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Hornbostel-Sachs universal classification and André Schaeffner: a discordant or an original voice?

Florence Gétreau

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Florence Gétreau. Hornbostel-Sachs universal classification and André Schaeffner: a discordant or an original voice?. Reflecting on Hornbostel-Sachs's Versuch a century later, Fondazione Ugo e Olga Levi, Jul 2015, Venice, Italy. pp.95-110. halshs-03092697

HAL Id: halshs-03092697

<https://shs.hal.science/halshs-03092697>

Submitted on 2 Jan 2021

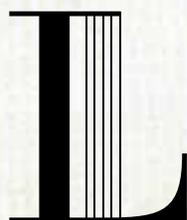
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Reflecting on Hornbostel-Sachs's *Versuch* a century later

Proceedings of the international meeting
Venice, 3-4 July 2015



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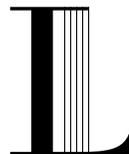
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edited by Cristina Ghirardini



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*The warmest thanks to Matilda Colarossi
who has also helped with the linguistic revision
of the texts.*

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Progetto grafico e impaginazione

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Stampa

Cross Value, Treviso

in copertina

Livre de prières de Croy
with illuminations by Simon Bening
and Gérard Horenbout, ca. 1510, f. 27
(A-Wn, Cod. 1858)

© 2020 by FONDAZIONE LEVI
S. Marco 2895, Venezia
Tutti i diritti riservati per tutti i paesi

edizione on-line
www.fondazionelevi.it/editoria/reflecting-on-hornbostel-sachss-versuch-a-century-later/

ISBN 978 88 7552 0625

a Febo Guizzi

Reflecting on Hornbostel-Sachs's *Versuch*
a century later

- 9 Foreword
Daide Croff
- 13 Introduction
Cristina Ghirardini
- 25 Reflecting on Hornbostel-Sachs's *Versuch* a century later
Fébo Guizzi
- 35 Being and becoming of musical instruments: Curt Sachs and diffusionism
Renato Meucci
- 51 Hornbostel-Sachs and Mahillon: the unanswered question
Ignace De Keyser
- 65 The Hornbostel-Sachs classification system.
Its origin and relevance for contemporary research
Lars Christian Koch
- 81 The early reception of Mahillon's taxonomy
and of the Hornbostel-Sachs classification system in Italy
Gian Nicola Spanu
- 95 Hornbostel-Sachs universal classification and André Schaeffner:
a discordant or an original voice?
Florence Gétreau
- 111 Enhancing and developing the Hornbostel-Sachs System:
the case of flutes and bagpipes
Marie-Barbara Le Gonidec
- 145 How far do we dare to revise Hornbostel and Sachs?
Jeremy Montagu
- 149 Issues in the classification of multiple-feature musical instruments
Roger Blench
- 161 Some reflections on the use of the Hornbostel-Sachs classification
in studying children's instruments
Vincenzo La Vena
- 167 The revision of the Hornbostel-Sachs classification in 2011 by the MIMO consortium
Margaret Birley and Arnold Myers, with Rupert Shepherd

Florence Gétreau

Hornbostel-Sachs universal classification and André Schaeffner: a discordant or an original voice?

During summer 1932, André Schaeffner (1895-1980) submitted to Curt Sachs a new classification of musical instruments that he had already announced in the first issue of the «Bulletin du Musée d'Ethnographie du Trocadéro» in January 1931. Schaeffner's proposal was then published in «La Revue Musicale» [1932] and later developed as *Appendix* to his seminal monograph *Origine des instruments de musique* [1956]. This article will present the genetic and characteristics of this classification, evaluate its international reception, its influence on French ethnomusicologists working on organology, its heritage in academic training and publications, and finally its impact in the storage and indexing system of the collections preserved in the Musée de l'Homme and later in the Musée du Quai Branly.

André Schaeffner's classification system 1931-1936

George Henri Rivière (1897-1985), the French museologist who served as co-director of the Musée d'Ethnographie since June 1928 (future Musée de l'Homme) to organize temporary exhibitions [Gorgus 2003, 28-39], asked André Schaeffner to create a Department of Organology and to prepare a comparative exhibition room of musical instruments in 1929. Two years later, he asked him to participate, under Marcel Griaule, in the famous field research Mission Dakar-Djibouti. In 1931 Schaeffner published his monograph on Stravinsky and an expanded French version of Hugo Riemann's *Dictionnaire de musique* [Rouget 1973; Paulme-Schaeffner 1982a, 1982b]. André Schaeffner had already prepared in 1930 a *Projet d'une classification nouvelle des instruments de musique*, announced in January 1931 in the first «Bulletin du Musée d'Ethnographie du Trocadéro». He then submitted it to Curt Sachs (letters are preserved in the former Archives of the Musée de l'Homme in Paris¹) at the beginning of the summer 1932. Sachs answered on 9 July 1932 and endorsed his judgment, wishing to submit Schaeffner's work to Professor Hornbostel:

1. Médiathèque du Musée du Quai Branly. Archives, Dossier «Curt Sachs». Schaeffner's first letter bears no date (July 1932?), Sachs's first answer is dated 9th July 1932.

Professor Dr. Curt Sachs, Berlin W 10, Lichtensteinallee 2, to André Schaeffner,
9 July 1952

Sehr verehrter Herr Kollege!

Für die freundliche Übersendung Ihres Bulletins danke ich Ihnen herzlichst. Sobald die Ferien anfangen, werde ich mich mit Hornbostel zusammen über Ihre interessante Arbeit setzen und sie gründlich studieren.

Ihr hochachtungsvoll ergebener

Curt Sachs

Schaeffner first sketch was then expanded in his article on the same subject published in October 1932 in the «Revue Musicale». In this article, he pointed out that Mahillon's, and Hornbostel-Sachs's definition of *autophones* or *idiophones* was ill defined («mal délimitée»), covering all that is unclassifiable:

Mais revenons à l'idée d'instruments *autophones* ou *idiophones* introduite par Mahillon. Si juste soit la distinction établie entre le membranophone et l'autophone – de sorte qu'un tambour à membrane ne se confond point avec une cloche de bronze ou de bois –, si claire soit la notion même de membranophone, la classe des autophones n'en apparaît pas moins assez mal délimitée. Et en elle figure le rebut de l'ancienne classe des instruments à percussion: là se range tout ce qui est inclassable par ailleurs [Schaeffner 1952, 219].

Considering that the use of the word 'percussion' should be rejected to describe how man proceeds to put an instrument in vibration, and a classification based on the procedure to put an instrument in vibration should be avoided, he underlined that one specific instrument can be used with different playing techniques. He then proposed that the subdivisions should be based on «factors of an immediately appreciable character», on elements we find in physical matter of the sounding body excited by the musician:

Malgré les avantages certains qu'elle présente, la classification de Mahillon et de ses continuateurs prête à équivoque par l'emploi du terme d'*idiophone*, par la pente aussi qui y conduit sans cesse à une division par modes d'excitation sonore malaisés à définir ou que le manque de témoignages laisse ignorer. Nous croyons qu'une meilleure base de classification serait assurée par des éléments de caractère évident, indiscutable, tels qu'on les appréciait immédiatement et sans qu'ils exigeassent une expérience musicale rendant cette étude peu accessible aux ethnologues ou aux préhistoriens [*ibidem*, 223].

He finally proposed, quoting Al-Farabi, the Arab theorist (d. 950), according to whom «the striking organ is either the human hand or the respiratory apparatus» to base his classification on a uniform principle: the nature and structure of the vibrating material. Schaeffner defines two principal categories: instruments with solid vibrating bodies (subdivided into those «not susceptible

of tension», and those that are «flexible»), and instruments in which the air itself is the primary vibrator:

Il nous apparaît d'abord que tous les instruments de musique sans exception se peuvent ranger selon deux grandes catégories: les instruments où le premier corps qui vibre est un solide et ceux dont le premier corps vibrant est un gaz – en l'espèce, l'air. D'un côté, les instruments à cordes et à percussion (soit cordophones, membranophones et idiophones); d'un autre côté, les instruments à vent (soit aérophones). Une pareille division ne répond-elle point à deux gestes essentiels et distincts de l'homme: celui de toucher ou de battre un corps quelconque, celui de souffler à l'intérieur d'une cavité quelconque? Deux gestes naturels, dont les prototypes mêmes se trouvent dans le chant et dans le frappement des mains ou de toute autre partie du corps – cuisse, épaule, pied sur le sol... Tant le théoricien arabe Al Farabi que Victor Mahillon avaient noté cette division fondamentale dont ils eussent pu tirer le principe de la présente classification des instruments de musique [*ibidem*, 225].

Before its publication André Schaeffner submitted to Curt Sachs the proofs of his article, to be published in the same issue of the «Revue Musicale» than Sachs's article *A travers un musée d'instruments* [1932] devoted to the Berliner museum of Musical instruments. Schaeffner was «honored» that his article had such a «flattering neighborhood»:

André Schaeffner to Prof. Curt Sachs, Berlin W 10, Lichtensteinallee 2 [July 1952?]

Monsieur le Professeur,

Je vous remercie vivement de la carte que vous m'avez envoyée le 9 juillet dernier et par laquelle vous m'annoncez si aimablement que vous voulez bien durant ces vacances examiner mon projet de nouvelle classification des instruments.

Mon désir eût été de vous envoyer au préalable une étude beaucoup plus approfondie et plus exacte de la question qui m'occupe. Cette étude fut rédigée au cours de l'été 1931 et devait paraître en octobre de la même année dans la «Revue musicale» (de Paris). J'avais même prié mon ami Georges Henri Rivière de vous en adresser un tirage à part. Lorsque je revins d'Afrique, où j'avais été envoyé en mission, j'eus la tristesse de constater que mon étude n'avait pas encore paru. Ce qui, maintenant, me console, c'est qu'elle paraîtra en octobre prochain, en même temps qu'un travail de vous: je ne puis qu'être honoré d'un voisinage aussi flatteur [...].

He then underlined that this article is not giving the detail of his subdivisions, not yet ready. He planned to work on these subdivisions by classifying all the instruments preserved in the Musée du Trocadéro and after examining the collections in Berlin, Bruxelles and Oxford:

Je vous prie de ne tenir aucun compte de l'ébauche imparfaite de ma classification que contient le «Bulletin du musée d'Ethnographie du Trocadéro»; elle avait pour but unique

de prendre date. Dans le cas où vous voudriez malgré tout connaître ma classification, je me permets de vous envoyer dès maintenant un jeu d'épreuves de l'étude qui paraîtra en octobre. Je m'excuse de l'horrible présentation de ces pages corrigées.

Cette dernière étude ne renferme pas le détail de mes subdivisions que je n'ai pas encore mis au point; du reste ce n'est qu'en classant tous les instruments du Musée du Trocadéro et qu'après avoir examiné les riches collections de Berlin, de Bruxelles et d'Oxford, que je compte saisir plus nettement ces subdivisions.

Vous trouverez cependant le principe dans les lignes encadrées au crayon de la page 7 des épreuves ci-jointes.

En m'excusant de la liberté que je prends de vous envoyer mon article en épreuves, je vous prie, Monsieur le Professeur, d'agréer, l'expression de mes très respectueux sentiments et de toute la reconnaissance que je dois à vos travaux.

[André Schaeffner]

Curt Sachs answered at the beginning of September 1932 but he suspended his opinion to the return of Hornpostel, still on holiday, commenting that the subject and the 'weight' of the author need a detail examination:

Curt Sachs to M. André Schaeffner, Musée d'Ethnographie, 4 september 1932

Monsieur et cher Collègue,

J'ai étudié avec soin les épreuves que vous avez bien voulu m'envoyer, mais je voudrais suspendre la communication de mon point de vue jusqu'au retour de M. von Hornpostel, qui devra avoir lieu dans les semaines prochaines. Le sujet même et le poids de son auteur nous demandent un examen minutieux.

Je vous prie, Monsieur, d'agréer, l'expression de ma plus haute considération.

Curt Sachs

Georges Henri Rivière, the young joint director of the Musée d'Ethnographie du Trocadéro, took the opportunity of this enquiry to visit Curt Sachs in Berlin in September 1932, arranging some weeks later an official invitation to his museum. Sachs was then welcomed in Paris in June 1933 to give a lecture on comparative musicology at the Institut d'Ethnologie (June 20) and another one on the History of Dance – related to his recent publication *Eine Weltgeschichte des Tanzes* [Sachs 1933] at the Musée Guimet (June 30). Back in Berlin, Sachs expressed his gratitude to Rivière at the end of July, saying that he was happy in Paris and moved by his hospitality. These preliminary contacts played certainly a role when, on 30 September 1933, Sachs was deprived of all his academic positions by the National Socialist Regime. Paul Rivet, the Director of the Musée d'Ethnographie, invited then Sachs officially on 24 October «to collaborate in the classification of the musical instruments of our collections in collaboration with M. Schaeffner». Having the benefit of a financial support from the Universal Jewish Alliance and from the Rockefeller Foundation, Sachs

took indeed the opportunity of this stay of four years in the Musée du Trocadéro with more ambition than the official invitation planned. But we can be sure that Curt Sachs had, due to these circumstances, plenty of occasions to share, during these years of collaboration, his point of views on Schaeffner's classification. It was indeed published in a much more developed version in his seminal book *Origine des instruments de musique* [1936, 371-377]. As clearly exposed half a century later by Geneviève Dournon [1992, 253-254]:

It is based on a uniform principle: the nature and structure of the vibrating material. Schaeffner defines two principal categories: instruments with solid vibrating bodies and instruments in which the air itself is the primary vibrator.

The subdivisions are based on the material (wood, metal, stone, etc), the form or structure of the sound-producing component (stick, lamella, plaque, tube, husk, block) in the case of those «not susceptible of tension» and those that are «susceptible of tension» (string, stalk, thong); the membranes are classed by the body of the instrument (vase, tube, frame) on which they are stretched. In the category of instruments with vibrating air, Schaeffner distinguishes those for which the vibrating air is not confined – or 'air ambient' – as for example the bull-roarer, from wind instruments proper, which are subdivided into single pipe, pipe with natural reeds and reed pipe.

As pointed out by Geneviève Dournon [1992, 253]

Schaeffner does not introduce the means of setting an instrument in vibration as a criterion of subdivision, but simply as a complementary indication for certain types (direct percussion sticks, struck boards, scraped bones, plucked lamella, skin set vibrating by direct of indirect percussion etc.). He thus makes optional something that was a useful classificatory sub-criterion in Hornpostel-Sachs and Mahillon, at least in three of their four categories.

The reception of *Origine des instruments de musique* and its new classification among international ethnomusicologists

The reception of that book was quite enthusiastic, even if the reviewers pointed out his new but disconcerting classification and the inconsistency on a number of points.

Klaus Philipp Wachsmann (1907-1984) signed the first review of the book [1937] only with initials. But it is interesting to know that he had been trained in Musicology and Comparative Musicology by Erich Moritz von Hornpostel and Curt Sachs before 1933, that he earned his PhD on pre-Gregorian chant at the University of Fribourg (1935) and proceeded to London for post-graduate studies in Bantu languages and phonetics. As a very young Africanist, later curator of the Uganda Museum in Kampala, he found the book in the tradition of Hornpostel-Sachs thought but took little attention to what he considered an attempt for «a modified classification» [*ibidem*]:

Sachs set out to write a history of musical instruments which was based mainly upon their structural elements and their diffusion. His standard work on this subject is *Geist und Werden der Musikinstrumente* [1929]. André Schaeffner has been inspired to this work by Sachs's line of research.

It is worth while to look at the index of Schaeffner's book as it shows the method of his approach to the subject. The earlier chapters dealing with the invention and application of musical instruments, treat to the following subjects: the corporeal origins [...]; the organology of the theatre; work and play; religion and magic. But then Schaeffner changes his course and confines himself to an exclusively organological survey of the main types of instruments. He goes on by giving a genealogical account of string instruments, of wind instruments, and an essay on the position of musical instruments in general in the evolution of music and in cultural history. Finally, a modified classification of musical instruments is attempted.

Schaeffner's treatment of the problem is instructive and full of suggestions owing to observations partly of his own made during two expeditions to Africa partly based on specimens of ethnological collections, partly cited from traveling records and essays of other scientists. Well-chosen quotations from philosophers, poets, and composers make his book pleasant reading.

Few months later, Francis William Galpin (1858-1945), the famous organologist and specialist of Triangular harps and Sumerian Music, wrote a review [1937a] – also only signed by initials – of Schaeffner's book in the same issue of «Music & Letters» where his own major *A textbook of European Musical Instruments. Their Origin, History and Character* [1937b] was reviewed. He was quite impressed by Schaeffner's «remarkable survey», but considered that the new classification was more «ethnographical rather than musical» because based on materials, and found disconcerting that «In the first division the 'material' arrangement is followed; in the second it is discarded» [Galpin 1937a]:

With one of the great ethnographical collections of Europe at his command and a personal acquaintance with primitive people both in Africa and America, M. Schaeffner has been able to present to us in this treatise a remarkable survey of man's earliest efforts in music-making; though it may not always win our assent in its conclusions, it cannot fail to arrest our attention and stimulate further enquiry [...].

Following on the text, a new scheme for the classification of musical instruments is set out. Without wishing to detract from its intrinsic interest, we may gather from its construction the real purpose and principle of the whole work. It is ethnographical rather than musical. For, as a true ethnologist, the author classes his subject on the lines of the materials used (wood, metal, stone, bone, shell, etc.) and for the history of human development such a view is important. In this way too he follows the age-long practice of the Chinese, who group their instruments by their substances, though their object in so doing is cosmological. But for the musician the material employed is of quite minor account [...]. The main point for the musician is of course, the acoustical and sound-producing principles involved. It is, therefore, momentarily disconcerting to find in his classification but two divisions. [...] In the first division the 'material' arrangement is followed; in the second it is discarded.

Douglas Harold Varley (1911-2000), the author of an extensive and annotated bibliography published in 1936 under the title *African Native Music*, gave a review in the journal «Man» in which he considered that Schaeffner «without attempting to define 'a musical instrument', goes a stage further than M. Closson, and emphasizes not the rhythmic origin, but the space in which the sounds reverberate, and the quality of the objects which produce them». He quoted without comments «a suggested classification for instruments based on the four categories» and gave some addenda to Schaeffner's «imposing systematic bibliography» [Varley 1937].

Percival Robson Kirby (1887-1970), one of the earliest musicologists specialized on African Music and author of *The Musical Instruments of the Native Races of Southern Africa* [1934], stressed the «absorbing interest» of the book, its promising posterity, its universalism but once again the «inconsistency» of the two basis for his classification (materials and in the second part methods of sound production) [Kirby 1939]:

His work, although it deals with a musical subject, is, of course, ethnological in outlook, and this is undoubtedly right [...]. Schaeffner [...] is historian, geographer, ethnologist, musician, and philologist; he has had practical experience in the field [...], he is in charge of one of the most important collections of primitive and exotic musical instruments in Europe; and he has read widely in the literature of this subject. As a result he has succeeded in producing a volume of absorbing interest. Even where we disagree with some of his conclusions, we must confess to admiration for his ideas, and willingly admit that his work will be of the greatest value to future investigators [...]. Schaeffner concludes with a new classification of musical instruments, dividing them into two main groups. In the first the classification is based upon the materials from which they are made; in the second according to the method of sound production. Surely there is an inconsistency here [...]. The book is a prodigious attempt on the part of one man to gather together and to unify knowledge, which is scattered all over the globe, and throughout the ages. Every student will welcome its appearance, and will, on becoming more acquainted with it, feel increasingly indebted to the author.

George Herzog (1901-1984), native of Budapest, who completed his training in music in Berlin where he was impressed by Hornbostel circle and understood the importance of cultural context in studying 'exotic' musics, established the first course in ethnomusicology in Columbia University. He was the first reviewer to point out that Schaeffner drew the consequences of a critical attitude to the previous classifications, but he criticized the too prominent position given to materials, the «confusion between the aims of a technological as against a genetic classification» and the inconsistency of his system on several points [Herzog 1941]:

This is among the most important general treatments of musical instruments. [...] In large measure the work is a critique, implicitly or explicitly, of the classificatory schemes of Mahillon, Montandon, and especially of Sachs and von Hornbostel.

Schaeffner goes into considerable detail about subtle technical and acoustical features of sound production on musical instruments. Previous schemes were based on grouping and subdivision according to the method of excitation or sound production. He submits, among other considerations, that 1) many instruments consist of an enclosed cavity; the nature of the cavity and its walls may be more important for the understanding of the development of the instrument than the methods of making it vibrate; 2) there are numerous technological 'contagions' that connect forms whose method of sound production may appear technologically different; 3) transitional and substitutive forms often cross the divisions; 4) the same material and object has often been used for making different kinds of instruments [...]; 5) the same gesture or type of bodily movement may result in technologically different musical instruments; the gesture must be kept in mind for technological as well as historical considerations.

After these observations, supported by considerable detail, one looks with interest – and some disappointment – at the scheme Schaeffner himself offers. The system contains two main subdivisions [...]. Within the main groups further divisions are made according to material, form, and occasionally the method of sound production. These special principles are not always given the same place or order in the scheme. The material of which the instrument is made has been given rather too prominent a position. Consequently Schaeffner's system also could be shown to be inconsistent, on a number of points. [...] Schaeffner's scheme has got further away than others from the sometimes unconscious confusion between the aims of a technological as against a genetic classification.

To summarize, none of the five reviewers paid a detailed attention to Schaeffner's proposal and quite all of them considered it 'inconsistent' in several aspects.

Half a century later, Margaret Kartomi as the first scholar to concentrate with the closest attention and universal interest on all classification systems, gave the first detailed account on Schaeffner's attempt, with a considerably deeper comparative emphasis [1990, 174-176]:

Schaeffner rejected Mahillon's and Hornbostel and Sachs's category of autophones/idiophones [because it] is not sufficiently differentiated and therefore cannot avoid the faulty classification of instruments such as the African *sanza*, whose plucked tongues – not the body or soundboard – vibrate, thus making them linguaphones rather than idiophones, or East Asian and African xylophones, whose keys, not the body or box, vibrate. More importantly, the presence of the idiophone category destroyed the only basis for the Hornbostel and Sachs classifications's claim to logical structure, namely, single-character division at the highest step. [...] However, Schaeffner could not accept the differentiation of the category, nor its logical inadequacy. Schaeffner also argued that the physical structure of an instrument, not its playing method, should be the main criterion for its classification. He constructed a key, making a basic distinction between wind instruments and all others and dividing the latter into those that are operated by tension and those that are not [...].

Schaeffner's system meets the demands of logic in vitally all respects. Not only is it logically exhaustive, potentially covering all real and conceivable instruments, but its two major categories are mutually exclusive, and it applies single-character division at all its five steps (although its lowest step is a little more hazy than the others). It is not a symmetrically developed scheme, as its second category has only two steps in the case of instruments containing free cavities, three steps in the case of instruments with ambient air, and four steps in the case of instruments with air columns), as opposed to five in the first category. Unlike the Hornbostel and Sachs Classification, Schaeffner's scheme has not been translated into English, and has had little impact outside France. Its comparative novelty or, in other words, its lack of continuity with past classifications, the greater prestige and greater exposure of Hornbostel and Sachs's classification mediated against the widespread acceptance of Schaeffner's scheme, despite its elegantly logical quality.

Geneviève Dournon as a follower of André Schaeffner

We would like now to come to André Schaeffner's main follower, Geneviève Dournon, who was in charge of the collection of musical instruments in the Musée de l'Homme between 1967 and 2004. In 1982, in the special issue of the «Revue de Musicologie», devoted entirely to the late Schaeffner (with massive French contribution), Dournon wrote:

Even if very original, the scheme proposed by Schaeffner completes and illuminates, rather than replace the *Systematik der Musikinstrumente*. [...] Like all classification, it has questionable aspects, for example when separating in distinctive categories, because of their different material, instruments pertaining to the same organological type, or when subdividing too briefly important categories. But it is however a first rank tool [...] for ethnologists and anthropologists as Schaeffner already pointed out.

A decade later, reviewing Margaret Kartomi's monograph in her article *Instrumentariums et classifications* for the «Revue de musicologie», an occasion of a developed overview on classification systems, Dournon [1993] criticized her for not highlighting sufficiently how Schaeffner's proposal could bring much to Hornbostel-Sachs's classification. For Dournon, both systems are complementary. The four instrumental classes can easily be redistributed (at the higher level of the hierarchy) inside Schaeffner's two perfectly exclusives categories. For her also, idiophones can enter without difficulty in the category of solid vibrating bodies, constituted with material 'non-susceptible of tension', while chordophones and membranophones take place in this same large category as 'solid bodies susceptible of tension'. Concerning aerophones, they can be inserted logically among the 'air vibrating instruments'. Schaeffner's dichotomy used upstream the quadripartite division, and has so the indisputable advantage of increasing the definition of Hornbostel-Sachs categories. No wonder that Dournon developed these same arguments when she was in charge to write the chapter *Organology* in Elen Myers' *Ethnomusicology*: In her

chapter *Systematics* she gives an introduction defending once again the value of Schaeffner's proposal [Dournon 1992, 252-253]:

André Schaeffner did not entirely adhere to the system of the two German theoreticians [...], although he freely expressed his esteem for and indebtedness to the work of Hornbostel and Sachs [...]. The interest of the Schaeffner system, which Wachsmann describes [1984, 408], as «logically perfect and coherent» [...]. Schaeffner has not been widely used, despite its undoubted interest, perhaps because the user must revise and complete the subdivisions himself. Moreover, Schaeffner's work on the origin of musical instruments, which is fundamental to ethnomusicology and organology and includes his classification, has never been translated from its original French into any other language (except a recent Italian version [Schaeffner 1978]).

Dournon inserted in her article *Organology* for Helen Myers' manual her own *Classification* where she merged the two systems, giving also for each subdivision several vernacular names of real instruments and their geographical provenance, making this tool easier to use.

In 2007, in her contribution to Jean-Jacques Nattiez's encyclopedia, Geneviève Dournon re-used, in a French translation, the same classification in her chapter *Instruments de musique du monde. Foisonnement et systématiques* [Dournon 2007]. But she added some questionable changes in the hierarchies which are not always coherent. We should not forget also that when promoting her *Guide pour la collecte sur le terrain* [1981] in her article on Schaeffner's museographic heritage, Dournon mentioned the fact that she used, for her chapter dealing with the identification of instruments, the main principles of Schaeffner's classification, because its effectiveness was verified both for the training of African museographers and for students in Ethnomusicology at the University of Nanterre, a direct extension of Schaeffner's teaching initiated at the Institut d'Ethnologie [*ibidem*, 219]. In the same way one can find evidence of the spread of Schaeffner's principles in the handout distributed by Dournon to her students during the same years when she published her 'merged' classification with Helen Myers (see Appendix).

Schaeffner's classification and its impact for the storage and indexing systems at the Musée de l'Homme and the Musée du Quai Branly

When Geneviève Dournon became in charge of the musical instruments collections at the Musée de l'Homme, in 1967, she was impressed by the storage, «where Schaeffner had gathered and classified thousands of instruments whose observation and study had inspired his Master book» [1982, 216]. She kept this system as long as she served in this institution.

Finally, the most 'living and visible' heritage of Schaeffner's concepts, if I can risk this provocative metaphor, is the famous and controversial 'glass tower' or

'glass cylinder' devoted to the storage of all the instruments, in the Musée du Quai Branly that was opened in 2006 [Leclair 2007]. Here the entire collection, despite the arduous architectural gesture of Jean Nouvel, is 'visible' even if quite 'invisible'. It is classified, thanks the work of Madeleine Leclair, by continent, then after Hornbostel-Sachs four categories, and then applying material criteria inherited from Schaeffner's seminal book and classification.

Appendix

Handout distributed by Geneviève Dournon
when teaching Organology at the University of Nanterre (1991)

LES FAMILLES D'INSTRUMENTS DE MUSIQUE

Tous les instruments de musique relevant de l'acoustique (et non de l'électronique)
peuvent être rassemblés selon quatre groupes

Qu'est-ce qui vibre ?	Comment
Deux sortes de matières vibrantes :	Principaux procédés de mise en vibration
Les corps solides	Frappement
- rigides (bois, pierre, métal, etc.)	Secouement
- élastiques (membranes, cordes)	Raclement
L'Air	Pincement
- contenu dans une cavité	Frottement
- ambiant	Soufflement

On définit ainsi quatre catégories instrumentales:

Idiophones – membranophones – chordophones – aérophones

Qui constituent la CLASSIFICATION généralement utilisée en ORGANOLOGIE,
science des instruments de musique.

MATIÈRES RIGIDES

Le son est produit en mettant en vibration des matières rigides par:

Entrechoc

- de deux objets semblables (pleins ou creux): cymbales, castagnettes
- d'une série de plaques de pierre (lithophone), de bois (xylophone), de métal (métallophone)

Secouement

- d'un ensemble d'éléments mobiles: sonnailles
- d'un objet creux rempli ou entouré de petits corps mobiles (hochet et hochet-sonnailles)
- d'une série de disques enfilés sur une tige: sistre
- de tubes disposés dans un cadre: tubes oscillants ou angklung

Raclement

- des côtés cannelés d'un objet (plein ou creux): racleur

Frottement

- de la face lisse d'un objet (plein ou creux): bloc frotté

Pincement

- de l'extrémité d'une languette flexible insérée dans un cadre: guimbarde
- des extrémités d'une série de languettes flexibles disposées sur une caisse: sanza

CES INSTRUMENTS DE MUSIQUE, TRÈS NOMBREUX ET DIVERSIFIÉS,
CONSTITUENT LA CATÉGORIE DES **IDIOPHONES**

MATIÈRES ÉLASTIQUES: LES MEMBRANES

La mise en vibration d'une membrane tendue sur un corps de résonance s'obtient par:

Percussion ou Friction.

On distingue les différents types d'instruments en fonction des caractéristiques suivantes :

Nombre de membranes: une ou deux

Forme du corps de résonance:

- **Caisse** (cylindrique, hémisphérique, tronconique, en sablier, en tonnelet, en gobelet, etc.)
- **Cadre** (circulaire, quadrangulaire, polygonal).

Système d'attache de la membrane: lacée, collée, clouée, chevillée, cerclée, etc.

CES INSTRUMENTS, APPELÉS TAMBOURS, CONSTITUENT LA CATÉGORIE DES **MEMBRANOPHONES**

MATIÈRES ÉLASTIQUES: LES CORDES

La mise en vibration d'une corde tendue sur un corps de résonance s'obtient par:

PINCEMENT – FRAPPEMENT – FROTTEMENT



Le plan des cordes – perpendiculaire ou parallèle au plan du corps de résonance – permet de déterminer les différents types d'instruments:

- ▲ ● **Arc Musical:** corde tendue entre les deux extrémités d'une branche arquée.
- ▲ **Pluriarc:** plusieurs arcs musicaux réunis dans une caisse.
- ▲ **Harpe:** corde(s) tendue(s) entre une caisse et un manche (arqué ou droit) formant entre eux un angle
- ▲ ● ■ **Cithare:** cordes parallèles entre elles et au corps de résonance ne comportant pas de manche.
- ▲ ■ **Luth et Vièle:** corde(s) tendue(s) entre une caisse et un manche situés dans un même plan; cordes parallèles entre elles.

CES DIFFÉRENTS TYPES D'INSTRUMENTS, DITS À CORDES, CONSTITUENT LA CATÉGORIE DES **CORDOPHONES**

L'AIR

Le son peut être produit de deux manières bien distinctes

Par la mise en vibration de l'air contenu dans une cavité au moyen du souffle:

- heurtant l'arête d'un orifice (embouchure) situé à une extrémité ou sur le côté de l'instrument: flutes
- ébranlant une languette simple ou double: instruments à anches
- faisant vibrer les lèvres contre l'embouchure de l'instrument: trompes

Par la mise en vibration de l'air ambiant au moyen du tournoiement:

- d'une plaque: rhombe
- d'un disque: diable

CES DIFFÉRENTS TYPES D'INSTRUMENTS, APPELÉS À AIR OU À VENT, ENTRENT DANS LA CATÉGORIE DES **AÉROPHONES**.

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Marie-Barbara Le Gonidec

Enhancing and developing the Hornbostel-Sachs System: the case of flutes and bagpipes

The work I have been carrying out in the past years in the field of the Hornbostel-Sachs system concerns two wind instruments, the flute and bagpipe. I would like to explain how I was able to extend the category they belong to in the Hornbostel-Sachs system.¹ I first became interested in flutes during the first part of my academic studies, and later in bagpipes, also pastoral instruments, which was the subject of my PhD research in the Balkan area. In 1985 I had my first opportunity to work with Geneviève Dournon,² director of the department of ethnomusicology at the Musée de l'Homme in Paris. At that time, the department held roughly 1,200 flutes, and I based my Master's thesis on particular types of flutes which are often known in French as *flûtes obliques* (rim-blown) because they are held obliquely. This is a descriptive term that makes sense in Western culture if we consider the traverse flute or the flute played vertically (like the recorder), but which is not pertinent in the context of transculturally based classifications. These 'oblique' flutes are widespread in Balkan states. They are the Bulgarian *kaval* (figure 1, p. 108), and also the *nây*, or *ney*; played in classical oriental music (figure 2, p. 108). The name, 'oblique' flute, is not pertinent in all cases, as we can observe in the example of the Persian *ney* (figure 3, p. 108).

If we compare Turkish and Persian flutes, we see that the Persian flute is played in line with the body's vertical axis. I decided then to provide another name, basing my choice on the English 'end rim-blown flute', which is more logical (even if in French it is translated with the lengthy term: *flûte à insufflation sur le biseau terminal*). That first study [1988] was monographical and concerned this type of flute only. From an organological standpoint, I studied the body of twenty or so flutes from the collection held in the Musée de l'Homme, choosing examples that presented a different mouthpiece or a different playing technique.

1. Many thanks, for the illustrations found herein, to the Kunitachi college of Music, the Musée des Civilisations de l'Europe et de la Méditerranée, the Société des Océanistes, Hyptique; to Alice Barrat, Bertrand Bilger, Cyrus, Jean-Pierre Dalbéra, Kudsî Erguner, Dobri Giaurov, Paoun Kušlev, Constance Le Gonidec, Jean-Sébastien Martin, Benoît Mager, Valérie Pasturel, Todor Trifonov, Jean-Michel Vandercamère, Anton Varela, Hugo Zemp; to the *zampognari* seen in Saint Chartier in 2007 and to the Slovak player of *komcovka* I met thanks to Igor Mačák. I would like to thank Laurence Fayet for helping with the English terms in the classification of flutes.

2. This paper is dedicated to her in gratitude for what she awarded me during my studies.

- 181 For a revision of the reeds taxonomy (also in the light of some new discoveries)
Nico Staiti
- 189 The Hornbostel-Sachs system: a model for the twenty-first century?
Stéphanie Weisser
- 199 How to create Hornbostel-Sachs codes for polyorganic instruments
and other marginal subdivisions
Cristina Ghirardini
- 215 Synth in a box. On the systematic classification of electric, electronic
and experimental instruments using the Hornbostel and Sachs taxonomy
Maarten Quanten
- 227 Classification of Musical Instruments
Erich M. von Hornbostel - Curt Sachs, Febo Guizzi
- 281 Sistematica degli strumenti musicali
Erich M. von Hornbostel - Curt Sachs, Febo Guizzi

Davide Croff

Foreword

We are honoured to present here the *Atti*, the records of an intense and productive exchange on the theme of the classification and the description of musical instruments.

Our first thoughts go to Febo Guizzi, to whom we will be forever grateful for proposing this initiative for the one hundred year anniversary of the publication of the classification system created by Erich Moritz von Hornbostel and Curt Sachs in 1914. Guizzi worked intensively on this subject, and we believe that his contribution – in continuity with the research carried out by and with Roberto Leydi – is extremely important.

In 1985, on the occasion of the international year of music, the Fondazione Levi, too, along with numerous other associations, participated in the proceedings by holding an important conference on the restoration of musical instruments. Evidence of this fact can be found in the *Atti*, which were edited by Elena Ferrari Barassi and Marinella Laini. Febo Guizzi took part in the conference and published an articulate intervention on *La classificazione degli strumenti musicali popolari: appunti per una riflessione critica* (The classification of folk music instruments: notes for a critical reflection). In the title itself, as in his methodical elaboration, we find the man Guizzi, his ability to work in the field and to collect objects and information on how those objects are used, that is, objective data that he would later reflect upon critically, in depth, and with dedication. The transcription of the debate which took place at the end of the conference and is found in the *Atti* also holds one of his lectures on the theme, a lecture in which he speaks of the research carried out together with Roberto Leydi in various regions of southern, central and northern Italy in order to collect documentation on musical instruments, on the use of those instruments, and on the history, both ancient and modern, of their evolution using iconography – reconstructing the evolution processes of instruments and how they were played. This presented the chance to make hypotheses on the reconstruction of sound in the distant past.

The defence of the Hornbostel and Sachs classification system – which is