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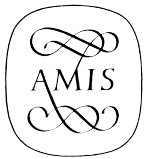

Notes on the Bassoon in Seventeenth-Century France

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The broad outline of the bassoon's development during the seventeenth century is clear enough. From its ancestor, the one-piece, two-key dulcian, which had achieved its essential form by the mid-sixteenth century, the baroque bassoon proper emerged as a four-joint, three-key instrument with bass register extended by one whole tone. Historians have generally identified France as the site of this phase of the bassoon's development, although the emergence of the four-joint instrument is apparently first documented in a Dutch painting dated 1669 or before.[1]

Details of this transformation have remained obscure for several reasons. Though in many ways parallel to the seventeenth-century remodeling of the other woodwinds, the reform of the dulcian was more drastic. Its newly extended lower range necessitated a longer bell and an added key, and the sectioning of the instrument's folded bore presented makers with more decisions than did the simpler sectioning of the other woodwinds. Only a few surviving instruments are constructed in a style that exemplifies the transition, while documentary evidence is scarce and often imponderable. Writers of the period often refer to flute, oboe, and recorder, while omitting reference to the bassoon. When "basson" and related terms do occur in seventeenth-century sources, additional evidence is usually necessary to determine whether a dulcian, a four-joint bassoon, or some transitional instrument is indicated.

To trace the revision of the bassoon's design during the first half of the century, scholars have turned to the descriptions offered in Marin Mersenne's *Harmonie universelle* (1636), which depicts four dulcians, all of them transitional, and provides approximately 1,300 words of explanation.[2] The first portion of this article will reexamine Mersenne's French text and illustrations, as well as the roughly parallel Latin version contained in Mersenne's *Harmonicorum libri* (1635),[3] in an attempt to

1. The painting, which is discussed below, is illustrated in Langwill, *The Bassoon,* plate 9, figure 1.

2. Mersenne, *Harmonie universelle,* 298–302.

3. Mersenne, *Harmonicorum,* 85–87.

resolve difficulties in the text and discrepancies that have arisen among modern interpreters. It will also examine a roughly contemporary account of transitional dulcians by the Bordelais Pierre Trichet[4] and review possible influences from Spain and Italy on development of the dulcian in France.

Discussions of the bassoon's evolution during the second half of the century have generally revolved around the Hotteterre circle.[5] At least seven members of the family, originally from the vicinity of La Couture in Normandy, were employed as wind players at the French royal court during the seventeenth century, and most of the seven are also known to have made woodwind instruments. As early as 1740, the court flutist Michel de La Barre credited "Philidor et Hotteterre" with having made improvements to the seventeenth-century shawm.[6] Many later writers, wishing to associate the sweeping reform of the century's woodwind instruments with names of known makers, have grown increasingly definite in their pronouncements about the Hotteterres' role. Yet Jane M. Bowers, a leading authority on the family, thought it necessary in 1984 to caution that "their leadership in this area cannot be proved and certainly should not be unequivocally asserted."[7] The second portion of this article will review evidence of possible contributions by the Hotteterres and other French makers to the development of the three-key, four-joint bassoon during the later seventeenth century.

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The challenging text and illustrations contained in Mersenne's *Harmonie universelle* have inspired varied and sometimes conflicting interpretations. Perhaps the most puzzling feature has been a distinction seemingly drawn between the terms *fagot* and *basson;* Mersenne's discussion is vague enough that interpreters have differed as to wherein the distinction consists. To William Waterhouse, it is a matter of one-part versus two-part construction:

> Mersenne (1636) distinguished between the *basson* "qui est tout d'une pièce de bois" (a four-key dulcian descending one tone lower than usual) and the *fagot,* whose name he derived from its resemblance to "deux morceaux de bois qui

4. Trichet, "Traité des instruments," 367–68.

5. See, for example, Marx, "The Tone of the Baroque Oboe," 8–9, and Baines, *Woodwind Instruments,* 286.

6. The relevant document is reproduced in Benoit, *Musiques de cour,* 455.

7. Bowers, "The Hotteterre Family," 33.

> sont liez & fagottez ensemble." His rather crude woodcuts do not show how the parts fitted together, but he wrote that at the base is a "bande de cuivre . . . qui joint & environne les deux branches de ce instrument."[8]

But to Richard Semmens, the distinction is a matter of size:

> The only difference between a normal *fagot* and a *basson* is apparently one of size. . . . Mersenne's chapter on bassoons is further complicated by his careful distinction between the terms *basson* and *fagot;* the former is a contra instrument, not unlike Praetorius's Quartbass, while the latter is analogous to the Chorist-Fagott.[9]

Neither writer discusses the chapter on dulcians in Mersenne's Latin *Harmonicorum* (1635), which contains the same illustrations and a briefer but roughly parallel text. Yet Mersenne's pattern of usage of the terms in the *Harmonicorum* sheds light on the ambiguous French of the *Harmonie universelle: fagot* hardly appears in the Latin chapter, its one occurrence confined to the chapter heading.[10] Meanwhile, *basson* occurs four times. This contrasts with sixteen occurrences of *fagot* and nine occurrences of *basson* in the *Harmonie universelle.*[11]

Comparing the two texts further, one finds other inconsistencies. In the *Harmonie universelle,* the first instrument is termed *fagot;* in the Latin, it is simply "the first of these [instruments]." Number 2, variously labeled *fagot* and *basson* in the French, is not discussed in the Latin. Number 3 is called *basson* in the French (as is the courtaut), while the *Harmonicorum* says that number 3, "like the preceding [courtaut], is called *tarot* by some, but commonly *basson,* because it produces deeper sounds." Instrument number 4, labeled *"fagot* or *basson"* in the French text, is simply *basson* in the Latin. The cervelat (rackett), termed "a shortened *fagot*" in French, becomes "a shortened *basson*" in the Latin.[12]

A clue to Mersenne's terminology appears in Proposition IV of the *Harmonicorum* ("Nomina sequentium instrumentorum, et partium . . . "), wherein French organological terms are translated into Latin.[13] Here

8. *Grove Musical Instruments,* s.v. "Bassoon," 183.

9. Semmens, "The Bassoons in Mersenne's *Harmonie universelle,*" 24 and 26.

10. Mersenne, *Harmonicorum,* 85.

11. Mersenne, *Harmonie universelle,* 298–301, 303. Hereafter, the two dulcians on page 298 will be referred to as instruments 1 (left) and 2, respectively, that on page 300 as instrument 3, and that on page 302 as instrument 4. The same illustrations occur in the same order in the *Harmonicorum.*

12. Mersenne, *Harmonicorum,* 85.

13. Ibid., 78–79.

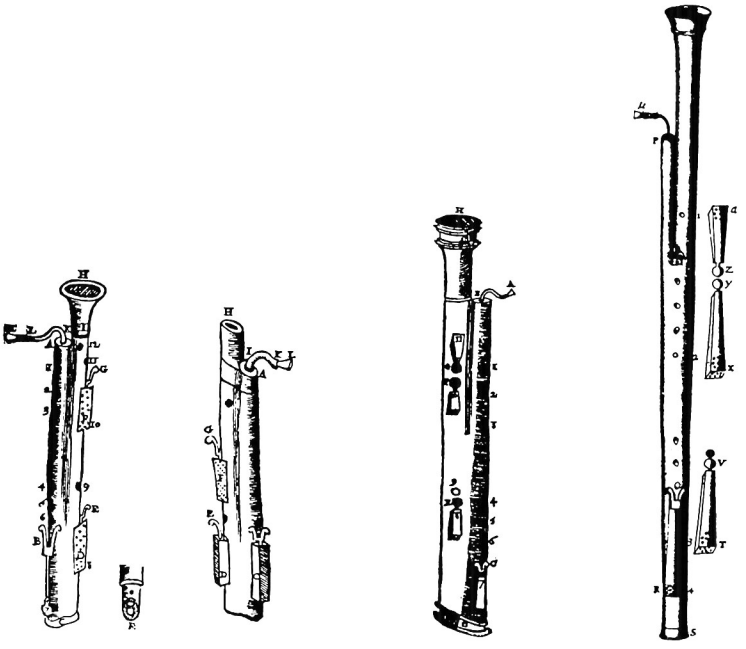

FIGURE 1. Transitional dulcians as pictured in Marin Mersenne, *Harmonie universelle* (Paris, 1636), 298, 300, 302. From left: No. 1, with detail of butt construction; No. 2; No. 3; No. 4 (numbers added by the present author). The relative sizes follow Mersenne's original scale.

Mersenne renders *fagot* as "fistula compacta," that is, a folded-bore instrument. *Basson* is rendered as "barytonum," once again stressing the instrument's range rather than its structure. Given Mersenne's usage of *basson* in the *Harmonicorum* to include the cervelat and courtaut as well as dulcians, we may conclude that its Latin application is broad and at least partly synonymous with *fagot*.[14]

14. There are other indications that the terms had broad and overlapping applications in Mersenne's time. Trichet's 1631 inventory of his collection included "un basson ra-

Aside from the inconsistencies of usage between the two texts, the case for a distinction between *fagot* and *basson* in the *Harmonie universelle* is not without difficulty on its own terms. Granted, Mersenne refers in the French to instrument number 1 exclusively as *fagot,* while he refers to instrument number 3 exclusively as *basson;*[15] since his discussion centers on these two instruments, it might seem plausible that he intended to convey a distinction. Yet to articulate the distinction is no simple matter, as the divergent findings of Waterhouse and Semmens indicate. And there are other factors in the French account that weigh against a distinction. First, Mersenne refers to instruments 2 and 4 by both terms. Second, he refers to the courtaut as "nothing but a *fagot* or a shortened *basson.*"[16] Third, Mersenne's derivation of *fagot,* cited by Waterhouse as evidence of a distinction, is apparently a recital of a broad term's standard etymology rather than an empirical observation about a particular type of instrument. Here is the passage in context:

> Proposition XXXII/To explain the shape, size, range, and use of *bassons, fagots, courtaux* and *cervelats de musique./*I treat of these types of basses because they can be used in the shawm consort and because they differ from the preceding basses [bass shawms] only in breaking into two parts so as to be carried and managed more easily; thus they are called *fagots,* because they resemble two pieces of wood faggoted and bound together. Now the first *fagot,* on the left side, begins with the letter A. . . .[17]

Mersenne addresses himself to "these types of basses" in the plural, using *fagot* in this sentence, at least, to embrace several folded-bore instruments, including the courtaut, as shown with the two dulcians in the accompanying illustration, and the cervelat as well. Although each has two or more bores, neither the courtaut nor the cervelat is constructed of two pieces of wood, so it would be unwarranted to assume that a third type of *fagot* (the dulcian) necessarily would be. The corre-

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courci," presumably a rackett, and he also described *bassons* of varying sizes and constructions (Trichet, "Traité des instruments," 286, 367). In 1664, the inventory of the collector Manfredo Settala, who was a self-described admirer of Mersenne, included "fistulae compactae tres, seu facotti, chorista unus, alter ascendentis quartae, tertius quartae descendentis" (that is, tenor, bass and quart-bass dulcians) as well as a "quatuor tibiae replicate sive courtaut Septalij opera, qui sentit hos veros esse facottos, longitudine palmum non ascendunt" ("four racketts built by Settala, who considers them to be *facottos,* shorter in height than one's hand"). Quoted in Schlosser, *Sammlung alter Musikinstrumente,* 18. (In this and other passages quoted from older authors, I have brought capitalization and italicization into conformity with modern standards.)

15. Mersenne, *Harmonie universelle,* 298–301.

16. Ibid., 299, 303.

17. Ibid., 298.

sponding passage in the *Harmonicorum* is also broad and general, noting that "*fagotes, bassones,* and other instruments of the type" are essentially shawms "shortened into a bundle." Thus the *Harmonicorum* avoids the ambiguous locution of "two parts" with which Mersenne burdened the *Harmonie universelle.*"[18]

The size-based distinction Semmens claims between the *fagot* (bass-sized, according to Semmens) and the *basson* (contra-sized, per Semmens) is also undermined by Mersenne's inconsistent usage between the Latin and French texts. Moreover, the measurements Mersenne gives for instruments 1 and 3 suggest that they are approximately equal in size, although Semmens considers them to represent the two different sizes.[19] Given the discrepancies raised by attempting narrower distinctions, we must again conclude, this time with respect to Mersenne's French, that *fagot* and *basson* had broad and overlapping meanings.

Nonetheless, Mersenne does attest later in the chapter to the existence of two-piece dulcians. This is, of course, a matter of great significance, but Mersenne's testimony is unfortunately lacking in particulars.[20] In the *Harmonie universelle,* Mersenne wrote of instrument number 1:

> C is the ferrule of brass or other material that joins and surrounds the instrument's two branches when it is not made from a single piece of wood. The bore-ends in these two branches of the *fagot* are closed with two plugs so that the wind cannot leak and so that the bores of the two branches of the *fagot* are connected. . . .[21]

The version in the *Harmonicorum* is more definite, though no more detailed:

18. Mersenne, *Harmonicorum,* 85.

19. Mersenne states that the bore-length of instrument 3 measures five and one-half feet, and gives component measurements from tone hole to tone hole that essentially confirm the size. Yet this is approximately the length of a conventional bass dulcian, while instrument number 3 supposedly descends "a fourth lower than the ordinary ones." (Ibid., 298, 300–1.) For a tabulation of the measurements, see Köhler, *Blasinstrumente,* 360, 369.

20. The detachable bell, a frequent feature of traditional dulcians, appears to be present in Mersenne's illustration of instruments 1 and 3, but is not a factor in this "two-part" construction. However, the lengthened bell-joint is a significant feature of Trichet's transitional dulcian, and is discussed below as one of his instrument's three joints.

21. "C montre la bande de cuivre, ou d'autre matière, qui joint et environne les deux branches de cet instrument, si ce n'est qu'on le fasse d'un mesme morceau de bois. Or les deux trous, qui sont en ces deux parties du fagot, se bouchent avec deux chevilles, afin que le vent n'en puisse sortir, et que les deux canaux des deux branches du fagot soient tellement continuez que le vent qui entre par l'anche M, ne sorte que par le douzième trou, et par l'ouverture H, quand les unze trous sont bouchez" (Mersenne, *Harmonie universelle,* 298–99).

> Note, however, that these instruments are sometimes made from two tubes, but other times from the same piece of wood. When made from two pieces, as in the instrument we are describing, the ends of the two bores are bound together by the copper band or iron girdle C, and the result of this is that one continuous bore is produced from the two.[22]

It is in this passage alone that Mersenne documents a two-part instrument, for, as noted above, his etymology of *fagot* implies only that any folded-bore instrument has two (or more) parallel bores, and Mersenne's illustrations give no sign of two-part construction. Indeed, the interpreter of Mersenne's illustrations is forced to one of two conclusions, neither of them gratifying. Either his illustration of instrument 1 is of the one-piece version of the dulcian (despite his discussion of both one- and two-piece types), or else it depicts the two-piece version, while failing to reveal its two-piece design. It is less problematic to believe that Mersenne has illustrated the one-piece version, for his detailed illustration of the dulcian's bore-ends gives no sign of two-part construction. In fact, he notes the similarity of the dulcian's bore-ends to those of the one-piece courtaut, remarking that the detail "could also serve to represent the end E of the courtaut BE."[23]

In the absence of an illustration, the design of Mersenne's two-part instrument is a matter for conjecture. One possibility is suggested by Trichet's roughly concurrent description of a sectional dulcian. A Bordeaux lawyer and instrument collector, Trichet began his "Traité des instruments" by 1631. In that year, he also inventoried his instrument collection, including a set of four *bassons,* which presumably influenced his descriptions.[24] The treatise must have been completed by 1644, the year of the author's death. Trichet describes both a conventional small dulcian (*dessus de basson*) and—in unspecified, larger sizes—transitional instruments of three-piece design:

> . . . *bassons* (except the *dessus*) are each composed of two tubes joined together, one somewhat smaller than the other in diameter and length. The wind descends through the smaller tube, then ascends and leaves through the larger one. . . . The *basson* lacks the fontanelle with which the shawm is fitted, but at the point of the bore's reversal, in order to open and close the most

22. "Notandum est autem has tibias aliquando fieri ex duabus tibiis separatis, aliquando ex unico frusto ligni; cum fit ex duobus, uti contingit in ea tibia quam describimus, extrema binorum cavorum limbo aeneo C, vel ferrea fascia ita simul stringuntur, et unicum cavum continuum ex duobus conficiatur. . . ." (Mersenne, *Harmonicorum,* 85).

23. Mersenne, *Harmonie universelle,* 299.

24. Trichet, "Traité des instruments," 286–87.

> remote tone hole, there is a key shielded by a long brass cover perforated in several places. The *dessus de basson* has fewer tone holes than the others, only ten, while the others have twelve or thirteen. The six nearest the crook socket are always located along the smaller tube in a straight line and are equally spaced, except that the third and fourth are somewhat more separated. The other tone holes are sited in different places along the larger tubes, which for convenience may be dismantled and broken into two parts. But one must be careful to reassemble them in the correct position for use, and to position the curved brass crook correctly.[25]

The bell joint of this three-part instrument must have been relatively long and the middle joint relatively short, else there would have been none of the convenience Trichet noted in the two-part construction of the longer tube. In contrast, Mersenne's instrument seems to have had either an integral bell, or a traditional detachable bell not worthy of remark. Otherwise, there is general agreement with Mersenne's brief description of a two-part instrument.

A possible construction for both instruments is suggested by the bass size of the *hautbois de Poitou,* which is depicted by Mersenne as a folded-bore instrument of two discrete tubes (see fig. 2).[26] The connection be-

25. ". . . les bassons (sauf cellui du *dessus*) sont composés chascun de deux tuiaux joincts ensemble, dont l'un est un peu moindre que l'autre en grosseur et longueur : par le moindre le vent descend, et puis s'en remonte et sort par le plus grand. . . . ils n'ont point au milieu cette boëte pertuisée tout à l'entour qu'on met aux haubois. Il est vrai qu'à la partie de la taille on y met, pour ouvrir et fermer le trou plus esloigné, une clef ou ressort de cuivre couvert d'une boëte aussi de cuivre, longue et pertuisée en quelques endroits. Le dessus des bassons a moins de trous que les autres, n'ayant que dix et ceux des autres parties douze ou treze, dont les six premiers vers l'orifice sont tousjours placés sur le moindre tuiau en droite ligne et par esgale distance, sauf que le troisième et quatrième trou s'esloignent davantage. Les autres trous sont situés en divers endroits des plus grands tuiaux, lesquels pour la commodité se peuvent desmonter et se briser en deux parts. Mais il faut estre soigneux de les remettre justement en leur place lorsqu'on veut s'en servir et de bien ranger les cuivrins courbés ou sont insérées les onches qu'on met en la bouche pour entonner les bassons. . . ." (ibid., 367).

26. The possible resemblance between Mersenne's two-piece instrument and the *hautbois de Poitou* was noted by Köhler, *Blasinstrumente,* 361. Of the *hautbois de Poitou,* a cylindrical double-reed instrument blown through a windcap, no specimen survives, although Köhler depicts a modern reconstruction in his plates 3 and 6. Mersenne's description and illustration appear in *Harmonie universelle,* 305–7.

Attempting to visualize Trichet's transitional dulcian, Waterhouse speculated that "presumably the 'double courtaut' of Talbot with its 'first and second conveyances'—the 'pavillion above' and 'plug at bottom covered with brass'—can be identified with one of these transitional French instruments, of which there is unfortunately no other record" (*Grove Musical Instruments,* s.v. "Bassoon," 183.) But Talbot's instrument, which had ten tone holes and descended only to C, cannot have been identical to Trichet's larger instruments, which had twelve or thirteen tone holes, indicating an extended lower range plus one or two tuning holes.

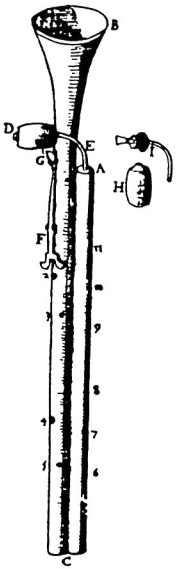

FIGURE 2. The bass *hautbois de Poitou,* with details of windcap and reed, as pictured in Marin Mersenne, *Harmonie universelle* (Paris, 1636), 306.

tween the tubes, not made clear by the illustration and not explained in Mersenne's text, was presumably achieved through an air-tight passage at or near the bottom of the two. Trichet's three-piece dulcian, though conical in bore, was likewise constructed of two discrete tubes, and may have had a similar passage. Such a connection, no doubt delicate, would account for Trichet's warning to reassemble the larger joints "in the correct position for use." Such a design would also account for Mersenne's scrupulous attention to "brass band C, which joins and surrounds the two branches of

(See Baines, "James Talbot's Manuscript," 16, and Trichet, "Traité des instruments," 367.) Instead, Talbot's "double courtaut" seems to have been a conventional dulcian, as Baines noted. The two "conveyances" were simply the two bores; otherwise Talbot would have termed them "joints," as he did the components of the other woodwinds. Talbot also says that the "basson's" four "joints" yielded a "length of conveyance" of nearly six feet.

this instrument."[27] A bottom ferrule is a standard feature even of one-piece traditional dulcians, but Mersenne's emphasis seems to imply that it was of special significance to the two-part instrument.

The longitudinal clefts that appear in all four of Mersenne's illustrations of one-piece instruments hint at the "tibiis separatis" or "branches" of the two-piece instruments he discusses.[28] Such clefts are unknown on surviving dulcians and may have represented an effort by early seventeenth-century Parisian makers to incorporate features of the double-tube, two-piece design into a one-piece traditional design. The clefts, gouged into both sides of the instrument's exterior, would have had the practical effect of reducing weight.[29] If the relation of cleft to tone holes is accurately depicted, the long cleft in illustration 3 would have limited the oblique boring of the three tone holes for the upper hand, while the clefts in illustrations 1 and 2 would limit oblique boring of at least six tone holes. If so, the long cleft was a fruitless departure from the essential character of both the traditional dulcian and the eventual baroque bassoon proper, for both relied on the "chimneys" (deep, obliquely bored fingerholes) to produce their characteristic sound. The same shortcoming would have affected any dulcian constructed of two simple tubes, as Trichet's apparently was and as Mersenne's two-piece instrument may have been.

At Bordeaux, Trichet lived within 100 miles of the province of Poitou, which was a center of wood turnery and instrument making. Constant Pierre provided an overview:

> It is probably in Poitou that [French woodwind] instrument-making began, particularly the oboes and musettes known under that name. The town of Croutelle was renowned for the ability of its turners, who made an infinity of useful objects, including spindles, bed posts, chandeliers, and musical instruments of the day, such as "cornetts, shawms, cornemuses, *chèvres-sourdes* [in-

27. Mersenne, *Harmonie universelle,* 298–99. Mersenne's description is hardly complete enough to rule out other possibilities. A second possible construction is suggested by an extant octave-bass dulcian in the Augsburg Städtische Kunstsammlungen, no. 3012 (illustrated in Stanley and Lyndon-Jones, *The Curtal,* 12–13, and *Grove Musical Instruments,* s.v. "Bassoon," 182). The upper third of the instrument, divided along the minor axis of its oval diameter, is constructed from two transverse sections glued together. By this second hypothesis, Mersenne's two-piece instrument might have looked little different from his one-part instruments, except for the addition of a similar transverse join.

28. The terms occur in Mersenne, *Harmonie universelle,* 298–99, and *Harmonicorum,* 85.

29. Similar gouges are seen in the butt joints of later contrabassoons. See, for example, an early nineteenth-century instrument made by Kaspar Tauber, illustrated in Baines, *European & American Musical Instruments,* nos. 611–12.

> door bagpipes?], flageolets, fifes, and recorders, the wood of which is excellent, and the wood giving the most melodious sound, box," one reads in the works of J. and P. Coutant [Contant], published at Poitiers in 1628. . . . The industry apparently ended with the revocation of the Edict of Nantes [1685].[30]

It is no surprise that the *hautbois de Poitou* should have been known to Trichet in nearby Bordeaux, and hardly more surprising that it was known to Mersenne at Paris, which lies about 200 miles distant from Poitou. In fact, Trichet recounts an anecdote suggesting how instruments of Poitou may have first reached Paris: King Louis XIII visited Bordeaux in 1622, where he apparently heard both the *hautbois de Poitou* and the conventional *hautbois* (shawm), valuing the well-played instruments "more than any other."[31] An accomplished composer who took a personal interest in the royal musical establishment, Louis may well have caused Poitevin players and their instruments to be brought to the royal court. At any rate, a 1625 document records the sale of an oboe and musette post at court from one Poitevin, Zamet Bournault, known as Verdelet, to another, François de Bien. By 1637, one Jean Destouches was spoken of as one of the king's four players of the *hautbois de Poitou* and musette.[32] By 1650, the *Hautbois et musettes de Poitou* were attached to the royal Ecurie, and Jean Hotteterre (i) was a member.[33]

Mersenne's account, unmatched by written descriptions from other countries, has sometimes distracted attention from other evidence of the dulcian's evolution. Among Semmens's conclusions, for example, is a "tentative chronology in the process of remodeling the bassoon," which can be summarized in three points: (1) the range was extended to BB-flat, (2) experimental sectioning occurred, and (3) sectioning into four parts occurred. Semmens also concluded that "the process of change probably occurred in France."[34] But neither conclusion can be accepted without qualification, as reference to certain existing instruments and other evidence will make clear.

In the collection of the Kunsthistorisches Museum in Vienna is a three-piece dulcian (C 201) descending to C (see fig. 3). It is an instrument, that is, in which sectioning came before the range extension,

30. Pierre, *Les Facteurs,* 414. Pierre's reference is to *Les Oeuvres de Jacques et Paul Contant,* Traict 1, 194.

31. Trichet, "Traité des instruments," 351.

32. Jurgens, *Documents du minutier central,* 242, 246.

33. Bowers, "The Hotteterre Family," 34, 39.

34. Semmens, "Bassoons," 31, 30.

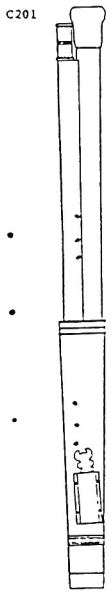

FIGURE 3. Three-piece transitional dulcian from the Sammlung alter Musikinstrumente, Kunsthistorisches Museum, Vienna. Drawing from Barbara Stanley and Graham Lyndon-Jones, *The Curtal* (St. Albans, Hertfordshire: The authors, 1983). Reproduced by permission.

thereby reversing the first two steps of Semmens's tentative chronology. The instrument, from the Este collection at the Catajo Castle in northern Italy, is unsigned, but presumably by an Italian maker.[35] Aside from Vienna C 201, a simpler sectioning giving rise to the prototypical butt joint may be seen in surviving transitional dulcians; Julius Schlosser may have been the first to note that the jointed design marked a step in the

35. The instrument is described and illustrated in Schlosser, *Sammlung,* 82–83 and Tafel 38. It is also illustrated in *Die Musik in Geschichte und Gegenwart,* s.v. "Fagott," Tafel 53.

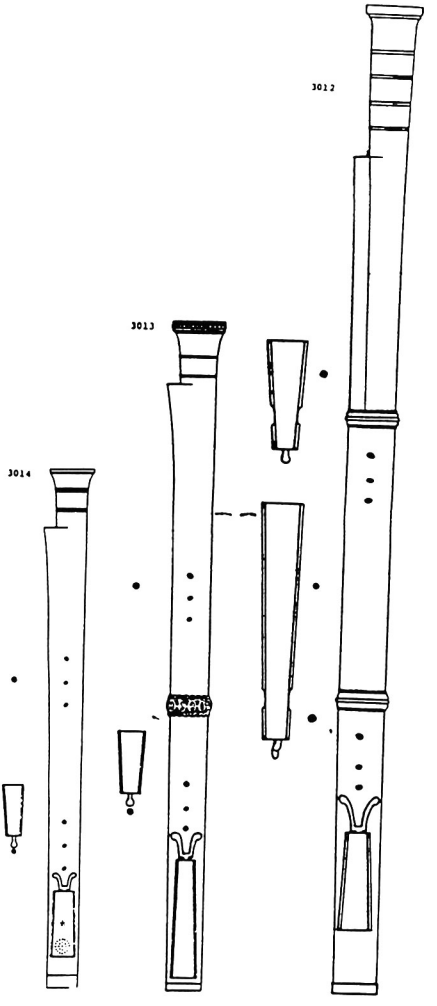

FIGURE 4. Dulcians from the Städtische Kunstsammlungen Augsburg signed by "Hiero S." From left: one-piece bass, two-piece great bass with socket, four-piece octave bass with two sockets and a transverse join in the upper third of the instrument. Drawings from Barbara Stanley and Graham Lyndon-Jones, *The Curtal* (St. Albans, Hertfordshire: The authors, 1983). Reproduced by permission.

instrument's evolution.[36] In fact, at least six surviving dulcians have such a socket joint connecting longitudinal sections (see fig. 4).[37] One of these, the octave-bass at Augsburg (number 3012), has two sockets to accommodate its great length.[38]

These experiments, presumably attempts to alleviate the difficulty of boring such long billets of wood, are logical steps in the evolution of the one-piece dulcian and are no less significant than Mersenne's instruments to the development of the four-piece baroque bassoon. Only by combining such a socket with the "branches" and extended range of Mersenne-style instruments did some unidentified maker produce the three-joint transitional instrument, apparently French, depicted by Randle Holme III ca. 1688 (see Fig. 5).[39] In Italy, conversely, the socket joints were apparently already known when a maker split the dulcian's upper half into "branches" to produce Vienna C 201.

Four of the jointed dulcians, including Augsburg 3012, bear the stamp of "Hiero S," which has been tentatively attributed to Hieronymous Geroldi of Venice.[40] If the attribution is correct, we can credit Geroldi or his successors with a significant role in the reform of the dulcian; barring the unlikely event that all the stamped, jointed instruments are by Geroldi's successors, we can also date the socket design to Geroldi's era. He apparently died in 1596 or before, for a 1596 inventory of the Ambras collection records that "a bass dulcian was purchased from Hieronymous Geroldi's successors."[41]

Hints of the dulcian's reform also appear in Spain. Among the *Canzoni, fantasie et correnti* of the Spaniard Bartolomeo de Selma y Salaverde, published at Venice in 1638, four of the six works for dulcian descend to BB-flat. One possible explanation is that Selma, who was himself a

36. Schlosser, *Sammlung,* 82, no. C 200.

37. See Stanley and Lyndon-Jones, *The Curtal,* 12–15, 17, which illustrates the following sectional instruments: Augsburg, no. 3012, by "Hiero S"; Augsburg, no. 3013, by "Hiero S"; Vienna, no. C 198, by "Hiero S"; Vienna, no. C 199, by "Hiero S"; Vienna, no. C 200; and Braunschweig, Städtisches Museum, no. 95.

38. Illustrated in *Grove Musical Instruments,* s.v. "Bassoon," 182.

39. The Holme document (from London, British Museum MS Harl. 2034, f. 207b) is reproduced in Langwill, *The Bassoon and Contrabassoon,* plate 2, figure 1. Although Langwill later (p. 10) implies that Holme's instrument has four joints, it lacks the bulbous swelling between bell and long joint that would mark a true four-piece instrument. Compare the clearly depicted joints of the adjacent "French hoboy" in Holme's drawing.

40. *Grove Musical Instruments,* s.v. "Bassoon," 182.

41. Quoted in Schlosser, Sammlung, 13

virtuoso dulcian player, was familiar with an instrument having the extended range.[42] Moreover, B. Kenyon de Pascal, after study of archival sources, has recently suggested that an extended-range instrument may have been developed in Madrid by 1616 or earlier by the composer's grandfather, who was a maker of dulcians.[43]

Thus the Italian maker Geroldi and the Spanish maker Selma, both working before Mersenne's time, appear to deserve mention in the history of the dulcian's reform. We also may speculate about another possible contribution: If Mersenne's or Trichet's instruments were inspired by the bass *hautbois de Poitou* (as suggested above), then certain forgotten makers of Poitou ultimately deserve credit for their "branching" design, which survives in principle in the modern bassoon.

Mersenne's importance as a witness in the dulcian's development is not limited to his documentation of the extended range and his assertion of a two-piece style of construction; the last of his four illustrations of dulcians even implies that a Parisian maker had grappled with the problem that eventually led to the development of the full-fledged wing joint. Despite the fourth instrument's conservative one-piece construction, it features a cleft. But the cleft is short enough to allow for the oblique boring of fingerholes (which is clearly illustrated), revealing the maker's consciousness of the need for such boring. In this respect, the maker of Mersenne's fourth dulcian has surpassed the makers of Mersenne's other, longer-cleft dulcians, who had entered, with their thin-wall instruments, a cul-de-sac of design.

Mersenne was evidently less familiar with the dulcian than with some of the other wind instruments. His treatment, though lengthened by discussion of the courtaut and cervelat, is nevertheless much briefer than his treatment of most other wind instruments.[44] He never gives a fingering chart for the dulcian, whereas he documents the fingering and

42. For alternative explanations, see Wagner, "Fagott-Instrumente," 38, and Klitz, "The bassoon in Chamber Music," 17.

43. See Kenyon de Pascual, "Bartolomé de Selma," 26. (As this article went to press, I received further evidence of early transitional dulcians in a letter dated 30 July 1991 from Graham Lyndon-Jones. First, the frontispiece to Philipp Galle's *Encomium musices* (Antwerp, [ca. 1590]) illustrates a three-piece dulcian similar to Vienna C 201. Second, an inventory made at Kassel in 1613 of the music and instrument in the chapel of Landgrave Moritz of Hessen included both "a large Fagott in low C" and one "in low B-flat," suggesting that the latter may have had an extended lower range.)

44. See, for example, Mersenne's treatment of the various recorders and flutes, *Harmonie universelle,* 230–44.

range of the recorders in full detail.[45] Nor does he give the ranges of the ordinary *basson* or the larger *tarot,* despite the distinction he draws between them.[46] This is not to suggest that Mersenne's testimony is without value. Clearly, his understanding of the dulcians of his time was substantial, and his two accounts are the more valuable for being unparalleled in both length and provenance. But his treatment of the dulcian is unfocused enough in general that we need not shrink from recognizing certain specific contradictions, such as the conflicting sizes and measurements he gives for instruments 1 and 3, as errors. We may also note with regret that a later edition of the *Harmonicorum* published in 1648, the year of Mersenne's death, includes no updated information on the evolution of the dulcian in Paris after 1636.

* * *

The bassoon's history in France during the second half of the seventeenth century begins, for lack of other evidence, with the descriptions provided earlier by Mersenne and Trichet. A highlight of the instrument's subsequent history comes in 1692, with the first clear evidence of the four-joint baroque bassoon in France: Charles Simoneau's title-page engraving of Marin Marais' *Pièces en trio* (Paris, 1692) shows portions of what is almost certainly a four-joint bassoon.[47] The only specific evidence of an intermediate stage of development between Mersenne's instruments and the one shown in Simoneau's engraving is the illustration and brief description of a three-joint instrument, apparently of French design, by Randle Holme III, which has been dated to ca. 1688. His drawing of a "double curtaile" adjoins his picture of a full-fledged "French hoboy," and no more advanced bassoon is shown.[48] The instrument has the wing joint and butt joint characteristic of the fully developed baroque bassoon, but the third joint combines the length and functions of the baroque bassoon's long and bell joints. Given the stated

45. Mersenne's remark (*Harmonie universelle,* 299) that "it is unnecessary to explain the fingering of this instrument [dulcian number 3], since one simply closes the holes one after another, as with the flutes," ignores the thumb-controlled low register and is inconsistent with the fastidiousness he shows elsewhere.

46. Mersenne says that the *tarot* descends a third or a fourth lower than ordinary *bassons* and *fagots* (*Harmonie universelle,* 299).

47. Reproduced in Bowers, "New Light on the Development of the Transverse Flute," 11.

48. Langwill, *The Bassoon and Contrabassoon,* plate 2, figure 1.

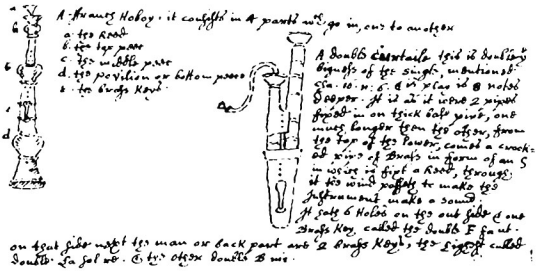

FIGURE 5. The "French hoboy" and "double curtaille" (a three-piece, transitional dulcian) pictured by Randle Holme III, circa 1688. From London, British Library MS Harl. 2034, f. 207v. Reproduced by permission of the British Library.

French design of the adjacent oboe and other evidence of some sort of "French bassons" in England during the period, we may assume that Holme's double curtaile represents a French design.[49]

A comment by the Englishman James Talbot may or may not serve to preempt 1692 as the earliest documentation of the four-joint bassoon in France. Writing ca. 1695, he described a four-joint "basson"; elsewhere in the same document, he noted that the "chief use of sackbutt here in England is in consort with our waits or English hautbois. It was left off towards the latter end of K.Ch. 2d & gave place to the Fr. basson." The latter information is credited to "Bull," whom Baines identifies as William Bull, "the most celebrated London maker of brass instruments of that time."[50] Since King Charles II died in 1685, the "French basson" used in his lifetime, if similar to the four-joint "basson" described elsewhere in Talbot's manuscript, would predate the 1692 illustration as earliest documentation of a four-joint bassoon of French design. But a word of caution is in order; we cannot be sure that Talbot (or Bull) might not use the term "French basson" to denote a transitional bassoon of French design. Indeed, mentions of *basson* or *basse de hautbois* that appear at any time during the transitional period are ambiguous as to

49. Several period references to "French basson" and "basse de hautbois" are quoted in Lasocki, "The French Hautboy," 340–42.

50. Baines, "James Talbot's Manuscript," 19, 25.

the instrument's construction unless accompanied by clarifying evidence; we may recall that Mersenne referred to a one-piece instrument (number 4) as *basson* and grouped it with the shawms and the *courtaut,* all of which were pictured together and described as *les hautbois*.[51] Thus the design of the *basson* used in Lully's orchestra, to cite another important example from the period, remains uncertain.

It is within this context that we may examine the possible contributions of the Hotteterres and their countrymen to the development of the baroque bassoon. We can exclude the Hotteterres from development of Mersenne's instruments with a fair degree of certainty; the only known maker of the family old enough would have been Jean (i), who was a master wood-turner in La Couture by 1628, but who was only known to be in Paris by 1636, only known as a player by 1640, and only known as an instrument maker by 1646 or 1648.[52]

As early as 1672, Pierre Borjon de Scellery, author of a treatise on the musette, wrote that Jean (i) "is a man unique for the construction of all kinds of instruments of wood, of ivory, and of ebony, such as musettes, flutes, flageolets, oboes and cromornes, and even for making complete families of all these instruments. His sons are in no way inferior to him in the practice of this art. . . ."[53] It may be that Borjon understood the Hotteterres to be makers of bassoons, but thought of the bassoon as a *basse de hautbois* and hence thought it unnecessary to be more specific. Even if so, however, his statement does not reveal what sort of *basse de hautbois* the Hotteterres were making, nor which members of the family specialized in bassoon making. Yet this passage was the only evidence cited by François-Joseph Fétis, who in 1839 recognized one Henri Hotteterre as a "wind-instrument maker . . . [who] became well known in Paris around the middle of the seventeenth century for his flutes, oboes, bassoons, etc. . . . [and] died at St. Germain in 1683."[54] Later research has failed to identify any Henri Hotteterre, although Jean (iv), not known as a maker, played *basse de hautbois* in the Ecurie until his death in 1683.[55]

51. Mersenne, *Harmonie universelle,* 303.

52. Bowers, "The Hotteterre Family," 34. The numbering of similarly named members of the Hotteterre family used here is that of the latter article; a different, less complete scheme is used in *Grove Musical Instruments,* s.v. "Hotteterre," and some other writings.

53. Translated in Bowers, "The Hotteterre Family," 33.

54. Fétis, *Biographie universelle,* s.v. "Hotteterre, Henri."

55. Bowers, "The Hotteterre Family," 38.

Another spurious claim that the Hotteterres made bassoons in the seventeenth century was originated by Constant Pierre, who asserted in 1893 that the *Dictionnaire françois* of Pierre Richelet (1680) referred to one "Hauteterre" as a maker of *bassons*. Pierre, however, mistook the date and conflated several of Richelet's sentences into one misleading sentence of his own.[56] In fact, both the 1680 and 1690 editions of Richelets's dictionary contain perfunctory and archaic entries on "basson" based on Mersenne.[57] Following below is the true basis of Pierre's assertion, an entry from the 1706 edition of Richelet's dictionary. As a corrective to Pierre's misquotation, the entry is quoted in its entirety; sentences after the first are to be understood as examples of prescribed usage rather than as part of the definition per se.

> Basson, masculine substantive. Musical wind instrument sounded by a reed and made of wood, four feet long and dismountable, which sounds the bass part in consorts of flutes, oboes and musettes. The basson has two keys, two ferrules and a bocal, at the end of which one fixes the reed when one plays the basson. A good basson costs four or five pistoles. Hauteterre makes bassons, and demonstrates the playing of all wind instruments.[58]

Thus the only light that Richelet sheds on the Hotteterres as bassoon makers is that one of the family, at least, was widely known as a maker by 1706, some fourteen years after the three-key, four-joint instrument had appeared. The entry is provocative, however, for its implication that unreformed two-key dulcians were still known in Paris seventy-one years after Mersenne's account had shown only transitional instruments.

We come next to Abrahame Du Pradel's *Livre commode contenant les adresses de la ville de Paris* (1692), which lists the following "master players and makers of wind instruments, flutes, flageolets, oboes, bassoons, musettes, etc.": Colin Hotteterre, Jean Hotteterre, Fillebert, Des Cousteaux, Filidot, Rousselet, Dupuis, Le Breton et Fremont, Héron, Du Buc, Roset.[59] The list has sometimes been interpreted very broadly as indicating

56. Pierre, *Les Facteurs,* 373.

57. Richelet, *Dictionnaire* (1680), s.v. "Basson," and Richelet, *Dictionnaire* (1690), s.v. "Basson."

58. "Basson, s.m. Instrument de musique à vent et à anche, qui est fait de bois, et est long de quatre piez[,] qui se demonte, et qui sert de basse aux concerts des flûtes, des hautbois et des musettes. Le basson a deux clez, deux viroles et un cuivre, au bout duquel on met l'anche lorsqu'on se veut servir du *basson*. Un bon basson vaut bien quatre ou cinq pistoles. Hauteterre fait des bassons, et montre à jouer du basson et de tous les instruments à vent" (Richelet, *Dictionnaire* [1706], s.v. "Basson").

59. Du Pradel, *Livre commode* 1: 212–13.

that each person named was a player and maker of each instrument named, thus giving rise to the questionable notion that at least eleven seventeenth-century French bassoon makers can be named. Du Pradel's heading is ambiguous, and it is likely that the daunting list of accomplishments describes the group, not each of the respective individuals.

Among those listed, only Colin (Nicolas [iii]) Hotteterre (1653–1727) is independently known to have made bassoons; an inventory of his possessions made in 1708 listed several bassoon bocals.[60] An inventory made at his death showed, in addition to many flutes and oboes, two bassoons and a supply of bassoon bocals.[61] He was known as one of the family's most expert instrument makers, though how early he began to make bassoons is a question that cannot be answered. Edouard Fournier, in his 1878 edition of the *Livre commode,* mistakenly described Colin Hotteterre as "basson à la Chapelle-Musique."[62] According to Bowers, it was Colin's elder brother Nicolas (ii) l'aîné who played bassoon in the royal chapel.[63]

Absent from this list but cited in the supplement (1692) to the *Livre commode* "for all the wind instruments" is Louis (v) Hotteterre (died 1716), a younger brother of Colin who around 1660 worked in a family shop with Colin, along with their older brother Nicolas (ii) and their father Nicolas (i).[64] Louis signed his name "Hauteterre," as in Richelet's quotation, and other similarities of wording between Richelet and Du Pradel may point to him as Richelet's bassoon-making "Hauteterre," but if so, this would be the only specific indication that Louis made bassoons.

The other Hotteterre listed by Du Pradel is Jean (iii) Hotteterre (ca. 1648–1732), a cousin who also may be reckoned as a possible bassoon maker because he was both an expert instrument maker and a player of the *basse de hautbois* in the Ecurie from 1683.[65] A bassoon maker need not be primarily a specialist player of that instrument (witness Colin above), but the converse seems unlikely: that an expert instrument maker would fail to experiment with the design of the instrument he spent his days playing.

In an annotation, Fournier identified "Filidot" as André-Danican Philidor (ca. 1647–1730), adding that "he played bass in the Chapelle-

60. Benoit and Dufourcq, "Documents du minutier central," 207.
61. Ibid., 204.
62. Du Pradel, *Livre commode* 1: 212.
63. *Grove Musical Instruments,* s.v. "Hotteterre."
64. Du Pradel, *Livre commode* 2: 72.
65. See Bowers, "The Hotteterre Family," 38–39.

Musique and the royal chamber."[66] Indeed, André-Danican, best-known of the seventeenth-century Philidors, has been identified as a bassoonist, as well as a librarian and player of several other wind instruments.[67] But we may also note another possible identification: André's brother, Jacques-Danican Philidor (1657–1708), has been identified as both a bassoonist (in the Chapelle-Musique, from 1683) and an instrument maker.[68]

Another possible bassoon maker from Du Pradel's list is Pierre Rozet, to whom Lindsay G. Langwill attributed a rackett preserved in the collection of the Paris Conservatoire.[69] His service at court as instrument maker is documented in 1678, 1680, 1683, 1684, 1686, 1688, and 1689; the small amounts of compensation suggest that his major employment lay outside the court.[70] He is not recorded as a player, and no other instruments by him are known; we can do no more than conjecture that a maker interested in the intricacies of such an obsolete folded-bore instrument as the rackett might also have been attracted to the production of bassoons.

Another apparent reform-minded maker from the list is Dupuis. Aside from Du Pradel, the only known evidence of his work is an oboe of late-transitional design and a tenor recorder of high-Baroque design.[71] Both instruments are richly decorated with ivory mounts that are in turn inset with a highly individual style of flush-fitted ebony studs. Again, we can only conjecture that a double-reed maker of obvious technical mastery might have been attracted to the production of bassoons.

Two more names from the list may be judged as possible bassoon makers on the ground that they played oboe, though not necessarily *basse de hautbois,* and though neither is otherwise known as a maker. The Rousselet listed by Du Pradel may have been Jean, who was listed as *dessus du hautbois* at court at various times from 1661 to 1708, or his son

66. Du Pradel, *Livre commode* 1: 213.

67. *New Grove Dictionary,* s.v. "Philidor."

68. Benoit, *Versailles,* 360.

69. Langwill, *Index,* s.v. "Rozet." But Young attributes the instrument to Bizey, citing the opinion of William Waterhouse (*Twenty-Five Hundred Historical Woodwind Instruments,* 4).

70. See Benoit, *Musique de cour,* 58, 75, 86, 93, 105, 112, 120.

71. The oboe (Berlin, Musikinstrumentenmuseum no. 2933) is depicted in Haynes, "Lully and the Rise of the Oboe," 330. The recorder is depicted in *The Recorder Collection of Frans Brüggen,* 8 and drawing sheet 3.

Michael, who is recorded as *basse de hautbois* in 1661 and 1677.[72] François Pignon, known as Descouteaux, played *dessus de hautbois* in the Poitous from 1661. His son René succeeded him in 1688; the size oboe played by the son is not specified.[73]

There is no apparent reason to suppose that the remaining names on Du Pradel's list were bassoon-makers. Rebillé, known as Philibert, was a member of the Poitous from 1667 but seems only to have played recorder and later flute.[74] "Du Mont" may have been Aubin Du Mont, who played fife and drum in the Ecurie from 1708.[75] "Héron" may have been Gilles Héroux, who is recorded as playing bass crumhorn and marine trumpet in the Ecurie from 1666 through 1679, when he resigned.[76] "Le Breton et Fremont" (which may represent one or two persons) and "Du Buc" are known only from this mention.

Not included on Du Pradel's list was Nicolas (ii) Hotteterre l'aîné (ca. 1637–94), who in fact looms likeliest of all the Hotteterres to have been a bassoon-maker during the transitional period prior to 1692. The elder brother of Nicolas (iii) and an accomplished maker of woodwinds, he established a shop before 1660 that eventually included his father Nicolas (i) and his brothers Louis (v) and Nicolas (iii). As noted above, Nicolas (ii) joined the royal chapel as *basse de hautbois* in 1668. Upon his death, his widow listed among his effects "iron tools serving to make wind instruments, such as flutes, flageolets, bassoons."[77]

Jean-Jacques Rippert, also absent from Du Pradel's list, may have made double-reed instruments in Paris during the transitional period. Two documents dated 1696 and quoted by Bowers describe him, respectively, as a long-established maker of flutes, and as a master maker of wind instruments.[78] In a 1712 letter written from London and quoted by David Lasocki, Louis Rousselet (son of Michael Rousselet, noted above) ordered two bassoons from Rippert in Paris.[79] This is the only indication that Rippert made bassoons, although at least one oboe by him survives.[80] He thus falls, like Colin Hotteterre, into a category of

72. Benoit, *Musique de cour,* 4 et passim.
73. Ibid., 4, 59, 79, 121, et passim.
74. Ibid., 18, 19, et passim.
75. Ibid., 213 et passim.
76. Ibid, 15, 68, et passim.
77. Bowers, "The Hotteterre Family," 35–36.
78. *Grove Musical Instruments,* s.v. "Rippert, Jean-Jacques."
79. Lasocki, "The French Hautboy," 348.
80. The oboe is described and illustrated in Young, *Twenty-Five Hundred Historical Woodwind Instruments,* 103, plate X.

eighteenth-century Parisian bassoon makers who were old enough to have begun making bassoons during the developmental period prior to 1692.

Another Hotteterre who played *basse de hautbois* during the transitional period is Jacques-Martin Hotteterre le Romain (1674–1763), son of the musette-maker Martin and grandson of the instrument maker Jean (i). Though he achieved fame as a player of the traverse flute and as author of an early tutor for it, Jacques-Martin played *basse de hautbois* in the Ecurie as early as 1689 (when he was only fifteen years old) and as late as 1721.[81] He is known to have made flutes and musettes.[82] Curiously, though his *Principes de la flûte traversière* also includes instructions for recorder and oboe, it contains no reference to the bassoon.[83] It may be that Jacques-Martin saw less demand for bassoon instruction and hence omitted it (though a posthumous edition included coverage of the bassoon[84]). At any rate, Jacques-Martin's treatise shows no pride of invention in the reformed bassoon; given the omission and the author's youth during the transitional period, we can exclude him from credit in this stage of the bassoon's development.

The sum of our knowledge concerning French makers' participation in the development of the baroque bassoon between 1636 (Mersenne) and 1692 (Simoneau) can only be expressed in terms of possibilities established or denied. Among the least likely of the musical Hotteterres to have developed the baroque bassoon are Martin, who appears to have specialized in the musette,[85] and Jacques-Martin, who was born late in the developmental period. We can dismiss as remote possibilities Jean (ii) and his nephew Jean (iv). Though both played *basse de hautbois,* they were not known as makers and died in 1669 and 1683, respectively.[86] It may not be safe, however, to dismiss Nicolas (i), even though he was unskillful enough at tuning that his sons had to complete his instruments.[87] It is common even today for woodwind makers to divide the responsibilities

81. Bowers, "The Hotteterre Family," 40–43, and Benoit, *Musique de cour,* 321 et passim.

82. Bowers, "The Hotteterre Family," 42–43.

83. Hottetterre le Romain, *Principes de la flûte traversière* (Paris, 1707).

84. Hotteterre le Romain, *Méthode pour apprendre à jouer en peu de tems de la flûte* (Paris, [ca. 1765]). Cited in Warner, *Woodwind Instruction Books,* s.v. "Hotteterre."

85. See Bowers, "The Hotteterre Family," 39–40.

86. See Benoit, *Musique de cour,* 15, 24, et passim, and the family tree in Bowers, "The Hotteterre Family."

87. See Bowers, "The Hotteterre Family," 35–36.

of turning and finishing, and progress in the baroque bassoon's development was largely a matter of the former.

Deferring for the moment discussion of other French makers, there are six members of the Hotteterre family who are reasonable prospects for having continued the reform of the dulcian after Mersenne's time: the brothers Jean (i) and Nicolas (i), their nephew Jean (iii), and Nicolas' three sons Nicolas (ii), Louis (v), and Colin, or Nicolas (iii). It is around Nicolas (ii) that the most compelling evidence centers: He played *basse de hautbois* as early as 1668 and left bassoon-making tools at his death in 1694. In light of our meager knowledge, these bare circumstances make him more identifiable than any other Frenchman as a likely contributor to the development of the baroque bassoon. We may also note that Jean (iii) played *basse de hautbois* as early as 1683, and that Nicolas (iii) had made bassoons by the time of his death in 1728, which perhaps lends them extra credibility as possible participants in the development of the instrument. However, so little is known about the other candidates named—Jean (i), Nicolas (i) and Louis (v)—that to exclude them from consideration would be as unwarranted as granting absolute credit to Nicolas (ii), Nicolas (iii), or Jean (iii). Indeed, the two first-generation makers survived virtually throughout the developmental period—Jean (i) died between 1690 and 1692, and Nicolas (i) died in 1693[88]—while Louis (v) may be, as noted above, the "Hauteterre" who was known individually to Richelet in 1706 as a bassoon maker.

Nor can we exclude from consideration the other French makers discussed above. Jacques-Danican Philidor was a bassoonist as early as 1683 and an instrument maker before his death in 1708. Rippert, a bassoon maker by 1712, was established as a master maker of wind instruments before 1696. Rozet and Dupuis apparently experimented with the design and manufacture of double-reed instruments during the period. These activities are germane enough for us to include them with the six Hotteterres as reasonable prospects for having helped develop the French baroque bassoon.

It cannot be shown that the baroque bassoon emerged in France quite as early as the reformed flute and oboe. Haynes estimates the emergence of the prototypical baroque oboe at about 1680, and Bowers estimates the emergence of the baroque flute in France at about the same time.[89]

88. Ibid., 35.

89. Haynes, "Lully and the Rise of the Baroque Oboe," 331, and Bowers, "New Light on the Development of the Transverse Flute," 9, 12.

If we assume that the "French basson" Talbot records in England before 1685 was a four-joint instrument, then the evolving bassoon in France would have been well abreast of the oboe and flute, but, as discussed above, there is no firm reason either to make or to preclude such an assumption.

Of possible relevance to the date of the reformed bassoon's emergence is a document signed in 1696 by Johann Christoph Denner of Nuremberg, the only maker whose surviving work includes both dulcians and baroque bassoons.[90] He made a joint application with J. C. Schell for permission to engage in "the manufacture of French musical instruments, mostly oboe and recorder," which, the two noted, were developed "about twelve years ago in France."[91] The omission of reference to the bassoon may be noteworthy, since the two makers describe themselves in the same document as oboe-, recorder-, and "Fagothmacher."[92] Or it may be that bassoons were less in demand and thus less worthy of the makers' mention. At any rate, the earliest unambiguous record of the four-joint bassoon in France remains the Simoneau illustration of 1692, which postdates the emergence of the fully reformed oboe and flute by more than a decade.

It is commonly assumed that the baroque bassoon was developed first and exclusively in France, either at Paris or in the vicinity of La Couture, original home of the Hotteterres, but recently published research has suggested that development of the instrument may have been under way simultaneously or even earlier at Amsterdam. As noted above, the earliest clear evidence for the existence of a full-fledged baroque bassoon is apparently the Hals painting, dated 1669 or before—at least twenty-three years earlier than the four-joint instrument documented by Simoneau's illustration, and apparently seventeen years earlier than Holme's transitional instrument.

The painting appears not to be signed or dated, although museum officials have not loosened its frame to make an exhaustive inspection. It was labeled in the 1883 catalog of the Aachen museum as a self-portrait of Jan Steen (1626–79),[93] but Cornelis Hofstede de Groot questioned the attribution in 1907, writing that "it is doubtful that this a portrait of Jan Steen and whether it was painted by him. Possibly it is his work, but

90. Surviving examples are described in Nickel, *Holzblasinstrumentenbau,* 231–35, and Young, *Twenty-Five Hundred Historical Woodwind Instruments,* 23–24.

91. The document is reproduced in Nickel, *Holzblasinstrumentenbau,* 204–5.

92. Ibid., 204.

93. Puvogel, letter to the author, 5 July 1990.

many details suggest the work of Harmen Hals."[94] The painting was attributed to Hals (1611–69) in the museum's 1932 catalog and the attribution has not been challenged, according to Renate Puvogel, a museum official.[95]

Hals was baptized and eventually buried in Haarlem, which lies only about a dozen miles west of Amsterdam, where a school of woodwind makers flourished during the last third of the seventeenth century.[96] No transitional dulcian or bassoon by a Dutch maker is known, but transitional "Dutch oboes" survive, some of them bearing the stamp of the Amsterdam maker Richard Haka, who retired in 1696.[97] In the company of deutsche Schalmeien and full-fledged baroque oboes bearing Haka's stamp, they exemplify an analogous development of shawm into baroque oboe in the workshop of a single maker. Meanwhile, a three-key, four-joint bassoon by Haka has recently come to light,[98] and recent archival studies point to a great vogue of the *basson* in Amsterdam during the last third of the century.[99]

The traditional assumption—that if members of the Hotteterre circle reformed the other woodwinds, they also reformed the bassoon—might easily be adapted to the Haka circle: If Dutch makers carried out a reform of the oboe, they may also have participated in a reform of the bassoon. This is conjecture, of course, but so is the assertion that Parisian makers were first or alone in developing the baroque bassoon. Meanwhile, the Hals painting, if correctly attributed, provides a strong suggestion of Dutch priority in at least the final stages of development of the four-joint, three-key instrument.

After this earnest examination of the seventeenth-century bassoon and its reputed development in France, what can we conclude? First, the tradition that has attributed the baroque bassoon's design to experimentation by Parisian makers is not to be rejected in toto, and certainly not

94. Hofstede de Groot, *Catalogue raisonné* 1: 233.

95. Puvogel, letter to the author, 5 July 1990.

96. See van Acht, "Dutch Wind-Instrument Makers," 83–101.

97. Some of these are illustrated in Langwill, *Index*, 80, and Haynes, "Lully and the Rise of the Baroque Oboe," 333.

98. Waterhouse, "A Newly Discovered Seventeenth Century Bassoon," 407–10.

99. Among other seventeenth-century makers of the *basson*, van Acht names Coenraad Rijkel, who during his apprenticeship to his uncle Richard Haka (ca. 1679–86) served as a bassoonist in theater performances. Jan Jurrians van Heerde (1638–91) was described in an obituary as a maker of *bassons*, among other instruments. The maker Michiel Parent during 1691–92 lived in the house "In der vergulde Basson" ("Dutch Wind-Instrument Makers," 92, 95, 97).

the early innovations documented by Mersenne. On the other hand, there is no reason to believe that Parisian makers anticipated another major development—the sectioning of the dulcian's length that produced the butt joint—that is exemplified in the work of the Italian "Hiero S." And important questions regarding other aspects and phases of the baroque bassoon's development—in which Poitevin, Spanish, Italian, and Dutch makers figure as possible protagonists—simply cannot be answered unless more information becomes available.

Considering the contributions made by Parisian makers themselves, and thus attempting to unravel the complexities hidden under the rubric of "the Hotteterre circle," we find that several members of the family can be named or eliminated as authentic or possible bassoon makers during the transitional period, and that several makers bearing other surnames deserve to be cited as possibilities. We must also bear in mind that between Mersenne's time and 1692, the only transitional instruments even tentatively attributable to a French maker are Randle Holme's three-joint instrument and the undetermined "French basson" mentioned by Bull and Talbot. 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 as odds-on favorites, Parisian makers, including the Hotteterres, might better be viewed as able contenders within a strong field.

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