FALSE. AUTHENTIC. FALSE AUTHENTICITY. CONTRIBUTIONS AND FAILURES OF EXPERIMENTAL ARCHAEOLOGY AS APPLIED TO MUSIC INSTRUMENTS*

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The attempt to revive a music whose traditions have been lost seems hardly a reasonable challenge. Nonetheless, for more than a century now, makers, interpreters and composers have traced the first outlines of 'ancient music': Camille Saint-Saëns (1835–1921) directed the monumental edition in eighteen volumes of the work of Jean-Philippe Rameau (Paris: Durand, 1895–1914);[1] Louis Diemer, Wanda Landowska and Pauline Aubert brought the harpsichord back from oblivion with the aid of well-known firms such as Pleyel and Gaveau. By dint of criticism, contradictions and discoveries, they restored to Baroque music its letters of noble credentials and attempted to revive it in its 'authenticity', with the aesthetic which is proper to it, and which at times still baffles aficionados of 'classical' music. They thus rediscovered the uses and diversities of old diapasons (e.g., 412, 401 or 392hz),[2] of lost timbres and sound qualities, which they interpreted with *their* sensibilities.

Likewise today, there are people who recognise the utopian nature of attempts to create an exact revival of the past. David Lowenthal entitles one of his publications *The Past is a Foreign Country* (Lowenthal 1985). André Souris (1899–1970), who republished the *Premier livre de tablature de luth (1551) d'Adrien Le Roy* (1960), declared with justification: 'La musique ancienne n'existe pas, qu'il n'y a qu'un état présent de la musique ancienne'.[3] The desire for authenticity still dominates in the preoccupation with audiovisual systems and the competitive market, 'period' sounds are subjected to the constraints of marketing and of the *average* music-lover. Thus was born the 'Baroque' sound, clear and sanitised in recent years, without any doubt very different from the original. It is also regrettable that the publicity organised around this music occludes—at least as far as the general public is concerned—the existence of musics still more 'ancient'.

With respect to music archaeology,[4] this question of authenticity presents a paradox as well as a dilemma because it requires not only experimentation to test hypotheses but also re-invention (quite often in error) of missing elements. Historical research necessarily produces errors to the extent that it is connected to individual and cultural subjectivity.

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* Translated by Ann Buckley in consultation with the author.

1. Revised by himself, by Vincent d'Indy, Paul Dukas, Reinaldo Hahn and others.

2. A pitch-pipe (registration no. E.493) housed in the Musée de la Musique, Paris (in future abbreviated MM) provides evidence of two tones used in Versailles in 1789: that of the chapel and that of the opera, the latter a quarter-tone lower. This object drew the attention of G. Chouquet who selected it for his first catalogue (Chouquet 1884, 189, no. 744).

3. A remark reported by me in Autumn 1992 by his disciple, Jean-Michel Vaccaro, professor at the Centre d'Etudes Supérieures de la Renaissance, Tours.

4. The term 'archaeology' is intended here in a broad sense. It applies to all enquiry on 'ancient' instruments, i.e., those concerning which direct knowledge, including knowledge of practical performance, has been lost, irrespective of the distance in time. However, the majority of my examples will be taken from the Middle Ages and from France.

It produces *its* truth. Michelet, for example, successively imagined four Middle Ages, each one reinvented, 'awakened', 'restored', as he himself liked to say in true romantic fashion (Le Goff 1977, 20, 33, 43). The search for authenticity, which provokes numerous debates, is thus complicated by the subconscious effects of taste and mentality on the part of those who make experiments. How would it in fact be possible for them to observe the distance necessary to analyse their own cultural reflexes, to eliminate the susceptibility which often accompanies their research, and to un-learn or to 'decant' their academic formation? Uncontrollable by its protagonists, the precise originality of the work cannot be captured. The question of error in historical reconstruction encroaches upon that of technical acculturation in the domains of music instrument-making and the practice of music. How to reconstitute the instruments and their playing techniques? In which context to play them? And why? Indeed, does one know how they sounded and by whom they were made and played?

Stimulated already by the establishment of human sciences such as the history of art and archaeology at the end of the eighteenth century by Bernard de Montfaucon (1655–1741), the Count de Caylus (1692–1765) and Jean-Jacques Winckelmann (1717–68), by the romantic current which drew its epic and sublime inspiration towards an historical and geographical Other, and also by the first ethnographic missions, those of an enquiring turn of mind in the last century developed all manner of experimental techniques. In the sixth year of the French Republic (1798), General Bonaparte and his scientific commission brought back monuments of ancient Egypt;[5] at the dawn of the twentieth century, Lord Elgin returned with his acquisitions of Greek art. Since the Revolution, France also rediscovered its own history. People became increasingly aware of social, democratic and patrimonial issues. Alexandre Lenoir (1761–1839) established the Musée des Monuments Français in 1796 and an Académie Celtique (from 1814, called the *Société des Antiquaires de France*) was founded in 1805 (Year XIII of the Revolutionary calendar) which brought together all of the discoveries of French archaeologists. Auguste de Forbin (1777–1841), director of the Musées royaux in 1816, reorganised the Louvre under Charles X and placed an emphasis on the new Egyptian collections but also on the European Middle Ages (then considered the period of 'the origins of France'). In 1833 Prosper Mérimée was appointed Inspector of Historic Monuments (Fermigier 1986) at the same time as Jules Michelet commenced publication of his *Histoire de France* (1833–69). 'Troubadour' painting was in fashion (Chaudonneret 1980, 1995). The first collectors appeared: Pierre Revoil (1776–1842) who sold his collection of *gothicités* to the Louvre in 1828; Alexandre du Sommerard (d.1842) who established his collection and his museum in the Hôtel de Cluny; Charles-Alexandre Sauvageot (1781–1860)—whose personality was surely the inspiration for Balzac's Cousin Pons—presented his collection to the Louvre in 1856.[6]

The Universal Exhibitions contributed also to this growing awareness. They developed sections of an historical nature, such as that on the history of music composition in 1867 which was placed beside the famous gallery on the history of work, or copies of old

5. Music was represented by G.-A. Villoteau (1759–1839). See his various works published by Jomard, who was a collector of musical instruments (Villoteau 1809–22).

6. It is interesting to note that these collections brought together all categories of objects, music instruments included. Only their utilisation varied. Revoil found there documentation which enriched his 'troubadour' paintings; Du Sommerard attempted to restore the objects to their real-life situations, in fact to *reconstitute* a use. It would also be worthwhile to make a study of casts and their documentary use; or of *reconstructions* of music instruments—in particular casts commissioned by the Louvre under Napoleon III or those deposited in the 'Musée des Etudes' at the Ecole des Beaux-Arts in Paris over a period of one-hundred-and-fifty years (now housed in Versailles). For this proposal see Pinatel 1992.

picturesque districts such as that of Old Paris at the Paris Exhibition of 1900 (Exhibition 1983, 327), or that of the Bruxelles-Kermesse at Brussels in 1910, or indeed those reconstructions of 'historic' instruments presented in 1889 and 1898 by A. Tolbecque,[7] the Erard company and Victor-Charles Mahillon. These same exhibitions also exploited, if not the comparative musicology propounded by Fétis in 1867 (cf. Haraszeti 1932), then a musical exoticism represented largely by colonial possessions from 1878 and 1889. Each of these explorations echoes the sincere appeal of that unusual adventure which is the study of lost civilizations and of 'exotic' peoples.

Beginning in 1832, the first 'historic concerts' were organised in Paris by F.J. Fétis (1784–1871)[8] with thematic programmes devoted to musics of the fifteenth and sixteenth centuries (see Wangermée 1948, 185ff). At the same time Niedermeyer (1802–61) developed *L'École de musique religieuse* (founded by Choron in 1818), which bore his name,[9] and the Prince de la Moskova (1803–57) founded the *Société des concerts de musique vocale, religieuse et classique* which published the eleven-volume *Receuils des morceaux de musique ancienne* (Paris: Pacini 1843–[1845]) devoted to works from the Renaissance and the seventeenth century. At the end of the century and following the success of his harpsichord recitals at the 1889 Universal Exhibition, Louis Diemer (1843–1919), together with his friends J. Delsart, L. Grillet and L. Van Waefelghem, founded the *Société des instruments anciens* which was inaugurated in Paris at Salle Pleyel in 1895 before visiting London in 1897 (fig. 1). Théodore Reinach (1860–1928), however, was the first to organise a concert of ancient Greek music which he presented before Pierre de Coubertin at the Sorbonne in 1892 and before the King of Greece at the French School in Athens in 1893. The programme included the Delphic Hymn to Apollo harmonised for the occasion by Fauré for voice, chromatic harp, Boehm transverse flute and two Boehm clarinets![10]

Bringing together their interest in history and manufacture, Tolbecque, Dolmetsch, the Erard company, A. Wolff-Pleyel and L. Tomasini resolved to manufacture reconstructions of Medieval and Baroque instruments. Today, with the distance of a century, their methods can be clearly assessed. What were their guiding principles? Which elements appeared to them in need of modification? What did they take unquestioningly for granted? How was the transformation made?

The figure of August Tolbecque (1830–1919) occupies an essential place in this research. Enquiring and passionate, this musician-performer-collector who, in the same year that saw the publication of his *Art du luthier*, presented himself unsuccessfully as

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7. In his preface to *L'Art du luthier* (1903, II) Tolbecque recalls his own efforts in this area: 'Celui-ci [Charles Mahillon] me commanda les reconstitutions de lyres et de cytares [*sic*] de l'antiquité et des crouths, rebecs et autres instruments du Moyen Age et de la Renaissance qui figurent dans ce musée [they remain there still today]. J'ai également construit une série de ces types d'instruments anciens pour mon regretté ami Eugène Gand, qui les fit figurer dans le vieil atelier de luthier qu'il avait reconstitué dans la galerie du travail, à l'Exposition universelle de 1889. Enfin, en 1892, je présentai à l'Exposition de Tours un ensemble de 30 instruments qui me valut le grand prix. Plus récemment (en 1898), à l'Exposition du théâtre et de la musique, au Palais de l'Industrie, j'obtins également le grand prix pour une collection d'instruments disparus, depuis la lyre antique montée sur une carapace de tortue [reproduced on p. 1 of the book] jusqu'aux violes du XVIIIe siècle aux formes si élégantes et si variées'.

8. For further discussion of this movement, see Gétreau 1990 and 1995.

9. He engaged Saint-Saëns to teach there. Gabriel Fauré was one of the first pupils of the Ecole Niedermeyer.

10. *Hymne à Apollon (chant grec antique) harmonisé pour chant et harpe, flûte et 2 clarinettes. Op. 63bis.* Paris: Bornemann 1894.

candidate for a post of curator at the Musée Instrumental of the Paris Conservatoire, settled in Niort, Fort-Foucault, at the beginning of this century. He associated with the intellectual circle of Niort which included eminent local figures such as H. Clouzot, bookseller and later valuer,[11] J.-C. Formigé (1845–1926), architect,[12] and Rev. Camille de la Croix (1832–1911), organist and archaeologist.[13] The last-named discovered the Hypogée des Dunes at Poitiers in 1879 and was responsible for casting its model for the Musée du Trocadéro.[14] Better than most, he probably knew how to direct Tolbecque towards works of the first order such as Moissac or Chartres. In the same way as Proust's work benefited from the contacts which he had with Berenson and Emile Mâle,[15] it would be interesting to know whether Tolbecque, whose associates (among whom Saint-Saëns, Mahillon) had a great interest in 'ancient' music, was in touch with the great archaeologists of his time. Did he know Prosper Mérimée (1803–70), who saved the paintings of Saint-Savin-sur-Gartempe (eleventh century) while Tolbecque resided at Niort? Viollet-le-Duc (1814–79), who restored the basilica at Vézelay and who, towards the end of his life, devoted a large chapter to music instruments in his *Dictionnaire raisonné du mobilier français* (1874)? Bottée de Toulmon (1797–1850), who in 1844 published a *Dissertation sur les instruments de musique employés au Moyen Age*? or Coussemaker (1805–76), who published his *Essai sur les instruments de musique du Moyen Age* towards the middle of the nineteenth century? How did he find and choose his models? Archival research is not sufficiently advanced to answer these questions, but it is important from this moment onwards to broaden the field of specialist enquiry to include this type of exchange of ideas.[16]

Examination of three of Tolbecque's reconstructed medieval instruments (MM E.980.2.625, E.034 and E.0636) allows access to the process of his discovery of instrument-

11. Father of the French film-maker, Henri-Georges Clouzot (1907–77), also born in Niort.

12. He constructed the Palais des Beaux-Arts for the Universal Exhibition of 1889 and also restored the abbey at Conques and the Gallo-Roman theatre at Orange. His son, Jules (1879–1960), was Inspector General of Historic Monuments and participated in the restoration of the Saint-Denis Basilica. He supervised the great Gallo-Roman excavations of the Midi (Arles, Glanum) and partly restored the La Turbie trophy.

13. I thank Christian Gendron, curator at the Niort museums, for information on de la Croix, who engaged in correspondence with great French intellectuals such as the archaeologist, J. Quicherat, the archivist-palaeographer, R. de Lasteyrie, with L. Courajod, curator at the Department of Sculpture, the Louvre, and S. Reinach, curator at the Musée des Antiquités Nationales, Saint-Germain-en-Laye, brother of Théodore Reinach, specialist in ancient Greek music. See also Rérolle 1978.

14. These casts have remained at the Poitiers museum because the Trocadéro was ultimately not able to pay him. It is interesting to note that Rev. Camille de la Croix lived in an old casting atelier which he called the 'château de bois'. He would similarly have cast monuments of the region such as Notre-Dame de la Couldre at Parthenay the plaster-casts of which *should* always be preserved at the Poitiers museum; a detail of this portal is reproduced in Tolbecque 1903, 6, fig. 7.

15. Rotily (1990, 50, n.30) remarked as follows: 'Proust utilisait les études d'Emile Mâle sur l'art religieux du XIIIe siècle jusqu'à y puiser les éléments pour la description des fameuses tapisseries de Combray'.

16. A study group (*Itinéraire Tolbecque*), formed on the intiative of Camille Aubéry, grandson of Tolbecque, exists to bring together various individuals from the Musée de la Musique, the museums of Niort, as well as several instrument makers.

making.[17] His precise style, organised, deliberate, and hardly spontaneous, also bears witness to the puritanical and mechanistic character of his time.

He reconstructed two viols represented on the portal at Moissac (*c.*1120). The first (E.980.2.625) is very 'rustic' and probably represents his early attempts when still a Conservatoire student receiving instruction from the instrument-maker, Rambaud, in his spare time. For this item he did not use instrument-makers' wood but oak for the body (thick and bulging), pine for the soundboard (flat), five 'rudimentary' frontal tuning pegs for the double courses and the drone. The string-holder is very ornate and fastened by a solid leather thong, without a knot. This instrument, undoubtedly copied from a cast in the museum's deposit (E.1205), is of interest only when compared to a second one which must have been made much later when Tolbecque was already well-known as a specialist in ancient instruments and after he had acquired an academic training.

In the case of the second fiddle (inspired by another instrument in the porch, more lozenge-shaped—E.034, see fig. 2), Tolbecque did not hesitate to make a soundboard of Norway spruce and a back of wavy maple quarter-cut in two pieces, to arch them both, to fit a soundpost as well as a mobile saddle of ivory, to choose industrially-manufactured gut strings, to close the pores with a wooden base and to apply a supple varnish to the whole body. He knowingly chose partially rotted wood for the back in order to simulate age.[18]

His originality resides in the fact that he did not introduce a bass-bar and that he sawed the sides and neck as a single piece. He also appears to have invented, on occasion, a type of blind 'archaic' bridge, thick and without an underneath arch or rosette, simply pared and curved at the sides and on the upper edge, justified in his view by the action of the bow.

Similarly in the case of the fiddle copied from the Royal Portal at Chartres (*c.*1145; MM E.0636—see fig. 3) one recognises the locating pins, a vaulted back, a button and varnish like those on the violins, traces of thumb-plane on the belly, industrial gut strings. Once again he did not use a bass-bar and dared to make an instrument from a single block of wood (monoxylous). The bridge this time has rectangular sides, with a curious little eye for an opening, and rests on a quadrandular base in line with the vault, mounted on a semi-circular moulding.

When the Erard company decided to display a thirteenth-century harp at the Universal Exhibition of 1889 (MM E.1263; see fig. 4), it conceived it as an assembled body, a belly of pine, and nuts to hold each string. Its maker, believing that manufacture in those times should be very different from that which he normally observed, took some courageous steps. He chose to cut the forepiller and neck out of oak. The choice of this wood, heavy and dense, astonishing to us today, bears witness to a desire to break with classical traditions, or at least to create a distance from them. This construction must have appeared very strange.

Finally, the *aulos* (MM E.781), evidently made during the same period, by Victor-Charles Mahillon (1841–1924), keeper at the Musée Instrumental in Brussels, was

17. I am obliged to Anne Houssay of the technical conservation laboratory of the Musée de la Musique for information and advice which she kindly gave me concerning Tolbecque and his instruments.

18. In this respect it is justified to raise a question as to the purpose for which he intended his work. See also Eudel 1907, 296ff.

modelled on artefacts from Pompei deposited at the Naples museums.[19] It no doubt caused some surprise with its sophisticated system of sliding keys enabling the player to stop or open a total of twenty-four soundholes (fig. 5)!

These pioneers suspected the existence of other traditions of manufacture of 'ancient' instruments. Since the documents had barely begun to be assembled and their diffusion remained very limited, they forced themselves to innovate and to contravene the regulations of academic instrument-making without systematically being able to justify their choices, innocent or foolhardy. It is interesting to note also that even if they knew folk and exotic instruments reported by explorers, they rarely thought to compare them and to use the evidence in their own work of reconstruction of what were at times very similar artefacts. It is equally true that ethnographic collectors have for a long time ignored the issue of instrument-making. Only those less commonplace and 'archaic' instruments appear to have benefited from particular attention. This was the case with the medieval lyre for which we have original material evidence[20] as well as ethnographic avatars (e.g., the Welsh *crwth*). Their strangeness attracts attention, and appropriate 'traditional' techniques, such as monoxylous carving, were in time exploited (MM E.2035). As a consequence, the evident link supposed between the fiddle and the violin caused the respectable ancestor to be endowed with the same characteristics of manufacture as its prestigious descendant. Technical authenticity appears not to have been much of a preoccupation among researchers of that time.

The development of nationalisms and of archaeology in the second half of the nineteenth century contributed to an even greater interest in reconstruction of music instruments, whether Scandinavian *lurs* (Højring 1986) or instruments from ancient Rome (MM E.755;[21] *lituus* by Mahillon, E.923; nineteenth-century *cornu*, E.924). But these exercises were guided not so much by a concern for objectivity as by the appeal of novelty, the spectacular and the promotion of social values associated with strength and justice. The revolutionary period had already bestowed honourable status on the reconstruction of 'ancient' instruments; hence the *tuba curva* of Cormery, developed around 1789 for Gossec's *Marche lugubre*, written on the occasion of the translation of Voltaire's ashes to the Panthéon (see Tiersot 1894, 33, n.1; Pierre 1893). It is therefore not appropriate to analyse these products in terms of authenticity but rather to attempt to decode the meaning of these diverse interests in the ancient which often were (and could still be) the consequence of doctrinaire manipulations (Thuillier and Tulard 1990, 22). Similarly the galvanoplasty presented today in museums of casts are neither more nor less authentic

19. Four *auloi* were discovered on 10 December 1867 at Pompei in the house of Caius Vibius (see Schlesinger 1970, cap. 10, pl. 12). One of these was reconstructed and played in Brussels during a lecture by François A. Gevaert on 25 May 1896 to the *Société pour le progrès des études philologiques et historiques*. The performer was M. Poncelet, professor of clarinet at the Conservatoire Royal de Musique de Bruxelles (Gevaert 1965, II, Appendix, 645–7). Three of the reconstructions are still housed in the Brussels museum (Mahillon 1978, I, 431, no.416; III, 391–2, nos. 1971–2). See also the 'Egyptian flute' which Fétis made after the original preserved in Florence (Haraszeti 1932, 100).

20. For example, two lyres from Oberflacht found, respectively, in 1846 and at the end of the nineteenth century; also the Kravik lyre, discovered in the middle of the last century (see Panum 1905).

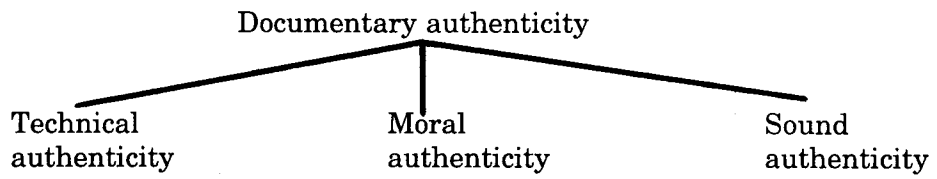
21. The preparation of this copy of a lur was entrusted to Adolphe Sax by the Danish government, based on an original found in a Danish bog and shown at the Universal Exhibition of 1867. See Gétreau 1990, II, 124.

than the experimental casting carried out by Peter Holmes (Holmes and Stanbury 1986). Their objectives are simply different.

Research on harpsichords for over a century provides testimony of an extremely varied range of historical and aesthetic approaches. Of the following four instruments, which could be considered as the most faithful to musical authenticity that it is possible to achieve? Wanda Landowska's Pleyel with a cast-iron frame,[22] the Neuperts of the 1960s, Gustav Leonhardt's Skowronek (a copy of a J.D. Dulcken dated to 1745), or the Ruckers made in Antwerp in 1646 refurbished in Paris by P. Taskin in 1780 (MM E.979.2.2)—that is with a 'double' historic integrity—and recently restored to playing capacity by the Musée de la Musique in Paris?

Generally speaking, work carried out in the last century suffers from premature judgement and qualities of obsolescence, outmodishness, incompleteness or fantasy produced by the history of our century. Present-day researchers, who have a large amount of documentary and technical information at their disposal and who are motivated by the wish to perform better and more systematically, seem after all to be proving less imaginative than their predecessors. No longer appropriating the ancient, they appear more humble in their attitudes towards the past; but does not it proceed rather from a kind of cowardliness only to leave the responsibility of interventions to their colleagues or successors? Research of objectivity and authenticity, constantly refined and subjected to questions, ends also by paralysing the historians and one might question the scientific limitations of so much caution.

For some decades, however, prospection and analysis in archaeology (in the broad sense) develop and reveal unpublished and accurate organological and musical information (in the form of repairs of a structural or decorative nature, materials, thickness, function, etc.). Tangible information, fundamental (*stricto sensu*) for developing research, which helps to confirm or correct observations in plastic and literary sources, necessarily has repercussions—if it is not subjected to rigorous checking—on concealed errors in the more abstract domain of documents, that is to say, of a technical, sociological or musical nature. We could summarise it in the following way:



DOCUMENTARY AUTHENTICITY

To research forgery requires first of all an assurance that the documents upon which one relies have not been deliberately falsified by badly-intentioned dealers. Such items exist

22. According to reports, having seen 'Bach's' harpsichord with sixteen-foot stops in Berlin, Landowska requested the Pleyel company to make a copy for her. Specialists in piano manufacture, this firm did not know how to meet the request except by use of a cast-iron frame. The keyboard of one of this celebrated harpsichordist's instruments, now housed in Berlin, bears the following inscription: 'Le jeu grave (dit par les Anciens 'de 16 pieds') fut introduit dans les clavecins Pleyel à partir de l'année 1912 sur la demande & les suggestions de Wanda Landowska' (Mercier-Ythier 1990, 120).

among countless public and private collections. In 1861 L. Clapisson, at the time keeper at the Conservatoire museum, believed he was acquiring a bone Roman *tibia* (MM E.159; see fig. 6). It turned out that this item comprised articulations of certain antiquity, but very much re-worked to produce a false reed instrument (Bélis 1987). The temptation of profit or the simple pleasure of misleading institutions and amateur collectors is often the cause of such falsifications (see Eudel 1907).[23]

An instrument-maker can add false information in order to increase the value of his product. Some liked falsely to use the name of a renowned master. Thus Jean-Claude Goujon added the date of 1590 to the name-bar of his harpsichord next to the name Ruckers. He also placed the famous initials 'HR' on the rose of the instrument. Yet he also inscribed his own name in pencil underneath the four-foot hitchpin rail of the case (Robin 1982). Does the invocation of Ruckers represent an act of homage? Was its purpose to 'antiquify' or to sell the instrument more easily? Does it make the instrument more 'respectable' and hence more 'valuable'? Where does the forgery begin? As for the instrument restored to playing condition under supervision of the museum in the 1970s, was it altered in its integrity by this treatment?

Certain collectors also wish to recreate false antique instruments. That is probably the case with the neo-Gothic ivory harp which was offered to the Louvre in 1892 by the Marquise Arconati-Visconti. Badly documented, this object was dated by Koechlin in 1924 to the fifteenth century (with some reservation, admittedly), and was classified as a medieval piece by Crane (1972, 18, no. 342.2; cf. Homo-Lechner 1987). We can also refer to a twin pair of lutes manufactured in the nineteenth century and passed off as relics from the fifteenth or early sixteenth centuries. One of them is preserved in the Witten II collection of the 'Shrine to Music' Museum at Vermilion, USA. Its 'brother' is in Paris at the Musée de la Musique (depôt of the Musée des Arts Décoratifs, no. 23.456). They bear the same initial mark, 'AF'. Even if conceived as reconstructions, this was 'forgotten' and manipulated by a dishonest salesman.[24]

However, certain instrument-makers specialised in ancient copies, and, while not introducing any whims of fancy of the forger's art, were sometimes manipulated by those who were selling on. This is the case with the violin by Hargrave—well-known for the excellent quality of his copies—which, after an illicit removal of the label, was recently sold in Vienna under the name of Joseph Guarneri filius Andrea, 1714, at a price of £400.000 (a third of its estimated value) with certificates of authentification delivered unanimously by all the experts at the auction.[25]

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23. There now exists heavy and sophisticated equipment for detecting forgeries, for example, the instrument known as Aglaé (*Accélérateur Grand Louvre d'analyse élementaire*) which was installed in the research laboratory of the museums of France at the Louvre, but its cost still limits its use to important art-historical works.

24. For discussion of related matters, see Prynne 1961.

25. See (anonymous) article in *The Strad*, May 1992, 103, no. 1225, 396. Another case of falsification was denounced briefly by Matthieu J.R. Besseling in the July issue of the same year (no. 1227, 589). On these same questions of forgeries, see further the communications of Brian Harvey, Hamilton Caswell and Roger Hargrave 1992, 28–38; also Harvey 1992, *passim*.

The questions of facsimiles and analysis of copies (ancient and modern) is currently giving rise to much discussion in museum and instrument-making circles. In this connection see Köstler (Exhibition forthcoming) for an account of an exhibition and round table held in Stuttgart in 1990; also the debate held at the Antverpiano meeting in summer 1993 devoted to the museographic pertinence of music instrument copies; as well as Exhibition 1988 and Exhibition 1990.

Complexity of interpretation leads one to question what is the 'realistic element' contained in the image, the text or context, and to endeavour to disentangle the authentic from the truthful (Wanegffelen 1992, 489). Which elements may one retain? How does one verify the original function of the instrument? Is its dating trustworthy? Which semantic values ought to be accorded the terms employed in the text? Which truths are represented by the size or the colour of instruments in artistic representations of the High Middle Ages (e.g., fig. 7a)? How to reproduce them in three dimensions (fig. 7b)?

OBJECT

In addition to the enormous amount of work still necessary on the 'unidentified' archaeological materials preserved, including those in the smallest local collections, it may serve to identify two types of error involved in the definition and dating of material evidence.

The 'Music' case in the large Gallo-Roman room of the Musée des Antiquités Nationales in Saint-Germain-en-Laye serves as a good example in this context. The bone 'flute', the 'trumpet' (both from Garenne-du-roi in the Forêt de Compiègne) and the 'sistrum' from Berthouville appear on preliminary examination to be, respectively, a joint articulation,[26] a drinking horn and an item of ornamental furniture.

It can also happen that scholars participate involuntarily in the transmission of false information. Such is the case with the piriform board (fig. 8) discovered at Charavines in a submerged settlement of the eleventh century which the present author has described—with some expression of doubt, it is true—as possibly a soundboard of a music instrument (Homo-Lechner 1993). As soon as it was discovered, the artefact, soaked with water, was measured, photographed, immediately sealed and then sent for treatment. The preparation of a technical drawing and examination of the object after it was released from the laboratory contradicted the initial identification.

In the case of clearly identified instruments, their function can be more subtly implied by context, the study of which reveals customs and 'morals' *stricto sensu* (see section on intellectual authenticity below). Did jew's harps found in graves or in river-beds have an identical function, however similar their appearance? Further, before even using one's imagination to reconstruct and play them, is it useful to enquire into their original use? Were grave goods exclusively symbolic? Were they played? If so, how were they distinguished from contemporary homologues? In the absence of answers to such questions, one is led to misinterpret these unknown objects and to propose uses undoubtedly never witnessed in history.

On the other hand, and for want of method or configuration of the site, countless objects have been separated from their stratigraphic data. Only the overall context of the site seems to provide the basis for their dating. This is the case of the jew's harps once thought to be Roman but which, according to the results of recent research (Ypey 1976, Buckley 1986), cannot be anterior to the Middle Ages. It has been systematically established with material examined in Belgium and Ireland, as also with certain 'Gallo-Roman' artefacts from France (Cimiez, Rouen, Levroux) housed in the Musée des

26. These 'flute-hinges' are found in abundance in archaeological collections in the museums of Besançon, Melun, etc. This mistake also proved profitable to the individual who sold the false Roman *tibia* to Clapisson mentioned above. Cf. chapter on methods by the present author in the Exhibition Catalogue from Besançon et al. (Exhibition 1993a, 11–25).

Antiquités Nationales, Saint-Germain-en-Laye, that no stratigraphic levels were ever documented.

To continue in this vein, we shall also consider stratification of information on the object itself in the course of handling. It is true that historical integrity is respected more frequently in the case of the materials of current archaeology than in that of 'valuable items' preserved in museums and private collections. In other words, to say 'a Stradivarius violin' leads to error because that obscures all the interventions which have followed the work of the master, in particular those requisitioned by owners concerned to maintain the instrument in active playing condition, thus involving modernisation. The 'Strads' are rarely found in their original state like the 'tenor violin' from Florence. In the nineteenth century they were transformed as soon as they were rediscovered since, in order to continue to sound, the instrument had to be adapted to contemporary exigencies. Vuillaume or Hill did not hesitate to graft, lengthen or reverse the fingerboard or to introduce modern fingerboards or tail-pieces of ebony. Neither did they intend to falsify or compromise the integrity of the instrument, because they viewed them with the eye of a musician playing a contemporary repertory,[27] because they regarded the object as a utilitarian item which conformed to practice and thus evolved over time, without regrets or a desire to fix its conventions according to the perceptions of the historian (see Gétreau 1993, 32).

Today the consciousness is otherwise. The idea of improvement is disappearing and as far as possible people are by preference sparing in their transformations of old artefacts. The curator-restorer of today is an archaeologist. He systematically records all of the markings and characteristics of an artefact (e.g., with photographs, technical drawings, x-rays) and endeavours to reconstitute its history by means of the readability of its elements. But his work is above all appreciated in the degree to which he neutralises processes of deterioration and bequeathes intact to future generations the patrimony for which he is responsible, and furthermore, his intervention must be *reversible* and reparable—as distinct from the forger whose aim is to mask or the Far Eastern restorer whose deontology does not demand reversibility.

In conclusion, let us instance reconstructions which, because of very incomplete or deformed material evidence, are mistaken even in the shape of the object. This was the case with a Gallo-Roman frame drum found at Koenigshoffen which Jean-Jacques Hatt (1970, 324–6, figs 14–15) reconstructed in square form, a type never recorded to this day in an antique context, as confirmed by textual and iconographic sources (Exhibition 1993a, 25, item 20). A similar case in point was the instrument from Sutton Hoo, first conceived by Arnold Dolmetsch in 1948 as a 'quadrangular' [*sic*] harp before he suggested some years later, with the assistance of Rupert Bruce-Mitford, that it was a lyre, in keeping with the iconography of the period (see Bruce-Mitford 1970, especially pls 1–3). It is nowadays on display at the British Museum.

Shifting interpretations are thus common; but besides becoming fixed in the memory more readily than their subsequent corrections, they above all endanger historical hypotheses.

27. This is similar to the painters who unhesitatingly retouched the frescoes of the Sistine Chapel, or Veronese's *Wedding at Cana*. See Exhibition catalogue 1992b, and especially the article by Gétreau, 'La musique dans les Noces de Cana', included therein (Gétreau 1992).

TEXT

Texts should also be examined with care because they contain numerous falsifications. At the level of the history of music, I might first of all mention the case of the famous forgeries of scores of Pindar written in the seventeenth century by Athanasius Kircher (1601–1680),[28] and also that of a medieval text on the organistrum (*Quomodo organistrum construatur*) which, by virtue of its proximity to a treatise by Odo (d.942) in the work of Gerbert (1784, I, 303a, 177), remained incorrectly dated for a long time. The text, now in the Österreichische Staatsbibliothek in Vienna , is in fact from the thirteenth century.[29] One can also cite that Mozart concerto which would have continued to lead musicologists into error if R. Casadesus had not admitted responsibility for the hoax. Excessive reconstructions, whether in error or in jest, these forgeries give rise to the most incongruous historical hypotheses.

Philology, for its part, reveals certain snares peculiar to ancient languages and places one on guard against readings which are too literal, and thus naïve: contradiction of occurrences and effects of polysemy, concurrence of usage (polymorphism, actualisation), literary effects, etc.

In the Middle Ages the term *lira* designated a harp, a fiddle and a hurdy-gurdy. The *De proprietatibus rerum* by Bartholomew the Englishman (*c.*1260), translated into French by Jean Corbechon in 1372 (Paris, Bibliothèque Nationale, MS fr. 16993, for example), produces as equivalents of *lira, cithara et sistrum* the words *harpe, guiterne et luth*! Similarly, one might ask which instruments correspond to the *citharas* of the Apocalypse (5:8, 15:2), the *organum* of Psalm 136, or the extraordinary figural illustrations which hardly contribute to disentangling this web.[30]

The variety of lexical forms used to describe the same object also contributes to the confusion: *vièle/viole* in Old French and Occitan, *rebec/gigue* in Romance and Germanic languages, etc. This was noted by Virdung in 1511 in his treatise, *Musica getutscht* (1511 / 1970, D.iij *verso*): 'Welches einer ein Harpfen hat genennet / das heist der ander eyn Leyr'—'One calls harp what the other calls lyre', as stated already by Abbot Cuthbert in the eighth century: Cythara teutonica quam nos appelamus rottam (Gérold 1931, 184).

Medieval vernacular languages, latinised or not, but in a constant state of evolution (*giga, rotta, harpa*), competed with academic Latin which had often by then lost its original meaning (*cithara*). This is particularly evident in the *Musica enchiriadis* from Saint-Amand (tenth century; now Valencienne MS 337) where the revisor, concerned not to alter the original text, erased the term *bracia* freely chosen by the first copyist and replaced it with the word *cithara* (Huglo 1984, 8).[31]

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28. This document is featured in Kircher's celebrated work, *Musurgia universalis* [1650], 541–2 (including transcriptions). It is also reproduced in Pöhlmann 1970, 47, ills. 2–3 (no. 16).

29. This error was revealed by Bachmann in his book on the origins of bowing (Bachmann 1969, 105).

30. For example, the numerous copies of the letter of pseudo-Jerome to Dardanus and the instruments cited therein (see Hammerstein 1959, Seebass 1973, 565); the thirty-first capital of the cloister at Moissac (south gallery); or the Circle of Philosophy and the Liberal Arts in Herrad von Landsberg's *Hortus deliciarum* (see Green et al. 1979, fol. 32r, cat. no. 33).

31. For discussion of the wider contexts of language evolution, in particular that of Latin, see Banniard (1992) who analyses its transformations according to different socio-political purposes: clear and simple in Late Antiquity in connection with the mission of evangelization, leading to vernacular use (oral as well as written), and a distinctive concern from the ninth century onwards with issues of grammar, style and social position.

Medieval literature emphasises numerical statements and excessive enumeration of instruments in a given situation. It is pointless to attempt to trace any accuracy of description, for example, in Guillaume de Machaut's *Remède de Fortune* (cf. Bec 1992b, 128) where some forty instruments are listed in the space of twenty-five lines.

IMAGE

Every aesthetic presupposes a specific attitude and decoding. An understanding of past images in the present requires knowledge of stylistic and iconographic conventions proper to each respective era and the effects of perspective and of copies, as well as enquiry into their intellectual meaning.

The phenomenon of copies, a feature of medieval art, permits of a better understanding of the place occupied by 'models' and traditions. It also implies a very active circulation of documents which reflects other exchange structures, whether economic or political.

The Utrecht Psalter (Reims *c.*810; Utrecht University Library MS 32 [*olim Script. eccles.* 484]), copied from an antiquitising manuscript of the fifth century, was itself recopied many times up to the end of the twelfth century (eleventh-century England—London British Library MS Harley 603; twelfth-century Canterbury Psalter—Cambridge, University Library MS R.17.1; France *c.*1190—Paris, Bibliothèque Nationale MS lat. 8846).

In these three manuscripts the 'organ' of Psalm 150 is faithfully depicted according to its antique (hydraulic) model, although the pneumatic organ was introduced to the West in the eighth century. Which part of 'reality' do these manuscripts transmit? Is it still that of the fifth century? Did it not become gradually deformed? On the other hand, certain instruments were brought up to date where the copyists knew 'modern' equivalents of the models, as in the case of the harps in the London and Cambridge sources. Every copy constitutes a sort of recasting more or less faithful to the model. There are countless examples of this process: *Psychomachie* of Prudentius (copies from the ninth to thirteenth centuries, see Stettiner 1905), *Beatus* (fifteen copies, see Cid and Vigil 1964–5), *Liber floridus* (copies from the twelfth to sixteenth centuries, see *Liber floridus* 1973), astronomical treatises (Panofsky and Saxl 1933), etc. However, the strong infatuation with Antiquity during the Middle Ages put a brake on the process of bringing representations into line with contemporary artefacts. Certain details were probably preserved by these imitations in order to signify Antiquity. This applies in the case of the 'antique' lyre which has eluded every attempt to imitate it and which became increasingly stylised over the course of the centuries.

The net of copies assists in the establishment of iconographic stereotypes. That of King David became the emblem of music for Judeo-Christian culture during the Middle Ages. He had necessarily to be represented with a music instrument in order to be recognised. For this reason, his attribute was treated in a very uneven and varied manner, with instances of harp, lute, psaltery, lyre. The same applies to other less internationally well-known figures such as Gunnar in Scandinavian mythology (e.g., Johansson 1979). In sum, it is essential to take account of the laws governing (i) the profession of the *ymagier* as well as the personality of the artist (skill, conceptual grasp, fantasy and what one might term general culture); (ii) the nature of the material, in particular, which does not necessarily permit of the reproduction of identical images (glass, parchment, mural painting, ceramic, stone, ivory, metal, wood, etc.), the effects of transparency, proper to the painter, being incompatible with the material volume handled by the sculptor; (iii) the space accorded to the document, its size and form, its placement in relation to the

spectator (distance or height generating constraints of perspective), the aesthetic of the time (isocephaly, frontality, spiritual hierarchy), all admit of a certain bias.

Finally it is necessary to consider the appropriateness of the colours applied to instruments,[32] the coherence of instrumental ensembles, the symbolic purpose of the image; at the same time to assess the alteration, indeed amputation, of the document due to 'restorations' and/or aging of the materials (erosion, corrosion, blistering, migration of pigments, etc.), and to relate all of this information back to the internal (therefore invisible) structure of the instruments (a snare at the back of a drumhead, the barring of a lute, etc.), the expectations and requirements of those in positions of power at the time, whether religious, lay, traditional or academic.

It falls thus to the spectator, before beginning the work of reconstructing the (supposedly) original object, to take into account in advance an appreciable number of adjustments and corrections.

TECHNICAL AUTHENTICITY

It is also the responsibility of the experimenter to recover information on the materials, stock of tools and contemporary construction techniques of the instrument to be reconstructed, i.e., including also gestures, craft skills, a work rhythm, a patience, a time when mechanisation was non-existent. Research on materials takes place in the workshop: which types of wood were used? how was wood cut, dried and worked at the time? which pigments coloured or protected the instruments? was the object finished in a hard, half-hard or soft wood? was it made with a gouge, trimmed, pegged, nailed or glued? painted, waxed or varnished? is the soundboard necessarily vaulted on a bowed instrument? is it made of skin or of wood? Taking account of the historical context, which tools should we use today in the manufacture of this instrument: an electric drill, a wood-turning lathe, a plane, a saw or hot glue? Numerous instruments of the High Middle Ages were worked with a simple adze, a drill, or a tool for making notches. To reconstruct them by using 'traditional' tools does not have any relevance whatsoever at an historical level.

The study of markings and micro-traces enables experimental archaeology to revitalise perceptions and to understand bodies of knowledge (of which even experimenters are ignorant) which could not have been described in any written source. Jean-Claude Condi has attempted one of these experiments by reconstructing an ancient Greek lyre under the guidance of Annie Bélis. Rather than cutting branches necessary to set the arms of the lyre, he did not hesitate to seek out natural branches in the forest and even to shape them on the trees in his own garden. These branches are in fact more resistant than those shaped by the human hand. Such a simple detail as that implies acceptance of, and sometimes learning anew, how to work at the rhythm of the trees.[33]

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32. Old French and other medieval texts often contain references to silver instruments (i.e., presumably plated), including transverse flutes, bows, rebecs etc. For example, '[Merlin] joue j lai breton ... ot une harpe a son col qui toute estoit d'argent (Merlin, *c.*1270); archets d'argent des vieleurs entretenu par le jougleur anglais Raher, ayant fait fortune lors de Puy (quoted in Faral 1910/1987, ...); flahutes d'argent traversaines (Adenet le Roi, *Cléomadès* (*c.*1270), l. 7255).

33. For example, it is known that in the south of France trees such as the *Micocoulier de Provence* (*Cettis australis* L.) were used traditionally for fashioning forks.

INTELLECTUAL AUTHENTICITY

To these questions must be added others which have a bearing on the function and context of music instruments. Sites of habitation, for example, yield up degraded, fragmentary sources consigned to rapid disappearance: culinary waste, latrines, scoria, decayed materials, are the precious tools of archaeology. Beginning from these rejects, the scholar applies himself to reconstituting the image and activities of a precise moment. That explains the vigilance with which the material is examined. A flute, a tuning peg or a bridge discovered in a latrine or a waste-pit are first of all refuse. They were perhaps thrown there by chance, but chiefly because they were damaged or worn. They are not models, or are no more so. On the other hand, material discovered in the grounds of a house or a river-bed may perhaps have been mislaid, and material abandoned in panic following a natural catastrophe (such as the volcano at Pompei,[34] the flood at Charavi nes) undoubtedly indicate current usage. The little elderwood recorder from the end of the fourteenth century found in February 1991 at Serris (on the site of Euro-Disneyland) was discovered intact—with its block—in a water-logged ditch close to the entrance of a fortified dwelling. This object appears to have been mislaid. What music might one perform today on the replica of this instrument?[35] Is it correct to refer to it as a 'music' instrument or a signalling instrument, for which evidence is also provided in contemporary texts?[36]

Funerary archaeology of the High Middle Ages also produces exhumation of deposits which should be studied with great attention. Is the celebrated Sutton Hoo lyre an actual lyre constructed in order to be played? Could it also represent not so much evidence of a funeral ritual but rather the attribute of the music of the dead? In which case, why are accessories such as bridges made of less perishable materials such as amber (Elisenhof, Broa), antler (Birka) or bronze (Concevreux)? The bridge of the lyre from York, found in an urban secular context, is made of wood, which appears to confirm the theory that the manufacture of durable sound materials was for the purpose of accompanying the deceased to the other side. Similarly, one might ask if the position of the object in the grave was of some significance. The majority of medieval funerary lyres were found to the right of the body. Should one conclude from this a right-handed technique or a more subtle meaning connected to the universal valuation of the right? Such caution permits of greater attenuation in conclusions drawn from artefacts discovered in graves. These deposits of instruments are found in numerous civilizations as shown, for example, in the arched harp from the second royal tumulus at Pazyryk in the Altai Mountains (Rudenko 1953, 324, pl.86.1), the coptic lute in Grenoble found in fragments in Antinoa in the grave of a woman prophet (Gayet 1909), the trumpets from the tomb of Tut-an-khamun

34. The *auloi* discovered in the house of Caius Vibius were placed on a bed ready to be played. See note 19 above.

35. Reconstruction is being carried out by Jeff Barbe, a maker of traditional flutes.

36. The *gaite* (watch) of medieval texts refers to the wait as well as to his signalling instrument, horn, flute, etc. See, for example, the accounts of the Duc de Berry: 'Devant lui, un *bonhomme de gaite* vint *flûter* à Lézignan le 7 mai' (Pirro 1930, 5, B.389); or the *Roman de la rose* by Guillaume de Lorris (*c.*1240), l. 3875: 'Quant il set / qu'il doit la nuit fere le *guiet*, / il monte le soir as quarniaux / et atrempe ses *chalumiaus* / et ses *buisines* et ses *cors*; / une foiz dit chanz et descort / et sons noviaus de controvaille / as *estives de Cornuailles* / autre foiz dit a la *flaüte* / c'onque ne tova fame jute' (my emphasis). For iconographic representation see, for example, the thirteenth-century French manuscript of *L'Histoire de la Guerre Sainte* by Guillaume de Tyr (Paris, Bibliothèque Nationale, MS fr. 2824, fol. 21) where three men sound the watch with a trumpet, a flute and a drum.

(Hickmann 1961, 121, fig. 88; Hickmann and Manniche 1989, 56) or the Chinese bell-set and mouth organ (without reeds—which is surely significant!) buried in the tomb of the Marquis Yi of Zeng (von Falkenhausen 1991; see fig. 40 for an illustration of the mouth organ). The find contexts of excavated instruments is of essential importance to understanding and experimentation.

Another aspect of this enquiry concerns the 'ceremonial' surrounding performance of music. The contemporary western custom of listening in silence, usually within an enclosed space, to music performed before a large audience without the active participation of the latter (save in applause) is totally incongruous for the Middle Ages. Secular music generally took place out of doors, in the courtyards, in the *parvis* of churches, and on any raised area (*podium*) such as a platform, gallery, table, tree or hillock (*puy*) in front of a very attentive public which often participated in the event by dancing. In monasteries, on the contrary, sacred music was required to be (but was it in fact the case?) prayed in fervour and peaceful contemplation, thus excluding the faithful from the abbatial church. These chants were accompanied by processions and stations which varied according to the Proper and Ordinary of the Mass and Office, and evolved freely because chairs did not yet encumber the naves of churches.

How could one not react, under these conditions, against static concerts of plainchant in churches filled with a seated public, passive and oblivious as to its original function as prayer, or against the sanitised character of the recordings of pilgrimage songs such as that of the *Llibre vermell* by the Ensemble Hesperion XX,[37] which suffers from too much purity, and by the Caillard-Hayward Ensemble,[38] which is (perhaps) too agitated?

Recent experiments have been conducted in order to confront the public with an original-type situation. Curators and archaeologists from the Audois recently took the initiative of opening a medieval tavern at Villerouge-Terménès where the guests participated in a medieval feast at large communal tables while watching a spectacle inspired by fourteenth-century texts and iconography. Acrobats, musicians, fools and dancers entertained the diners who, in due course, relearned to talk, drink and laugh at will while listening to the music.

At another level, Ensemble Organum lent themselves on three occasions to experiments proposed by Pro Lyra (Centre Français d'Archéologie Musicale). They reconstructed various liturgical processions during concerts organised at Maguelonne Cathedral near Montpellier (Département Hérault), in five Cistercian abbeys, and in the chapel of the château at Saint-Germain-en-Laye on the occasion of the Fourth International Meeting for Music Archaeology. In the first two cases, these concerts formed part of festivals (respectively, Montpellier and Année Saint-Bernard), the audience was large and unfortunately seated and apparently very disconcerted by these unaccustomed perambulations. On the other hand, those in attendance at the last-named concert were reserved and aware, and were from the outset interested in the movement of the singers between reconstructed ambo and chancel (Homo-Lechner 1994). But if they accepted the absence of seats in the chapel, nobody became involved (perhaps through timidity?) in the historic proceedings which were directed at a standing public, as is still the case in the Orthodox church, but did not hesitate to sit even on the floor or lean against the walls.

37. Recorded July 1978; EMI/Reflexe 1C 065–45 641 (1979).

38. ERATO ECD 88 04 47, 1984– (CD version); ERATO MCE 75 122, 1984– (cassette version).

SOUND AUTHENTICITY

Far from being limited to questions of context and conduct, historical research is taken up to the point of discovering the sounds of instruments, because this exercise has little sense unless it responds also to research on sound. How to make an instrument live? Beyond the visual object, music archaeology extends to research on impalpable information which techniques of reconstruction (provided that they have been 'correctly' observed) can assist in their turn—but only to a certain limited extent. The low string tension of medieval instruments or the sound produced by hand-made gut strings represent some of these possibilities.

Nevertheless, in each period people subconsciously recreate the sound which is acceptable to them and which they wish to hear. Old recordings of Baroque music enable observation of noticeable changes in sound characteristics and aural pleasure. In the 1950s, Roger Désormière was not ready to hear what Jean-Claude Magloire could propose in the 1970s, even less the recent interpretations by Christopher Hogwood or William Christie. The 'Baroque sound' has such a varied history that one could well question the validity of certain hypotheses. Will we ever know its original colour? When will anyone dare to introduce those nasal timbres (tromba marina, musette de cour, hurdy-gurdy) which are still too disturbing to be of interest to musicians or to be appreciated by the general public?

The situation of the 'Medieval sound', with an even more acute absence of documentary information, is similar. The sound of the 1970s, in keeping with the movement of returning to traditions, was imbued with Celticising and Arabising flagrancies. Numerous ensembles accompanied their performances with *'ūd, rebāb, santur and zārb*, with Breton *bombarde*, 'Celtic' harp or instruments of much later date.[39] The temptation was great at that time to take a model—but without distancing oneself greatly—from ethnographic or 'art' instruments and to presume a direct relationship with the medieval period which, as we have shown above, is exactly the opposite position to that adopted in the nineteenth century when inspiration was rarely derived from ethnographic examples.

These amalgams and rejects ('impure' sounds, 'snorting' timbres) result from the modern education of the ear which perpetuates the immutable deafness of historians and, what is still more serious, the prejudice of musicologists and musicians. The same applies to the volume of sound (the 'absence' of power) which academic teaching still sometimes promotes.

When at Puivert the musicians tested instruments reconstructed in imitation of the sculptures on the castle, they quickly expressed their dissatisfaction because the material sounded 'bad'. In spite of being advised that they would be working on 'experimental' reconstructions, certain musicians could not prevent themselves from asking the makers to increase the sonority of their instruments. The sound which they discovered was indeed exotic, perhaps historic, but disappointing rather than conforming to the expectations of their modern ears. This experiment had the value of demonstrating clearly that even when collaborators were informed and aware of the purpose of the research, the sound, if cut off from a familiar auditory system, produces quite strong reactions, indeed

39. Compare the recordings of Les Ménestriers, Ensemble Guillaume de Machaut from Paris (e.g., *Le chant des troubadours*, 1979, ARION 38503), Florilegium Musicum from Paris, Studio der frühen Musik and their famous *estampies* (*Estampie: Instrumentalmusik des Mittelalters*, 1974, EMI/Reflexe, C063–30122), the Clemencic Consort with Chemirani playing the *zārb* (*Les Cantigas de Santa Maria* 2, 1976, Harmonia Mundi 978), Capella Antiqua of Munich with Renaissance instruments and a trombone by Ehe from 1690 (*Guillaume de Machaut, Messe de Nostre Dame und Motetten*, 1970, Das Alte Werk/Telefunken–Decca, 6.41125 AS), and so on.

obstructions. It has also revealed that when an instrument is reconstructed (thus inauthentic), its historical sonority is bypassed because it is considered as necessarily arbitrary. It is true that timbres are alterable at will, lose their pertinence, become 'innocent' and—if they are not recorded—leave no tangible compromising traces. The restored (recreated) medieval instrumental sound has still no definition and perhaps there also we should extend our efforts so that makers and scholars may become alive to the problems of perception and the irrationality of taste, so that they may attempt to justify the identity and influence of the sounds which they are reinventing.

Paradoxically, questions of accuracy offend only those detractors of ancient music who favour the big romantic sound, and who cannot withstand this craze for playing a repertoire on old instruments which do not keep in tune (or do so badly) and which sound poorly (i.e., inadequately). They are irritated by natural instruments (trumpet, horn, cornet, trombone), cross-fingering (transverse flute, oboe, clarinet), gut reeds which generate flexible sonorities, not powerful, not normalised, not virtuoso; ultimately they refuse this grain of sound, less regular and less sure, which contributes to the charm of such music in the same way as do the various unequal temperaments.

But if one controls Baroque *coloris* quite well today, what does one propose for the ancient popular traditions which were contemporary with it, and what of more 'ancient' epochs? How to regulate the reconstruction of instruments originally made by peasants? Did they know the different temperaments and, in the Middle Ages, the Pythagorean system? How to apply the precision of an interval described in an ancient Greek music treatise?

The historian regards himself as obligated to take liberties with these works, to transcribe, to translate, to deceive, to invent by the lights of his own incomplete knowledge and his culturally different sensibility. How to distance oneself from those transcriptions and their inherent authenticity? Or more precisely, in which instance and in what way are those transcriptions inauthentic, since there exist several types?

Transcriptions of works composed by their own author (e.g., *Les Indes galantes* by Rameau, transcribed for harpsichord in 1735), or with his approval, are here of course outwith our consideration. It is those 'transcriptions' established without the author's consent which we are concerned to document. To what extent do the substitution of one instrument for another (such as Bach's *Goldberg Variations* transcribed for accordion[40], or Vivaldi's *The Four Seasons* performed by a Japanese koto ensemble[41]—which would appear to stretch the possibilities to the limit), the reduction of a work (e.g., the Countess's Air from Mozart's *The Marriage of Figaro* for wind ensemble, remarkably transcribed in the eighteenth century by the Czech professional transcriber J.-N. Wendt),[42] the arrangement or orchestration (such as Rimsky-Korsakov's of Mussorgsky's *Boris Goudounov*), and the 'free' transcription (in the sense of Bach's transcriptions for organ or harpsichord—BWV 593, 972, 1065—of Vivaldi's opus 3 concerti for violin(s) or

40. Stefan Hussong, accordion: Compact Disc Thorofon CTH 2047, 1988. This recording constitutes one of the richest versions of this work in terms of phrasing and articulation. If it is totally anachronistic and somewhat provocative, it is perhaps more real than reality—as is sometimes said of imaginative literature when compared with documentary accounts.

41. The New Koto Ensemble.

42. It is not known if Mozart supervised Wendt's transcriptions. Meanwhile Josef Triebensee, Wendt's son-in-law and director of the Prague Opera for twenty years, played under Mozart's direction at the première of *The Magic Flute*.

Schoenberg's marvellous Strauss waltzes), alter the musical integrity of a work or its authenticity?

In substance, two criteria seem pertinent: the discretion of the transcriber and fidelity to the spirit of the work, the author and the period. The personality of the transcriber can in fact transform the character of a work. In other words, Bach's transcriptions have become Bach's work and Schoenberg has deprived Strauss's waltzes of their heady seductiveness. But to the extent to which the character of the work and its musicality are not misrepresented, in what way is the transcription to be condemned? In earlier centuries more tolerance has been shown towards revision of work established by colleagues and predecessors. The exigency of a 'pure' identity is recent but beyond realisation. The issue of transcription is a limited one in our enquiry here, sensitive and problematic though it is, since historians regard it with a certain scorn.

However, the historian too transcribes facts with unequal talents. It is within his province to examine and verify the integrity of the sources, but also to respond to the options chosen in the specifications to compensate for lacunae and to attend to those gaps in synchronic or comparative evidence of an aesthetic, functional, material, technical, repertorial or intellectual nature essential to the functioning of the instrument. Hypotheses may thus be elaborated and selected with a view to reconstruction. This moment is rendered particularly delicate because invention intervenes to enhance historical work.

As observed in the case of these 'ancient' musics, the transition to practice gives rise to questions which go beyond strictly musical considerations. How ought one to play these instruments? What is known of their playing techniques and their timbres? Are our crystal-clear notations and our sound instruments inherited from the eighteenth century suited to the spirit of that age? How ought we to revive the ancient rhythmic modes? Are nasalizing effects appropriate to all periods of the Middle Ages? How to tune the instruments? What temperament to choose? Should stringed instruments be used for melodic or percussive resources? What were the different left-hand positions (if such a concept existed)? How should the bow be held? Of what are the strings made, for which hardly any information exists for Antiquity and the Middle Ages? What repertory can one choose for secular instruments of which one does not, so to say, know the repertory? How to constitute ensembles? How, finally, should one interpret the music?

To this burdensome list of anxieties is added that of poor transmission of information. In fact it appears that, for want of curiosity, numerous makers of instruments perpetuate out-of-date models. The study made in 1988 of the instruments of the Porch of Glory at Santiago de Compostela again proposed systems of assemblage with bass-bar and soundpost little suited to the twelfth century (Jansen 1988, 126, fig. 6). An error is simultaneously a form of ignorance and also—and this is more serious—a conviction which is fixed, unjustified or simplistic (as in the case of superficial ethnographic analogy), or an old hypothesis which has not maintained pace with subsequent developments. Research involves regular revision of hypotheses by recourse to reconstructions. Thus it is now known that in the Middle Ages curved bridges could be adapted to flat bellies, that instruments are often monoxylous and made from local materials, and that they have no trace of a soundpost. One nevertheless deplores the fact that the increase in information of this nature does not reduce in similar proportion the role of subjectivity and invention, since it is evident that new information generates new ignorance by means of new questions.

Archaeological experimentation reaches out to specific musics but can never restore them to their past atmospheres and realities. It is difficult today to defend the idea of an advancing, linear progress towards historical truth. If the methods of approach assume

an increasingly interdisciplinary character, they remain imperfect, and no matter what the circumstances, they will remain subject to the mentality and the taste of their time. Who would now dare in our day to interfere with Notre Dame de Paris in the manner of Viollet-le-Duc? or extend[43] a harpsichord as in the eighteenth century?

Much effort is still necessary to analyse better and to correct our historical views as, for example, in the cleavage between maker and musician now completely abandoned in Europe. It would be desirable for musicians to learn once more how to work the wood before playing on their instruments, as was often the case up to the sixteenth century. In that way they would acquire better mastery and more intimate acquaintance with them. Similarly, instrument-makers should take the risk of performing music. Some lute-makers set an example some few years ago, but in due course chose one speciality or the other. And above all it is necessary for researchers, who are often scholars as in the case of the present author, to cease to play the role of intermediator of scientific information in the service of executants because the real control, on the one hand, depends on the practitioners, and the future, on the other hand, depends on multi-skilled researchers. It is desirable that they systematically complement their historical and theoretical training with instrumental practice, both in terms of musical performance and craft skills, in order to avoid the peril of exclusive knowledge.

Archaeological experimentation, in my opinion, represents a necessary and salutary route for everyone to test working hypotheses, both technical and musical. One would like to see the protagonists of these experiments engage in open discussion of the choices which have guided their results. These instances are unfortunately too rare and, whether from pride or fear of criticism, the protagonists flee from comments even if these last are an excellent means of avoiding error and pursuing the task of reflection. Today this fault is more evident among medieval music ensembles than among those for Baroque music where competition—and therefore the standard—is too keen to perpetuate such a weakness. Few medieval ensembles seek out occasions of public performance to develop their ideas openly and rigorously on questions of organological technique or of musical context.[44]

Up to quite recently, performing medieval music was a profitable enterprise which permitted of many liberties in interpretation and execution but which abused the general public because this music remained shrouded in mystery. With the prop of improvisation, admitted as a technique common in the Middle Ages, it also provided the possibility of inventing the music. By this subterfuge such activity became united with the demands of traditional music groups: denunciation of Eurocentrism and its consumer society, escape from its art musics (including Gregorian Chant) to replenish oneself in the exoticisms of other musics, to revive and re-introduce the existence of other cultures within and without Europe. Is it by pure chance that medieval instruments are often manufactured by specialists in traditional instruments? Examination of French directories of instrument-makers is revealing. Manufacture of an *épinette des Vosges* is frequently associated with

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43. I.e., in the sense of *ravalement*, involving the extension of both keyboard and body of the instrument, including the soundboard.

44. However, new structures are progressively being provided, such as the ARIMM (*Atelier de Recherche et d'Interprétation des Musiques Médiévales*) managed by Marcel Pérès at the *Fondation Royaumont*, which has organised and published conferences since 1982 (see Bec 1992a), or the recently-established *Centre de Musique Médiévale de Paris* under the scientific direction of Marie-Noël Colette.

that of rebecs, psalteries and dulcimers.[45] These ensembles in search of roots or soil have served to 'revive' traditions which never in fact existed, as is confirmed by those courses with suspect titles such as 'Folklore and Ancient Music' or the new 'Celtic' harp in Brittany with its clever hybrid structure of Irish, diatonic, 'Gothic' (following Pleyel's term) and Latin-American of Spanish origin.

This recent historico-traditional folklorism is characterised by a lack of cultural identity and therefore by nostalgia. It developed alongside the somewhat desperate and morbid collecting of popular arts in danger of extinction. It produces images of Epinal, of the myth which exalts the picturesque, ignores the contingencies of history and seduces the public, like the folklore troupes organised by totalitarian régimes in order to portray a false image, quite out of keeping with present-day reality.

In so doing, the links with mainstream musicology were, if not altogether avoided, very slack, unlike the contact with ethnologists. During the 1960s collaboration between archaeologists and ethnologists was strong, but a concomitant coming-together of musicologists and ethnomusicologists did not occur, due to too great a difference of attitude. Today, music archaeology appears to have learnt some lesson, and is interested in associating with developments in history and ethnology with a research emphasis angled towards ethnohistory. Like the ethnologist, the music-archaeologist practices similar methods, being interested in the sound and gestural context of music performance. The ethnologist, however, has the advantage of direct observation of behaviour in its totality, human behaviour in the presence of sound production, which permits of anthropological and sociological perspectives. Only temporal thickness separates the two researchers. The one explores the past while the other remains in the present. The music-archaeologist who 'transposes' certain ethnological methods into the past is deprived *only* of the actual sound. The ethnologist collects the sound at first hand; the archaeologist recreates it.

Archaeological folklorism of the last century, the result of romantic nostalgia linked to the heroic and the grandiose, constitutes the antithesis of this approach. The example of Ludwig II of Bavaria, patron of Wagner, is perhaps the most striking. He re-invented Versailles at Herrenchiemsee and Linderhof, medieval knighthood, Tannhäuser and Lohengrin at Neuschwanstein and Hohenschwangau, in huge castles constructed by theatre designers, but heated and provided with running water. History is here the pretext of a dream in which neither authenticity nor objectivity may be found.

Chateaubriand also blundered with candour in his historical whims. Visiting Charles X in Prague in 1833 he gave a brief description—with several errors—of some great figures of its past (Jan Hus) but made no reference to the Baroque splendours of that city which reminded him nevertheless of Rome. How could he have seen them when he was firmly convinced that that land was a land of the Reformation, of magic and alchemy? Bohemia is *un pays de sorciers*, he concluded (Chateaubriand 1849–50, IV, Book 4, 254–7). To what is our eye drawn today and by what will it be attracted in a hundred years' time?

At each stage in this article I have chosen examples to illustrate the reflexes and clichés of our perception of the musical past and its technical, moral, sound and historico-ethnic

45. See *Catalogue de la facture instrumentale française*. Paris: AREFI [*Association pour le Renouveau et l'Expansion de la Facture Instrumentale*]/Ministère du Commerce et de l'Artisanat 1982. Addresses of instrument-makers may be found in *Cahiers de l'animation musicale* 22, April 1983, and in the Guides published by the CENAM [*CEntre National d'Animation Musicale*]: *Annuaire de la facture instrumentale*, Paris 1987, and *Guide des instruments de musique*, Paris 1990. See also Dimet 1985 where the 'rebec' is associated with a dulcimer, an *épinette des Vosges*, and a bowed psaltery!

acculturation in order to explore the way in which we *consume* and fashion music history. I shall in conclusion address the question why we behave thus.

Our civilization idolises the ancient, finding in it values which are regarded as fixed and certain. This tendency explains the nostalgia of folklorisms discussed above, a venal taste for the picturesque which endeavours to flee the present, but also the guilt: fear of mistreating the old; fear of deciding the benefit of such and such an intervention and therefore fear of interfering; fear of spoiling; fear of destroying; fear of dissonances within the heritage of the present which might risk distorting the traces of the past; finally, fear of having confidence in the future. The ancient is no longer integrated within the present. It is voluntarily demarcated, isolated and placed on the pedestal which up until the last century was occupied by religion and the sacred. In this connection the case of contemporary music is a good example. For the first time in history, serious music of the present is situated far down on the list of public preferences. The educated public flees towards the old and the none-too-new, in music as in architecture (restoration methods, apartment blocks in false freestone) or furniture (the fashion for the pseudo-rustic, copies of old masters). Today's public is disoriented by the acceleration of life and the use of dehumanised, disquieting technologies. People are searching for reassuring landmarks. Taste for the old counteracts the course of the present. We are tortured by authenticity, the return to the true, in imitation of the Utopian 'back to nature'. For each of those movements there are corresponding new propositions, new visions. In this instance it generates a nostalgia for 'genuine', non-synthetic objects (neither concrete, nor formica, nor plating), but gives rise to the sale of artificially 'genuine' materials such as façades of reconstituted marble made up of sized marble-dust, or cladding in imitation of carved stone and applied to the outside of buildings. Where is the genuine? Where the artifice?

This general survey is not intended to be exhaustive or polemical. Its purpose is solely to encourage scholars to reflect and face practical questions, undoubtedly to some extent 'Byzantine', but often overlooked. We have seen to what degree history is perhaps invented (Thuillier and Tulard 1990), acculturated, adapted to contemporary use and confused in the vision of each epoch. It would appear preferable not to give priority to questions of authenticity but to seek out other methods of analysis. The history of history,[46] on the one hand, almost always subject to the perverse effects of interpretation, can assist towards better understanding of the issues and expediencies of each era; on the other hand, experimentation, which *de facto* calls for and brings about a creation, may perhaps also reconnect with the past in another way.

46. The recent development of this field of enquiry raises again the history of mentalities, as in the case of the history of collections. Cf. Boilès and Nattiez 1977; Chartier, Duby and Fèbvre 1987; Thuillier and Tulard 1990; also Exhibition 1992a, which is to a great extent devoted to the presentation of past research on Etruscan civilization; the lecture series organised by the Louvre entitled *Histoire de l'Histoire de l'Art* (October/November 1991, January/March 1993; publication forthcoming). See also Exhibition 1993b.

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Fig. 1. The *Société des instruments anciens c.*1895 with Louis Diemer, harpsichord, Laurent Grillet, hurdy-gurdy, Jules Delsart, treble viol and L. van Waefelghem, bass viol. The harpsichord by which Diemer is standing is now housed in Berlin. It was constructed by Pleyel, Wolff, Lyon et Cie between 1888 and 1891. It is fitted with a lyre supporting six pedals, but does not have a metal frame. Cf. Catalogue 1991, 289–93, pl. 40. (Photo: Publimages)

Fig. 2. Reconstruction of a fiddle from the portal at Moissac by A. Tolbecque, Niort; end of the 19th century. Paris: Musée de la Musique, E.034. (Photo: J.-C. Billing)

Fig. 3. Reconstruction of a fiddle from the Royal Portal at Chartres by A. Tolbecque, Niort; end of the 19th century. Paris: Musée de la Musique, E.0636. (Photo: J.-C. Billing)

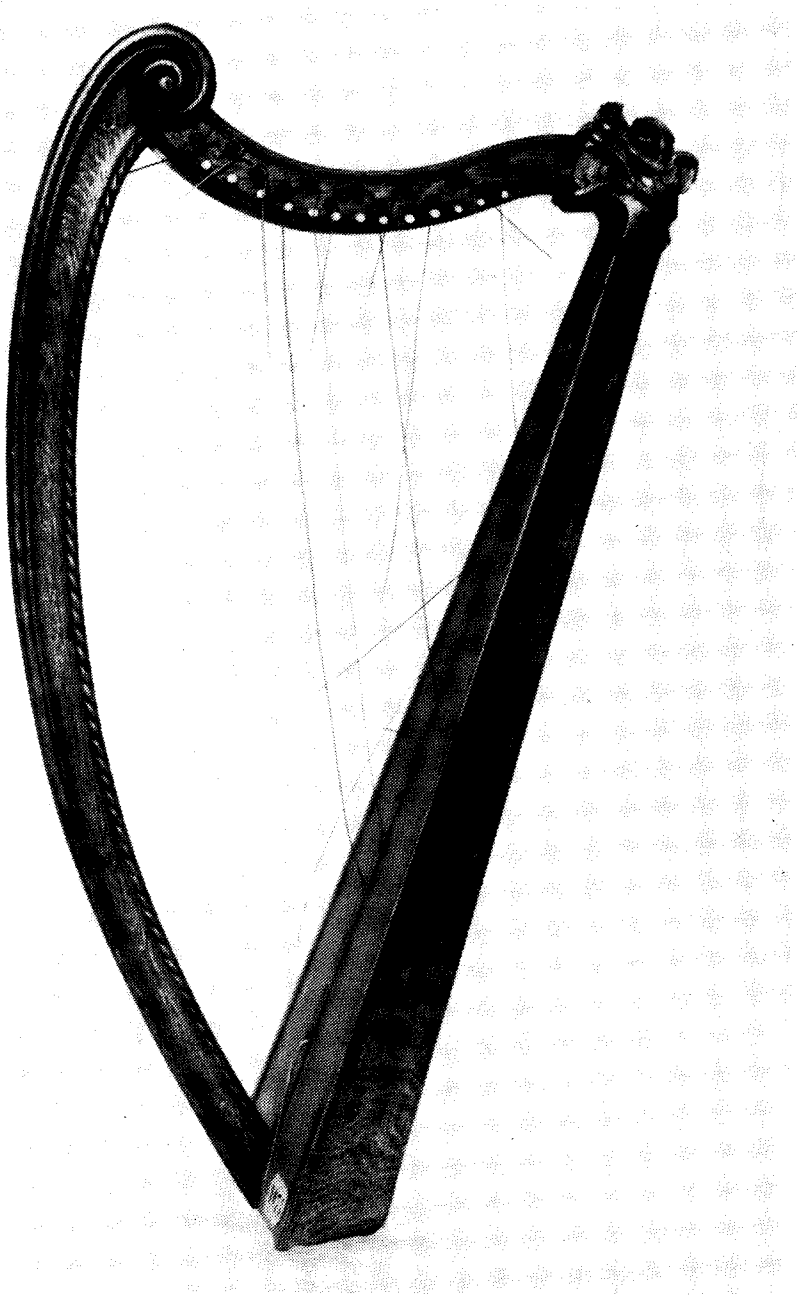

Fig. 4. Oak reconstruction of a 13th-century harp by Maison Erard, Paris 1889 (shown at the Universal Exhibition of that year). Paris: Musée de la Musique, E.1263. (Photo: Publimages)

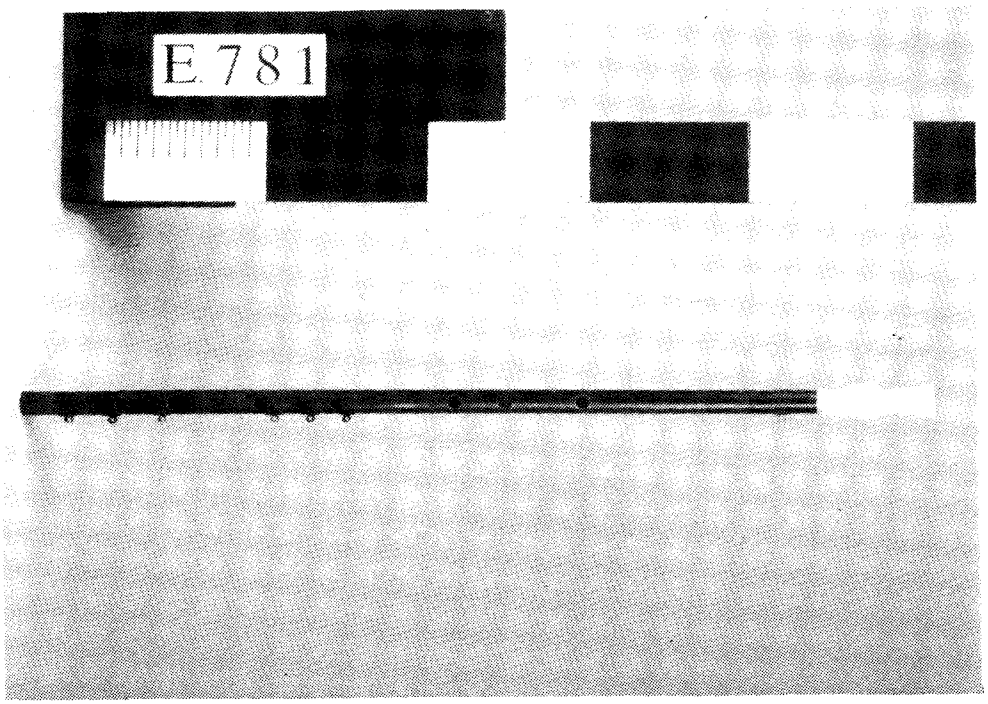

Fig. 5. Reconstruction of a Greek *aulos*, Victor-Charles Mahillon, Bruxelles, end of the 19th century. Paris: Musée de la Musique, E.781. (Photo: J.-C. Billing)

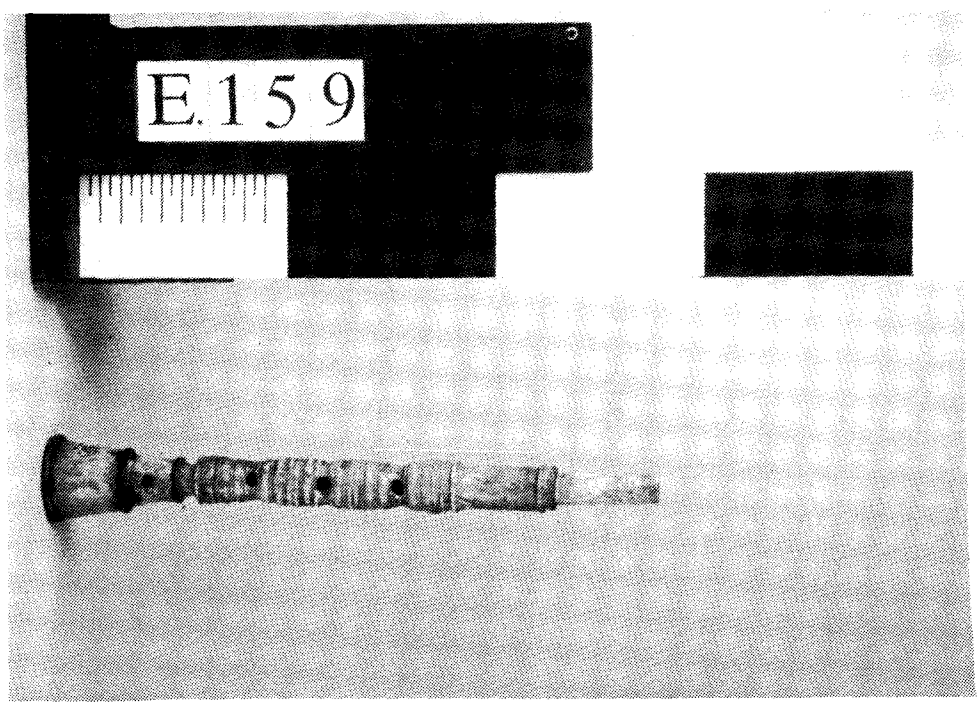

Fig. 6. False Roman *tibia* of bone. Paris: Musée de la Musique, E.159. (Photo: J.-C. Billing)

Fig. 7a. Stuttgart Psalter *c.*830, Saint-Germain-des-Prés. David playing a *cithara*. Stuttgart: Landesbibliothek, Bibl.fol. 23, fol. 55 [Psalm 42]. (Photo: after Bischoff et al. 1968)

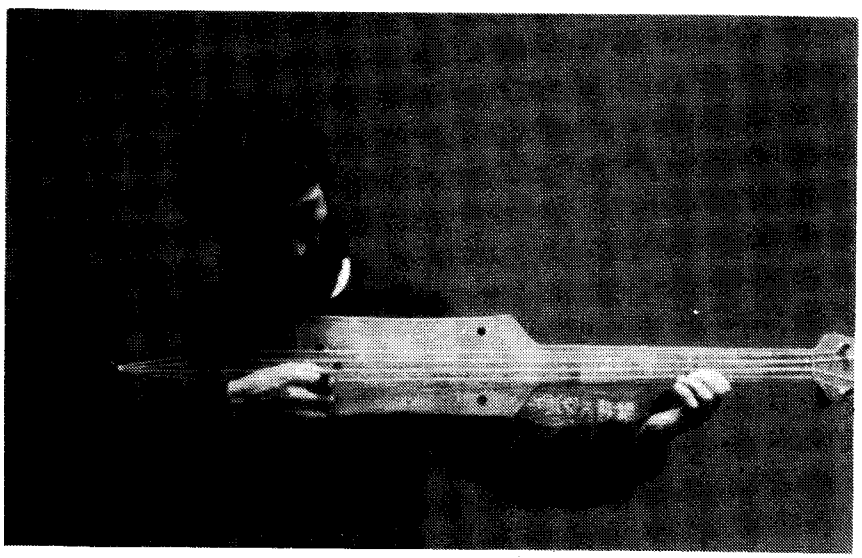

Fig. 7b. Reconstruction by Christian Rault of the instrument represented on the preceding miniature, 1983. (Photo: Chr. Rault)

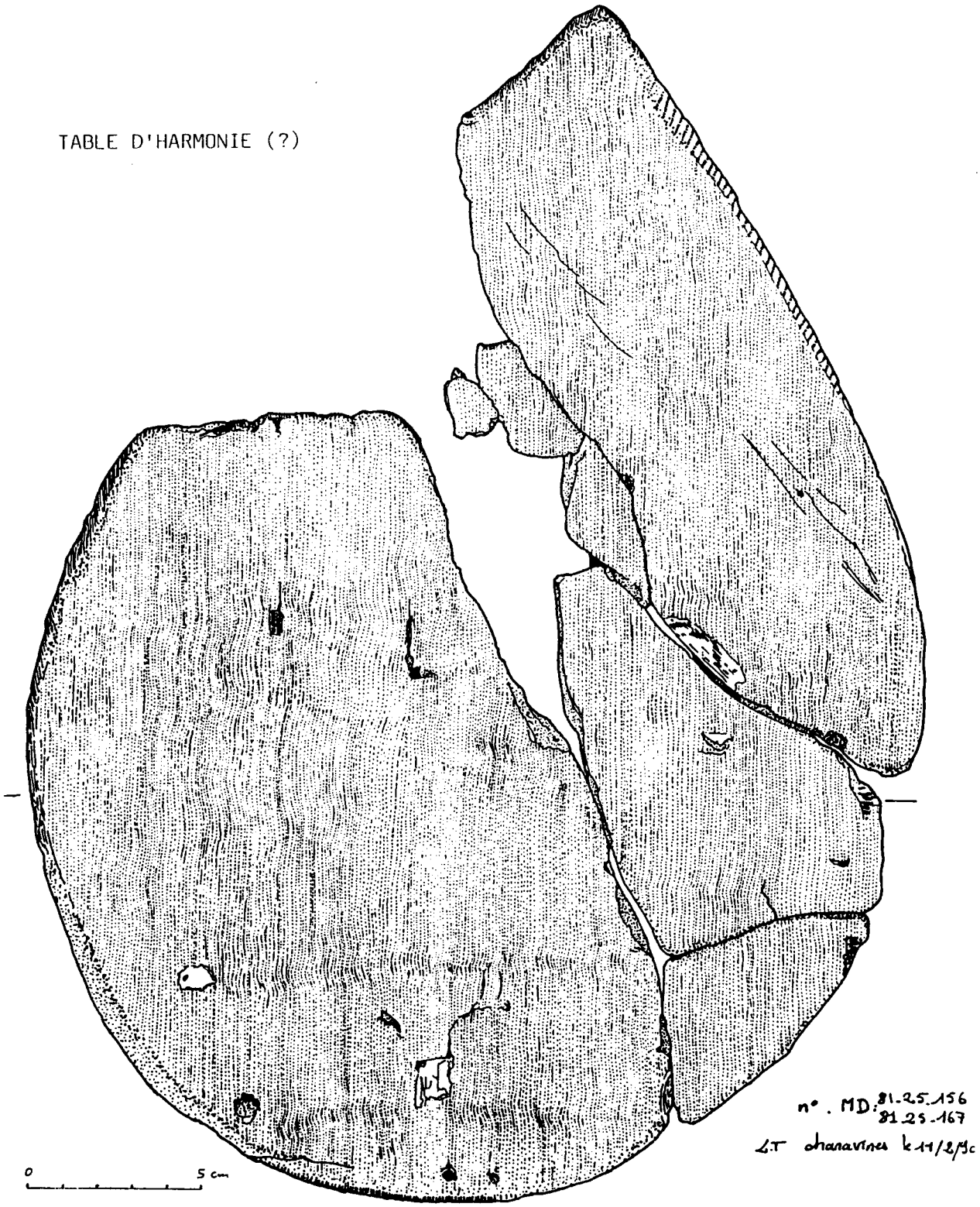

Fig. 8. Piriform wooden artefact discovered at Charavines on an 11th-century submerged site. Grenoble: Musée dauphinois. (Drawing by the Charavines Excavation)