

## Did Shawms Exist in Antiquity?

A paper given at an Archaeomusicology Conference

By 'shawm' I mean the instrument which is played with a double reed, normally held wholly inside the player's mouth (ie not controlled by the lips), and which is conical in bore, either in a conoid (as in China, S.E.Asia, India, Tibet, and Western Europe) or in a stepped cone (as in Turkey, North Africa, and the Balkans), and which, because of this conical bore, overblows the octave and all accessible harmonics. It thus differs from the normal aulos, mat, and tibia of Ancient Greece, Egypt and Rome which, while they were usually also played with a double reed,<sup>1</sup> were cylindrical in bore and thus comparatively low in pitch and unable to overblow the octave.

This question, whether this instrument with which we would associate the name 'shawm' existed in antiquity, is one which is important, both to us as archaeo-organologists and, certainly so far as nomenclature is concerned, to the scholars of antiquity in general.

Our colleagues, the archaeologists, those museum curators who are concerned with antiquity, and all those who write on the life and material culture of the ancient world, are notoriously careless about the names of most types of musical instruments, and particularly of wind instruments, to an extent which would be anathema to them if they were describing weapons, coins, pottery, or any other artefacts. How many museum displays, articles, books and so forth do we all know in which the aulos is called a flute? And this happens even when they are describing an illustration on a Greek pot in which the reed is clearly visible.

What I want to discuss in this paper is the comparatively rare form of aulos and tibia whose external profile is clearly conical. One of the earliest examples I know is painted on the internal surface of a Faliscan vessel of about 480 BC in a depiction of the contest between Apollo and Marsyas.<sup>2</sup> The vessel is in the University Museum in Berkeley, California, and a very small photograph of it can be seen in Becker 1966: Abb.3. Much earlier than this are some of the well-known neolithic figures from the Cycladic Islands playing double pipes, but these are sufficiently schematic in style that even when they appear to be conical, and by no means all of them do, one cannot decide with any real certainty whether they are meant to represent externally conical instruments or not. On the other hand, the instruments on the Berkeley Marsyas vessel are very clearly painted, so clearly that not only can we see that they are externally conical, but we can also see something which is either the pirouette or lip disc still used on many shawms today or a reed-bridle similar to that used on the Japanese hichiriki, the Turkish mey and the Persian balaban among other instruments, but otherwise unknown to me on the instruments of Classical European Antiquity.

Later examples can be seen in Fleischhauer 1964: Abb.4, 11, 17, 23, 26, & 37, which again are clearly externally conical (there are also some others in that book which are less definitely conical), and Behn 1954: Abb.98. Another example, somewhat later still, is a wall painting in the Villa Ammendola near Rome (Kinsky 1930: p.17 fig.1). However, it is one on which I would hesitate to rely too heavily without consultation with an expert on the art of the period, for both pipes look so much like an Italian ciaramella that recent 'restoration' seems only too possible.

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1 But see Schlesinger 1939 for the alleged use of a single reed on the aulos, and Becker 1966: Abb.8 for a very clear depiction of single reeds on aulos.

0. 2 The Faliscans were neighbours of, and I think connected with or a sub-tribe of, the Etruscans. At first glance, one would take the illustration to be Greek.

The important question is: are these instruments conical internally as well as externally? This internal conicity is the main and most important physical characteristic of the instrument which we call the shawm today: that it has a conical bore and therefore that it not only overblows the octave, as we have said above, and any other harmonics which the player can persuade it to produce, but also that it has a very loud and piercing sound, as can be heard today all round the Mediterranean and in much of Asia. It is this loud and piercing sound, which rings in the ears of the hearer, which distinguishes it from the many reed instruments with a cylindrical bore, whose basic pitch is much lower in relation to their length and which overblow only alternate harmonics (usually only the 3rd harmonic, a twelfth above the fundamental) if they are capable of overblowing at all, and whose sound can never be described as piercing and is usually quieter than that of the shawm.<sup>3</sup>

It will thus be seen that this question is crucial to our knowledge of the sounds of music in antiquity.

We know that the normal aulos and tibia, such as the Elgin auloi in the British Museum (see Schlesinger 1939: plate 17), the tibiae from Pompeii in the Naples Museum (Schlesinger: plate 12, or Behn 1954: Abb.131 & Abb.141), instruments found in Egypt (Behn: Tafel 27), and those from Ur (Schlesinger: plate 18), etc, etc, are all cylindrical in bore and that the pitches they produced must have been somewhere in the same region as those of the bottom register of clarinets of similar length or of crumhorns. Because all these surviving instruments are cylindrical, I believe that the slightly conical Greek auloi to be seen in many illustrations in, for example, Wegner 1963 and in many other sources are due either to a slight, and probably unconscious, added pressure on the painter's brush as the line progresses, or more commonly to the distortion implicit in a flat photograph of the curved surface of a pot, and that these representations, despite their apparent slight conicity, are in fact of instruments cylindrical in bore.

Thus, it is only if we can be allowed to assume that a definitely conical exterior presupposes a conical interior, that we can even suggest that there were any woodwind instruments in classical antiquity which produced a high-pitched sound. It should, in this connexion, be said that we must assume that flutes (ie edge-tone instruments) were seldom, if ever, used in what I suppose we should call serious music in classical antiquity. We have a considerable number of flutes of bone and other materials surviving archaeologically from most periods of prehistory, but because of the total lack of any iconographic representations in classical antiquity,<sup>4</sup> it would seem that these, if they were used at all in the areas of Greek and Roman culture, were the penny whistles<sup>5</sup> of the folk musician, rather than the instruments of the upper-class culture which was the subject of the artists whose work has come down to us.

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- 3 Their sound, however, is not usually as quiet as that of the modern and generally inaccurate reproductions of the renaissance crumhorn, which is one of the few examples of a cylindrically-bored double-reed instrument used in Western European art music.
  - 4 The well-known relief of a helmeted Etruscan soldier apparently blowing a transverse flute (Fleischhauer 1964: Abb.20; see *ibid.*: Abb.43 for a Roman example which is even more clearly a reed instrument) must surely represent a reed instrument rather than a flute. The point at which he is blowing is raised far too high for it to be acoustically viable as a flute embouchure, whereas it is well-suited as a reed socket.
  - 5 A useful term for such instruments, first used in this connexion, so far as I know, by Professor J.V.S.Megaw.

Can we make this assumption that a conical exterior implies a conical bore? Much of our knowledge suggests that it would be rash to do so. We know, from our studies of ethnography that the aulos (ie an instrument of cylindrical bore played with a large double reed) was widely disseminated, though our present knowledge does not reveal whether such instruments as the Turkish mey, the Persian balaban, the Chinese guan, the Korean hyang-piri, and the Japanese hichiriki, all of which are clearly surviving examples of the aulos (the mey and the balaban have a wooden thickening at the upper end exactly as can be seen on many auloi), are later derivatives of the aulos and the tibia, disseminated down the Silk Route, or whether they derive from the same source as the aulos must do itself, presumably from somewhere in Central Asia, and are contemporary with it. Certainly what we know of the history of the guan (see Grove 1984: II, 82) suggests that it may be a derivative of the aulos or tibia.

If these cylindrical Asian double-reed instruments are derivatives of the cylindrically-bored pipe of classical antiquity, one would want to know whether there are also any surviving derivatives of a conically-bored pipe. Certainly there are true shawms today in all the same areas, but how old are they? We know, from etymological evidence, that the shawm was disseminated in most of those areas by Muslim traders and other contacts with Islam (most shawms have names cognate either with Arabic zurna, such as zamr, shahnai, sona, or with Maghribi gaita, such as gaida, alghaita, wait, etc.). The only pre-Islamic and post-classical iconographic evidence for the shawm that I know of is the Sassanid silver vessel in the Musée des Beaux-Arts in Lyons (see Farmer 1966: Abb.7 & 8, or Behn 1954: Abb.100 & 101), which is dated to the eighth or ninth century AD.<sup>6</sup> There seems to be no other evidence for shawms much earlier than the late thirteenth and early fourteenth centuries, when they appear both mouth-blown and bag-blown in illuminated manuscripts and church carvings throughout Europe, and it is quite clear that these derive from either or both the Middle Eastern contacts of the Crusaders (eg Montagu 1976: plate 38) and transmission across the Pyrenees from Muslim Spain.

The strongest argument in favour of a conical interior is that of economy of effort and of material: why go to the trouble of making a conical exterior if the interior is to remain cylindrical? Apart from any other consideration, a conical exterior necessitates starting with a considerably thicker piece of wood, much of which has to be carved or turned away, wasting both effort and material. The one advantage of a conical bell on a cylindrical tube is the amplification and enrichment of the sound that results (as may be heard on the clarinet), but most of the iconographic examples referred to above appear to be conical over a greater length than just a bell.

I have raised a question, but I cannot provide an answer. This, indeed, is why I have raised it. We need an answer, and I hope that perhaps some of my fellow archaeo-organologists may have opinions that would go some way towards answering it, and even better, perhaps someone may be able to produce some concrete evidence that would lead us to a definite conclusion. Meanwhile, because an exterior does not necessarily follow an interior in shape, we can only say that so far as we know, all the wind music of classical antiquity was down in the chalumeau register of the clarinet, and that every literary reference to the 'screaming pipes of the ancients' is just as untrue as is pretty well every translation, including the Septuagint, the Targumim, and the Vulgate, of musical events in the Bible.

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6 One should note, parenthetically, the presence on the same vessel of a Chinese sheng, the mouthorgan, and of a lute closer in appearance to the Chinese pipa than to the Arabic 'ud.

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