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Why Straight-Tops?

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In Memoriam Bruce Haynes
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My first foray onto the field of the straight-top oboe (fig. 1) resulted in a skirmish over instruments of the type made by William Milhouse in England in the eighteenth century. In my article "William Milhouse and the English Classical Oboe," this Journal 22 (1996): 42–79, I concluded that such instruments were simple and more easily manufactured than others of the time, that they were not of great beauty, and that they were primarily products of instrument makers in the English countryside during the last two-thirds of the century. My assertion that the oboes were not particularly handsome went unchallenged, but the idea of *simple* hence *cheaper* manufacture did not, nor did my assertion that they were English in origin and almost unique to that country.[1]

Four oboes by Giovanni Maria Anciuti are assigned abbreviations for this article:
LVA 1127: straight-top ivory oboe, London, Victoria and Albert Museum, 1127-1869
PMIC C472: balustered ivory oboe, Paris, Musée de la musique, PMIC C472, E.107
BMIM 5079: balustered boxwood and horn oboe, Berlin, Musikinstrumenten-Museum, 5079
RMSM 829: straight-top boxwood oboe, Rome, Museo Nazionale degli Strumenti Musicali, 829, *olim* 1094

1. Eric Halfpenny previously wrote on this instrument type in "The English 2- and 3-Keyed Hautboy," *Galpin Society Journal* 2 (1949): 16. Halfpenny called the straight-top, which he designated "type C," "the most typically English form of the hautboy. . . ." In "William Milhouse and the English Classical Oboe," 45–46, I questioned some of Halfpenny's conclusions on the evolution from his type B (a form with spheroidal swellings at the joints and a plain bell of moderate flare, more common in France than England) to type C. As I commenced work with the oboes of the Milhouse family, it seemed apparent that their instruments could be parsed into Halfpenny's groups C and D, and, indeed, he characterizes the Milhouse output in this way. Content that type B was most likely French influenced—though it turns out that there are only two known instruments of this type by English makers (Schuchart and Stanesby Jr.)—I questioned his assertion of a shift from this category of instrument to the straight-top oboes of group C as a reaction to the ugliness of the French style, but then if this were not so, "what then was the origin of the [I must say] rather ungraceful type C

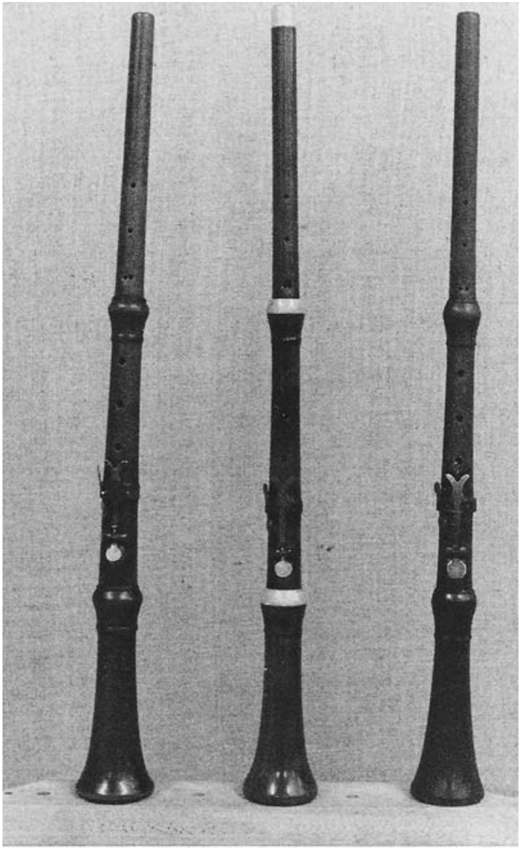


FIGURE 1. Three straight-top oboes by Milhouse, Newark. Oxford, Bate Collection, nos. 25, 26, and 27. Reproduced with permission of the Bate Collection, University of Oxford.

In response to my remarks about less expensive manufacture, Bruce Haynes averred that he could turn a baluster-top about as quickly as a straight-top; that a straight-top was no more quickly made than a baluster-top was seconded by Robert Howe, a collector but not maker. Writes Howe, "A straight-top oboe requires removing more wood from

instruments? Was it because there were not enough type B instruments to meet the demand? Would musicians willingly have moved from one 'ugly' design to another even more ungrateful?"

the unfinished instrument. This increases the work time and labor costs, and creates a greater likelihood of cracking during the turning process."[2]

To seek a resolution of this controversy, I asked Mary Kirkpatrick, who uses a treadle lathe in the old style, and Sand Dalton, who uses modern tools, how much time it would take them to turn a straight-top and a baluster-top. Although Kirkpatrick did not give an exact time estimate, her opinion was that the straight-top would be much faster and easier to set up, hence cheaper to turn. She said that the straight-top would take many fewer caliper settings than would the baluster-top, and much less skill as a turner. Sand Dalton's more direct reply gave an estimate of twelve hours more for setting up the baluster-top, in addition to the turning time.

Later a dispute arose over my use of the word "handsomeness," which was meant to refer to the shape of an instrument rather than its richness of decoration. In a discussion of the cost of straight-top oboes in the eighteenth century, I had pointed out ranges of high and low prices paid for oboes in English country churches, implying that this may have indicated a difference in price between straight-top and balustered oboes.[3] Howe, on the other hand, assumed that this higher price range applied to those English instruments with silver accoutrements.[4] However, all the oboes furnished in this way were manufactured by London makers, and none were found in country churches. Neither should my use of the term "cheaper" be construed to mean that the instruments were inferior, rather than simply lower priced.

With all of this in mind, I concluded that there was perhaps more to the story of the straight-top oboe than even I had conceived. Such topics as its simple shape had already been touched upon, but what about its origins, geographical distribution, distinctive uses and influence, and number of surviving instruments, as well as the way alterations in its outer and inner structure both mirrored changes in other oboes and served as harbingers of further innovations? Though there appears to be

2. Robert Howe, "Communication," this JOURNAL 25 (1999): 164–65. An expanded version of this communiqué was published in *The Double Reed* 24, no. 4 (2001): 17–19.

3. Some information as to costs for instruments to country parish churches is available from their vestry records. While these often record the price of instruments, only occasionally do they name the maker or dealer, and no references to oboe makers have been found. Accounts covering the years 1744–1811 show that the prices for oboes, bassoons, vox humanas, and bass viols were relatively constant: six bass viols varied from £1 0s. to £5 5s., a vox humana cost 18s., a clarinet cost 18s., four bassoons ranged from £2 2s. 6d. to £5 5s., four oboes fell into two groups, 10s. 6d. and 15s. 6d. to 16s. 6d. See "William Milhouse and the English Classical Oboe," 76.

4. Howe, "Communication," 18.

little rationality in the sporadic appearances of the straight-top oboe, it is still possible to garner enough information about its history and use to understand how it fit into the mosaic of late eighteenth-century oboe culture.

References to known oboists are plentiful, as are reports (though in less detail) of the music performed and the circumstances of its performance. There are also many surviving instruments. But virtually no records exist concerning the type or make used on particular occasions by specific players.[5] References are general at best, and conclusions drawn from them are mostly conjecture based on locality and time. It is also rarely possible to find sufficiently detailed illustrative material of unequivocal value, and conclusions gathered from these sources depend greatly on the weight of numbers as well as the perceived accuracy of the artists.

Pursuing these matters generated the following questions, whose answers or explanations, though perhaps not always definitive, are nonetheless significant:

1. Straight-top oboes represent what portion of extant historical oboes?
2. How does the exterior configuration of the straight-top oboe differ, and to what extent, from mainstream designs?
3. When and where did the straight-top oboe originate?
4. What was the geographical spread of the straight-top?
5. Who were the prominent straight-top manufacturers?
6. Do the straight-tops made in Italy represent the culmination of the type's development?

5. The only instance I know of such a reference to straight-top oboes is Anthony Baines's in his *Woodwind Instruments and Their History* (New York: Norton, 1963, 280; 3rd ed., 1967, corr. 1977; repr., New York: Dover, 1991, 384), which names "[Thomas] Vincent, pupil and successor of the celebrated San Martini and the last of the great Handelian oboists," as one who "adopted this model in his latter days." But with regard to Vincent's choice of instrument, see also William Thomas Parke's *Musical Memoirs* (London: Henry Colburn and Richard Bentley, 1830; repr., New York: Da Capo Press, 1970), 1:335: "[Fischer] arrived in this country under very favourable circumstances, the oboe not being in a high state of cultivation, the two principal oboe players, Vincent and Simpson, using the old English oboe, an instrument which in shape and tone bore some resemblance to that yclept a *post-horn*." Cf. Baines, *Woodwind Instruments,* 384n45, and Bruce Haynes, *The Eloquent Oboe* (Oxford: Oxford University Press, 2001), 443. The latter draws several unsubstantiated conclusions about these instruments. Further, Baines was quoted verbatim by Robert Howe in "Historical Oboes 5: The Milhouse Family and the English Straight-Top Oboe," *The Double Reed* 24, no. 4 (2001): 18, to refute an argument I had never made that the straight-top oboe was an inferior species.

In defining the history of an instrument, the best source is often information that can be gleaned from the instruments themselves. In Bruce Haynes's work on pitch, for example, he combined data gained mainly from surviving cornettos, recorders, and organs to establish basic pitches common to a given time and place.[6] He thus demonstrated how the scrutiny of a number of instruments can yield a factual foundation for a primary study. Similarly, the conclusions of the present investigation are derived mainly from the instruments themselves, combined with contemporary commentary and iconography in order to provide a more complete narrative.

How Many Oboes?

Attempting to determine how many oboes were actually made during the first 150 years of the instrument's existence is as daunting as the task undertaken by Conrad Gesner in his *Bibliotheca universalis* of 1545. Gesner's "universal" gathering of ten thousand titles has been estimated by some scholars to contain less than one percent of all those published by the time of its appearance ninety years after the invention of the printing press.[7] It is possible that a similar disparity exists between the number of known oboes and the number manufactured.

There are about nine hundred surviving two- and three-key oboes made between 1640 and about 1830. Further, there are at least 181 known seventeenth- and eighteenth-century makers in some thirteen countries for whom extant instruments are recorded, as well as sixty-eight makers without identifiable oboes, and thirty-four anonymous instruments. The number of known oboes per maker ranges from a single instrument to two dozen. The sixty straight-top oboes represent twenty-one makers: there are thirteen English, four Italian, and two American makers; one anonymous instrument; and one whose provenance is uncertain.

In an effort to estimate the total number of oboes manufactured between 1640 and 1830, I again asked Mary Kirkpatrick how long it would take with a treadle lathe to make a finished instrument. Cautioning that her reply was an informed guess, she said that, doing nothing else and having someone shove food under the door, it would take two weeks. Early in her thirty-two-year career, during her time in England, she

6. Bruce Haynes, *A History of Performing Pitch: The Story of "A"* (Lanham, MD: Scarecrow Press, 2002).

7. Elisabeth L. Eisenstein, *The Printing Press as an Agent of Change* (Cambridge: Cambridge University Press, 1979), 79–80.

produced about one instrument per month using the treadle lathe. Her lifetime output is about 150 oboes, which averages slightly fewer than five instruments per year. Using Kirkpatrick's per-year average, 181 makers could produce 905 in a year. If all had enjoyed similar thirty-two-year careers, their total could have reached 28,960 instruments.

Although I believe that Kirkpatrick's lifetime number of 150 may be representative of historical practice, I inquired once more of Sand Dalton, who has also manufactured oboes over a thirty-year period. With modern tools he produces three to four oboes a month and estimates his annual total to be thirty to forty instruments. As of 2010, he had made about six hundred soprano oboes, as well as two hundred oboes d'amore, tailles, english horns, and oboes da caccia.

These estimates relate to one-person shops, and certainly a shop with several employees would produce more instruments. Given the proportionally small number of surviving instruments, it is impractical to try to project numbers based on shop size, although available evidence suggests some practices of individual ateliers.[8]

The demography of European oboes during the period under discussion suggests some trends, but also raises questions. Table 1 shows the surviving instruments distributed by country and thirty-year generations. The most prolific periods were 1700–1730 and 1730–60, with the larger part being Dutch in the first period and German in the second. The numbers decline after 1760, though the era of this type of oboe had not yet come to an end. While the number of makers increases in each generation, as might be expected, the number of known surviving

8. Cecil Adkins, "The German Oboe in the Eighteenth Century," this JOURNAL 27 (2001): 36n26. Late eighteenth-century Dresden, on the cusp of the industrial revolution, had many large shops that produced instruments in batches. Numbers on the lower edges of the joints or on the tenon ends are indications of batching. These numbers, such as the "5" stamped on the Jeremias Schlegel oboe preserved in Leipzig (Musikinstrumentenmuseum der Universität Leipzig, 1322) differ from those often seen just under the top-column beads on the top joint, which were intended to differentiate joints of differing lengths made as part of a *corps de rechange.* These latter numbers are common on the oboes of Grundmann and the Grensers. Herbert Heyde, "Die Werkstatt von Augustin Grenser d. Ä. und Heinrich Grenser in Dresden," *Tibia* 18 (1993): 599, reprints an inventory of the Grenser shop from the time of Heinrich's death, which lists seven lathes and a polishing machine among its tools. Ardal Powell, "Science, Technology, and the Art of Flutemaking in the Eighteenth Century," *The Flutist Quarterly* 19, no. 3 (Spring 1994): 37–38, describes at length French mass-production techniques in the second half of the century. Further, it is also well known that many of the prominent makers subcontracted instruments to other makers, with the stamp being that of the contractor. At the same time, in a reverse way, prominent makers accepted subcontracts for large orders from other makers who were pressed with their own deadlines; these were then stamped with the mark of the contracting firm.

Number of Makers		1640-1670	1670-1700	1700-1730	1730-1760	1760-1790	1790-1820	Totals
American	2					1		1
Austrian	14			1	3	4	6	14
Belgian	2			7				7
Czech	4					1	2	3
Danish	4						2	2
Dutch	8	10	22	84	26	1		143
English	30		6	17	42	54	30	148
French	29		14	30	27	18	8	97
German	51		22	88	80	38	29	257
Italian	27			26	46	44	35	151
Polish	1			1				1
Slovakian	1							1
Slovenian	1					1		1
Spanish	1					1		1
Swiss	2				3		5	8
Spanish/	2					12		12
Austrian Netherlands								4
Habsburgh								11
Empire	2			3		1		
Other	2			3		8		
Totals	181	10	64	260	227	182	174	917

TABLE 1. Known two- and three-key oboes by country and generation: 1640–1820.

instruments fluctuates, and actually decreases during the last two. This may simply be an indication of fewer researchers working in these areas, or it may be due to political developments and the dissolution of private ensembles in the last third of the century.[9] Table 2 demonstrates the generational output of the six most prolific countries.

The Shape of Straight

The sixty surviving straight-top oboes date between 1738 and 1815, and represent only 5.7 percent of the known two- and three-key instruments. They can be divided into several types (fig. 2). The basic straight-top oboe, as its name implies, is characterized by a plain, tapered top joint (type 1: fig. 3a). For the most part, this is reinforced with a brass or

9. Appendix 1 in Haynes's *The Eloquent Oboe,* 452–65, is a fourteen-page list of oboists' places of employment and the duration of their tenures from 1600 to 1760. The list contains 844 names, and of those, 54 were employed after 1760: 1760–69, 27; 1770–79, 16; 1780–89, 6; 1790–99, 3; and 1800–1802, 2. Admittedly this list was designed to close at 1760, but the diminishing number of oboists per decade does imply that increasingly fewer establishments were retaining them.

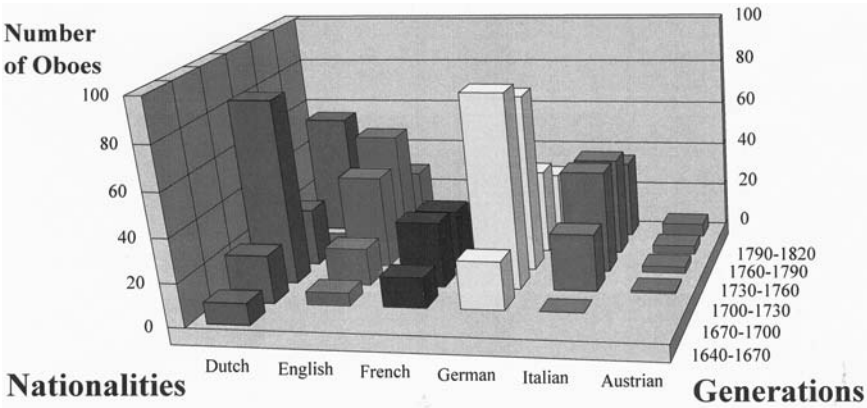


TABLE 2. Output of oboes by nationality and generation for the six most prolific countries.

Top Joint

1. Unadorned
2. Unadorned with ferrule
3. Turned finial with vase shape
4. Turned finial with beads
5. Turned finial cylindrical baluster top column beads
6. Turned finial with beads cylindrical baluster top column beads

Middle Joint

a. Unadorned
b. Unadorned with ferrule
c. Baluster

Bell

a. Unadorned
b. Unadorned with ferrule
c. Baluster

FIGURE 2. Stylistic classification of straight-top oboes.

ivory ferrule at the upper end (type 2: figs. 3b and 3c). These ferrules are sometimes modestly decorated with a simple inscribed quirk or a bead contained within the diameter of the taper (fig. 3d). On the plainer instruments (type 1aa) this body style has been extended to the other two joints, and the resulting shape is a smooth curving taper from the top of the instrument to the beginning of the bell flare (fig. 3e) or a straight-sided cone. Oboes of the latter style are depicted in a number of engravings and paintings beginning about 1750, but no exemplar is extant; see figures 35a and 35b below.

FIGURE 3a. Basic straight-top oboe by Milhouse, Newark: detail of the top. Oxford, Bate Collection, no. 293. Reproduced with permission of the Bate Collection, University of Oxford.

FIGURE 3b. Straight-top oboe by N. Cosins, with brass ferrule: detail of the top. Nuremberg, Germanisches Nationalmuseum, MIR 375.

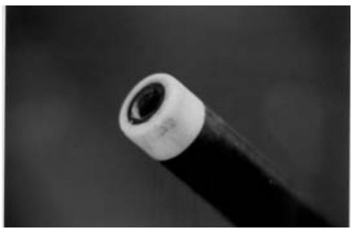


FIGURE 3c. Straight-top oboe by Caleb Gedney, with ivory ferrule: detail of the top. Colchester, Hollytrees Museum, 356-1932. Used with kind permission of Colchester and Ipswich Museums.

FIGURE 3d. Straight-top oboe by Milhouse, Newark, with simple quirk and bead: detail of the top. Oxford, Bate Collection, no. 26. Reproduced with permission of the Bate Collection, University of Oxford.

FIGURE 3e. Straight-top oboe by N. Cosins, with ferrules: top joint. Nuremberg, Germanisches National-museum, MIR 375.

The finial, a close cousin of the ferrule, is defined as a decorative terminal part at the top of most anything.[10] The finial serves to reinforce the structure, as well as to create a foundation for embellishment. On balustered oboes, the finial creates a section of the top that is of a larger diameter than the rest of the joint immediately below, and that can be treated to many sorts of turned decorations (fig. 4a, 1–5). Straight-top finials typically do not protrude beyond the diameter of the column, but can be separated from the main body by a set of decorative beads, or finished at the top with a similar device, or both (type 4: fig. 4b). A type of straight-top finial that has little or no embellishment culminates in a gentle expanding sweep toward the top (type 3). Consensus holds instruments of this design to be straight-top oboes, even though the finial exceeds our within-the-diameter criterion for a straight-top oboe. It has often been suggested that this type of finial resembles a vase (fig. 5).

On non-straight-top oboes a baluster lies below the finial, and it too is usually set off with beads. Some early oboe engravings indicate a "balustered" section between the lower finial beads and the beads at the top of the column on what would otherwise appear as a straight-top instrument. The intent, however, is to convey the impression of a complex top joint within a simple artistic style, and these illustrations should not be considered particularly reliable or as representing straight-top oboes. Clear examples of this practice are to be seen in the two illustrations appearing in Peter Prelleur's *The Modern Musick-Master.*[11] Shown in figure 6 is the frontispiece of the volume with such a "balustered" oboe. The frontispiece to the oboe tutor (fig. 7) features an even clearer example of this artistic style.[12] A similar depiction appears in an anonymous *Compleat Tutor for the Hautboy* (ca. 1746) (fig. 8).[13] It is curious that none

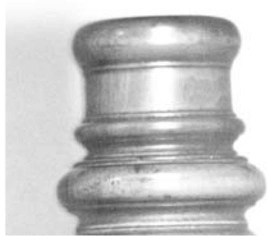
10. A decorative, terminal part at the tip of a spire, gable, lampshade support, etc.

11. Peter Prelleur, *The Modern Musick-Master* (London: Engraved, Printed and Sold at the Printing Office in Bow Street Church Yard, 1731).

12. The two engravings from Prelleur's *The Modern Musick-Master* appear to have been independently conceived rather than copied from one another. Repeated figures with the instruments changed are unusual in Prelleur's publications. The only example found of a copied illustration occurs between the frontispiece of Peter Prelleur, *Directions for Playing on the Flute* [recorder]," which is the second manual in *The Modern Musick-Master,* and the frontispiece of *The Compleat Tutor for the Hautboy* (London: John Simpson, ca. 1750), which uses an identical figure (and background) with a different instrument (oboe) in the player's hands.

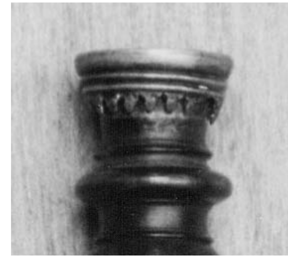
13. *The Compleat Tutor for the Hautboy, Containing the Best and Easiest Instructions. . . .* (London: John Simpson, ca. 1746), frontispiece. The straight-line baluster occurs in these early engravings because their diminutive size does not allow space for the complicated curved sections. The top joint is represented by two parallel lines that are demarcated with pairs of cross lines to indicate the beading. This is a convention used by most engravers before the 1740s.

4a-1. Giovanni Maria Anciuti (1719). Paris, Musée de la musique, E.980.2.138. Reproduced with the permission of the Musée de la musique.



4a-2. Giovanni Panormo. Bingham Inventory. Photograph by the author, June 1, 1993.

4a-3. Hendrik Richters. Vermillion, SD, National Music Museum, 4547. Reproduced with permission of the National Music Museum.



4a-4. Anonymous Dutch instrument. Bingham Inventory. Photograph by the author, June 25, 1992.

4a-5. George Astor. Bingham Inventory. Photograph by the author, June 25, 1992.

Figure 4a. Finials on some balustered oboes.

Figure 4b. Anonymous straight-top oboe with decorated finial; photograph taken before restoration of 1961–62. Williamsburg, VA, Colonial Williamsburg Foundation, 1937–286. Reproduced with permission of the Colonial Williamsburg Foundation.

FIGURE 5. *Corps de rechange* of an oboe by Andrea Fornari, with vase-shaped top. Museum für Musikinstrumente der Universität Leipzig, 1327. Used with permission.

of these engravings shows a baluster at the top of the middle joint or rings to define the joints. The engraving of the oboist in figure 9, the frontispiece of another anonymous *The Compleat Tutor for the Hautboy* (ca. 1746), shows a similar instrument with a tapered baluster. Yet another frontispiece, for a tutor with a similar name, depicts another oboe of this type (fig. 10).[14] One final illustration of this style of drawing was

14. Though the detail of this engraving is very coarse, one can see the bottom edge of a baluster at the end of the reed. See also Janet K. Page, "The Hautboy in London's Musical Life, 1730–1770," *Early Music* 16 (1988): 367. The engraving appears in the *New and Complete Instructions for the Oboe or Hoboy* (London, ca. 1777–85). In 1987 Peter Hedrick edited this version of the work (Columbus, OH: Early Music Facsimiles, 1987). According to Page, yet another *Compleat Tutor* was published between 1763 and 1776 and is attributed to J. C. Fischer.

FIGURE 6. Peter Prelleur, *The Modern Musick-Master* (London: Engraved, Printed and Sold at the Printing Office in Bow Street Church Yard, 1731), frontispiece, detail.

FIGURE 7. Peter Prelleur, *The Modern Musick-Master* (London: Engraved, Printed and Sold at the Printing Office in Bow Street Church Yard, 1731), frontispiece to the *Oboe Tutor,* detail.

FIGURE 8. *The Compleat Tutor for the Hautboy, Containing the Best and Easiest Instructions* (London: John Simpson, ca. 1746), frontispiece, detail.

FIGURE 9. *The Compleat Tutor for the Hautboy, Containing the Best and Easiest Instructions* (London: Charles and Ann Thompson, ca. 1746), frontispiece, detail.

FIGURE 10. Johann Christian Fischer, *New and Complete Instructions for the Oboe or Hoboy* (London, ca. 1777–85), frontispiece, detail.

printed in Johann Christoph Weigel's *Musicalisches Theatrum* of 1720 (fig. 11).[15] In all respects it resembles the instruments in the preceding figures, including the lack of a joint between the hands, lending weight to my assertion that such images represent oboes with a baluster top, since no straight-top oboes are known to have been manufactured in Germany in the eighteenth century.

There is some distortion in the placement of the hands in figures 6–10, but only in figure 6 are the hands misplaced; in all of the others the hand and finger positions lie well within the range of those accepted for early eighteenth-century oboes, that is, within a segment one-third the length of the instrument, which is centered on a point two-fifths of the length of the oboe, a point that is nominally the joint between the top and middle sections.[16] Admittedly, not all of the features on these engravings are accurate or clearly drawn, but for some details, such as the balusters, the weight of similar, multiple examples leads to a reasonable conclusion that straight-top oboes were not part of the musical scene when Prelleur's book was first published in 1731.[17]

A more confusing depiction of an early oboist is found in an anonymous French engraving made in Paris during the time of the *Guerre des bouffons* (ca. 1752–54). Entitled *Concert italien* (fig. 12), the original engraving is now lost, but was last reported to be in the Manskopf Collection in Frankfurt am Main.[18] The players, named in the caption, are (from the left): Domenico Scarlatti, Giuseppe Tartini, Giuseppe Sammartini, Pietro Locatelli, and Salvatore Lanzetti. Although Sammartini's instrument has been the subject of much discussion, it has not been possible to discern if it is crowned with a baluster and reed, a fipple mouthpiece, or a reed cap. Page suggests that it "is a cross between an oboe and a recorder, perhaps to show that he played both instruments;"[19] Haynes asserts that it is a Type C hautboy (straight-top oboe);[20] others call it a tenor recorder, while I posit that it could be an *hautbois de Poitou,* shown

15. Johann Christoph Weigel, "Hautboist," *Musicalisches Theatrum* (Nuremberg, ca. 1720; facsimile ed., Kassel: Bärenreiter, 1961).

16. Cf. Adkins, "Proportions and Architectural Motives in the Design of the Eighteenth-Century Oboe," this Journal 25 (1999): 106, fig. 6, and Herbert Heyde, *Musikinstrumentenbau 15.–19. Jahrhundert: Kunst, Handwerk, Entwurf* (Leipzig: VEB, 1986), 88–172.

17. The engraving by Thomas Blanchet (ca. 1672), said to be the first illustration of a hautboy, has none of the problems of the relative placement of the hands with regard to the balusters; see Haynes, *The Eloquent Oboe,* 15, 124.

18. It has also been reported that this engraving is from a publication of Michel Corrette, but this has not been found.

19. Page, "The Hautboy in London's Musical Life," 371.

20. Haynes, *The Eloquent Oboe,* 443.

FIGURE 11. “Hautboist,” in Johann Christoph Weigel, *Musicalisches Theatrum* (Nuremberg, ca. 1720), 8, detail.

in this engraving for its rustic associations. The latter instrument was not used in the French *écurie* after the seventeenth century, but existed as a folk instrument into the nineteenth. Similarly, the *violoncello da spalla* played by Lanzetti[21] was not in fashion in France in the mid-eighteenth century except possibly for rustic uses.[22] The *violoncello da spalla* and *hautbois de Poitou* reinforce the satirical nature of the cartoon, which is subtitled “Casarelli’s cat singing an Italian parody.” It is notable that Locatelli and Lanzetti’s music is placed on a small table beneath the edge of the harpsichord where it can scarcely be seen, but that the cat has its own part. Below the engraving are the two stanzas of the cat’s

21. Gregory Barnett, “The Violoncello da Spalla: Shouldering the Cello in the Baroque Era,” this JOURNAL 24 (1998): 81–106.

22. Patricia J. Woodward, “Jean-Georges Kastner’s Traité général d’instrumentation: A Translation and Commentary” (MM thesis, University of North Texas, 2003), 72–73. See also Dmitry Badiarov, “The Violoncello, Viola da Spalla and Viola Pomposa in Theory and Practice,” *Galpin Society Journal* 60 (2007): 122.

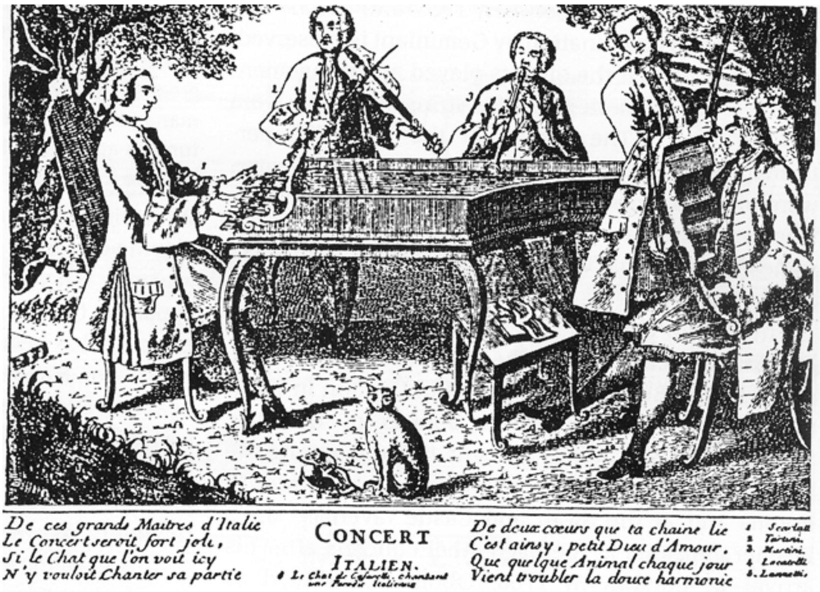


FIGURE 12. *Concert italien.* Anonymous French engraving, ca. 1752–54. Formerly in the Manskopf collection, Frankfurt am Main.

song, which further emphasize the intent of the satire, to impugn the contribution of the singer to the performance.

De ces grands Maitres d'Italie
Le Concert seroit fort joli,
Si le Chat que l'on voit icy
N'y voulit Chanter sa partie

De deux coeurs que ta chaine lie
C'est ainsy, petit Dieu d'Amour.
Que quelque Animal chaque jour
Vien troubler la douce harmonie

From these Italian masters grand
Lovely music would be at hand,
If the cat below here found
Did not utter a single sound.

Though your chain two hearts may bind,
Little God of Love you'll find
That every day some small strange beast
Comes to spoil the harmonious feast.

With the exception of a few very plain straight-top instruments, the lower two joints on straight-top oboes differ little from those on balustered instruments. The decoration is apt to be simple, a ferrule surmounting the baluster with little or no beading (type 2cc; fig. 13a), in imitation of the top joint, but sometimes it may be highly ornate, as on the ivory Anciuti oboe that dates from about 1740 (LVA 1127; fig. 13b).

FIGURE 13a. Simple straight-top middle baluster with ferrule, on an oboe by Henry Kusder. Oxford, Bate Collection, no. 23. Reproduced with permission of the Bate Collection, University of Oxford.

FIGURE 13b. Decorated straight-top middle baluster, on an oboe by Giovanni Maria Anciuti, ca. 1740. London, Victoria and Albert Museum, 1127-1869. Reproduced courtesy of the Victoria and Albert Museum.

The finial of a straight-top oboe, like the baluster that lies below it, may be integral with the wooden tube or made from a different material, such as horn, ivory, or bone, and attached with glue or a threaded or lapped joint.

Origins of the Straight-Top Oboe

The earliest verifiable dating for the beginning of the straight-top era is 1738, with the appearance of a small instrument created by Giovanni Maria Anciuti, who was active as a maker in Milan during the first half of the eighteenth century. Scholarship of the first decade of the twenty-first century has illuminated his familial relationships[23] and provided new information about his instruments.[24]

Giovanni Maria Anciuti was born in 1674 in Forni di Sopra, in the north of the province of Udine, about 170 km (106 mi.) from Venice.[25] Anciuti is a proper name from the mountainous area in the north of the Udine; the earlier assumption that Anciuti's name was derived from the Italian word *ancia* ("reed") is mistaken.[26] Though surviving documents are few, they place him in Venice before the end of 1693, perhaps al-

23. Francesco Carreras and Cinzia Meroni, "Giovanni Maria Anciuti: A Craftsman at Work in Milan and Venice," *Recercare* 20 (2008): 181–215.

24. On Anciuti's ivory instruments, see Renato Meucci, "The Ivory Instruments by Giovanni Maria Anciuti," *Meraviglie Sonore: Strumenti musicali del barocco italiano,* ed. Franca Falletti, Renato Meucci, and Gabriele Rossi Rognoni (Florence: Giunti Editore, 2007), 207–22.

25. Carreras and Meroni, "Giovanni Maria Anciuti," 186.

26. Ibid., 181. This supposition was earlier published by Alfredo Bernardini and Renato Meucci in "L'oboe d'avorio di Anciuti (1722)," *Rassegna di studi e di notizie* 26 (2002): 373.

ready having been taken up as an apprentice, and by 1699 he was resident in Milan, as is shown by a notary document establishing the terms of a marriage contract with Giuliana Vanotti di Giacinto.

The acquisition of ivory by Anciuti in 1700 and the purchase of Milanese instruments by oboists and institutions in Venice before 1709, the date of his first surviving dated instrument, suggest that Anciuti was doing business with Venice early in the century.[27] Anciuti's reasons for taking up residence in Milan are unknown, but it may be surmised that the severe Venetian Guild restrictions impeded his choice of materials and products, whereas in Milan he was free to choose his tools, to use exotic woods, and to sign his instruments.[28] No other primary information remains of Anciuti's life in Milan beyond the recorded date of his death, November 15, 1744.[29]

Anciuti's surviving output consists of thirty instruments, of which twelve are complete oboes (parts of two others are single joints).[30] Most of the thirty have stamped dates ranging from 1709 to 1740, the maker's name, and a cartoon of the Lion of Venice. Though the cartoons are not legible on three of the oboes, they are an integral feature of the identification of each instrument. Numerous hypotheses exist regarding Anciuti's use of this symbol:

- It indicated that the instrument was commissioned by someone in Venice.
- It was a reference to Anciuti's roots in the Venetian province of the Udine.
- It indicated that Anciuti was under the patronage or protection of the Serenissima, thereby retaining some link to the armed neutrality of Venice in the otherwise Habsburg-dominated Milan.[31]
- It was a means of maintaining or taking advantage of his Venetian citizenship.

27. Carreras and Meroni, "Giovanni Maria Anciuti," 197–99. A document from 1700 confirms the acquisition of ivory by Anciuti. The assumption that at least some of the instruments purchased from Milan between 1700 and 1709 were made by Anciuti derives from the lack of information about any other makers resident there during that time.

28. Ibid., 210–12.

29. Ibid., 203.

30. One further oboe is listed in Carreras and Meroni, "Giovanni Maria Anciuti," 204n60, but no details are provided, except that the instrument is made of boxwood, dated 1729, and was discovered in Italy. This instrument is not included in the discussion.

31. In 1706 the Austrians, commanded by Prince Eugene of Savoy, broke the French siege of Turin. Shortly after, Austrian troops entered Milan, ending Spanish rule there. After this episode Venice opted for armed neutrality, and over the next two centuries refused to take sides in the quarrels of the great European monarchies.

The Lion of Venice symbol, also frequently referred to as the "Lion of St. Mark," exists in at least three forms (fig. 14). The most common of these, and the one that Anciuti appears to have primarily used as his stamp, shows a lion *passant affronté*, with the right forepaw surmounting the Gospel of St. Mark and the wings *vol* (fig. 14a). This appears to have been derived from the Venetian coat of arms, which features the lion on a beribboned oval shield that is surmounted with the ducal crown (fig. 14b). There, however, the lion is armed with a sword in the right forepaw above the open gospel. The third depiction (fig. 14c) shows the lion *abaissé,* that is, with the wings or a wing lowered, in this case the right wing, placed so that it protrudes to the front.

The stamped name "Anciuti" appears on all of the thirty known instruments but three; on twenty-four of these it is in the combined form "Anciuti a Milan." Of the remaining three stamped instruments, the boxwood and horn oboe now in Berlin (BMIM 5079) is marked "Anciuti a Milano," the ivory oboe in London (LVA 1127) is stamped "Anciuti F" [*fecit*], and an ivory oboe in Paris (PMIC C472), is stamped "F in Milano."

Of greater significance is the cartoon stamped on the two ivory instruments, which was identified as a bird by Phillip T. Young (fig. 15).[32] But Renato Meucci has suggested that this symbol "is more likely the usual winged lion of St. Mark."[33] Whether the symbol is a bird or a lion is of lesser consequence than that this cartoon is different from all the others. It is likely a winged lion in a different state from that appearing on the other oboes. Here, in order for the wing to be on the left, the lion has to be *abaissé*—that is, with the wings or right wing lowered, as is depicted in figure 14c. This version of the lion of St. Mark is by Jacobello del Fiore (Palazzo Ducale, Venice; it also appears on the flag of the Veneto region). These two ivory oboes—one a vase-shaped straight-top, the other a balustered model, together with the straight-top boxwood instrument now in Rome (RMSM 829), which has the more customary lion *vol,* provide the key to the beginnings of the straight-top oboe.

Anciuti's two straight-tops and his balustered ivory oboe are depicted in figure 16. Each has two or three features that are duplicated on one of the others, but nowhere on any of the other Anciuti oboes. Based on the stamped date of 1738 on the small straight-top oboe in Rome, it is plausible to conclude that the other two oboes were made in the same working

32. Phillip T. Young, *4900 Historical Wind Instruments: An Inventory of 200 Makers in International Collections* (London: Tony Bingham, 1993), 6. Young may have suggested the bird image after the Paris inventory entry of M. Girard (1984), which reads in part: "Marque: 'ANCIUTI.F' et 'ANCIUTI / F. IN / MILANO' surmontée de l'oiseau stylisé."

33. Meucci, "The Ivory Instruments by Giovanni Maria Anciuti," 217, 222.

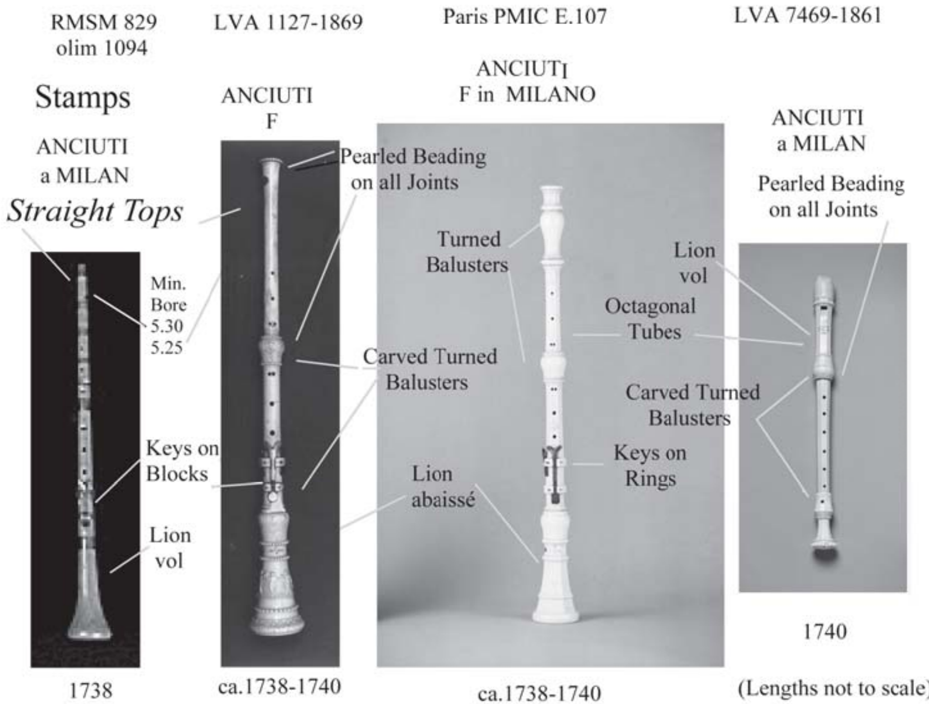
FIGURE 14a. Anciuti stamp: Lion of Saint Mark *passant affronté* with wings *vol.* Drawn by Friedrich von Huene. Reproduced with permission of Friedrich von Huene.

FIGURE 14b. Coat of Arms of the Most Serene Republic of Venice (697–1797), detail, the Lion of Saint Mark. Wikimedia Commons, http://en.wikipedia.org/wiki/File:Coat_of_Arms_of_the_Republic_of_Venice.svg.

FIGURE 14c. Lion of Saint Mark *abaissé,* as represented on the flag of the Veneto. http://en.wikipedia.org/wiki/Veneto.

FIGURE 15a. Cartoon stamp on the ivory oboe by Giovanni Maria Anciuti. London, Victoria and Albert Museum, 1127-1869. Reproduced courtesy of the Victoria and Albert Museum.

FIGURE 15b. Lion of Saint Mark superimposed on original stamp.



Rome, Museo Nazionale degli Strumenti Musicali, RMSM 829, *olim* 1094.
London, Victoria and Albert Museum, 1127-1869. Reproduced courtesy of the Victoria and Albert Museum.
Paris, Musée de la musique, PMIC C472, E.107. Reproduced with the permission of the Musée de la musique.
London, Victoria and Albert Museum, 7469-1861. Reproduced courtesy of the Victoria and Albert Museum.

FIGURE 16. Stylistic similarities of Anciuti's straight top instruments.

period, that is, close to or between 1738 and 1740. Anciuti's last known dated instrument is an ivory treble recorder stamped with the lion *vol*, "Anciuti a Milan," and "1740." This recorder has the same pearled beading as LVA 1127, and these are the only two instruments to use this decoration. It also has the same body configuration of turned balusters on an octagonal body as the oboe in Paris (PMIC C472), which we can now date to the period 1738–40.

Contrary to the stylistic similarity of the output of many makers, Anciuti's oboes show an almost constant variation in design and material. The basic configuration is of three balusters coupled with ivory bodies and silver keys, or with wood bodies and brass keys; mounts on the wooden instruments utilized ivory or horn. Even the two straight-tops have only their shape in common and vary widely in most other respects. For example, the boxwood oboe is the smaller of the two and is only 513 mm (20.2 in.) in length, 43 mm shorter than the average length of the other instruments known to me. Its acoustic length (AL)[34] of 286 mm places it in the A+1 (a'=about 466 Hz) pitch range that was in use in Venice during this time.[35] The other Anciuti straight-top, the ivory confection now residing in London's Victoria and Albert Museum (LVA 1127), has an AL of 310.75 mm, resulting in a projected pitch level of A+0 (a'=440 Hz). This pitch was also common in the earlier eighteenth century in northern Italy, where it was called the *corista di Veneto*. Another major variation is the minimum bores of the instruments; the two straight-tops have bores of 5.25 mm in the ivory instrument and 5.3 mm in the boxwood. These are the smallest diameters found in any of the oboes, and they reflect a decreasing minimum seen throughout Anciuti's career. Table 3 demonstrates this trend in the eleven oboes for which we have reliable stamps or measurements.

The smaller of these two oboes is the more important, because of what it contributes to our understanding of high-pitched oboes in Venice and environs around the mid-point of the century. Heretofore it has gone unnoticed, even though it is the only known survivor of its type. Only a few other small oboes survive, all made as miniatures in the balustered style. None of these instruments were made in Italy, nor were known to have been used there, with the possible exception of two small Denner instruments similar to Nuremberg, Germanisches Nationalmuseum, MI 155, which were lost in World War II (MI 153 and MI

34. An explanation of acoustic length may be found in Appendix 1.

35. A+1 is one of a series of pitch designations developed by Bruce Haynes (*A History of Performing Pitch*) as a way of indicating approximate half-step intervals above and below a standard of a'=440 Hz. A fuller explanation and accompanying table may be found in Appendix 2.

Table 3. Stamps of dated Anciuti oboes and minimum diameters.

Date	Stamp	Ref. No.	Diameter
1709	Anciuti a Milan	RMSM 0 827	6.1
1718	Anciuti a Milan	RMSM 0828	5.9
1719	nil	PMIC 980.2.138	6.2
1719	Anciuti a Milan	PMIC	
1721	Anciuti a Milano	BMIM 5079	6.8
1722	nil	MMSM 752	6.2
1725	Anciuti a Milan	PMD	
1727	nil	MMTS-FA/02	6.2
1730	Anciuti	APBC	5.8
1738	Anciuti a Milan	RMSM 829	5.3
1740	Anciuti F	LVA 1127 -1869	5.25
n.d.	Anciuti F in Milano	PMIC C472-E107	

TABLE 3. Stamps of dated Anciuti oboes and minimum diameters.

154).[36] The final section of this article, beginning with "The Venetian Straight-Top," deals specifically with these smaller oboes and their place in the music of northeastern Italy in the earlier part of the eighteenth century.

The ivory instrument is a vase-shaped straight-top (type 3; cf. fig. 5). The tapered curve, unique in Anciuti's surviving output, becomes the prominent aspect of Andrea Fornari's oboes at the end of the century. In Anciuti's oeuvre, however, it is unusual, and though its origin is unknown, I might point out its striking similarity to the top section of the *deutsche Schalmey* in the version produced by Richard Haka at the end

36. The following oboes were made in southern Germany or Austria between 1707 and ca. 1740: J. C. Denner, Nuremberg, fl. 1678–1707 (Nuremberg, Germanisches Nationalmuseum, MI 155, and the lost oboes, nos. 153 and 154); Peter Eggl, Berchtesgaden, fl. early eighteenth century (Salzburg, Museum Carolino-Augusteum, 13/1); Johann Benedikt Gahn, Nuremberg, fl. 1698–1711 (Milan, Conservatorio "Giuseppe Verdi"); Johann Schell, Nuremberg, fl. 1697–1732 (Berlin, Musikinstrumenten-Museum, 5250); Franz Simon Schuechbaur, Munich, fl. 1692–1743 (Venice, Conservatorio di Musica Benedetto Marcello, Museo Strumentale, 33). These instruments are discussed in Haynes, *The Eloquent Oboe,* 94–95 and Appendix 3. See also Martin Kirnbauer, *Verzeichnis der europäischen Musikinstrumente im Germanischen Nationalmuseum Nüremberg,* vol. 2, *Flöten und Rohrblattinstrumente bis 1750* (Wilhelmshaven: Florian Noetzel, 1994), 126–27.

of the seventeenth century. Figure 17 compares the top segment of Anciuti's instrument with one of Haka's. Note that the graceful sweep of the *deutsche Schalmey* is more pronounced. The Anciuti instrument has a pearled edge at the top as part of the finial[37] and the Haka instrument has a rather similar-looking scalloped edge, an uncommon device for this position on the oboe, but a prevalent feature on the *deutsche Schalmeyen* of Haka, where the finial cap is made of brass.

We have dwelt long on the details of Anciuti's oboe output because of its importance in establishing the advent of the straight-top oboe in England. The ivory straight-top, long the favorite of those historians who estimate its date of creation from 1709 to 1730, thereby claiming that it was played abroad in the 1720s or early 1730s, is no longer a candidate for that honor. Whatever instrument Giuseppe Sammartini may have played in London during his visit there in 1723–24, and after his permanent return in 1729,[38] it seems clear that he did not use a straight-top manufactured by Anciuti as has been suggested, or for that matter any straight-top before the end of the 1730s.

Other Italian Straight-Tops

Eighteen other Italian straight-top oboes are extant. Of these, sixteen make up the major part of the oboe oeuvre of Andrea Fornari, and the others represent the work of Carlo Palanca and Vincenzo Panormo. The oboes of Fornari and Panormo date from the second half of the eighteenth century, but Palanca's are more difficult to place chronologically, though some of their characteristics suggest the post-1760 era.

Carlo Palanca (1688/90–1783) was a bassoonist in the Turin Royal Chapel from 1719 to 1770, when he retired at the age of 82.[39] His instrument-making career began in his early years, when he learned the trade from his father, a Turinese woodwind maker active from about 1705.[40] The extent of the younger Palanca's oeuvre is unknown, as none of his twenty-seven extant instruments are numbered and only one is dated. This is an oboe (Paris, Musée de la musique, E.980.2.144) that is stamped *Carlo Palanca/1780* on all three joints.

37. This finial ring is now missing from the instrument.

38. Haynes, *The Eloquent Oboe,* 346, 441.

39. William Waterhouse, *The New Langwill Index: A Dictionary of Musical Wind-Instrument Makers and Inventors* (London: Tony Bingham, 1993), 290.

40. Francesca Odling, "La costruzione degli strumenti a fiato a Torino fra '700 e '800," *Quaderni della Regione Piemonte* 2, no. 11 (October 1997): supplement *L'artigianato del suono,* 45. Information provided by Alfredo Bernardini.

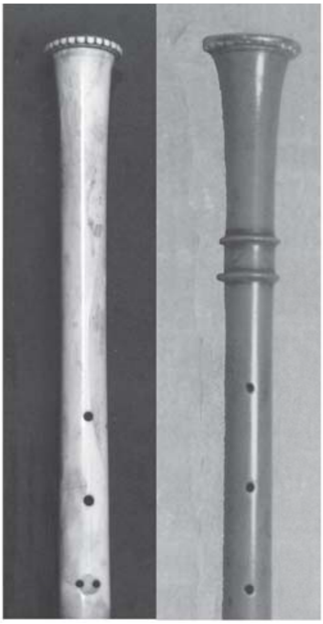


FIGURE 17. Comparison of upper joints of an Anciuti oboe (London, Victoria and Albert Museum, 1127-1869) and a Haka Baroque Schalmey (New Haven, Yale University Collection of Musical Instruments, 3410.68). The Anciuti oboe is 207 mm in length and the Haka instrument is 250 mm, reduced here in diameter by 8.3% and shortened. Reproduced with permission.

Historical references to Palanca as a maker are exceedingly rare. Bernardini cites only four early sources,[41] relying mainly on Bouquet's *Musique et musiciens à Turin de 1648 à 1775*[42] for information about his long service as a bassoonist in Turin. Palanca's instruments tell us little more. Among the known instruments, there appears to be a division about mid-century in the morphology of the design. However, the small number of surviving earlier instruments makes this only a hypothesis.[43]

41. Alfredo Bernardini, "Carlo Palanca e la costruzione di strumenti a fiato a Torino nel Settecento," *Il Flauto Dolce* 13 (1985): 22–26.

42. Marie Thérèse Bouquet[-Boyer], *Musique et Musiciens à Turin de 1648 à 1775* (Turin: Accademia della scienze; Paris: Picard, 1968).

43. Bernardini, in his article "The Oboe in the Venetian Republic, 1692–1797," *Early Music* 16, no. 3 (August 1988): 378 and 386nn58 and 59, offers, as justification for the conclusion that the classical oboe developed earlier in Italy than elsewhere, the *Sonata in sol minore* by Matteo Bissoli, one of his two surviving pieces, which "is probably

An understanding of these instruments is of importance, because of the misplaced emphasis placed by several later writers on the widespread influence of Palanca as a maker in central Europe after 1740, a time when the emigration of Italian musicians was widespread across the area.[44]

The Palanca straight-top oboe (Angoulême, Marc Ecochard collection) is the longest of all the Palanca oboes at 588 mm (23.1 in.), exceeding the average 559 mm length of Palanca oboes by 29 mm.[45] The acoustic length, however, is 337.6 mm, which is close to Palanca's average of 334 mm. The instrument plays at a'=405 Hz, placing it in the A-1 ½ pitch range, that is, about a'=400–410 Hz. This is comparable to the *A-Kammerton* of Johann Friedrich Agricola and Johann Joachim Quantz,[46] which was also the prevalent pitch level in Naples in the mid-1750s.

This oboe belongs in group 2bb of straight-top instruments, in that it has a simple tapered body without the protrusion of balusters at the middle joint and bell. Each of the joints has a silver ferrule; that on the top joint is now missing, but confirmed by Ecochard. There are three silver keys set in wooden rings, though much of the lower ring has been excised, and the lower portion of the C key is thus mounted in integral wooden blocks. This feature is an interesting characteristic almost entirely peculiar to straight-top oboes in the eighteenth century.

Of all the Palanca oboes for which data are available, this is acoustically the most secure in terms of its conicity (0.0239).[47] Inasmuch as it can be compared with other groups of straight-tops or other types of double reeds, the conicity—that is, the amount of deviance from the shape of a pure acoustical cone—is about 40%, where 0% deviance is 0.0000 and 100% would equal 1.00. Greater conicity—that is, greater

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the earliest to include the note f'''," (Genoa, Conservatorio Niccolò Paganini; published Milan, ed. Giovanni Ballola, Edizione Suzini Zerboni, ca. 1983). Bernardini speculates that Bissoli's f''' was the earliest use of this high note, therefore placing the earliest development of the classical oboe in Italy. But one must ask: What about the high-pitched instrument pictured with Bissoli (see fig. 35b below)? Would such a note not have been easily attainable on this instrument?

44. For the best summary, see Bruce Haynes, *The Eloquent Oboe,* particularly chap. 7, "1730–1760: Italian Ascendancy and the Rise of the Narrow-Bore Hautboy" (pp. 396–450), especially section D (pp. 436–45), on England, with its detailing of the Sammartini straight-top myth beginning in Section 2 (p. 441).

45. Data and photographs kindly provided by Marc Ecochard.

46. Johann Friedrich Agricola, *Anleitung zur Singkunst* (Berlin, 1757), 45; and Johann Joachim Quantz, *Versuch einer Anweisung die Flöte traversiere zu spielen* (Berlin, 1752), chap 17:7, §7. See Bruce Haynes, *A History of Performing Pitch,* 266–68, for an explanation of these two authors' conflicting views on this pitch.

47. Conicity as it is used in this study is explained below and in Appendix 1.

deviance—indicates more inharmonicity in the bore. Inharmonicity is the degree that the frequencies of the partials depart from alignment with the nodes of the fundamental frequency. The conicity of this oboe at 0.0239 lies only 0.0005 from the group average and just below the median (23 of 54). In this regard, it leans slightly toward the later eighteenth-century oboes that feature narrower bores.[48]

In his later years, Palanca, though well known, was apparently not working much, or reliably, as an instrument maker. Marita McClymonds, observing that acquisition of materials in Portugal was often a long and arduous process at that time, cites an anecdote regarding the purchase of two of his oboes for the Portuguese court that extended over several years, beginning in 1773. In that year the chief procurer for the court opera, José Antonio Pinto da Silva, sent a detailed order to the Portuguese consul general to the Republic of Genoa, Giovanni Piaggio. Part of that order was for two oboes to be made by Palanca:

> From Turin we would like two oboes made by Palanca, approved by Mr. Besozzi, and it is enough if they have each one or two pieces; i.e., the first piece should be in the natural tone and the other lower-[pitched], and each must come with a half dozen staples, and all done with the advice of Mr. Besozzi, and as soon as possible.[49]

One of the oboes finally arrived after two and a half years of waiting, and in July of 1776, in rather rough Portuguese, Pinto da Silva again wrote to Piaggio:

> I cannot excuse myself from telling you that your friend from Turin, to whom I gave the order on your recommendation, thinks little enough of it that he has sent an oboe composed of five parts, three old and only two new, much to the surprise of my friend when he saw it, and I persuade myself that your friend thinks that the Court of Lisbon is like that of Morocco, where they are not familiar with instruments.[50]

It was returned to Palanca with the admonition to play no more tricks when the next one was sent.

The other Italian maker of a straight-top was Vincenzo Panormo, a peripatetic member of a Neapolitan family of instrument makers, many

48. The minimum bore diameter of this oboe is 5.2 mm. In comparison with forty-one Italian oboes (1709–1832), ranging in minimum bore diameter from 4.49 to 6.8 mm, this instrument lies in position 27 above the smallest. The average for this group is 5.13 and the median is 4.9.

49. Marita McClymonds, "Niccolò Jommelli: The Last Years, 1769–1774" (PhD diss., University of California, Berkeley, 1978), 42.

50. Ibid.

of whom eventually settled in England. Little seems to be known about Panormo's woodwind instruments, though his violins were quite famous in the late eighteenth century.[51] Of the half-dozen known oboes by members of this family, a straight-top, formerly in Michel Piguet's collection (now dispersed), was stamped "VINC. PANORMO" on all three sections. Piguet opined that the brass E♭ key was an Italianate original similar to the E♭ key on an oboe by Perosa in Copenhagen (Copenhagen, Musikhistorisk Museum, 461),[52] but that the silver C key was in the English style.[53] In addition to mentioning many repairs, Piguet most importantly suggested that the top joint had been remodeled from a baluster-top to a straight-top configuration.

This oboe could possibly date as early as the 1750s, since Panormo was born in 1734 and left his home in Monreale/Palermo at the age of sixteen. However, it more likely dates from later in the century, perhaps from his Paris years (1753–89), if one can judge from its physical attributes. Apart from its length and its higher pitch (Piguet places it at a low A+0 of 435 Hz), its internal configuration is close to the Palanca straight-top discussed above (fig. 18). These are large diametric measurements for an oboe from later in the century. For example, the average minimum Palanca bore diameter is 4.91 mm; for the Panormo family instruments, all dating from the second half of the eighteenth century, the average minimum is 4.75 mm. But, as we will see, a larger diameter is typical for straight-top oboes.

The last of the four Italian straight-top oboe makers was Andrea Fornari (1753–1841), who worked alone in his shop in Venice from 1791 until 1832. Fornari's instruments are unique in that they are almost all dated, and all but four of the twenty for which I have data are made in the straight-top vase style (3bb). Those with baluster tops are closely patterned after the late Dresden style, and all date from late in Fornari's career—according to Bernardini, after 1810.[54] Three of the four balustered Fornari oboes in my inventory are dated 1813, 1814, and 1817, and the other has no date.

51. Waterhouse, *The New Langwill Index,* 291; William Henley, *Universal Dictionary of Violin and Bow Makers* (Brighton: Amati, 1959–60; repr., 1973), 862–64.

52. This key has a dumbbell shape with spurs on both segments. According to Halfpenny, "The English 2- and 3-Keyed Hautboy," 16, the E♭ keys on English straight-tops do not have spurs.

53. Michel Piguet, "Die Oboe im 18. Jahrhundert: Versuch einer Chronologie verschiedener Oboentypen anhand von Messungen und Betrachtungen von neunzehn Instrumenten aus der Sammlung M. Piguet," *Basler Jahrbuch für historische Musikpraxis* 12 (1988): 104.

54. Alfredo Bernardini, "Woodwind Makers in Venice, 1790–1900," this JOURNAL 15 (1989): 60.

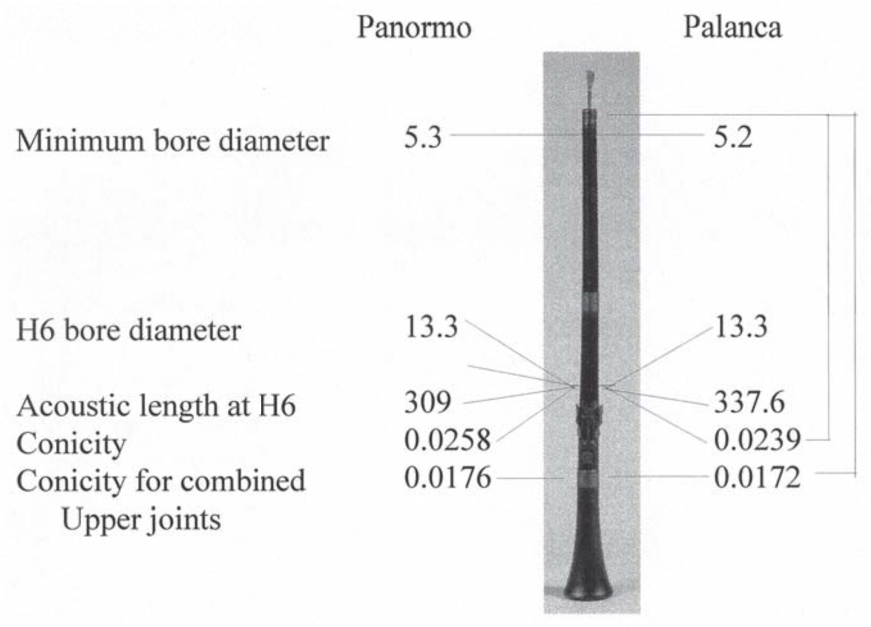


FIGURE 18. Interior measurements of the Panormo straight-top oboe (formerly Basel, Michel Piguet, 10) and the Palanca straight-top oboe (Angoulême, collection of Marc Ecochard).

As have I, Bernardini has observed that these balustered instruments bear a striking resemblance to the instruments of Heinrich Grenser. The bells of the Fornari oboes exhibit a design with a compound curve and a semi-flat bell (fig. 19).[55] This style was prevalent on Grenser instruments before 1807, as was the shape of the mid-joint baluster seen on these Fornari instruments. Grenser used an octagonal C-key cover, but Fornari's is a slightly rounded square with clipped corners (Paris, Musée de la musique, E.980.2.143). The top baluster of the Fornari instrument shown in figure 20 is made on a quarter radius and placed about .8 of the baluster length from the bottom of the baluster. Rather than resembling Grenser's instruments, this design is more in line with the practice of J. F. Grundmann before 1800 and J. F. Floth in the first decade after 1800. Fornari's finial is shorter than Grenser's, and the matching bead clusters at the top and bottom of the finial cove give the impression that the cove is concave. Other decorative elements that contribute to the

55. See Adkins, "The German Oboe in the Eighteenth Century," 5–47, on the typology of German oboes and on terminology. See esp. pp. 33–36 and fig. 25, where this style is identified as Dresden type 3.

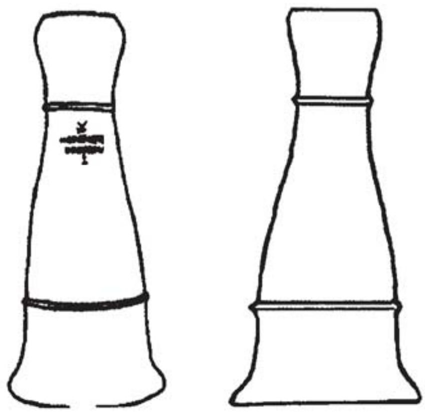


FIGURE 19. A comparison of a Grenser type-3 bell from before 1807 (left) and a similarly styled Fornari bell dated 1814 (right) (Bern, Historisches Museum, 36776). Drawing by the author.

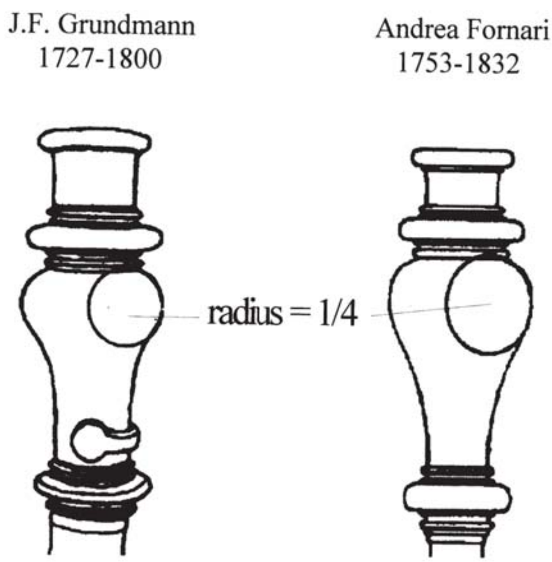


FIGURE 20. Grundmann and Fornari balusters compared. Drawing of Fornari baluster (Bern, Historisches Museum, 36776) by Mary Kirkpatrick; drawing of Grundmann baluster from Cecil Adkins, "The German Oboe in the Eighteenth Century," this JOURNAL 27 (2001): 34, fig. 21.

similar appearance are the top-column beads, the upper waist beads, and a single flare bead toward the bottom of the bell. All of the oboes use only a double third finger-hole instead of having both three and four doubled, a configuration shared with the instruments of Heinrich Grenser.

Where one might puzzle over the eclectic borrowed elements of the balustered instruments, the Fornari straight-top oboes are strikingly uniform and distinctive. These oboes are precise and unvarying in their design. Variation is found only in the use of materials: six are made of ebony and one of ivory, with boxwood used for the bodies of the remainder (nine). The rarer materials appear on the earlier instruments, and the later oboes of boxwood are a lesser choice, necessitated, according to Bernardini, by the economic decline after the fall of the Venetian Republic in 1797.[56]

The straight-top oboes share the musical and structural characteristics of Fornari's later Dresden-style instruments, as all but three have the usual two keys. The exceptions are Leipzig, Musikinstrumentenmuseum der Universität Leipzig, 1327 and Venice, Fondazione Querini Stampalia, 400-1 and 400-2, the latter two constructed in 1792 and 1793.[57] They are made with an open long-touch C mounted on a brass saddle between holes 5 and 6. On two of the instruments (Leipzig 1327 and Venice 400-1) the C key is in its usual anterior orientation (fig. 21a) with the touch turned to the left to be operated by the left little finger. The third instrument (Venice 400-2) has its C key moved to the left where on earlier instruments one would have found a second E♭ key. A closed C♯, with a right-turned touch, was inserted in the center position. This design perhaps did not gain acceptance, or the instruments may have been produced on commission and not duplicated. Sometime after 1797 William Milhouse used a similar long key on the left side for a low C♯, to be played with the left-hand little finger. An example, engraved with the inventor's name, William Parke, is Oxford, Bate Collection, 27 (fig. 21b).

As I mentioned above, all of the Fornari oboes that I have examined share the common characteristics of the later classical oboe. Should the Fornari straight-top instruments (grouped as type 3cc) be classified with the other straight-tops in groups 1 and 2, or are his design changes the culmination of the straight-top movement toward the classical oboe or simply exterior modifications? Similarly, a reclassification could be considered for the ivory Anciuti oboe (LVA 1127) from earlier in the eighteenth century. The question arises because straight-tops in groups 1 and

56. Bernardini, "Woodwind Makers in Venice," 60.

57. Leipzig 1327 is undated. It also has a four-part *corps de rechange* (see fig. 5), as does Venice 400-2.

FIGURE 21a. Oboe by Andrea Fornari, long C♯ key. Musikinstrumentenmuseum der Universität Leipzig, 1327. Used with permission.

FIGURE 21b. Oboe by William Milhouse, long C♯ key. Oxford, Bate Collection, no. 27. Reproduced with permission of the Bate Collection, University of Oxford.

2, which include Anciuti's small straight-top (RMSM 829, dated 1738), the Milhouse and some other English instruments, and the Venetian straight-tops of the mid-eighteenth century, have some individual structural characteristics that set them apart from instruments like those of Palanca, Panormo, and Fornari, which vary from contemporary balustered oboes only in exterior design.

The Other Straight-Tops

Besides the Italian straight-tops already discussed and the English instruments that follow, I know of only three other straight-top oboes. Two are of American provenance, and the third, though stamped, is of unknown origin. Both of the American oboes date from the later straight-top era, one having been made by Jacob Anthony of Philadelphia in the twenty-five year period after 1785, and the other by Uzal Miner of Hartford between 1807 and 1815. Both are of boxwood with two brass keys and four ivory half-mounts. The Miner instrument is stained black and shows signs of heavy use. Both instruments have double third and single fourth holes, and both have keys mounted on full-turned rings in the London style rather than the bosses or cut-away rings that are common on the English country and Continental straight-tops. Decorative turnings are at a minimum—there are no elaborate molding groups—and of those that are present, Anthony's are the more finely worked. The bells have a simple concave flare that extends without interruption from the bottom of the baluster to the ivory ring at the orifice.

The third of these oboes, stamped N. Cosins, bears a Habsburg mark (fig. 22), which suggests that, if it were made outside the German-speaking areas, it could have been made in Milan during Austrian occupation (1706–1796). It is also possible, as has been suggested for the Anciuti oboes, that it was made in Milan and destined for Venice. It probably dates from the middle third of the eighteenth century, and several elements point to the earliest possible date, which would be in the late 1740s or early 1750s. Its use of three keys would have been anachronistic after the mid-century, and double fourth holes began to diminish rapidly in German-speaking areas after the 1760s. Based on its AL of 309 mm, it is in the A+0 pitch range, a pitch known as *corista di Veneto* because of its common use in the Venetian area. This may well be the area for which the oboe was destined, as were a number of small oboes manufactured in Austria and southern Germany.[58] The ivory straight-top made by the Milan builder Anciuti (LVA 1127) was manufactured to play in this pitch range (AL=310.75), and it bears the Venetian lion logo.

The Cosins oboe is elegant in its simplicity. The curve of its boxwood tube is accented by the smooth brass ferrules, which are undecorated except for some light scoring on the topmost part. The E♭ keys are simple and balanced and cut in a dumbbell style with spurs on the upper lobe. All of the keys are set in posts made from cutaway rings. Italian straight-tops use only blocks, as do most of the French Type E oboes,[59] and English country oboes all have blocks, whereas the English city makers used rings in the more customary style.

Milhouse Redux: The Straight-Top Oboe in England

By far the largest group of surviving straight-tops are those of English origin. All together there are thirty-nine such instruments, of which nineteen were manufactured by the Milhouse family and twenty by London makers. A survey of 113 English oboes surviving from ca. 1750

58. Haynes, *The Eloquent Oboe,* 96.

59. Type E oboes were made in France by Christophe Delusse, Thomas and Martin Lot, and Desjardins, mostly in the second half of the eighteenth century. They are contemporaneous with the classical oboes ("Type D") developed during this time. Haynes's classification of instruments by turning style is discussed in *The Eloquent Oboe,* 68 and 78–89.

FIGURE 22. Habsburg stamp on oboe by N. Cosins. Nuremberg, Germanisches Nationalmuseum, MIR 375.

to ca. 1810 yields these statistics: There were at least 25 woodwind-instrument makers working outside of London: 8 of these are known to have produced 23 oboes, 19 straight-top and 4 balustered instruments. In London there were 49 makers of woodwind instruments who produced 88 oboes: 36 of these builders made 20 straight-top and 68 balustered oboes.

Figure 23 gives an approximation of the production dates of these instruments in England. Note that 94.7 percent of the straight-top oboes made outside of London were produced before 1787, the year William Milhouse moved from Newark-on-Trent to the capital, while 65 percent of the London-made straight-tops appeared after this date. The inevitable conclusion would be that these instruments were an indigenous development of the English countryside, beginning sometime in the 1740s, rather than of cosmopolitan London. They may have appeared as early as the beginning of the decade. For example, Richard Milhouse Sr. was born in 1724 and it is not impossible that he was manufacturing such instruments in his teens. If he were apprenticed at eleven or twelve as many youths were, he could easily have been an independent journeyman by eighteen, which would have been 1742. Unfortunately, I have not been able to find one bona fide historical source that discusses this striking change.

The hypothesis that the straight-top was brought into England after 1729 by Sammartini from Italy is detailed by Haynes in *The Eloquent Oboe:* "there is a good chance that the straight-top model, which Anciuti was already making in the 1730s, was brought from Milan to London by Sammartini. . . ."[60] He believed also that the earliest English straight-tops were made in the 1740s, by Thomas Stanesby Jr. Bear in mind, however, that there are only two surviving straight-tops by Anciuti, dating from 1738 and about (or after) 1740,[61] and that Palanca's surviving

60. Ibid., 443.

61. A rationale for the dating of this oboe to the years 1738–40 is set forth in the section "Origins of the Straight-Top Oboe" above.

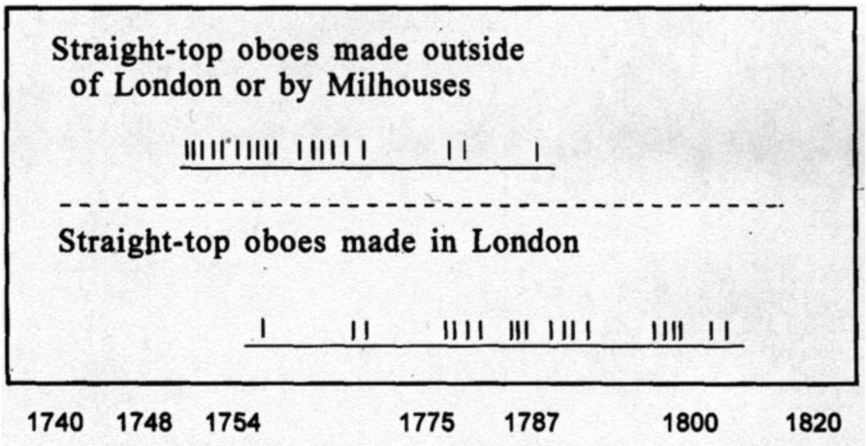


FIGURE 23. Chronological production of straight-top oboes.

straight-top was made a generation later. It has been noted above that the smaller Anciuti oboe (RMSM 829) may have been destined for the Venetian trade.[62] The other (LVA 1127), with its decorated ivory body, was possibly a commemorative instrument, and has, like the Palanca straight-top, the acoustical design of a later oboe, unlike those from Anciuti's earlier period. If Stanesby Jr. actually made the straight-top attributed to him, it would date before his death in 1754. It may be either a very late instrument imitating an earlier specimen by someone else, perhaps Richard Milhouse Sr., or an experiment by Gedney, who is known to have used Stanesby stamps in his first years as Stanesby's successor. The Stanesby instrument's large bore is not typical of that maker's oboes, which reinforces the conjecture that the maker was following someone else's pattern.[63]

Table 4 compares the Palanca straight-top, an undated, balustered Palanca instrument of apparent late manufacture (Berlin, Musikinstrumenten-Museum, 5336), the ivory Anciuti straight-top, an earlier Anciuti baluster-top (dated 1721; Amsterdam, Alfredo Bernardini collection), and measurements of the smallest and largest straight-tops together with the average and median sizes derived from all of the straight-tops used in the study. This is useful in helping to establish more firmly a period of manufacture for the ivory Anciuti oboe.

62. See the further discussion regarding this instrument in the section "The Venetian Oboe" below.

63. See Adkins, "William Milhouse and the English Classical Oboe," 78–79.

A) Minimum ⌀		B) Conicity	
Smallest ⌀	4.49	Smallest conicity	0.02304
Median ⌀	4.9	Average conicity	0.03642
Average ⌀	5.13	Median conicity	0.03657
Palanca (Ecochard)	5.2	Palanca (Ecochard)	0.03485
Anciuti (LVA 1127)	5.25	Palanca (AAB-A)	0.03600
Palanca (AAB-A)	5.4	Anciuti (BMIM5079)	0.03990
Anciuti (BMIM 5079)	6.8	Anciuti (LVA 1127)	0.04140
Largest ⌀	6.8	Largest conicity	0.04746

TABLE 4. Conicity of oboes by Palanca and Anciuti compared to conicity of other straight-tops.

It is possible that Italian straight-top instruments were introduced into England in the later part of the eighteenth century, during the time of Thomas Vincent Jr., active as a performer from 1735 to 1784; the oboist William Parke suggested that Vincent played a straight-top in the 1760s.[64] Along with his brother Richard (d. 1783), he was said to have been a pupil of Sammartini, who died in 1754. Still, it is not likely that the English straight-tops were produced under Italian influence, because of the almost simultaneous appearance of the style in both places. The unknown source used by Anthony Baines suggested that Vincent "adopted this model in his latter days," which would have been well after Sammartini's death. Haynes suggests that Sammartini and Vincent were playing Italian straight-tops as companions in Sammartini's last decade (1744),[65] but this seems unlikely.[66]

On the other hand, the straight-top instruments produced by the Milhouse family, beginning before mid-century, spread across the countryside, though they may have had little influence on London production for several decades. Straight-top oboes are not known to have been

64. See note 5 above.

65. Haynes, *The Eloquent Oboe,* 441, 443.

66. See note 5 above. Vincent and Sammartini were listed together as performers at the Swan and Castle concerts in late 1744 by Charles Burney; see *A General History of Music* (1789), ed. Frank Mercer (New York: Dover, 1957), 2:780.

made in London until after the mid-1750s, and their manufacture was not significant until after 1775 (see fig. 23). The English country oboes as a group are acoustically different from those of later London manufacture, which for the most part were simply classical oboes with straight tops, and different as well from the few remaining Italian specimens.

Bore size. The most striking aspect of the English country oboes—specifically those made by the Milhouse family—is the consistent wideness of their bores, like those of instruments several decades earlier. The straight-top instruments of Stanesby and Gedney have large minimum diameters over 6 mm, and the sixteen Milhouse instruments cluster around 5.77 mm, with the broadest at 6.07 and the smallest at 5.4 mm. The diameters of the later straight-top English oboes range downward from 5.7 to 4.6 mm, and those of the balustered English oboes range from 5.61 to 4.6 mm. The later straight-top examples also differ from the Milhouse instruments in having a smooth decrease in diameter, which lessens to a range more like the later balustered English oboes (fig. 24).

Conicity. The conicity of the five oboe groups in figure 25 reveals much less uniformity of design. The fluctuation of the patterns demonstrates a lack of consistency within the groups that may have been the result of a continuing quest for a better-balanced and more freely playing instrument, or simply haste or inexperience. Only in the Milhouse straight-top group does the improved [lowering] conicity trace a consistent path.

Conicity, as used here, is a discrete number that is derived by subtracting two diametric measurements (the minimum bore from the bore diameter at hole 6) and dividing the difference by the acoustic length (the distance between these two diameters) of the tube. The larger the difference (i.e., conicity), the greater the taper, and the more inharmonicity there is in the tube. The maker can adjust anomalies by chambering the bore and undercutting the tone holes. An "improved" conicity, as found in the Milhouse instruments, most likely indicates that more consistency was applied to the reaming of the bores and to their subsequent adjustment.

In table 4A the minimum diameter of the ivory Anciuti oboe lies comfortably within the range of the two Palanca instruments, suggesting that the Anciuti instrument was made at a later time, when the trend toward smaller bores had already begun. Note that the minimum diameter of Anciuti oboe BMIM 5079 is quite large, in keeping with instruments manufactured earlier in the century.

In table 4B the conicity of the two Palanca instruments is quite close, and they lie just at the average and median of the sixty-six oboes used for

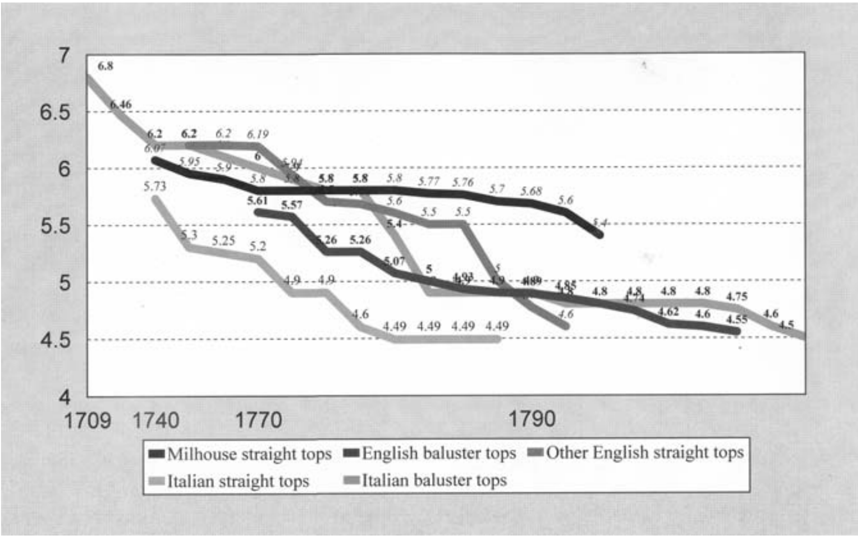


FIGURE 24. Chronological comparison of minimum bore diameters of straight- and baluster-top groups.

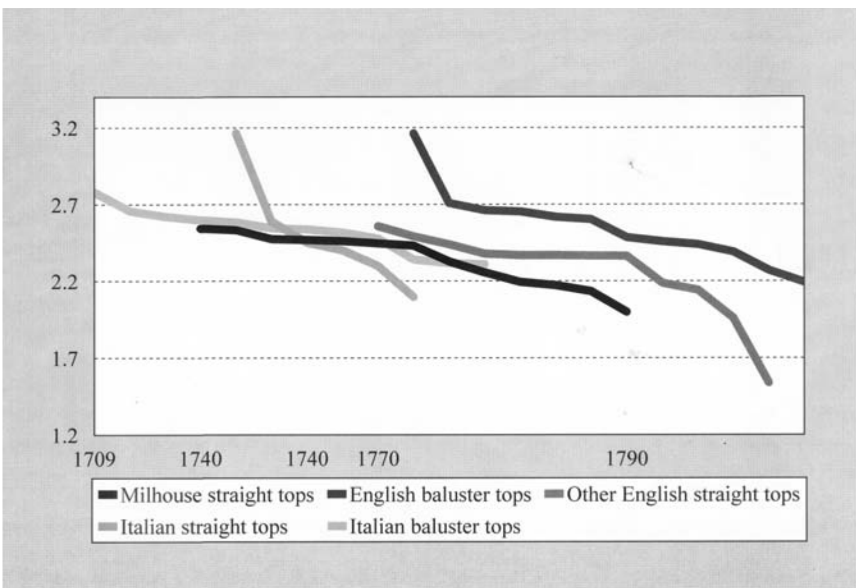


FIGURE 25. Conicity of oboe groups.

this table. Both of the Anciuti oboes display a greater conicity, that is, their bores widen more than do the Palancas, with the ivory oboe demonstrating the larger amount (fig. 26).

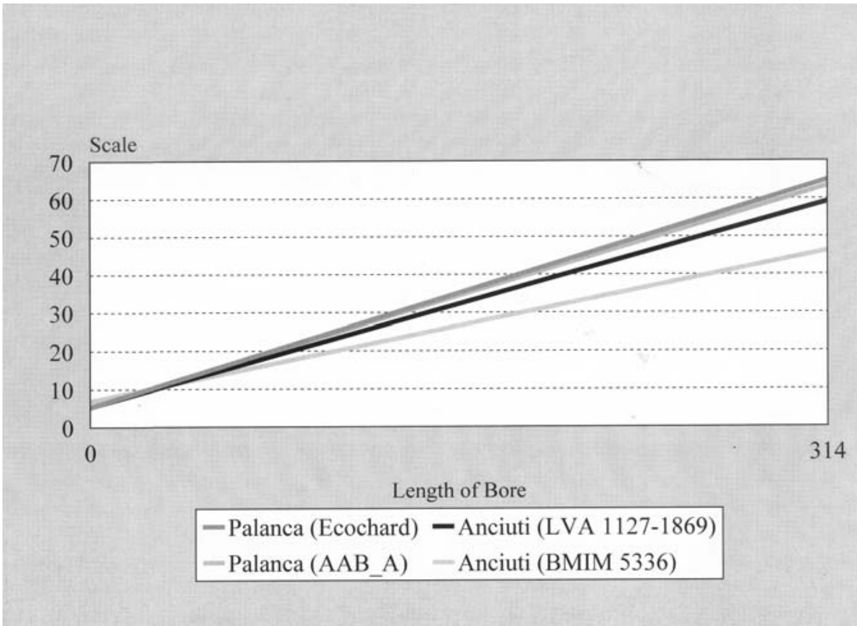
Practical Observations

The preceding section points out some distinctive physical variations that occur within the straight-top genre. While the exact mathematical differences are easily observable, the tonal variations they create are less so. The process of oboe adjustment is quite complex, and is an empirical skill rather than an academic process.[67] Nonetheless, it is possible to characterize both processes, which can be divided into three procedures as above, and each of these into two, moving from the academic to the empirical in each instance.

Minimum bores. With regard to minimum bores it may be observed that those of the straight-tops are as a group larger than those of the baluster-top instruments, and that the bores of the earlier straight-tops are larger than those of later examples. The latter approach the diameters of the classical oboes, that is, they are very similar to the balustered instruments, both English and Continental. An empiricist would assume that a more constricted upper diameter, as found in the baluster-top, would probably

67. All of my correspondents offer a caveat to their remarks with equivocations about the reeds we now use for early instruments. Though there have been many attempts to re-create early reeds based on the few surviving examples, these have been for the most part unsatisfactory. To modern ears, these reeds are not satisfying in timbre and stability—we are unable to accept the aural results of our re-creations. Consequently, I have to offer my own caveat about the observations and conclusions in this section: my own and those of my correspondents (Mary Kirkpatrick, Sand Dalton, and Stephen Hammer) are all conditioned by modern experiences and individual practice. Thus, unfortunately, that one aspect of early oboes—exactly how did they sound—is lost to us.

The search for a perfect reed is made more problematic by difficulties in finding a perfect staple. Modern experiments range from the duplication of surviving historical specimens to the popular contemporary use of two-part staples, always with emphasis on the proper taper of the staple. The influence of this element is discussed by Marc Ecochard in his commentary on the tuning of an oboe cited below (note 72). During the period July 30–August 2, 2010, some members of the online oboe research group hautboyresearch@yahoogroups.com (Per Bengtsson, Jem Berry, Geoffrey Burgess, Matthew Dart, Stephen Hammer, Mary Kirkpatrick, Herb Myers, et al.) engaged in a lively and informative discussion on these topics, particularly reeds, staples, and bore resonances.



Palanca (Ecochard): Angoulême, collection of Marc Ecochard.
Palanca (AAB_A): Amsterdam, collection of Alfredo Bernardini.
Anciuti (LVA 1127-1869): London, Victoria and Albert Museum, 1127-1869.
Anciuti (BMIM 5336): Berlin, Musikinstrumenten-Museum 5336.

FIGURE 26. Relative conicities of Anciuti and Palanca oboes.

indicate a smaller bore, which in turn would yield a denser, more focused sound, though it will be seen that this is not always the case.

Conicity. Conicity, and hence inharmonicity, is the most imprecise of our studies, at least in terms of projecting an exact consequence. It is observable that straight-top conicity is less predictable and less regular than that of the balustered instruments; the straight-top numbers range from 0.0204 to 0.0287, whereas those of the balustered instruments mostly lie below 0.0204 (though this is not the case in table 4). The result of these differences may be explained as suggested by Mary Kirkpatrick and Stephen Hammer when they speak about a brighter, clearer tone and one that is less lively,[68] for inharmonicity does result in more instability

68. Communications to the author from Kirkpatrick and Hammer.

in the production and placement of the harmonic partials, and hence more brightness in the timbre and more easily attained high notes.

Figure 27 gives a graphic illustration of the range of conicity for thirty-three straight-top and forty-four balustered instruments. All of the data for the two types are quite similar, except that the balustered oboes have a much greater variation in taper, with a majority of them in the upper half of the group. The straight-top oboes tend toward smaller conicities, or less taper.[69] This produces a less lively tone and suppression of some of the partials (Hammer), and the resulting tone has a darker timbre (Dalton).[70] In his discussion of the development of the oboe in England, Anthony Baines writes: "A minor flaw in the tone of the Purcell-Handel oboe is a trace of huskiness, which becomes eradicated in later eighteenth-century designs through narrowing of the bore." He notes of the straight-top oboe that "the bore is only slightly reduced, but the sound seems to become brighter. An English popular tutor of this period encourages the student to aim for the sound of a well-played violin, but by some accounts (e.g. Parke's) this model tended to sound a little too bright and penetrating."[71] There seems to be some difference of understanding on the consequences of narrowing the bore. Baines's remark suggests that the reduction is throughout the bore, but the effect he describes is one of reducing the minimum diameter, thus increasing the conicity. Increasing the taper brightens the timbre and raises the pitch of the instrument, though, as Hammer mentions, "with the same reed it also means a flatter pitch on the second and third partial notes relative to the fundamental."[72]

69. For example, an instrument with a residual bore measurement of 6 mm (that is, the difference between the minimum bore diameter of 4 mm and a diameter of 10 mm at hole 6) and an AL of 300 mm has a conicity of 0.02. An instrument with a minimum measurement of 5.5 mm and a 300 mm AL has a conicity of 0.0183. The latter instrument has a bore with less taper and resembles a straight-top oboe.

70. Communications to the author from Hammer and Dalton. Hammer (communication, May 28, 2009) makes a point of this in a comparison of Continental oboes: "A mid-century French hautboy such as Bizey has very low conicity [taper] for a hautboy, a Stanesby or Richter oboe medium low, Denner and other German models somewhat higher, and some shawms considerably higher than that—think of a Spanish tiple, for example."

71. Baines, *Woodwind Instruments,* 384; cf. note 5 above.

72. Marc Ecochard has posted on his website www.grandhautbois-flutes.com, under the heading "Articles and Documents," an article entitled "Tuning the Hautboy: A Perspective on Original Tuning and Modern Adaptations" (English version by Jem Berry). This article contains part of a letter written by Karl F. Golde to a wealthy client about 1850, in which he sets forth some of the principles and techniques necessary to the tuning and adjustment of an oboe. Translated by Cary Karp in "Woodwind Instrument Bore Measurement," *Galpin Society Journal* 31 (1978): 9–28, Golde's original

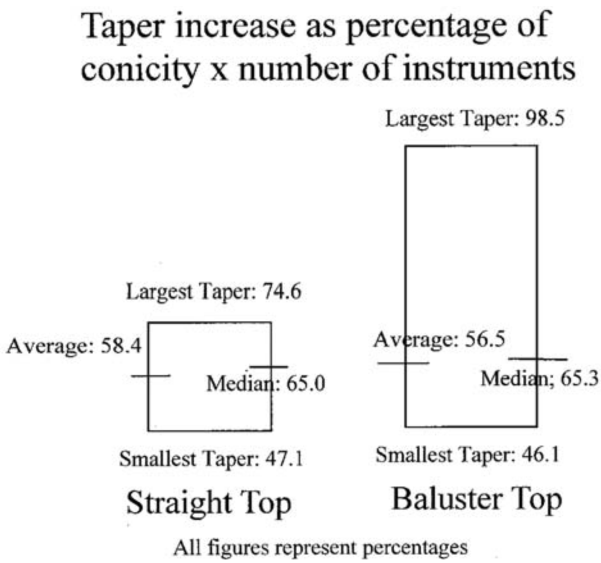


FIGURE 27. Amount of taper increase in straight-top and baluster-top oboes.

The Venetian Straight-top

In the introduction to the origin of the straight-top oboe outlined above (p.104), the first specimen mentioned was a small straight-top instrument made by Giovanni Maria Anciuti of Milan in 1738 (RMSM 829; fig. 28). Not only is its design unique, but it bears a stamp of a Venetian lion, suggesting that it may have been destined for that city as a commissioned piece, as were several other oboes of this diminutive size. We should also point out two smaller instruments completed in Nuremberg for Ferdinando de' Medici only three days before the death of their maker J. C. Denner in 1707.[73] Other makers also produced diminutive

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letter was lost in World War II, but the text had been included in F. Drechsel, "Über den Bau der Oboe," *Zeitschrift für Instrumentenbau* 52 (1932): 258–59. It was subsequently reprinted in Günter Dullat, ed., *Holz- und Metallblasinstrumente: Zeitschrift für Instrumentenbau, 1881–1945* (Siegburg: Verlag der Instrumentenbau-Zeitschrift, 1986), 99–101.

73. Ferdinando's agent Cristoforo Carlo Grundherr wrote on May 4, 1707: "Stato un soprano solo . . . il maestro mi fece un altro in medesimo modo del concerto, e duoi altri *più acuti*" (Instead of a single treble . . . the *maestro* has made me another in the same pitch as the consort, and two others that are *higher*). Pierluigi Ferrari, "Cercando strumenti musicali a Norimberga: Ferdinando de' Medici, Cristoforo Carlo

FIGURE 28. Straight-top oboe by Giovanni Maria Anciuti, Milan, 1738. Rome, Museo Nazionale degli Strumenti Musicali, 829, *olim* 1094.

oboes, though except for the Anciuti instrument, all were from German-Austrian sources, and all are smaller versions of larger, lower-pitched balustered instruments.

The production of these smaller instruments was stimulated in the late seventeenth century by the introduction into central Europe of the newer French-style *hautbois,* which had a softer, more moderated sound, but a lowered pitch. The widespread adoption of this newer style was hindered by parochial adherence to older sound preferences and pitch standards both in Germany and in Italy. Northeastern Italy, especially the Veneto, clung to a more primitive instrument. Although Anciuti has

Grundherr, Johann Christoph Denner e Jacob Denner," *Recercare* 6 (1994): 211, quoted in Haynes, *The Eloquent Oboe,* 96. The Museo Correr in Venice owns a small oboe (no. 34), which is presently located in the Conservatorio di Musica Benedetto Marcello; the high-pitch instrument is 539 mm long, with a minimum bore of 5.3 mm.

been suggested as the earliest of the Italian makers to embrace the newer French style, this small straight-top appears to have been an attempt to perpetuate the older Venetian style. We might gain a better understanding of Anciuti's instrument by clarifying the etymological and organological state of other soprano double-reed instruments in use at the time and their relation to the lack of pitch standardization throughout Europe.

Around the turn of the twenty-first century several articles appeared that emphasized the state of flux that still exists in the taxonomy of early woodwind instruments. The subject of these essays was the *deutsche Schalmey*, a name that was singularly applied around the mid-twentieth century by Anthony Baines to a slender shawm variant so called by James Talbot at the end of the seventeenth century. Volume 25 (1999) of this JOURNAL contains both an etymological study by Susan Thompson and a detailed essay by Jan Bouterse, "The Deutsche Schalmeien of Richard Haka,"[74] and a year later these two excellent articles were complemented by Bruce Haynes's broader study " 'Sweeter than Hautbois': Towards a Conception of the Schalmey of the Baroque Period."[75] A subsequent communication by Susan Thompson entitled "Smaller than Hautbois . . . ," based on her rereading of Talbot's manuscript, cleaned up more details.[76] While these articles provided ample explanation of the organological and etymological mysteries of the *deutsche Schalmey*, the taxonomy of early woodwind instruments was left incomplete.

Wading through the etymological morass engulfing non-oboe soprano double reeds is difficult because of the twentieth-century assignment of the term *deutsche Schalmey* to a specific variant, whereas historically it was used in the German-speaking areas for any of the members of the family, as was the name *shawm.* The group included, besides the sturdy shawm itself, instruments variously known as *chalemie, ciaramella, piffaro, tiple, bombard,* and *hautbois de Poitou.* Bruce Haynes introduced a new name, "Baroque Schalmey," to reorder the ambiguous slender shawm in the instrumental phylum, as well as to mitigate some of the confusion generated by the restrictive use of the term *deutsche Schalmey.* By reserving *deutsche Schalmey* for the older shawm, whose pitch (about a'=465 Hz) was a step higher than both the *französische Hautbois* and the

74. Susan E. Thompson, "*Deutsche Schalmei:* A Question of Terminology," this JOURNAL 25 (1999): 31–60; Jan Bouterse, "The Deutsche Schalmeien of Richard Haka," this JOURNAL 25 (1999): 61–94.

75. Bruce Haynes, " 'Sweeter than Hautbois': Towards a Conception of the Schalmey of the Baroque Period," this JOURNAL 26 (2000): 57–82.

76. Susan E. Thompson, "Smaller than Hautbois: A Fresh Look at James Talbot's Schalmeye," this JOURNAL 28 (2002): 246–60.

newly named Baroque Schalmey (both a'=415 Hz), he was able to provide a distinct and satisfying nomenclature for each group.

Haynes, Bouterse, and Thompson all rely heavily on the texts of Talbot's manuscript and Fleming's *Der volkommene teutsche Soldat,*[77] particularly the sections that disparage the unpleasant sound of the louder, higher-pitched shawm while praising the softer sound of the lower-pitched oboe and presumably of the new—to use the term coined by Haynes—Baroque Schalmey. Fleming describes in detail the replacement of the shawm ensemble (two trebles, an alto, and a dulcian) in the military band with six oboists (two trebles, two tailles, and two bassoons). Bouterse wonders if this "new type of sound, softer and more sophisticated," which "came into fashion not only in chamber music, but also in military bands of the period," was the result of the rapid spread and acceptance of the new instruments.[78]

Perhaps so, but such acceptance was not universal. Even as the age of the shawm was winding down in the first decades of the eighteenth century, other forces were prolonging its loud and bright sound—though not without complaint. Nowhere is this more apparent than in Italy, where Quantz, writing in 1751 of his experiences there during the mid-1720s, found that "although the Roman pitch was low, and advantageous for the oboe, the [Roman] oboists then played on instruments that were a whole tone higher, so that they were obliged to transpose. . . . these high instruments produced an effect like that of German shawms against the others that were tuned low."[79]

He then observed that although "the higher pitch would in effect transform the oboe into a shawm," this was not as bad as "the very high Venetian pitch, [in which] the wind instruments sound much too disagreeable."[80] "At the present time," he wrote, "the Venetian pitch is the

77. Anthony Baines, "James Talbot's Manuscript (Christ Church Library Music MS 1187), I, Wind Instruments," *Galpin Society Journal* 1 (1948): 9–26; Hans Friedrich von Fleming, *Der volkommene teutsche Soldat* (Leipzig, 1726), 181.

78. Bouterse, "The Deutsche Schalmeien of Richard Haka," 93.

79. Johann Joachim Quantz, *Versuch einer Anweisung die Flöte traversiere zu spielen* (1752), trans. and ed. Edward R. Reilly as *On Playing the Flute,* 2nd ed. (Boston: Northeastern University Press, 2001), 269 (chap. 17:7, §7). Quantz also observes that the ban on wind instruments in the church by Popes Innocent XI and XII may have been due to their high pitch. See Eleanor Selfridge-Field, "Italian Oratorio and the Baroque Orchestra," *Early Music* 16, no. 4 (November 1988): 506–13.

80. Quantz, *On Playing the Flute,* 268 (chap. 17:7, §7): "I do not wish to argue for the very low French chamber pitch, although it is the most advantageous for the transverse flute, the oboe, the bassoon, and some other instruments; but neither can I approve of the very high Venetian pitch, since in it the wind instruments sound much too disagreeable. Therefore I consider the best pitch to be the so-called German *A*

highest; [and] is almost the same as our old choir pitch."[81] According to Agricola and Mattheson, the old choir pitch, or *Chorton,* at that time ranged between *a′*=457 and *a′*=512 Hz.[82] In order to mitigate the effects of transposition or use of the Venetian high pitch, Quantz offered the suggestion that "smaller and narrower instruments could be made that would improve the high notes." But he concluded that since makers were accustomed to models designed at low pitch, they probably would have had difficulty adjusting smaller instruments so that they were true.[83]

In spite of Quantz's pessimism about smaller instruments, differences are apparent in the lengths of Italian oboes throughout the eighteenth century. Table 1 above, containing national lists of two- and three-key oboes, encompasses 151 Italian instruments manufactured between 1700 and 1820. Of this number we have the acoustic lengths of fifty-one, which allows us to predict with at least a modest certainty the pitch level of each. A comparison of the acoustic lengths of these Italian oboes with a random table of ninety-eight international instruments prepared by Bruce Haynes shows a much greater number of shorter instruments among the Italian specimens (fig. 29). In the Italian sample of fifty-one instruments there is only one oboe at *a′*=392 Hz (A-2), compared to one-third of the ninety-eight listed by Haynes. Sixty percent of the Italian oboes are at *a′*=415 (A-1), compared to 57 percent of Haynes's listings, but over a third (37 percent) of the Italian instruments are at *a′*=440 (A+0), as compared to 5 percent of Haynes's examples.

It is curious, however, that the group of Italian instruments contains only one of the shorter oboes (Anciuti, RMSM 829) one would have expected to find from the northern Italian area, particularly from Venice, which was known to have used the highest pitch of any of the Continental cities. In the early seventeenth century Michael Praetorius had alluded to ever higher pitch levels with the remark, "Now there have been some who have sought to raise this present pitch of ours a semitone higher still."[84] This observation was corroborated in Bruce Haynes's

chamber pitch, which is a minor third lower than the old choir pitch. It is neither too low nor too high, but the mean between the French and the Venetian. . . ."

81. Ibid., 267 (chap. 17:7, §6).

82. Haynes, "Sweeter than Hautbois," 94, 210.

83. Quantz, *On Playing the Flute,* 268 (chap. 17:7, §7).

84. Bruce Haynes, "Cornetts and Historical Pitch Standards," *Historic Brass Society Journal* 6 (1994): 98n21, discussing the higher pitch standards in Venice as shown in his Graph 1, writes that "these highest pitches [three, clustered just below *a′*=490 Hz] may be similar to a level to which Michael Praetorius (*De Organographia,* vol. 2, *Syntagma Musicum* [Wolfenbüttel, 1619], 15) alluded ('Es seynd aber etliche gewesen/ welche diesen itzigen unsern Thon noch umb ein Semitonium zu erhöhen/ sich

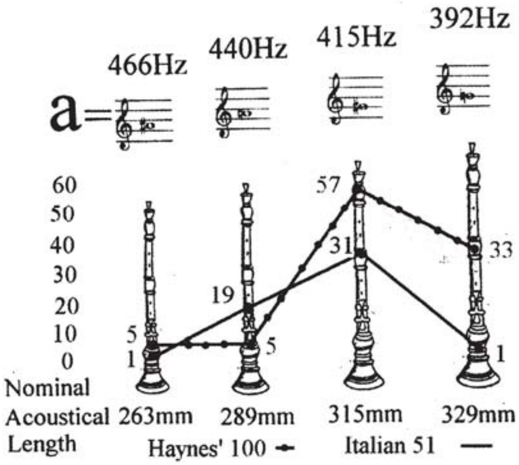


FIGURE 29. Comparison of acoustic lengths of Italian oboes with those of a sample of international oboes.

study of Italian cornetti, which demonstrated that some 78 percent of sixteenth-century examples were pitched at *a′*=470 (A+1) or higher, and 50 percent of seventeenth-century cornetti were also at this level (fig. 30).

Resorting to illustrations of Italian oboes as a possible clue to this anomaly, I sought portraits of northern Italian oboists from the eighteenth century, from which I hoped to glean some ideas about the smaller instruments. Italian oboes of this period take several forms: most common are the later-eighteenth-century models, such as those by Palanca or Grassi that are patterned after instruments of the Dresden school. Such an example is represented in a portrait of Sante Aguilar, who worked in Bologna in the last third of the century (fig. 31). A less clearly depicted instrument with a narrow baluster almost in the straight-top style is seen in a painting of three musicians after Pietro Longhi from about 1760 (fig. 32). The painting is presently in Venice, and is presumed to have originated there. Note the apparent four finger holes for the left hand. Finally, a similar instrument is portrayed in a Venetian caricature by Pier Leone Ghezzi from 1720 (fig. 33). The caption reads: "A German castrato who first played the oboe and all other wind instruments, drawn by me, Cav. Ghezzi, on 8 October 1720."

unterstehen wollen')"; English trans. by Arthur J. Mendel, "Pitch in the 16th and Early 17th Centuries," Part II, *Musical Quarterly* 34 (1948): 202, reprinted in Alexander J. Ellis and Arthur J. Mendel, *Studies in the History of Musical Pitch* (Buren: Frits Knuf, 1968), 109.

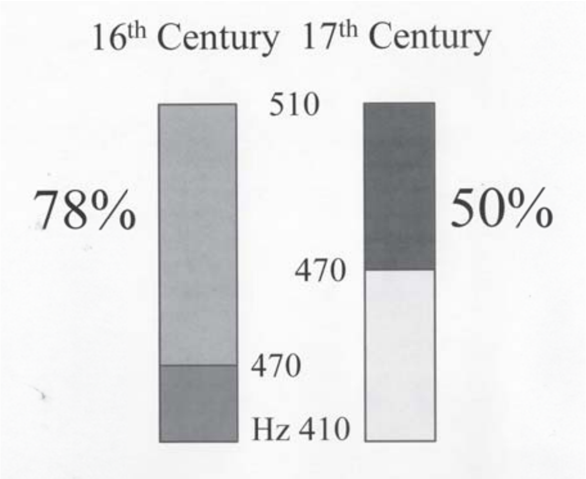


FIGURE 30. Pitch levels of Venetian cornetti.

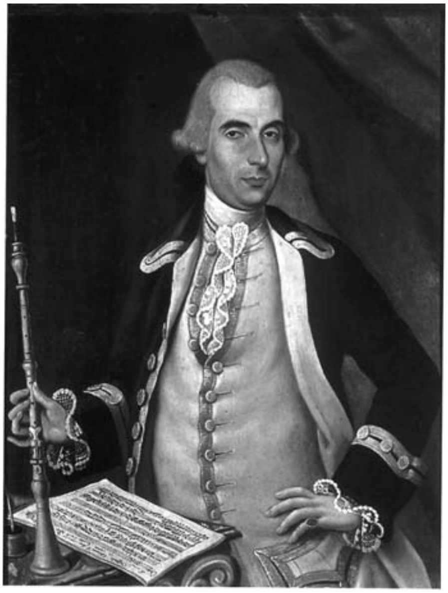


FIGURE 31. Anonymous, *Portrait of Sante Aguilar,* oil painting, probably from 1767. Bologna, Sala Bossi, Liceo Musicale (Conservatory). The oboe bears an illegible stamp.

FIGURE 32. *Concerto* after Pietro Longhi, detail. Courtesy of Alfredo Bernardini.

FIGURE 33. Pier Leone Ghezzi, *Caricature of an Oboe Player,* Rome, Vatican Library, Cod. Ottob. Latino 3113, p. 40. Reproduced with permission of the Vatican Library.

Oboes by Anciuti date from the first half of the eighteenth century, and often have a Nuremberg flavor in their turnings, as can be seen in the waisted balusters of the carved ivory oboe VA 1127 (see figs. 13b and 16 above). Oboes in eighteenth-century Venice may also be straight in the top joint, as is the instrument in a painting by Sebastiano Lazzari (fig. 34a), or have a slight flare toward the top, as in this detail from an engraving of Domenico Scolari, a pupil of Bissoli, who worked in Venice and neighboring cities during the last third of the century (fig. 34b). This latter pattern was also much used by Andrea Fornari, who worked in Venice in the late eighteenth and early nineteenth centuries (fig. 34c).

The styles of oboes mentioned in the preceding two paragraphs are grouped by outward appearance with no chronological emphasis, but if they are placed on a time scale as shown in table 5 it will be seen that they fall into four categories, of which the "Venetian straight top" is the bridging instrument between the early straight-top group and the classical oboe.

Any of the Italian straight-tops, given a short enough length, might have qualified as a smaller oboe as discussed by Quantz; but for oboes a shorter length usually results only in a narrower bore and a constricted scale. This is the case with the Christoph Denner instrument, thought by Kirnbauer to have been first used at the St. Sebald-kirche in Nuremberg (Nuremberg, Germanisches Nationalmuseum, MI 155),[85] which has a fairly short length of 539 mm (21.2 in.) and a bore beginning at 5.3 mm. Bruce Haynes commented upon playing this instrument that it "has a delightful, squeaky little sound."[86] These "smaller and narrower instruments," to quote Quantz again,[87] do not sound like *deutsche Schalmeyen*, unless, of course, they are "*deutsche Schalmeyen*" of the Haynes Baroque-Schalmey variety. Since Quantz refers pejoratively to the *deutsche Schalmey*, one may assume that he meant the older Renaissance shawm, which was still in use through the first third of the eighteenth century.

At the time Anciuti made the two straight-tops, there may have been some interest on his part in oboes that would play at the higher pitches (A+0 and A+1) and produce an acceptable sound, yet not like that of German shawms. With the exception of the Peter Eggl oboe, whose bore has been altered, all of the smaller German oboes mentioned in note 36 would play with the kind of sound Haynes describes. These oboes have a relatively narrow taper whereas the Eggl is about 9 percent larger and

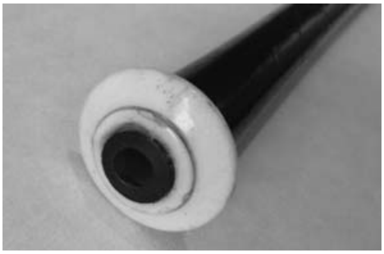
85. Kirnbauer, *Verzeichnis der europäischen Musikinstrumente im Germanischen National-museum Nuremberg,* 2:128, 209.

86. Haynes, *The Eloquent Oboe,* 95.

87. Quantz, *On Playing the Flute,* 268 (chap. 17:7, §7).

34a. Sebastiano Lazzari. *Still Life with Instruments,* detail. Milan, Finarte [auction house], sale, 1990. Courtesy of Alfredo Bernardini.

34b. I. Colombo, engraving of Domenico Scolari, Trieste, 1789, detail. *Civica Raccolta delle Stampe Achille Bertarelli,* Castello Sforzesco, Milan. Reproduced with permission.



34c. Andrea Fornari, finial of an ebony oboe. Rome, Museo Nazionale degli Strumenti Musicali, 3264. Photo courtesy of Gabriele Rossi Rognoni.

FIGURE 34. Oboe top patterns used by Venetian makers.




FIGURE	ERA	DATE	TITLE	ARTIST
32	Baroque	1721	German oboist in Venice	Pier Leoni Ghezza
27		1738	RMSM 829 (olim 1094)	Giovanni Maria Anciuti
33a	Straight top		ca. 1740 LVA 1027	Giovanni Maria Anciuti
2e		ca. 1750	NGM MIR 375	N. Cosins
33b		1752	Still life with instruments	Sebastiano Lazzari
34a	Venetian Straight top	1751	Gioseppe the Venetian	Pier Leoni Ghezza
31		ca. 1760	Three musicians, after Longhi, excerpt	Anonymous
34b		ca.1765	Matteo Bissoli	Joseph Tirabosco
42		1767	An English Concert	Engr. by Abraham Hume after Thomas Orde
33c	Classical oboe	1789	Domenico Scolari	Ignace Colombo
30		fl, late 1700s	Sante Aguilar	Anonymous

TABLE 5. Illustrated chronology of Italian straight-top oboes.

the Anciutis about 22 percent larger. The larger taper may be an attempt to make the instruments louder.

In the early twenty-first century, makers focused on creating an instrument that would produce an adequate sound at A+0 (a'=440 Hz). At the 2009 International Double Reed Society conference in Birmingham, England, several concertos were played on such modern versions with less than satisfactory results on the part of the oboe. According to some listeners, the tone was small and rather lightweight. Experiments of this kind have been made by Harry vas Dias[88] and Sand Dalton, the latter producing copies of Anciuti's boxwood and horn instrument now in the Berlin (BMIM 5079). Dalton related to me in February 2011 that he had only then achieved a satisfactory setup for this oboe.

88. Our Anonymous Reader writes: "Harry vas Dias has recently produced an instrument with more like what modern ears are wanting to hear from a baroque oboe at that pitch, but his instrument is definitely something of his invention, rather than a copy of any surviving specimen; but what I would say about it is that it incorporates the bell of a 415 oboe, and that it is the bell the contributes most to this model's overall sound."

Quantz himself had doubts about the efficacy of resizing: "very few would be in a position to reduce the measurements in a sufficiently correct ratio that would make the instrument high yet also retain its trueness. And even if some were finally to succeed, the question would still remain: would the above-mentioned instruments, if adjusted to the high pitch, produce the same effect as with the old measurements peculiar to them?"[89]

To my knowledge no one has had the opportunity to play or experiment with the Anciuti and Eggl oboes with the larger conicities, making it difficult to project a conclusion about the effectiveness of their sounds.[90] Since modern experiments have not realized an entirely satisfactory sound spectrum, might we not adjust our focus toward an eighteenth-century instrument? Perhaps one in use in Venice later in the century might serve to fulfill Quantz's report that the effect produced was like that of German shawms.

Shrieking Shawms

Our examination of Venetian oboes has as yet yielded no viable candidate for the smaller instrument envisioned by Quantz. The difficulties of the survival of such a specialized instrument—were there in fact such a thing—would have been compounded by the rather rapid change of pitch in the Lombard and Venetian regions in the later part of the eighteenth century. During this time, the prevalent standard became A+0 (a'=440 Hz); the classical oboe with its more easily attained high notes was coming into vogue in Italy, and the pitch A+1 (a'=465 Hz) was less frequently encountered, finally disappearing by the end of the century.[91]

The problems were resolved during the later eighteenth century with the pitch changes in the north and the advent of the classical oboe, but in the interim there was still a need for an instrument to fill the lacuna. Two likely candidates are the instruments pictured in figure 35, which are visually outside the mainstream of oboe development, yet apparently common enough that they did not elicit comment from the artist Pier

89. Quantz, *On Playing the Flute,* 268 (chap. 17:7, §7).

90. Anciuti died in 1744, and it is possible that these two productions are among his last instruments—the last dated one is 1740. Hence he may not have had the opportunity to pursue the avenues opened up by these investigations. Or perhaps his experiments were unsatisfactory. The enlarged bore of the Eggl may well have improved its timbre and volume. However, there may have been no further need for more experimentation or other similar instruments because of concurrent developments.

91. Haynes, *A History of Performing Pitch,* 305.

a. Pier Leone Ghezzi, drawing of Gioseppe the Venetian, Rome, 1751. Rome, Gabinetto Nazionale dei disegni e delle stampe, vol. 2606, F.N. 4659. Courtesy of Alfredo Bernardini.

b. Joseph Tirabosco, engraving of Matteo Bissoli, Padua, ca. 1770. Collection of Alfredo Bernardini. Reproduced with permission.

FIGURE 35. Two Venetian oboists active after 1750.

Leone Ghezzi, who was accustomed to drawing pictures of musicians (he also produced the caricature of the German oboist shown playing a normal-looking instrument; see fig. 33). The instruments shown in these two portraits have conical straight tops, are very narrow at the upper end, and appear to have a metal ferrule reinforcement. They are decidedly unlike a normal straight-top oboe in the taper of their upper section, which is all that can be seen in the pictures. The caption under the drawing of Gioseppe (fig. 35a) reads: "An excellent oboe player who performed at the Valle Theatre [in Rome and at the] Carnival in 1751, as well as at my Accademia. He is called Gioseppe the Venetian." Figure 35b depicts the Brescian oboist Matteo Bissoli (ca. 1711–1780), who was for forty-four years in the employ of the Cathedral of San Antonio in Padua, about twenty miles (32 km) from Venice. Bissoli is said to have been the most famous oboist of his time.

Using measurements derived from such items as Bissoli's forefinger and the width of the reed, sizes were calculated for the visible parts of the oboe (figs. 36 and 37). Both instruments are very narrow at the upper end, with extrapolated diameters of 8–10 mm, where a more normal straight-top (like the instrument shown in the Lazzari painting in figure 34b) measures 17–20 mm. Figure 38 is a suggested version of Bissoli's instrument based on the portion visible in Figure 35b. It was laid out according to principles formulated by Herbert Heyde and described in his *Musikinstrumentenbau* of 1986.[92]

A similar representation could be made for the instrument of Gioseppe, though the particulars differ in the layout of the finger holes. In Bissoli's portrait there is an obvious middle joint covered by a ferrule, but in the representation of Gioseppe nothing is indicated. Further, there appear to be four holes in the top part of figure 35a, as in figure 35b, though their placement is subject to some conjecture because of the obstructing left-hand fingers (a similar situation applies to the oboe depicted in fig. 32.)

In the projection of a classical oboe shown in figure 39 the bore has been drawn parallel to the outer walls of the tube. In actual practice, however, the bore expands at a greater rate than the exterior of the cone. In figure 38 the conicity of the interior is shown to be greater than that of the exterior, resulting in a bore typical of a late eighteenth-century straight-top oboe. This is, of course, a simplification, because it does not take into account the many adjustments that are built into conical bores.

The resulting conicities are 0.0391 for Bissoli's instrument and 0.0427 for Gioseppe's. Table 6 lists average conicities for a selection of double-reed instruments, which are then compared graphically in figure 40. The larger the number, the more accentuated is the conical shape. For the longer and lower-pitched members of a double-reed family, the length of the bore functions to reduce the conicity. Even allowing for perspective and artistic license, Bissoli's and Gioseppe's instruments have larger conicities that appear to be indicative of something other than the usual oboe.

Extrapolating this kind of information from illustrations can, of course, be misleading, and the projected conicities for these two instruments may be too large. Nonetheless, the visual similarities between the two instruments—one in a caricature and one in a formal portrait—are

92. Herbert Heyde, *Musikinstrumentenbau 15.–19. Jahrhundert,* 88–172. A simplified explanation of the procedure may be found in Adkins, "Proportions and Architectural Motives," 104–5.

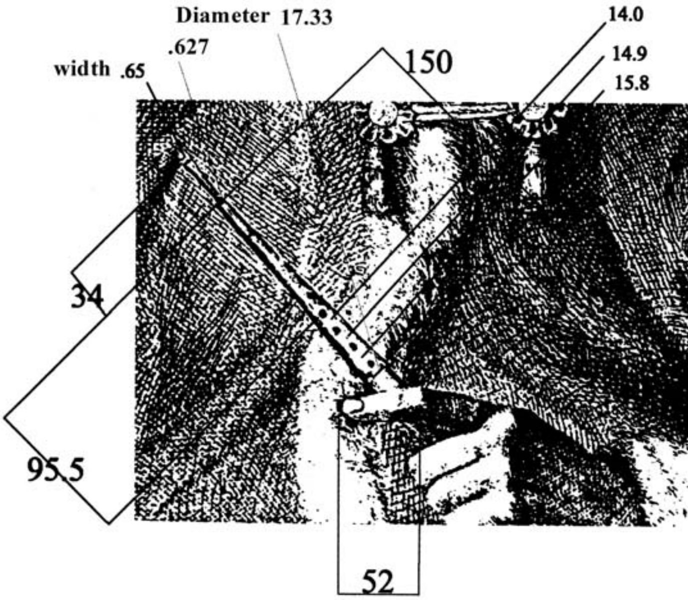


FIGURE 36. Measurements of Bissoli's oboe.

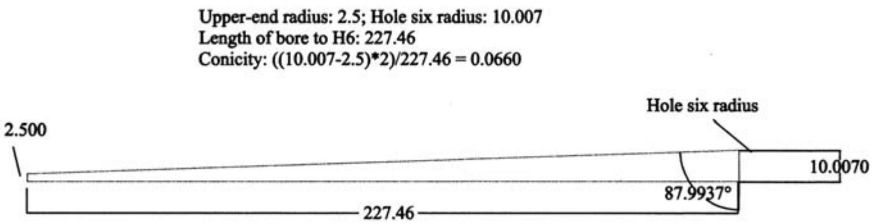


FIGURE 37. Schematic for the bore of the Bissoli oboe. Drawing by the author.

striking: both have straight tapers with no ornamentation other than the ferrule, which was necessary for strength, and four visible finger holes above the mid-point of the instrument or in the top joint, as may also be the case with the instrument in the painting after Longhi (see fig. 32). Of these two features, the latter—four finger holes above the mid-point—is the most unlike the oboe, and though these cannot be clearly discerned on Gioseppe's instrument, the placement of the hand with the third finger poised over the penultimate hole (fig. 35a) suggests that the little finger may indeed belong to the lowest hole.

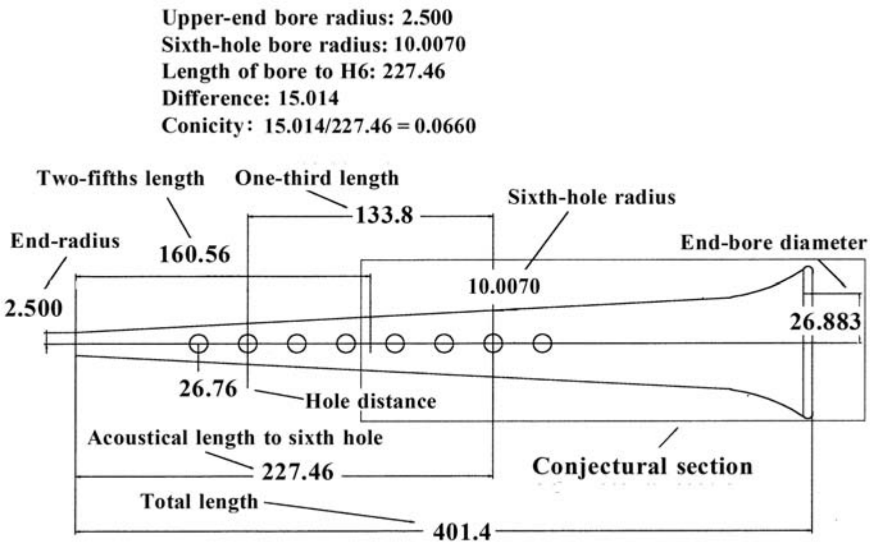


FIGURE 38. A reconstruction of Matteo Bissoli's oboe. Drawing by the author.

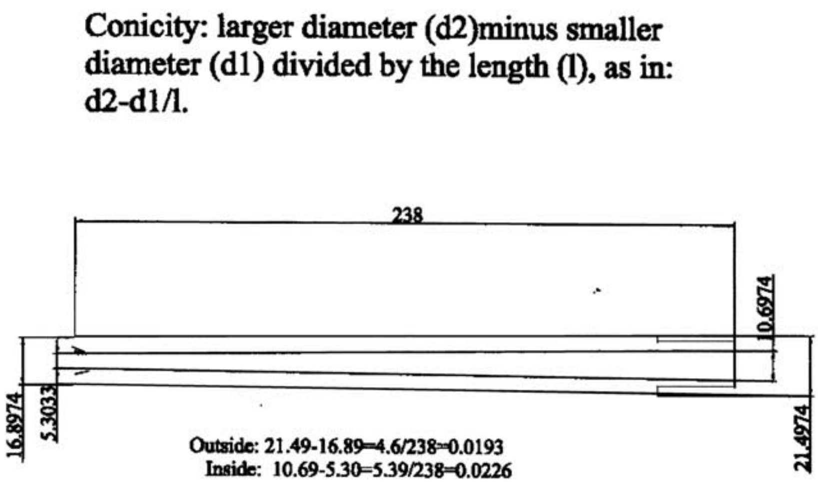


FIGURE 39. Diagram of the top-joint bore of a classical oboe. Drawing by the author.

Gioseppe	0.06600
Bissoli	0.05170
Ciaramella (Birsak)	0.03500
Descant shawm	0.03079
Vox humana	0.02892
Ciaramella (Adler)	0.02700
Descant oboe	0.02793
Alto shawm	0.02555
Deutsche schalmei (Baroque schalmei)	0.02224
Alto oboe	0.02165
Bassanello	0.01959
Doppione	0.01652

TABLE 6. Average conicities of double-reed instrument families.

What sort of instrument would have had four evenly spaced holes for one hand and presumably four holes for the other, with an extra space between the hands, as one finds on oboes? I know of no other candidate than the *ciaramella,* or *piffaro,* an instrument with evenly spaced finger holes that is often played to the accompaniment of a bagpipe (fig. 41). *Ciaramelle* range from shorter instruments of about 300 mm (12 in.) to as much as 470 mm (almost 19 in.). The conicity of such surviving instruments can be as high as 0.0357—much more than the other double reeds, but close to the projections for Gioseppe's and Bissoli's instruments.

By applying the techniques used for determining conicity in figure 37 we can estimate the length of both instruments. Gioseppe's would be 401 mm in length with a generous conical shape. Bissoli's instrument would be narrower, and at 384 mm, not quite as long. Both of these projections have a shape not too different from that of the *ciaramella.*

Aside from the *ciaramella,* which is still used in folk music, two obsolete double reeds of a different design are found in engravings a century apart. The first, in a French engraving by Thomas Blanchet published in 1672, is an instrument of delicate design that has at least six visible finger holes and a tuning hole close to the bell (fig. 42; the instrument is in the center). Its conical bore and finger holes remove it from the category of

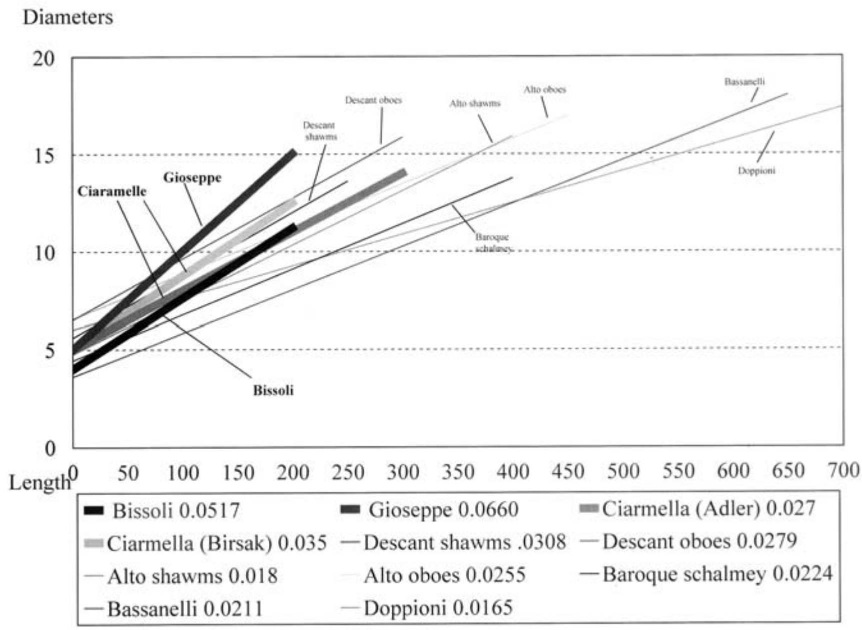


FIGURE 40. Bore comparisons of double-reed families, including the instruments of Bissoli and Gioseppe.

the *chalumeau simple* or the bagpipe chanter, and its lack of an extended bell indicates that it is not a small shawm.[93]

The second representation, more contemporaneous with our discussion, is found in an engraving of a concert performed by the pantaleon virtuoso G. T. Noel at Christ's College, Cambridge in June 1767.[94] In the upper left corner is a "Venetian-style" oboe, similar to the one in figure 42, whose player appears to be using all eight fingers; no keys are visible

93. Bruce Haynes cites this work as the first illustration of a hautboy. In *The Eloquent Oboe* (pp. 45–46) he discusses several related instruments, including some of those shown in his fig. 21 (in the engraving, these are heaped at the bottom of the page; see fig. 42 here). The central instrument (or third from the bottom) is identified as a detached bagpipe chanter, which it may be, but it has a different finger-hole configuration and shape from the usual chanter. It is too short to be a *klein discant Schalmey* of the sort mentioned by Praetorius (*De Organographia,* vol. 2, *Syntagma Musicum,* part 2, plate XI); the latter instrument can be up to 122 cm in length.

94. The lack of keys on this style of instrument is probably intentional, but it should also be noted that neither of the violins nor the cello have tuning pegs.

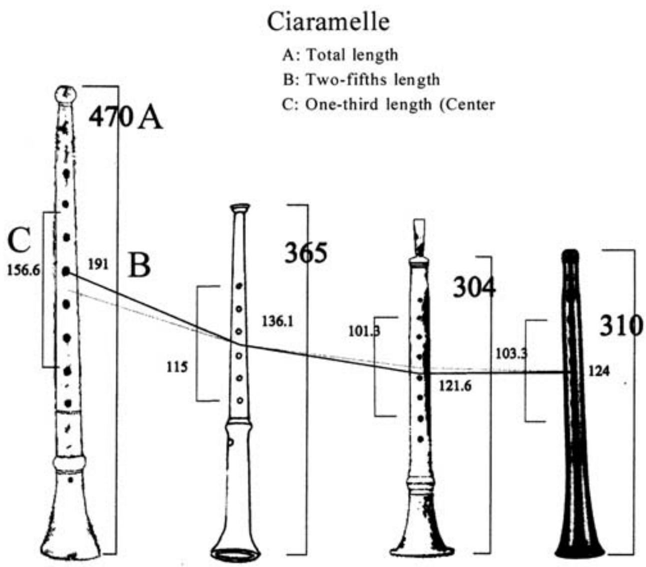


FIGURE 41. *Ciaramelle.* Anthony Baines, *Musical Instruments through the Ages* (New York: Walker, 1976), no. 954; Nicholas Bessaraboff, *Ancient European Musical Instruments* (Boston: Museum of Fine Arts, 1941), cat. no. 17, 1914; Kurt Birsak, *Die Holzblasinstrumente im Salzburger Museum Carolino Augusteum* (Salzburg, 1973), 32, no, 1 and Tafel VI; Adler, *Catalogue* (n.p., 1910). More modern versions of the *ciaramella* often feature a chunkier profile characterized by a larger baluster below all of the finger holes and a weightier bell.

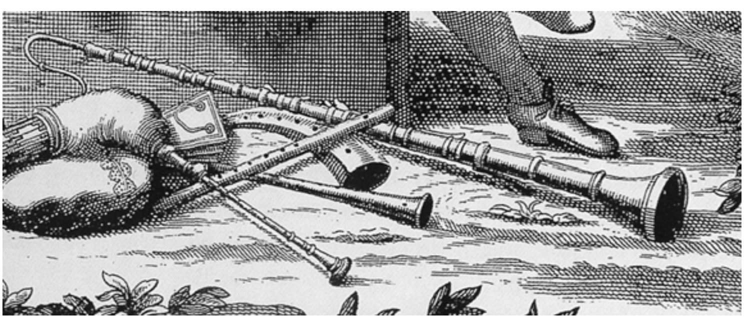


FIGURE 42. Thomas Blanchet, engraving of an oboist together with various double-reed instruments, detail of frontispiece, from [Charles-Emmanuel Borjon de Scellery], *Traité de la musette avec une nouvele* [*sic*] *méthode* (Lyons: Chez Jean Girin & Barthelemy Riviere, 1672).

FIGURE 43. Venetian-style oboe in an English concert of 1767. Engraving by Abraham Hume after Thomas Orde. Collection of William Waterhouse.

in the engraving (fig. 43). The length of both of these instruments approximates the projections made for those of Bissoli and Gioseppe.

Might one not ask at this point what kind of instruments these illustrations represent? The high range of pitches in use in northern Italy (fig. 44) indicates that there was a need for smaller instruments—yet none survive.[95] Quantz refers to the shawm-like qualities of the sound made by the oboists in Rome, who used instruments a whole step higher (A+0) than the prevailing Roman pitch of A-1, and Bruce Haynes confirms that oboe parts in Rome were frequently transposed.[96] One of the most prominent oboists in Rome at this time was Ignazio Rion, a Venetian who had removed there in 1705 and was presumably playing instruments

95. The presence of higher-pitched instruments is confirmed not only by Quantz, but also by the greater number of high-pitched instruments cited in fig. 29 and by the numerous transposed oboe parts cited by Bruce Haynes in *The Eloquent Oboe* (pp. 218–22) and other places: see 221n159 for further references. According to Haynes's studies, the higher-pitched instruments were at A+0 (about a'=440 Hz). He also discusses higher-pitched instruments on pp. 93–99.

96. Haynes, *The Eloquent Oboe,* 311.

FIGURE 44. Pitch map of Italy about 1700. Drawn by the author.

of Venetian origin, even higher than A+0. What would have been the sound of such an instrument? Loud and raucous? Would Quantz's "much too disagreeable," or an "effect like a deutsche Schalmey," apply in this instance? Since we lack a smaller "Venetian-style" oboe capable of playing at a higher pitch level, might we not conclude that some sort of innovative development involved the Italian straight-top in the third quarter of the eighteenth century, and that it quickly became obsolete with the advent of the classical oboe, or was absorbed into the fabric of traditional instruments of a similar nature?

Conclusions

We first approached the topic of the straight-top oboe more out of curiosity than scholarship. It seemed at the time just an odd variation of the standard oboe. But, as the reader has probably realized, the instrument has been the center of a hotbed of contention. Scholars, beginning with Eric Halfpenny, have harbored opinions of its value and influence—or lack of any such whatsoever, it being simply an anomaly in the evolution of the oboe.

With the straight-top oboe, as with other instruments I have studied, I have found that a rigorous examination of the surviving instruments yields fascinating observations. This particular project has given us a good idea of their numbers, nationalities, and makers, and how they were used, though disparagement of the instrument has admittedly been harsh. For example, an anonymous reader of the earlier version of this paper asked critically, "How many modern players have 'enjoyed' playing a straight-top oboe?" For sure no one knows, but certainly eighteenth-century players of the instrument made good use of it.

Having these points well in mind, the reader might reflect on the directions taken by makers of the straight-top oboe in the eighteenth century. First, and perhaps most important, are the two main currents of the instrument's development: its prominent and extensive use in England from the 1740s into the early 1800s, and its likely place among the high-pitched instruments in use in northern Italy after 1750. About the latter, it is sad that so little is known concerning its invention and development, and that there are too few surviving sources to warrant solid conjectures about its use, other than comments about its high pitch and shawm-like sound. One suspects that whatever sort of straight-top was in use at that time, it was replaced by the developing classical oboe, with its narrower bore and proclivity for higher notes and tessituras, and that the less satisfying and perhaps more difficult instrument faded into the fabric of history and folk performance.

With regard to the English phase of straight-top development, I think it safe to surmise that it evolved independently of the Italian stream—that the simultaneous appearance of the instrument in both countries was serendipitous. Confirmation for this lies in the beginnings of the instrument in the 1740s in the Newark-on-Trent shop of the Milhouse family some 140 miles (225 km) from London. This possibly even preceded the early straight-tops of the London maker Stanesby Jr. and his apprentice, Caleb Gedney, with whom the Milhouses would hardly have had any significant contact.

Of equal importance to the case for independent invention are the acoustic qualities of the English straight-tops. The reader may recall from figures 24 and 25 that the straight-tops began to decline in minimum diameters and conicities from the 1740s. Indeed I think it safe to surmise that the English country straight-top laid the foundation for later-eighteenth-century enhancements to the English oboe. It might be well to point out the later divergence in the development of the English and Italian lines of straight-tops. In the English line, the main thrust was in the direction of the evolving classical oboe with its narrower, less tapered bore. The northern Italian evolution of the straight-top, while also resulting in smaller-diameter bores, tended toward more open conical shapes that would allow the smaller straight-top instruments to produce a larger sound in order to compete in their high-pitched milieu.

One of the more enigmatic aspects of straight-top history is the fact that the instrument apparently did not spread beyond England and Italy. Of the three examples discussed in "The Other Straight-Tops," the two American oboes are most likely copies of English models, and the third, that of N. Cosins, may itself have been made in Italy, perhaps even Milan, judging from the Habsburg crest. Why did the straight-top instrument not turn up in the Lowlands or the German-speaking areas of Europe? This is a matter that would bear further study.

Other Observations

There are several less far-reaching aspects of the straight-top oboe that should be summarized because of their unique application to the instrument:

1. Key mounts. For an unknown reason, the makers of straight-top oboes adopted a system of key mounting that utilized blocks created by cutting away the encircling moldings, which were the usual way of providing key mounts. This was almost always done with the lower "square ring" while the upper hemispherical ring was left intact. While there are some exceptions, such as three instruments by Stanesby Jr. (one) and Gedney (two), the scheme was adhered to rigidly.

2. The shape of E♭ keys. Straight-top E♭ keys were made in a dumbbell shape, usually of brass and without spurs. On the Cosins straight-top, however, the keys are silver with spurs on the upper lobes.

3. Double third and fourth finger holes. English straight-tops used only a double third hole, as did Fornari in Italy. Palanca and Anciuti doubled both three and four. When only one hole is doubled it is always the third.

4. Two, three, or more keys. The standard configuration for the oboe in the first half of the eighteenth century was three keys: one C key and two E♭ keys. Beginning around the mid-century the left-hand E♭ key was omitted, and, except for occasional experiments, the two-key oboe became the standard throughout the first two decades of the nineteenth century.

APPENDIX 1:

Physical and Acoustical Characteristics of Oboes of Use to the Historian

1. Acoustic length
2. Total length
3. Conicity
4. Inharmonicity
5. End correction
6. Scale
7. Tone holes

1. Acoustic length. Acoustic length is defined by Bruce Haynes in *The Eloquent Oboe* as the "distance from the top of the instrument to the middle of hole 6." Measurements to the center of hole 8 would be more accurate for pitch determination, as he points out, but this "is less reliable historically, because hole 8 may later have been enlarged to accommodate pitch rises."[97] The acoustic length also provides a more consistent measure for predicting the pitch of an oboe than the total length, because of variations in bell length. Haynes's determination of acoustic length (the *top* of the instrument to the center of hole 6) has been used in this article where pitch is to be determined, but in cases where conicity is the end result, the length (AL) used is that between the *smallest bore diameter* and the center of hole 6.

Although an acoustic length can be established, and perhaps more accurately, from the point of minimum bore diameter, problems arise in determining that exact point, because of the cylindrical area that is often found between the foot of the reed well and the beginning of the bore. The length of this portion can range up to 40 mm as can, for that matter, the length of the reed well on various instruments. I first became aware of this when studying the oboes of Hendrik and Fredrik Richters, and at that time commented in a footnote:

> For the most part researchers, using fixed-sized gauges, measure the reamed portions of the upper joint, the bore proper, and the reedwell, from the opposite ends of the tube. Although the length of the interstice can be determined easily by calculation, it simply appears in their measurements as an area through which a particular gauge "passes," with no note made of its length.[98]

97. Ibid., 94.
98. Cecil Adkins, "Oboes Beyond Compare: The Instruments of Hendrik and Fredrik Richters," this Journal 16 (1990): 96n27.

From a practical point of view this is of little consequence to the maker, since all of the adjustments to the instrument are empirical, but it can bear on the results of mathematical or scientific studies where the length of the bore plays an important role. To my knowledge, no one has looked into the acoustical effect of this cylindrical portion of the bore.

2. Total Length. The length of the oboe from the top of the finial to the end of the bell. Though useful for general comparisons of size, total length does not suffice for acoustical measurements, because of variations in bell length even on instruments that are similar in other ways and made by the same craftsman. General pitch level is sometimes estimated on the basis of the acoustic length, which is a better indicator, but, as Bruce Haynes writes: "Based on the physical qualities of the instrument itself, there is in fact no objective method of being certain of the historical pitch of an hautboy."[99] An example of the problem is reed variation, which can alter the pitch as much as a quarter-tone upward and a half-tone downward. Pitch can also be raised by using a reed designed for a higher-pitched instrument.[100]

3. Conicity. Conicity as an acoustic term bears several definitions. It is frequently used: 1) as a state or degree of being conical; 2) to refer to tapering in a bore; and 3) as a three-dimensional geometric tolerance that controls how much a feature can deviate from a perfect tapered cone. Expressions using conicity in the second sense, e.g., "more or less conicity," are general in nature and do not precisely define or compare the amount of taper in a cone.

The third definition of conicity establishes the amount of imperfection present in a cone due to deviation from a perfect shape. Another kind of imperfection, produced by such elements as the lack of smoothness, the thickness or thinness of the tube wall, or by finger holes, is called interference. Conical imperfection/interference conspire to create conical deviation or inharmonicity.

In a perfect cone the harmonics occur in alignment with the integer multiples of the fundamental. In any real musical instrument, the resonant body—in this case a column of air—that produces the tone deviates from this ideal and allows or creates some amount of inharmonicity. Conical interference, or simply conicity, is mathematically determined in wind instruments by subtracting the smallest bore diameter from the largest and then dividing the difference by the acoustic length (AL). A more complicated mathematical method replaces the diametrical

99. Haynes, *The Eloquent Oboe,* 94.
100. See examples in ibid., 93.

difference with twice the tangent of the angle, which is then divided by the length. The greater the quotient, the more tapered the cone.

The more that the conicity varies from perfection, the more inharmonicity is present in the tube and needs to be adjusted by the maker. Anomalies can be corrected by chambering—that is, re-reaming, scraping, and gouging sections of the bore—and by undercutting the tone holes. Further, adjustments in the bore, which is basically one contiguous cone in the two upper joints, can lend it characteristics of two different cones. The need for mechanical correction is to some extent obviated by an acoustical phenomenon known as "mode locking," which causes the partials to lock more precisely onto the integer multiples of the fundamental pitch and thus counteract the natural inharmonicity of the air column.[101]

4. Inharmonicity. Inharmonicity is the degree to which the frequencies of partials (harmonics, overtones) depart from whole multiples of the fundamental frequency. Harmony and intonation depend heavily on the exactness of tonal harmonicity, which itself results from a perfect mode of vibration produced by an infinitesimally thin or flexible string or a homogeneous column of air.

Resonating bodies, however, all deviate from this ideal and have some amount of inharmonicity. A very thick string, for example, functions less as an ideal string and more like a cylinder whose resonances are not whole-number multiples of the fundamental frequency.

5. End Correction. In addition to the inharmonicity that results from imperfection in the vibrating body, inharmonicity can also result from the need for end correction in the resonating air column. The sounding length of a tube is greater than the geometric length by a small additive quantity, which is called the end correction. For an open-ended pipe this correction is about 0.6 times the tube radius. The amount of correction is complicated by its dependence on frequency: it decreases toward zero as the frequency is raised, effectively vanishing when the sound wavelength is equal to half the circumference of the tube. As a result the upper nodes of an open pipe are higher in frequency than the true harmonics of the fundamental.

6. Scale. The scale of the oboe bore is the quotient derived by dividing its acoustic length by its smallest diameter. Though described by Haynes in *The Eloquent Oboe* and utilized in his Appendix 2, it seems to be without

101. Similar to the principle of "drawing," observed in the tuning of adjacent organ pipes.

purpose.[102] This term also refers to the parsing of the harmonic nodes along the length of the bore, and hence the positioning of the tone holes.

7. Tone Holes. Hole sizes are of less value historically, because they are vulnerable to alteration by anyone desiring to adjust the pitch and timbre of the oboe. Adjusted and tuned by the maker, the holes represent an important part of an instrument's design, second only to the initial selection of bore and length. Unfortunately, there is no way of judging their authenticity, particularly in that all early oboe makers seem to have experimented with this aspect of the instrument.[103] Enlarging or undercutting a tone hole raises the pitch of the note and makes it both louder and brighter. In contrast, smaller holes have less harmonic resonance and hence produce notes that are darker and less loud. Oboes with smaller holes have a more clearly defined pitch and timbre, whereas larger-holed oboes have an intonation more easily adjusted by the player and are easier to play.

APPENDIX 2:

Pitch

Anyone desiring an understanding of seventeenth- and eighteenth-century pitch standards must consult Bruce Haynes's penetrating study *A History of Performing Pitch: The Story of "A"* (Lanham, MD: Scarecrow Press, 2002.) I have, however, taken his reassurance that "the history of pitch standards is actually simpler than it first appears" *cum grano salis,* and offer here a simple summary of Italian pitch standards from the late seventeenth and early eighteenth centuries that may help in assimilating the history of the straight-top oboe (table 7).

102. Haynes presents a more extended discussion of this aspect of the hautboy in *The Eloquent Oboe,* 90, 92–93.

103. See also Neville Fletcher, "Inharmonicity, Nonlinearity, and Music," *The Physicist* 37 (2000): 171–75. The following may also be of assistance: Neville Fletcher, "The Nonlinear Physics of Musical Instruments," *Reports on Progress in Physics* 62 (1999): 723–64, and N. H. Fletcher and T. D. Rossing, *The Physics of Musical Instruments,* 2nd ed. (New York: Springer-Verlag, 1998).

Pitch name	Hz value for *a′*	Frequency range (Hz)	Closest modern equivalent at *a′*=440					
˜D#	527	513-541	C (523 Hz)	A+3				
˜D	498	485-512	B (495)	A+2		**Mattheson** Chorton at D		A few organs in the north
˜C#	470	457-484	A# (466)	A+1		Chorton at C#	Also at	**Bologna, Padua, Milan** **Praetorius**: Cammerton *Corista di Lombardia*-cornett tone
˜C	443	431-456	A (440)	A+0	**Quantz**: Venetian pitch	B-Cammerton	Also called:	*Tuono dei cornetti* *Mezzo punto* *Corista di Veneto* *Corista di mezzo*
˜B	418	411-430	G# (415)	A-1	**Agricola**: Ger. A-Cammerton	A-Cammerton	B-Cammerton	18th-century Cammerton
˜β	403	400-410		A-1½	**German**: **A** *a′*=405			
˜B♭	395	384-399	G (392)	A-2	**Agricola**: Rome *a′*=384 **Quantz**: French chamber pitch *a′*=390		A-Cammerton	
˜A	372	362-383	F# (370)	A-3				

TABLE 7. Composite pitch table.