MUSICAL INSTRUMENT BOXES.
HIDDEN INFORMATION: CASES FOR MUSICAL INSTRUMENTS AND THEIR FUNCTIONS

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Appearance: heterogeneous, pipe-shaped compartments. Size: dependent on outer forms of musical instruments and on their constructional parameters.

Habitat: Europe; diverse social strata. Origin: case for Tartölten: Ambras (Austria), before 1578; case for the spinettino: Ambras (Austria), second half of the sixteenth century; case for four recorders: Catajo (Italy), sixteenth century, mark ‘!!’; case for a violin of tortoise shell: Imperial Treasury (Austria), made by Wenzel Kowansky, Vienna 1749. Function (once): case for Tartölten: definition of a whole consort, storage; case for the spinettino: sound radiation, protection, adornment, musical use; case for four recorders: definition of a whole consort, transport, storage, frequent use; case for a violin of tortoise shell: work of art, showpiece, protection. Function (today): case for Tartölten: object on display, definition of a whole consort; case for the spinettino: object on display, protection, adornment; case for four recorders: object on display, research specimen; case for a violin of tortoise shell: object on display, work of art.

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In museums and collections, curators, restorers, musicologists, instrument makers, and musicians deliberate intensively upon the aesthetic identity of cases and etuis for musical instruments. The reflection process is orientated toward the evaluation of the historic values of the items and the assessment of mostly forgotten artisanal technologies, and it accounts for the artistic elements that characterise the object. Therefore boxes, cases, etuis, quivers, and sheaths rank among the most important semiophors – to use Krzysztof Pomian’s term (1988: 81) – in collections of musical instruments, although in exhibitions they are mostly given an insignificant role as inconsiderable accessories far inferior to the renowned and artistically elaborated instruments. In fact, however, in the context of modern organology, these items – especially the cases of woodwind instruments – mutate from simple historical containers and useful transport aids into highly interesting objects of investigation that provide complex indications for musicology, modern instrument making, and performance practice.

Today’s musicians need etuis that protect their instruments from environmental influences and from damage. The etuis should help them to transport their instruments securely and comfortably, and allow for quick handling in the course of putting the instrument into and taking it out of the case. Ideally there should be room for accessories in the etui, too. The high-tech material that is available for today’s instrument cases is durable, light, and waterproof. The synthetic material of the interior lining has to be dust-binding and humidity-absorbing to create a certain climatic stability. The intended purpose of the case, and the expectations of the musicians, are known by the manufacturers, who produce commodities that fulfil the requirements of the musicians – this is consumer-oriented production. The design of instrument cases and etuis arises from concrete demands originating in the designated use. Thus it is clear that modern etuis and cases are merchandise, being – like all commodities – exchangeable and replaceable at any time. As far as contemporary items are concerned, clients, manufacturers, historians, and museologists agree that the function, which is the ontological criterion of such etuis, does not have any music-reference. The function is independent from the distinct instrument-model or instrument-type kept in the etui.
The instrument case produced according to modern requirements therefore qualifies as a commodity or consumer item, whereas the instrument case of the Renaissance and Early Baroque was usually crafted in accordance with criteria of the highest manual skills and craftsmanship (techné). It can thus be referred to as an authentic, singular item created in the sense of Martin Heidegger’s ‘Werkschaffen’, testifying to the mastery of highly qualified artisans, who occasionally signed their work (Heidegger 1960: 58). The material and form of the historic case comply with the requirements defined by the musical instruments.

We define three categories of instrument cases:

Cases of the first category and the instruments kept in them are in general interchangeable. These boxes serve as carriers to transport and protect the musical instrument. The empty case does not tell us much about the missing content.

The cases and etuis of the second category are similar to those of the first category but they form an inseparable aesthetic or functional unit with the instrument. The empty case tells us a lot about the conceptual details of the instrument. On the basis of its craftsmanship and artistic style, important information about the date of origin as well as about technological aspects of the instrument can be seen.

The objects possess the distinguishing marks of the antecedent categories, but in addition they may have a certain ‘opus-character’ because of marks or signatures. They inform us about musical and organological facts. This category includes in particular cases for woodwind instruments that indicate the length as well as the diameter of the instrument. Etuis of the third category are particularly interesting when their content is missing or has been separated from them. Although the instruments themselves – with their different pitches, that theoretically can be combined (sixths, fifths, fourths, thirds) – may be scattered worldwide, substantial rules for the formation or ‘layering’ of consorts can nevertheless be educed from these cases.

Due to the importance of instrument cases and etuis, it would be desirable to leave more room to them in exhibitions, and to give them proper consideration within educational museum events.

A short retrospective view of historic instrument cases and etuis shows that ‘protection’ and ‘transport’ is the purpose of the cases in the first category. Protection and transport have been relevant from the very beginning,
constitute the primal function of instrument cases. Whenever the forms and dimensions of the musical instruments do not change, a general exchangeability of the item exists. Contrary to the uniformity of musical instruments today, an immense variety of shapes can be seen within one and the same instrument class in the Renaissance and Early Baroque. So it is assumed that each instrument had its fitting case individually made by a box- or sieve-maker. The five *Tartölt* from the inventory of the Ambras collection founded by Ferdinand II of Tyrol form, together with their instrument cases, a unique set of objects, in particular because these items are exclusively preserved in the collection of the *Kunsthistorisches Museum* Vienna and they are of exceptional artisanal and art-historical quality. The case as a semiophor is important in so far as it informs us about the togetherness of the existing *Tartölen*-consort, whose instruments were designed with matching concert pitches by an anonymous maker (see Figure 9.1). Regarding the compartments of the instrument case, no conclusion – neither about the exact pitch nor about the sort of instruments – can be drawn, because the division of the box does not mirror the outer form of the woodwind instruments or their sounding length. If posterity inherited merely the cases of these instruments without any *Tartölt*, it would be impossible to infer the sort, appearance, and workmanship of the instruments.

Instrument cases of the second category do not only serve as transport carriers and protection devices but they are also connected with the instrument as far as the aesthetics is concerned. This relationship is pointed out on the basis of the form, material, style, and ornaments of the case, or by the individual artisanal style of the maker. Diverging from category one, the original togetherness of the case and the instrument is given, and usually the instrument maker and the maker of the etui were one and the same person. The violin made of tortoise shell by Wenzel Kowansky (SAM 638, see Figure 9.2), who did not work as an instrument maker but who was a renowned box maker, is considered to be an art object. This object (acquired by the Habsburg Empress Maria Theresia in 1749), is, however, composite: the etui, the violin and the bow form a single aesthetic entity. One unique feature of this entity is the fine gold-wire bordure of the etui, that traces the exact contour of the individual instrument, and assigns the bow its proper place. Moreover, it was made to fit the rounded pegbox which is a very individual feature of Kowansky’s instrument, and cannot be found
**Fig. 9.2** The case for the violin made of tortoise shell, SAM 638 (photo copyright KHM)

**Fig. 9.3** The spinettino in its box, SAM 121 (photo copyright KHM)
anywhere else. From the aesthetic point of view, the decorative elements of the instrument and the bow correlate with the ornamental details of the case – like the gold wire purling or the inlay of gold and ivory on the bow, as well as the gold wire bordure that goes with the golden fittings on the case. The opened etui by Kowansky tells the beholder that it is made for a violin with an uncommonly shaped pegbox and violin bow.

The outer box of the anonymous Italian *spinettino* (SAM 121, **FIGURE 9.3**) from the second half of the sixteenth century is an integral part of the instrument’s aesthetic identity. Beyond improving the protection of the fragile corpus of cypress, it also enhances the sound radiation of this small instrument when it is open. This *spinettino* has a very special geometry, with individual angled sides intrinsically tied to the outer box. If the outer box of the *spinettino* and the case of the violin by Kowansky were passed down without their instruments, one could reconstruct most of the structural details of the instruments: The inner measurements of the outer box of the keyboard instrument provide information about the arrangement of the strings and their length, as well as about the approximate compass. By dint of the outer box, it is possible to identify the exact sort of instrument it was made to contain, and moreover the ornaments and aesthetic style help to date the instrument and to assign it to a certain region. The information given by cases of the second category is thus very dense and highly significant.

There is a third category of instrument case in the Renaissance and Early Baroque; into this category fall etuis that, in addition to their basic functions of protection and transport, have a very meaningful aesthetical component, showing an immanent reference between the musical instrument they unite and general musical parameters. These cases are of particular interest, and should be looked over closely, items of this category being inherently connected to the music itself. Martin Agricola leaves his readers – in the fourth edition of his *Musica instrumentalis deudsch* of 1545 – the following advice (1896: 158):

*Cautela.*

Wist auch meine lieben knaben
Wolt ihr gestimpte pfeiffen haben /
So keufft euch die jnn futtern fein
Dann die andern sind falsch gemein.
Woodwind instruments (Pfeiffer) that form a consort and therefore have the same pitch-standard (or at least pitches that match while playing together) are united in cases. Thus woodwind instruments that are not bought in etuis are single instruments with individual pitches. They are neither suitable for consort playing nor for making music with musicians who use different pitch levels. Standardised pitches did not exist from the medieval age to the classic. Instead, pitches developed on the basis of local predilections and regional traditions, and they varied by the musical genre, for which reason the free combination of woodwind instruments was largely impossible. Woodwind instruments in cases did not only stand out due to their compatible pitch, but they also formed an aesthetic – artisanal, visual and tonal – oneness. Agricola’s statement is thus highly relevant for performance practice, as well as being trend-setting in terms of today’s organological and museological work.

In the Collection of Historic Musical Instruments of the Kunsthistorisches Museum, Vienna, forty-three Renaissance recorders and four etuis are preserved, which equates to about one fifth of the worldwide existing items of this type. Of these recorders, all but ten are signed with marks. Among the cases for recorders, one object bears a mark. By dint of the mark and its variants, it is possible to define the origin of the items and to assign them to certain workshops. Although knowledge of this provenance does not reveal the togetherness of the instruments – which can only be defined by the pitch – artisanal, technological and aesthetic criteria may affirm the alliance of the instruments. The pitch is usually defined on the basis of geometric measurement, of impedance measurement, or by synthetic blowing using dry air and steady air pressure.²

The case for recorders (SAM 171, Figure 9.4) offers much hidden information about performance practice in the Renaissance (Darmstädter 2006: 264–65; Darmstädter and Lueders 2008: 95–105). This item is signed with one single silkworm moth (‘!!’) in the inside of the cap, which relates it to the workshop of the Bassanos in London (Lasocki and Prior 1995: 80).³ The etui

[Cautela. You know, my dear boys
If you like to have pipes in tune /
Buy them in nice cases
Because the others usually sound wrong.]
belongs to the Este-collection and ranks among the original inventory of the museum. In historic documents this case is described as a single object, and it is not mentioned in connection with concrete instruments. Thus it was considered as an isolated object until 2008, when further analysis was carried out. The object was probably damaged in the course of the evacuation of the collection during the Second World War. In 1920 Julius Schlosser described the item as an entire case (Schlosser 1920: 80). There was lively interest among musicologists, instrument makers, and musicians to restore and reconstruct the case, because the variant of the stamp motive on the cap could be noticed on the sole of the foot of the alto-sized recorder ‘SAM 135’, too. For generations this particular instrument was said to be a ‘typical solo flute’ because of its bright and easy sound, its above-average compass, and many other conceptual details, like the progression of the inner bore, the elaboration of the foot-part, the dimension and position of the finger holes, the huge undercuttings, the shape of the window and labium, etc. All these features pointed to an exceptional, highly individual instrument, and led scientists to assume that this recorder never belonged to a consort, but was played in solo-music. Countless instrument makers copied this recorder and distributed it worldwide under the name of ‘the Ganassi-recorder’,

**Fig. 9.4** The case for four recorders signed with ‘!!’ SAM 171 (photo copyright KHM)
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because its playing properties corresponded largely with the characteristics of
the recorder model ‘B’ in Silvestro Ganassi’s *Opera Intitulata Fontegara* of 1535.
In the middle of the 1990s, Maggie Lyndon-Jones cast doubt on this idea, and
on the worldwide trend of using all these sketchy replicas of SAM 135 just for
virtuoso solo music. She put forward the hypothesis that SAM 135 possibly
belonged to a consort (Lyndon-Jones 1999: 262). Many instrument makers
and musicians ignored her remark, but the reconstruction of the case SAM 171
provided the opportunity to analyse its historic material and artisanal know-how.
Its cover was found to be of leather, in which the substances sulphur, chlorine,
potassium, calcium, iron, and zinc were detected. The black colouration was
done with iron gall ink. As aluminium, which is needed for white tanning,
could not be found in the leather, a vegetal tanning was applied. Potassium and
calcium were brought into the material in the course of liming. The parts of
the case were fixed with animal glue, while the cover was possibly coated with
a mixture of paste and glue to avoid gleaming blotches, and to secure water
resistance (Thon 1856: 27; Darmstädter 2011: 103). Today scientists assume
that cases for woodwind instruments with round shaped compartments were
produced in a work-sharing process. In this process turners, tanners, bookbind-
ers, and shoemakers may have participated. The inner lengths of the tubes are
today 622.2 mm, 427.6 mm, 428.0 mm, and 287.0 mm. The etui comprises one
tenor-sized recorder, two alto-sized recorders, and one descant-sized recorder.
It is quite obvious that the proportions of the tubes with circa 2:3 suggest layers
in fifths. The hypotheses that the alto recorder SAM 135 was kept in this etui
may now be checked in practice: The instrument fits perfectly into the tubes
of medium length. The alto recorder SAM 135 has its pitch on g#\(^1\) (at a\(^1\) = 440
Hz). Finally we can state that the historic case united a consort in *mezzo punto*.
Its missing descant should be tuned on d#\(^2\) and the missing tenor recorder on
c#\(^1\). Unfortunately no other fitting instrument that could complete this consort
has appeared until now in the Viennese collection or anywhere else. So one has
to assume that the recorders that originally belonged to the case SAM 171 did
not survive. With the help of this etui, however, it has at least been possible to
prove that the recorders with features described by Silvestro Ganassi were indeed
combined in consorts and not (only) used as solo instruments. This fact is one
of the most important conclusions in the field of performance practice within
recent years, and it could never have been stated without the information given by the instrument case.

By translating the measurements and technological parameters of the recorder SAM 135 into the missing instrument sizes, and by using the information deduced from the etui, today’s instrument makers are able to reconstruct the whole consort, and musicians can revive the sound of the lost instruments.

**NOTES**

1. *Tartölten* are double reed instruments with a slightly conical inner bore that runs helically through the interior of the whole corpus, on which equidistant finger holes enable the playing of precise tones.

2. In practice the applied method depends on the condition of the instrument and on the kind of sound production. The impedance measurement achieves good results for brass instruments (provided that the original mouthpiece is used), for recorders the implementation of organ blowing devices is advisable (on condition that the windway and the labium are intact), whereas for reed instruments the impedance measurement (single reed instruments) or acoustic calculation (all reed instruments) produce good results. The playing of the instruments by musicians is ineffectual because many subjective parameters (embouchure, air regulation, musical modulation, etc.) influence the sound, and all musicians compensate for the characteristics of their instrument, so that the musician always comes to the fore. Moreover, the playing of woodwind instruments by musicians is off-limits in museums – where the conservation and protection of the items is the central concern, humidity, heat and other negative influences are prohibited.

3. This sign symbolises the wings of the silkworm moth.

4. Due to the shrinkage of the wood, it seems that the diameters of the tubes decreased slightly. Originally there was enough space between the instrument(s) and the inner surface of the etui to wrap the recorders in a thin cloth to avoid unattractive scratches on the surface of the instrument(s).

**REFERENCES**


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FIG. 10.1 Disposable straw cage (without cricket) (source: Bopuke 波普客 (Popcorn idea factory), 2015: 108)