La Couture	127.30	42.60	81.60	120.35	185.60	224.17	261.55	89.02	160.55	280.95	101.95	72.90
P472	St. Pet. 472	128.10	42.85	82.00	120.90	185.90	224.45	262.20	89.39	161.14	281.10	102.13	73.58
G	Graz 1384	137.00	49.00	87.00	127.00	191.00	229.50	266.00	57.20	166.50	284.00	110.80	65.90
S	Stuttgart	131.20	44.00	83.75	122.40	187.15	227.30	264.25	39.60	158.80	282.30	99.20	69.90
Calculated Values													
X (Avg. Group A)		127.89	42.64	81.68	120.52	185.40	224.10	261.62	89.49	160.09	281.09	102.13	72.85
Range, Group A		1.35	0.52	0.65	0.57	1.65	1.7	1.7	2.15	2.07	1.4	0.59	1.68
Range of G, S, X		9.11	6.36	5.32	6.48	5.60	5.41	4.38	49.89	7.70	2.91	11.60	6.94

Note: Total sounding length, from the embouchure center to the end, is a + j + k + l. Group A comprises Bn, M, Br, P471, C, and P472.

a Embouchure center, measured from the lower headjoint tenon shoulder
b Center of tonehole 1, measured from center joint top tenon shoulder
c Center of tonehole 2, measured from center joint top tenon shoulder
d Center of tonehole 3, measured from center joint top tenon shoulder
e Center of tonehole 4, measured from center joint top tenon shoulder
f Center of tonehole 5, measured from center joint top tenon shoulder
g Center of tonehole 6, measured from center joint top tenon shoulder
h Total length of cap
i Length of head, excluding tenons
j Sounding length (total length excluding tenons) of center joint
k Total length of foot
l Total length of connector between head and center joints

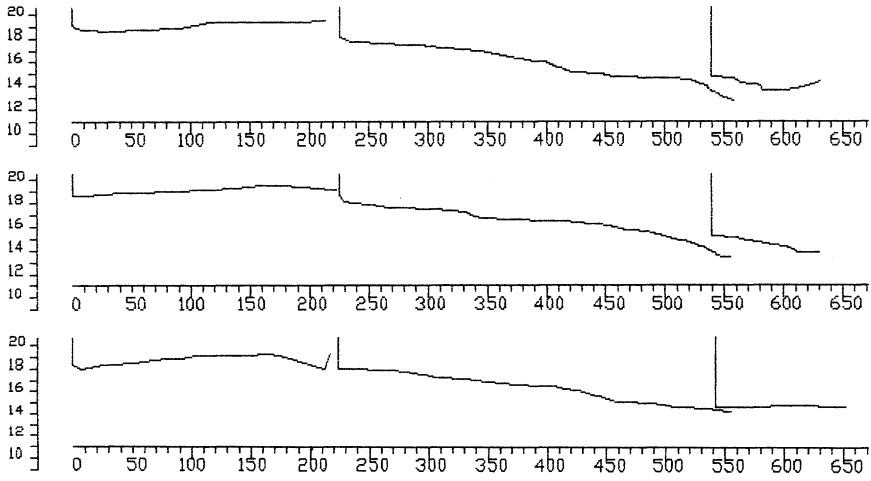


Figure 1. Bore graphs (from top) of Bn, S, and G. Vertical Scale: bore in mm. Horizontal scale: length in mm.

Table 2, listing some benchmark measurements of the eight "Hotteterre" flutes, shows that six of the eight—Bn, M, Br, P471, C, and P472 (Group A)—are made to the same pattern, while the remaining two—S and G—are unique. The six similar flutes in Group A are based on a pattern I have designated as X^{I}, representing the instrument that provided a model for the first generation of copies. Before considering Group A let us dispose of the two instruments remaining outside it.

In general proportions and decorative details, the anonymous flute S bears certain similarities to the six Group A instruments, although it is of a different pattern. Its bore profile resembles that of Group A (Fig. 1), but its tonehole locations deviate from X (the average measurements of the six similar flutes of Group A) by up to three millimeters, compared with a range of up to one-and-a-half millimeters within Group A. Its tonehole undercutting is of a comparably slight volume and has the same scraper marks as G. It carries a short, slim, cylindrical cap, as do some instruments by Naust (R-St. Petersburg: 465), Panon (F-Toulouse: Musée Paul Dupuy 9. 754), and Rippert (F-Paris: Dorgeuille ex le Roy), and its foot has a shape very similar to G and the Group A flutes, though it is somewhat shorter in overall length.

G stands out from the other seven flutes in a number of important respects. Though of a quite similar appearance, it is not simply a variant version of the Group A model: its overall sounding length measures 627.2 mm., almost a centimeter longer than the next longest

Figure 2. Documented Group B

example, and a full 17 mm. longer than the anonymous S instrument. Its toneholes, located much lower down the tube, have the smallest amount of undercutting of any of the instruments, with almost none at all on toneholes 3, 6, and 7. In materials too, G differs from the Group A flutes: the wood is ebony rather than boxwood, and the foot, instead of solid ivory, is made of ebony with an ivory mount at the socket. Though the flute's cap is of the decorative type found in Group A, it is much shorter and is hollowed out as much as possible to make it very light. The footjoint is less similar to those of Group A than to that of S, and is a good deal longer than either type. The turning of the wood tubes shows a surprising lack of care, and the key has a rectangular flap and a touchpiece of a rather unattractive form. Toolmarks from the key's manufacture resemble those of other three-joint flutes, such as Rippert (GB-Glasgow: Kelvingrove 42–68K) and Bressan (US-Washington, D.C.: Dayton C. Miller 1207), so the key along with its highly unusual tempered steel spring must be considered original. Its exceptionally fine, clear, regular, and well-preserved stamp (see Plate 9 below) appears on the head and center sections, though not on the foot, where the decorative turnings leave little room for it. Notable characteristics of the die impressed into the wood are even letterspacing, sharp-edged letters with serifs on the T's and the first E, and a chipped upper limb on the second E. The lettering probably resulted from rolling the wood across the die, twisting slightly to make the lettering appear curved, while the anchor stamp was struck separately on the wood.[66]

To return to Group A, we know that some of its members are not original Hotteterre flutes but replicas: the documentation cited above shows that Br is a copy of Bn made around 1877 and that M is a copy of Br made in 1924; thus both may be considered descendants of Bn. Let us collect these into a subset of Group A designated Group B (Fig.

[66] On the headjoint the anchor touches the first E; it has been struck harder there than on the center joint, leaving a more pronounced impression.

2). The differences in design, as listed in Table 1, between the other Group A instruments, P471, P472, and C, do not signify that they were made after another pattern. But are they too replicas of Bn? Scrutiny of their materials, the tools and workmanship of their manufacture, and their marks and keys can help answer this question in each case.

The two flutes which we know to be copies, Br and M, have key-seats made with a flat milling cutter 16 mm. in diameter, probably but not necessarily machine-driven while the footjoint was mounted between centers (Plate 6). This feature, which would effectively rule out an origin earlier than the last quarter of the eighteenth century when such technology was first used in woodwind making,[67] is also found on P471 and P472, though with the variation that the key-seats are slanted (Plate 7). In addition to this decisive indication of a late origin, P471 and P472 have characteristics of materials, edges, surface treatment, undercutting, key-making techniques and, in the case of P471, mark, which leave no room for doubt that they are copies made in the same tradition as Br and M, but with a higher degree of skill and care. On the other hand the key-seats of Bn and C are rectangular and made with a file, in a manner more consistent with eighteenth-century techniques (Plate 8).

Although the milled key-seats distinguish the two St. Petersburg flutes as replicas, we still have not answered the question of whether or not they were modeled on Bn. To determine this, one feature alone provides an indication: the form of the key. At one end of this simple metal lever, held closed by a spring, is the flap, which seals the hole beneath it. At the other end is the touchpiece on which the player presses to open the hole.

The characteristically shaped "Hotteterre" key, with a round flap and a round touchpiece, is found on M, P471 and P472, Bn, and Br—all the Group A flutes except C. Keys of this shape do not appear in pictorial sources: without exception, drawings and paintings of three-joint flutes from the late seventeenth and early eighteenth centuries, as well as all surviving instruments of three-joint construc-

[67] Milled key-seats have been noted on a number of flutes studied by this author, the earliest of a style which did not emerge before the 1770s or 1780s, by makers including [Hyppolite?] Camus (fl. before 1793–1822), Christophe Delusse (fl. before 1781–after 1789), the successors of Johann Friedrich Boie (after 1809), Carlo Palanca (1688/90–1783), and James Wood (ca. 1799–1832). The technique became standard on wooden instruments during the nineteenth century.

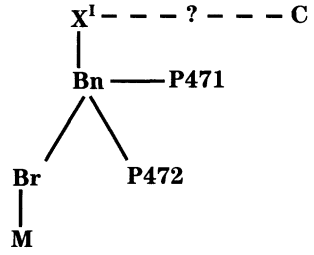


Figure 3. Revised Group B

tion except these five in Group A, have rectangular key-flaps.[68] Since a round-flapped key is present on Bn, it also appears, as one would expect, on its documented Group B descendants Br and M. However, C, G, and S have the usual rectangular key-flaps (though S has scratches in the flat wood of the key-seat that could conceivably have been left by a knife when trimming a leather pad fitted to a round-flapped key now missing). In any case G and S can be ruled out as the models for the St. Petersburg copies because of their differing designs, and now C can be ruled out because of the shape of its key-flap. Therefore P471 and P472 must have been modeled on Bn or X^I, not on C or its original (Fig. 3).

Group A instruments that carry the mark HOTTETERRE/anchor are Bn, P471, and C. Of these, we have so far determined all but Bn to be copies. Let us now consider the relationship between these copies and Bn itself. Their materials are remarkably similar: varnished orange-yellow boxwood, having a mark with lettering filled in in black. The mark on P471 (see Plate 10) has uneven letterspacing and a crude, irregular appearance. Possibly it has been tampered with to deepen the impression of a faint stamp, but if so, the stamp is not the same one that made the impression in G, and its faintness cannot have been due to wear since the instrument is in almost mint condition. More likely the mark was made with a sharp-pointed engraving tool following a set of dots traced in the wood. The mark on C (Plate 11) closely resembles that of Bn in that it seems to have been engraved by joining dots and filling in the depression with black matter, and like P471 and P472 the instrument is in mint condition. Also extremely similar in P471 and C are the workmanship of the ivory turning, and the

[68] Bowers, "Development of the Transverse Flute," 14. The engraving of Snoeck's Hotteterre flute (probably Bn) in Thoinan, *Les Hotteterre*, 40, shows a key with a round flap and a round touchpiece (Plate 3 above).

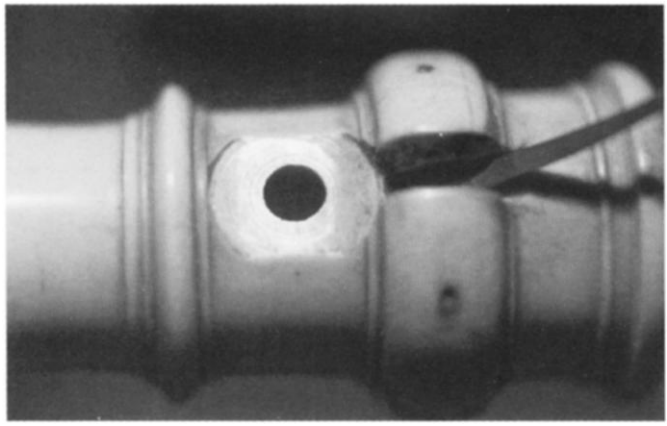


Plate 6. Key-seat of Br

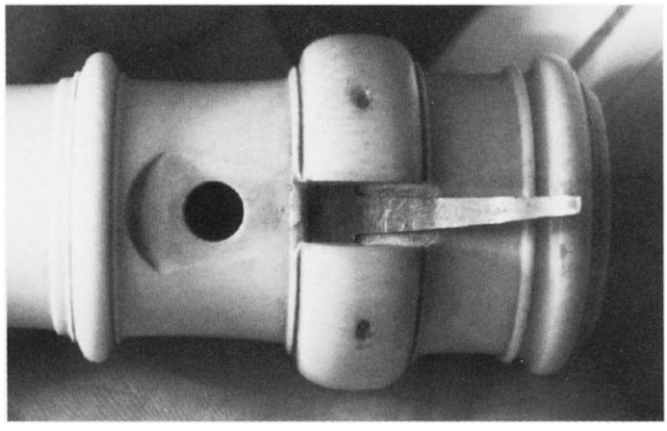


Plate 7. Key-seat of P471

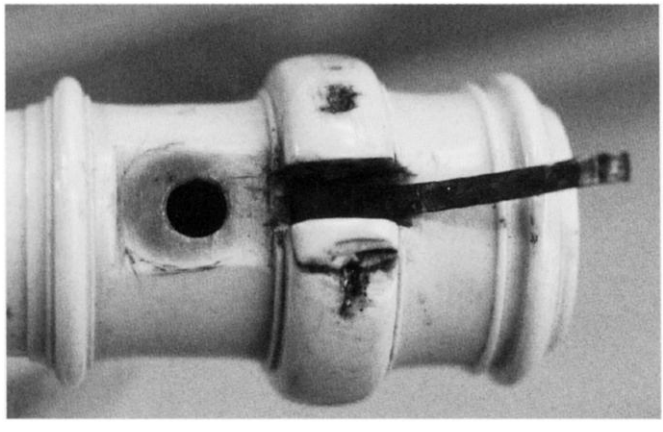


Plate 8. Key-seat of Bn

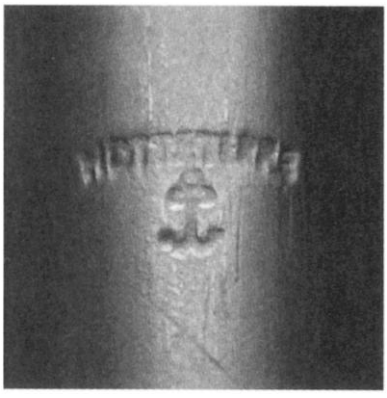


Plate 9. Stamp of G

Plate 10. Mark of P471

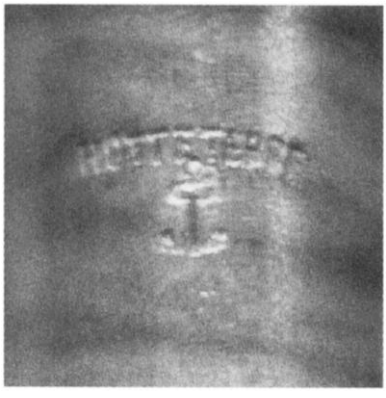


Plate 11. Mark of C

Plate 12. Mark of Bn

uncommon shiny finish on the unusually light-colored wood, which in C is of exceptionally fine quality, with a regular curl descending from left to right.

Bn shares these distinctive characteristics of P471 and C, a combination not found in any other woodwinds of the late seventeenth or early eighteenth centuries. Bn's wood is of the same exceptional quality as C's, having a regular curl descending from right to left. Such wood, in itself, does not rule out an origin in the baroque period: two flutes by Rippert (CH-St. Moritz: Engadiner Museum 1645 and F-Paris: Dorgeuille) are made from fine curly boxwood. Other surviving boxwood flutes of the period, however, are made of unfigured wood, while all of them including the Rippert flutes have a reddish-brown stain and an oiled patina dulled over time. The condition of Bn's finish is considerably more worn than that of P471 and C; the surface is scuffed and the varnish worn away unevenly. Yet close inspection shows traces of the same glossy varnish that on C remains in mint condition, a product not found on any three-joint flute except those of Group A. The headjoint of Bn, like that of P471, is somewhat warped (a possible indication of their makers', or maker's, inexperience with the seasoning of boxwood), whereas all other surviving authentic three-joint flutes have remained straight. All three instruments exhibit an identical style and execution in ivory turning: very good quality, accuracy, and finish, with an aesthetic sense highly developed by practical work. But a careful comparison of the turning style with that of other woodwinds of the period reveals none of the same sureness of taste and touch. As for Bn's mark, the depression in the wood is filled with black material, but its edges are too worn to indicate how it was made (Plate 12). The letterspacing, however, is more regular than that of P471 or C, and seems to have the same general characteristics as the stamp of G. The key and spring are of exactly the same construction as P471 and C, which is quite different from that of G.

To sum up thus far: we have determined P471 and P472 to be copies, probably of Bn, and from their provenance we can date them with reasonable certainty to the period ca. 1877–1902. When Bn is compared with P471 and C, it becomes apparent for the first time that all three flutes share a similar origin—that is, each one has features found only on instruments made in the mid-nineteenth century. Therefore, despite the absence of decisive indications—such as anachronistic technology—that Bn is a replica, its status as an authentic Hotteterre flute can no longer be maintained; rather it must be considered a copy from the same source as P471 and C. This leaves C

as the only Group A instrument that must be excluded from Group B, solely on the basis of the shape of its key.

If C is not a member of Group B, could it be that it follows the pattern of a second missing Hotteterre flute, X^{II}, identical to X^{I} in all respects except for the shape of its key? It is not out of the question that two very similar original Hotteterre flutes were present in La Couture in the mid-nineteenth century, but because such great similarities link C on the one hand with Bn and its descendants on the other, we can hardly dismiss on the basis of this small discrepancy the much stronger likelihood that they were copied from the same original, X^{I}. It seems simpler to suppose that only this single instrument survived, perhaps missing its key, and that more than one replica was made at around the same time, with keys invented to supply the lack; or that the copyist who made C decided to make a key more like the one shown in Hotteterre's fingering-chart than the round-flapped one of his model. This solution, the only one consistent with all the evidence reviewed above, would mean that all the Group A instruments except C are replicas of Bn, while C and Bn itself were copied directly from a single lost original, X^{I}.

This investigation of the provenance of the Hotteterre flutes, in conjunction with the physical examination of the instruments themselves, suggests the following hypothesis. At some time, probably in the second quarter of the nineteenth century, an original Hotteterre flute (X^{I}) became known to one or more of the woodwind makers of La Couture-Boussey. Because of the close family nature of the French woodwind-making tradition, the Hotteterre name captured the interest of one or more makers who carefully made copies (Bn and C, perhaps others) of the original, which then disappeared from view once again.[69] The replicas passed from hand to hand in La Couture, their origin forgotten, until the energetic Snoeck heard of one (Bn) and, believing it to be an original, acquired it for his collection. During the 1870s, at a time when interest in the history of French

[69] The original embouchure was probably similar in size and shape to those of G and S. C, Bn, and the descendants of Bn, however, have large, oval embouchures of a well-crafted nineteenth-century type. Though eighteenth-century flute embouchures were all too often altered by later hands in order to raise the pitch, in this case a modern embouchure was probably made on the flutes so that they would work better for the players of the time. Haskell writes, "Auguste Tolbecque, the instrument-maker and gambist, said that Fétis had difficulty finding musicians capable of playing the old instruments and so resorted to the expedient of modernizing them; see his *Notice historique sur les instruments à corde et à archet* (Paris, 1898)" (*Early Music Revival*, 200 n. 23).

woodwind making was on the rise, Snoeck's flute became known to Thoinan, Mahillon, and others. Mahillon measured the instrument and had a replica made by de Vestibule for the new Brussels museum (Br) on its foundation in 1877. In the late 1880s the second of the earlier Hotteterre copies (C) surfaced in La Couture and sparked the idea of creating a museum there. This in turn set off a veritable wave of copying activity, doubtless including the re-replication (P471 and P472) of Snoeck's instrument (which he at least still believed to be authentic) by La Couture workmen, who stocked the museum almost entirely with facsimiles of early woodwind instruments. By the time of Snoeck's death his enormous collection contained three replica Hotteterre flutes (Bn, P471, and P472), two of which carried the mark HOTTETERRE. Snoeck himself must have known that one signed and one unsigned flute were not genuine; in any case he did not mention them in his 1894 catalogue along with what he believed to be his "original" (Bn). Thus it came about, perhaps at the connivance of Snoeck's executors, or perhaps merely by accident, that the Berlin and St. Petersburg museums each acquired a flute signed HOTTETERRE at the dispersal of the collection in 1902. In the present century, Albert made a copy of the Brussels copy for Miller in 1924 (M), the arrangements having been made by Mahillon who still, as he declared, believed that Snoeck had possessed only one Hotteterre and that St. Petersburg had received it (P471). The La Couture replica (C), with pride of place in its museum since 1888, was still listed as an original along with Berlin 2670 and St. Petersburg 471 in 1977.[70] Thus the specimen in Graz (G), which surfaced only relatively recently, is the sole flute stamped HOTTETERRE whose authenticity remains unquestioned. The other authentic flute of a similar pattern (S), without a stamp, can be linked with the Hotteterre name and with the genuine G only by shared decorative features and a loosely comparable acoustical design.

Though this study reduces the tally of surviving authentic Hotteterre flutes from three (Bn, P417, and G) to one (G), it does not necessarily follow that few of these instruments ever existed. Some woodwind workshops in the early eighteenth century which evidently produced very large numbers of flutes are represented today by only a handful of examples.[71] In view of this perhaps we should consider

[70] Bowers, "Development of the Transverse Flute," 13 and the citation in n. 16.

[71] An instance of a highly productive workshop represented by only three surviving flutes is that of Louis Cornet (ca. 1678–1745): an inventory on Cornet's

ourselves exceptionally fortunate that any Hotteterre specimen remains. Indeed even the two replicas (Bn and C) copied from X^I provide valuable—if only approximate—information about what the lost original was like: their measurements, materials, and appearance are similar enough to each other that neither can have deviated far from the appearance and acoustical proportions of the model.

As for how our concept of the "Hotteterre" flute is changed by the results of this study, if Figure 1 and Table 2 indicate that G, X^I, and S were conceived rather differently from one another, an even greater variety of design, and thus of sound ideals and playing qualities, characterizes the larger group of surviving three-joint flutes.[72] But in a field still dominated by the "Hotteterre" type, the other surviving three-joint flutes have received attention from very few of today's replica builders and historical performance specialists. Consequently, important areas of the period's musical experience remain unexplored, leaving the Hotteterre flute, at present, almost in a vacuum, its true significance impossible to evaluate.

A properly revised appreciation of the Hotteterre flute will have to compare technical aspects of its construction not merely with other baroque three-joint flutes, but with all other types of seventeenth- and early eighteenth-century transverse flutes. This is a task for a separate study. Nonetheless, a few points may demonstrate the importance of such little-understood areas to our concept of the flute's history. In 1974, Raymond Meylan[73] argued that the flute described in Marin Mersenne's *Harmonie Universelle* (1636)[74] manifested a significant change that had already by the middle of the seventeenth century taken place in the design of the D flute, the size which by that time most commonly played tenor, contratenor, and descant parts in consort music. Mersenne's two fingering charts, for G and D instruments, differed significantly from one another, though Mersenne

death (Archives Nationales de France Z23635, quoted in Giannini, *Great Flute Makers of France*, 49 n. 48) listed some five hundred instruments in production at once, including sixty-nine transverse flutes. The corpus of surviving eighteenth-century flutes as a whole contains a low proportion of examples from the early part of the period (see Powell and Lasocki, "Bach and the Flute," 14).

[72] Powell, "The Hole in the Middle."

[73] Raymond Meylan, *La Flûte—Les Grandes Lignes de son développement* (Lausanne: Payot, 1974). This work appeared in German as *Die Flöte: Grundzüge ihrer Entwicklung von der Urgeschichte bis zur Gegenwart* (Bern and Stuttgart: Hallwag, 1974, 1975); and in English as *The Flute* (Portland, Oreg.: Amadeus Press, 1988). Meylan's discussion of the Mersenne flute is on pp. 94–96 of the English edition.

[74] Marin Mersenne, *Harmonie Universelle* (Paris: Sebastien Cramoisy, 1636).

himself could not explain why the difference existed. Meylan pointed out the similarities between Mersenne's D flute chart and that of Hotteterre's tutor for the "baroque" flute, contending that in order to function with the fingerings given, Mersenne's flute must, like Hotteterre's, have had a conical bore—though unlike Hotteterre's it was in only one or perhaps two pieces, and had six toneholes and no key. Mersenne did state that the D flute's bore was cylindrical, but doubtless this was because, observing that the open ends had the same diameter, he simply saved himself the trouble of investigating more thoroughly. As an example of music for the flutes he described, he gave a four-part *Air de Cour* by Henry le Jeune for flute consort. This may well indicate that conical-bored flutes indeed developed in circles in contact with the French court, and were used in French music at an early stage, but it conflicts with the notion that the conical bore evolved at the end of the century along with three-joint construction and one key, as the legend of the "Hotteterre" flute holds.[75]

If Meylan was correct, instruments with a conical bore were made before the mid-seventeenth century; but even so, the manufacture and use of cylindrical-bored transverse flutes of various types evidently did not cease immediately. A surviving two-piece flute by Lissieu (fl. Lyon ca. 1672; A-Vienna: Kunsthistorisches Museum C. 187) has a cylindrical bore but proto-baroque styling, and an instrument signed with an unidentified maker's mark and having similar characteristics (D-Nuremberg: Germanisches Nationalmuseum MIR 280) may have been made in Augsburg or northern Italy at around the same time.[76] Similarly, a 1646/49 collection of music by Jacob van Eyck[77] is prescribed for a recorder in C, or for a flute in high G with an ordinary "renaissance" fingering system.

Apparently the earliest surviving instruments with all three of the new features we associate with the baroque flute (three-joint construction, conical bore, and one key) are an anonymous D flute (I-Assisi:

[75] Jane Bowers found from a study of iconography and literary references that at the time Mersenne wrote, the transverse flute was in decline in France until it became popular after 1680 (" 'Flaüste traversienne' and 'Flûte d'Allemagne': The Flute in France from the Late Middle Ages up through 1720," *"Recherches" sur la musique française classique* 19 [1979]: 26–33).

[76] Peter Spohr, *Kunsthandwerk im Dienste der Musik* (Frankfurt: Published by the author, 1991), 13, item A2, illustrated on p. 12.

[77] Jacob van Eyck, *Der Fluyten Lust-hof* (Amsterdam: Paulus Matthyszoon, 1646). According to David Lasocki, the fingering charts for the instruments, although bound with several of the surviving copies, are a separate publication.

Biblioteca Comunale)[78] and a C flute by Amsterdam maker Richard Haka (NL-Utrecht: Ehrenfeld 19).[79] The information available at present is not sufficient to date these instruments precisely, but they represent at the very least a parallel development to the French three-joint flute, if not an antecedent one. The musical connections between Italy and the Netherlands, the thriving amateur musical culture and the prosperity of cities such as Amsterdam, and the high social status and inventiveness of Dutch woodwind makers all underscore the need for scholars seeking to learn more about the transformation of the flute in the seventeenth century to expand their attention beyond northern France—and even northern Europe.[80]

It is already clear from these few facts that a new history of the seventeenth-century flute cannot adhere to the model of linear development hitherto relied on. Rather a way must be found to accommodate the notions that quite distinct forms of the same instrument might coexist and be used in different ways, and that widely separated geographical areas might share new concepts of design but handle them variously in pursuit of objectives that were far from uniform. This requirement calls for a much more sophisticated theory than has yet been proposed for the short-term development of musical instruments.

In many fields that have seen reawakenings of interest in the past, the longevity of inexact early interpretations has "helped to throw a mist of unreliable antiquarianism about the subject which scholarship has not the means completely to dispel."[81] Most myths, doubtless including that of the "Hotteterre flute," contain a kernel of truth. In seeking to reevaluate the transformations in seventeenth-century woodwind instruments with the wider knowledge and new tools at our

[78] Vincenzo Di Gregorio, "Il traversiere di Assisi, con alcune osservazioni sulla prima fase del flauto traverso barocco," *Il flauto dolce* 10/11 (1984): 48–51; Filadelfio Puglisi, "A Three-Piece Flute in Assisi," *Galpin Society Journal* 37 (1984): 6–9.

[79] Solum, *The Early Flute*, 36.

[80] James B. Kopp reached a similar conclusion in a study of the bassoon, "Notes on the Bassoon in Seventeenth-Century France" (*Journal of the American Musical Instrument Society* 17 [1991], 85–111): "Given such yawning gaps in our current knowledge, credit for many specific innovations in bassoon design during the seventeenth century should rightly remain unassigned. And rather than odds-on favorites, Parisian makers, including the Hotteterres, might better be viewed as able contenders within a strong field" (p. 111).

[81] Peter Berresford Ellis, *The Druids* (London: Constable, 1994), 271.

disposal, our challenge will be to find and interpret the historical evidence, unfettered by the preoccupations of the past.

Folkers & Powell, Makers of Historical Flutes

ABSTRACT

Three instruments attributed to "Hotteterre" are considered the earliest baroque flutes. But two of these, once in the collection of César Charles Snoeck, prove to be copies, made at different times in the nineteenth century in La Couture-Boussey, Normandy. These, and other replicas made for the Brussels Conservatory and Dayton C. Miller collections, have fostered the growing myth of the "Hotteterre flute."

Recently discovered flutes by Richard Haka and others argue against the presumption that the baroque flute was a sudden invention. New and wider studies of seventeenth-century woodwind instruments throughout Europe are beginning to indicate that the flute underwent a process of change far more complex than previously thought.