CIMCIM Newsletter

NEWSLETTER OF THE
INTERNATIONAL COMMITTEE
OF MUSICAL INSTRUMENT
COLLECTIONS

BULLETIN DU COMITÉ
INTERNATIONAL DES MUSÉES
ET COLLECTIONS D'INSTRUMENTS
DE MUSIQUE

ICOM

XII - 1985

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Letter from the Chairman

This is our second Newsletter! CIMCIM-members who were not able to attend missed a splendid meeting in the U.S. organised by our American colleagues. The reports will show how privileged we were to visit so many collections. However, a report cannot express the friendly atmosphere of the meeting. We met many old friends and made the acquaintance of many new ones.

The next meeting will be in Argentina in November 1986; we asked our colleagues over there to prepare our meeting. I am sure that they are looking forward to showing us the collections that we do not know and will organise events to show what musical life means to them.

The theme, as you all know, will be "A future for our Heritage? Emergency Alert". I hope that many members will contribute by presenting papers giving the opportunity to discuss problems in our own field regarding the official conference theme. During the Argentinian meeting elections will be held. As the main issue concerns all members we urge them to take an active part in it.

During our New York meeting a wish was expressed that, since computers are finding their way into museums, a pilot project would be studied by some members in order to create a working group. In international committees the activities are focused upon such working groups so that all the members can benefit from mutual experience.

The next General Conference will be held in 1989 in Holland and after that in 1992 in the U:S: As well as these there is a CIMCIM meeting planned for 1988. It would be nice if this could be organised in Berlin where the collections will be celebrating their centenary.

We hope that these meetings will allow us to discuss professional matters : it is the only way to pursue our task in the rapidly changing world of today.

Dr. Jeannine Lambrechts-Douillez
Chairman.

MUSEUM NEWS

Shrine to music, Vermillion U.S.A.

The completion of the recent $1 million renovation project was celebrated with gala dedication ceremonies on Thursday, May 8, 1986.

Edinburgh University Collection of Historic Musical Instruments, Edinburgh, Scotland.

A programme of events is planned during the Edinburgh Festival in association with the clarinet exhibition. The exhibition will be open from Sat 9 August to Sat 30, from 11.00 to 18.00 hrs. For the first two weeks daily tours will be arranged from 14.00 to 14.50. A series of concerts will dlso take place.

Pitt Rivers Museum, Oxford, England.

On 26 June the Pitt Rivers Museum opened its new Balfour Building. This includes the new music gallery with its permanent exhibition 'Music Makers' and a temporary exhibition 'Music fit for Gods'. For those who may regret the loss of the old displays these will be refurbished and remain in place (with as much as ever in the cases) in the 'Old Museum'.

"Le salon de Musique", Musée de l'Homme, Paris, France.

A new music room opened in the Musée de l'Homme, Paris, in June 1985. For a description of the new exhibition see Geneviève Dournon's paper in this Newsletter .

Letter from the Editor

I must first apologise for the fact that this is so very late. My only excuse is explained by the paragraph in the Museum News section. If I had realised the work load involved in opening a new building and reorganising the old I would have been wiser and not offered to edit the Newsletter. May I thank all the members who sent their papers in so promptly and who also sent in their museum news. It would be good if more people did send me in notices of exhibitions and new galleries, as well important acquisitions, we would have to have enough of these to make the News page useful.

Since this Newsletter was typed we have acquired an Olivetti M24 in the Museum. This does now make it possible for members to send me their papers on disk, and from January it would be possible to send them over the 'phone. This could speed up things considerably. If members do have IBM compatible machines these papers could be sent unformated so that then they could be typeset on the University main frame.

It only remains for me to thank Theo von Gleich for all her hard work typing the Newsletter. Without her help I would have found it impossible to produce this at all.

CIMCIM Participants, New York 1985

Margaret Downie Banks	Vermillion
Robert Barclay	Ottawa
Margaret A. Birley	London
Josiane Bran-Ricci	Paris
Kalman Detrich	New York
Dagmar Droysen-Reber	Berlin
Robert Eliason	Dearborn
Ellen Eliason	Dearborn
Catherine Folkers	Washington
Eszter Fontana	Budapest
Sumi Gunji	Tokyo
Friedemann Hellwig	Nuremberg
Cynthia Adams Hoover	Washington
Cary Karp	Stockholm
Birgit Kjellstrom	Stockholm
Melissa Kuronen	Vermillion
Darcy Kuronen	Vermillion
Barbara Lambert	Boston
Jeannine Lambrechts-Douillez	Antwerp
Hélène La Rue	Oxford
Jean-Paul Le Maguet	Nantes
Laurence Libin	New York
Ursula Menzel	Munich
Jeremy Montagu	Oxford
Ken Moore	New York
Mette Muller	Copenhagen
Arnold Myers	Edinburgh
Catherine Megumi Ochi	Tokyo
Stewart Pollens	New York
Carlos Eduardo Rausa	Buenos Aires
Gary M. Stewart	Vermillion
Gary Sturm	Washington
Joana Ungureanu	Rome
Rudolf Wackernagel	Munich
Bettina Wackernagel	Munich

LES REUNIONS DU CIMCIM A WASHINGTON, NEW YORK, BOSTON

Mai - Juin 1985

Washington, 23-26 mai 1985

24 matin

Pour inaugurer cette session, un cordial accueil avait été réservé aux participants dans le cadre agréable de la Reception Suite du Musée (Smithsonian Institution), où ils devaient se retrouver un peu plus tard pour un lunch. Tout d'abord, ils se rendirent à la Division of Musical Instruments, dont l'activité devait leur être présentée en détail. Chaque membre du personnel scientifique intervient à tour de rôle. John Fesperman, conservateur à la Division depuis 1965 et "supervisor" donne les grandes orientations de la Smithsonian Institution, appliquées à la section musicale: préserver le patrimoine, en particulier le patrimoine américain; acquérir dans des domaines variés; développer une documentation au niveau national. L'activité de diffusion du département consiste à monter des expositions temporaires, de préférence à thèmes américains, à les faire circuler, à organiser des concerts sur place. En ce moment se tient une exposition constituée d'éléments fournis par un collectionneur privé et d'une nouvelle acquisition majeure.

Scott Odell, qui avait fondé en 1978 un département central de conservation, après avoir travaillé exclusivement à la Division of Musical Instruments, a réorganisé les laboratoires à la suite de l'ouverture du nouveau Museum Support Center; la visite de celui-ci est prévue.

Robert Sheldon, membre du personnel scientifique depuis 1965 et spécialiste de musées, montre et commente quelques exemplaires d'instruments à vent de facture américaine, utilisés naguère dans les harmonies et fanfares et fait entendre les enregistrements correspondants. Les groupes de musiciens et les collectionneurs étant nombreux dans ce domaine, il n'est pas trop difficile de reconstituer les différents aspects d'un mouvement qui fut très important au XIXe siècle du point de vue musical et en ce qui concerne la facture instrumentale.

Cynthia Adams Hoover, conservateur à la Division depuis 1961, rappelle qu'n 1961 elle a monté sa première exposition, à l'intention du CIMCIM venu ici et que c'est grâce à un groupe de travail composé de MM. A. Berner, H. Glahn et J.H. van der Meer qu'elle a pu organiser cette Division of Musical Instruments. Ses centres d'intérêt et de recherche sont surtout les pianos américains, en particulier la firme Steinway, qui fournissent l'occasion d'importantes études sociologiques. La collection d'instruments à clavier compte environ 250 instruments, aussi bien d'Europe occidentale que d'Amérique; la plupart sont en réserve. Des instruments d'Extrême-Orient figurent dans la partie ethnographique du Musée. Des publications sont faites, notamment à l'occasion d'expositions temporaires. C. Adams regrette parfois que la Division des Instruments ne soit pas un musée indépendant, mais elle reconnaît que l'appartenance à une institution importante présente des avantages considérables.

Gary Sturm, spécialiste d'instruments à archet, gère les collections de la Division depuis 1976. Il s'est occupé récemment de faire entrer par donation un violoncelle fait par Stradivari en 1701, qui fut celui du célèbre virtuose français Adrien-François Servais; il conte cette histoire romanesque d'un magnifique instrument auquel Stradivari donna un fond plat, des

éclisses hautes et qui a une sonorité exceptionnelle. Actuellement il réunit une documentation à ce sujet.

Janos Scholz, musicien professionnel et collectionneur privé, est ici pour présenter des archets de sa collection, qui sont exposés à la Division. Sa collection raisonnée ne comprend que des exemplaires représentatifs des différentes écoles de facture. Il connaît les archets "par l'intérieur" pour en avoir lui-même réparé, examiné de près et joué beaucoup. Il souhaite que sa collection soit utile à de jeunes archetiers.

Les participants sont ensuite conduits au laboratoire de conservation et aux magasins (réserves), dans le même bâtiment.

Le laboratoire est une unité d'étude et de documentation pour l'ensemble des objets en bois, cuirs et peaux, autres matériaux organiques et métaux, du Museum of American History. Les responsables des différents départements font connaître leurs besoins et leurs souhaits en matière de conservation ou d'utilisation des objets (exposition permanente ou temporaire, étude, restauration, mise en réserve, etc.); le laboratoire étudie chaque cas et apporte le traitement approprié, qui se fait la plupart du temps au Museum Support Center. Tous les renseignements recueillis au laboratoire sont informatisés, stockés sur place et diffusés dans tous les départements l'information circule ainsi à tous les niveaux. Une bibliothèque de travail se trouve sur place.

Les magasins bien organisés, conservant tous instruments sauf les claviers, sont constitués d'une seule grande pièce climatisée, meublée de rayonnages ouverts et d'armoires vitrées fermées. Ils sont accessibles aux chercheurs qui peuvent y travailler sur demande.

24 après-midi

Le début de l'après-midi est consacré à l'informatique, présentée par Hernan Otano, au National Air & Space Museum. Les participants ont bénéficié de la démonstration d'un programme musical sur vidéo-disque (système Philips) à lecture laser, faisant partie d'une série consacrée à la musique, dans une perspective pédagogique, produite par l'Université du Delaware. D'autre part, ils ont pu voir comment des données imprimées sont reproduites grâce à une caméra spéciale et ensuite entrées en informatique; à partir de ces données on peut obtenir tous les index, isoler des mots, des paragraphes, etc. La reproduction informatique permet en outre de reconstituter des images de documents endommagés et peu lisibles. La perspective d'avenir est d'obtenir, d'ici quelques années, des images de haute définition et la recherche simultanée des images et textes. Ces systèmes conviennent particulièrement au travail universitaire.

Le vidéo-disque est employé dès à présent au Musée pour envoyer des programmes audio-visuels dans les salles d'exposition.

De retour au National Museum of American History, les participants écoutent une conférence fort documentée sur le Rag-time par John Edward Hasse, conservateur à la Division of Musical Instruments depuis 1984, puis un concert de blues donné par d'excellents musiciens: Charlie Sayles, chanteur et joueur d'harmonica et Joe Harris, qui a travaillé avec Ray Charles, à la guitare-basse.

En soirée, un concert donné avec des instruments de la Smithsonian Institution par deux artistes de grand talent, James Weaver, directeur des concerts, et Lambert Orkis, pianiste, fit apprécier aux congressistes le

clavecin de Benoist Stehlin et le piano à queue de concert de Steinway, 1892, qui fut utilisé par Paderewski.

25 matin

Visite du Museum Support Center, terminé en 1983, qui se trouve à quelques kilomètres de Washington. Les congressistes sont très frappés par les vastes dimensions de cet établissement et par les équipements. Les laboratoires de recherche sont associés aux laboratoires de conservation, mais distincts. En matière de recherche sur les instruments de musique, Claire Soubeyran, de Paris, bénéficiant d'une bourse de son gouvernement, expose les problèmes qu'elle souhaitait voir traiter de façon approfondie sur l'usure des flûtes traversières et expose la manière dont le laboratoire a traité ces problèmes. Le directeur du Laboratoire montre divers appareils d'analyse, donnant des résultats avec le minimum de manipulations. Donatella di Giempietro, qui travaille au Metropolitan Museum of Art de New York grâce à une bourse de recherche Andrew W. Mellon, expose le travail préliminaire à la restauration de la décoration de caisse d'un clavecin attribué à J. Couchet; celui-ci sera pourvu de claviers neufs, copiés d'après les claviers originaux, ces derniers étant conservés à part. Scott Odell, qui a conduit les congressistes dans les différents services, montre également la vaste bibliothèque spécialisée, la chambre de grandes dimensions, les espaces pour emmagasiner les spécimens zoologiques, botaniques, etc.

25 après-midi

Présentation de la Collection Dayton C. Miller à la Library of Congress, par Catherine Folkers, conservateur depuis 1984. Cette collection, qui comprend non seulement les célèbres flûtes (plus de 1.500), mais encore des traités et méthodes, des partitions musicales, des gravures, des sculptures, concernant la flûte, ainsi que des documents de toutes sortes tels qu'autographes, programmes de concerts, est maintenant abritée dans de bonnes conditions; un aménagement rationnel la rend accessible aux chercheurs. Les participants ont eu également la possibilité d'admirer les fameux instruments de Stradivari, le violon d'Amati (1654), le violon de Guarneri qui fut celui de Kreisler, ainsi qu'un autographe de J.S. Bach (la cantate no. 10), exemple parmi d'autres précieuses pièces. La séance s'acheva par un petit concert à deux flûtes une par C. Folkers.

Une invitation à la maison de campagne de James Weaver fit apprécier aux congressistes, non seulement la beauté de cette région verdoyante du Potomac, mais aussi l'hospitalité généreuse de nos hôtes américains, qui ne s'est pas démentie un seul instant pendant toute la session.

26 après-midi

Transfert à Barnard College, sur Broadway; et toujours un accueil merveilleux!

Après une visite de la ville en autocar, les congressistes se rendent chez le Dr Robert et Ellen Rosenbaum, à Scarsdale, où un accueil extrêmement cordial et généraux leur est réservé; Mr & Mrs Rosenbaum avaient largement ouvert les armoires aux instruments de musique et exposé une grande part de leur collection. C'était une grande joie que de regarder, dans cette aile conçue spécialement, les guitares du XVIIe siècle, la flûte de Hotteterre, les violes, les vielles, le clavecin de Blanchet et tant d'autres pièces prestigieuses ... Après un lunch dans le jardin, le bureau du CIMCIM tenait une réunion de travail à laquelle participaient, outre la présidente, la secrétaire et l'éditeur, Mette Müller et Friedemann Hellwig, conseillers.

La journée se poursuivait par la visite de la collection d'Eric Selch, instruments et bibliothèque, où l'accueil fut également charmant et où les participants furent entraînés dans des ensembles vocaux et instrumentaux improvisés.

28 matin

Matinée consacrée à la visite de la Galerie André Mertens, après une présentation des collections par Laurence Libin. Elles comportent environ 4.000 numéros, dont un cinquième environ est exposé. Le Musée met en valeur les instruments par des concerts et des expositions, encourage les facteurs et les artistes modernes.

28 après-midi

C'est la première séance au cours de laquelle les problèmes informatiques, particuliers au CIMCIM, peuvent être abordés; elle a été organisée par Barbara Lambert, qui a fait appel à Mike Holmes, spécialiste d'informatique et d'instruments de musique, et au professeur William P.Malm, ethnomusicologue, de l'Université de Michigan. Pour M. Holmes, les difficultés peuvent provenir, non de l'appareillage, pour lequel le choix est quasiment illimité et où l'on trouve toujours ce dont on a besoin - établir une banque de donnés ne revient pas cher - mais des questions de langage et de contexte. Il faut d'abord définir les besoins.

Il semble que les attitudes ne soient pas identiques en Amerique et en Europe. Plusieurs publications vont être menées à bien grâce à l'ordinateur. Pour les descriptions organologiques, une mise au point préalable est nécessaire, car le système ne fonctionne pas comme un ensemble de notices de catalogue, bien qu'un catalogue puisse être bâti à partir des données.

Les membres européens attirent l'attention sur les particularités linguistiques qui risquent de poser des problèmes en cas d'échanges et sur les contingences historiques (noms de lieux et de pays).

Plusieurs membres font part de leur expérience en informatique: Stuart Pollens (catalogue de pianos), Friedemann Hellwig, Cary Karp, Dagmar Droysen-Reber, Robert Eliason. D'après les Américains, les échanges se feront sans aucune difficulté d'ici à quelques années. Un groupe se réunit et propose un schéma en huit points applicable à tout instrument dont il faut faire entrer les caractéristiques principales dans une banque de données.

1. collection	collection
2. number (accession or catalogue)	numéro (entrée ou catalogue)
3. lastname	nom de famille du facteur
4. first name	prénom
5. middle name	second prénom
6. date	date

Si celle-ci n'est pas certaine, il vaut mieux mettre un point d'interrogation que pas de date du tout. Elle figurera toujours dans le même ordre, par exemple: année, mois, jour.

7. origin	origine
(localisation de l'atelier ou de la fabrique)	
8. type	type
9. comments	remarques complémentaires

Par exemple, dans le cas d'un piano, le type désigne un piano; dans les remarques il sera précisé qu'il s'agit d'un piano à queue.

Après cette séance, les congressistes sont invité à visiter en avant-première l'exposition organisée par le Département des Instruments de musique du Metropolitan Museum sur le décor des pianos, intitulée "Keynotes: Two Centuries of Piano Design". Puis ils assistent à un récital de pianoforte donné par Igor Kipnis avec deux instruments de la Division of musical Instruments: l'un par Ferdinand Hofmann, Vienne, v.1790, l'autre par Joseph Böhm, Vienne, v.1820.

29 matin et après-midi

La séance, présidée par J. Lambrechts-Douillez, est consacrée aux communications par les membres.

Arnold Myers rend compte de l'édition d'un livre de comptes d'un luthier et vendeur d'instruments d'Edimbourg au XIXe siècle (collection de l'Université d'Edimbourg). De document, très intéressant du point de vue sociologique, apporte des précisions sur la diffusion de certains instruments à vent nouveaux et mérite d'être exploité.
La publication aura lieu prochainement.

Jeremy Montagu donne un aperçu de l'activité de la Bate Collection à Oxford: révision de l'exposition permanente: publication d'une nouvelle série de dessins techniques; vente de certains d'entre eux sous forme de miniplans au format carte postale; nouvelles acquisitions. Il signale l'outillage sophistiqué employé par Heinz Ammann, facteur de flûtes, pour la mensuration des instruments, dans des conditions satisfaisantes de sécurité. Il communique aux auditeurs des mini-catalogues d'expositions temporaires et des miniplans.

Dagmar Droysen-Reber fait l'historique du Musée dépendant de l'Institut berlinois et indique l'orientation actuelle de son activité. Elle montre des diapositives qui permettent d'imaginer l'architecture du nouveau bâtiment réalisé rundisciple le Sharun, la disposition des objets et des vitrines et l'organisation du travail. C'est un bilan des avantages et des inconvénients de cette nouvelle installation.

Margaret Downie-Banks décrit la composition de la collection de l'Université de Vermillion, qui s'est augmentée récemment d'une collection raisonnée de lutherie la collection Witten; outre les instruments, dont plusieurs sont d'une grande rareté et représentativité, il y a des accessoires, des outils, des objets documentaires tels qu'étiquettes de luthiers, gravures du XVIe siècle, ainsi que des livres rares. La conférence est illustrée de diapositives.

Le catalogue complet sera prêt d'ici deux ans environ.

Darcy Kuronen présente les modèles adoptés pour les vitrines dans les deux galeries d'exposition qui vont être installées et prêtes pour le prochain congrès d'A.M.I.S. en 1986. (avec diapositives)

Carlos Rausa fait un rapport détaillé sur un clavecin qui se trouve dans la collection Azzarini à Buenos Aires et qui est probablement italien ou originaire de la péninsule ibérique et explique quelles ont été les relations de l'Argentine avec l'Europe par le passé. Il espère publier un jour le catalogue des quelque 800 instruments conservés dans les collections d'Argentine. (avec diapositives)

Gary Stuart fait un rapport détaillé sur un clavecin de Jacques Germain, Paris, 1785, anc. coll. Salomon, Paris, acquis en 1983 pour la collection de Vermillion, et en particulier sur les nombreuses péripéties qui ont précédé son entrée au Musée. Actuellement, il est question de le remettre dans un état aussi proche que possible du XVIIIe siècle.

Catherine Megumi Ochi explique avec diapositives à l'appui et une vidéo la fabrication des tambours japonais à Miyama selon les techniques traditionnelles. Elle fait don d'un tambour à L. Libin pour le Musée de New York.

Robert Barclay fait une communication illustrée de diapositives sur les différents types de documentation que l'on peut établir en relation avec les descriptions traditionnelles d'un instrument. Tous les sens interviennent dans l'observation. Les documents rédigés gardent leur intérêt, mais la nécessité d'utiliser l'ordinateur dans la gestion de la documentation va obliger à exprimer les notions sans ambiguîté. R. Barclay prépare en ce moment un lexique des termes de conservation pour l'ordinateur. Il analyse les avantages et les lacunes de chaque forme de documentation.

Une discussion s'engage au sujet du degré de précision que l'on est maintenant en droit d'attendre d'une documentation. La nécessité de la conservation ne doit pas être oubliée et c'est aux responsables de la conservation à demander aux scientifiques des méthodes d'examen dans ce sens. Il est question particulièrement de l'acoustique des instruments à vent.

29 après-midi (suite)

Après la visite de la firme Curt Swidler Artist Pianos, les participants se rendent au domicile de Mr Guinness, propriétaire de la collection la plus importante actuellement dans le domaine de la musique mécanique et des automates musicaux. Pour les membres du CIMCIM il a bien voulu montrer lui-même les pièces majeures de sa collection, très impressionnante. Tous les aspects de la musique mécanique sont représentés. Les participants ont reçu là encore un accueil généreux.

30 matin

J. Lambrechts-Douillez préside la séance consacrée à la typologie et à la classification et commence par donner lecture de l'historique du groupe de travail par Claudie Marcel-Dubois, coordinateur.

Typologie et classification en organologie musicale

Coordinateur du groupe : Claudie Marcel-Dubois
Membres du groupe en 1984 : J. Bran-Ricci; G. Dournon; F. Gétreau;
V. Gutman; H. La Rue;
J. Lambrechts-Douillez, présidente

BREF HISTORIQUE ET INTRODUCTION
AUX TRAVAUX DU GROUPE A NEW YORK
EN MAI 1985

Une longue naissance

Le CIMCIM a été créé au sein de l'ICOM en 1960 à Paris. La Présidente actuelle du CIMCIM était présente à la réunion constitutive qui eut lieu du 27 juin au 1er juillet au musée national des Arts et Traditions populaires sous l'impulsion du premier directeur de l'ICOM, Georges-Henri Rivière décédé

le 24 mars dernier alors qu'il était toujours conseiller permanent de l'ICOM.

Au cours de la réunion constitutive de Paris, quatre motions furent émises; la motion no. 4 concernait les normes de catalogage des instruments de musique (cf. ICOM News/Nouvelles de l'ICOM, vol. 13, no. 4-5, août-octobre 1960). Cette motion représente l'instant historique le plus lointain de notre groupe de travail.

Après plusieurs années, des spécialistes parmi les plus éminents au plan international comme E. Winternitz ou Prof. E. Emsheimer se sont penchés, dans le cadre du Groupe, sur les questions de normalisation en matière de catalogage. On se rappellera par exemple l'exposé d'Emanuel Winternitz à Ljubljana en septembre 1967 sur les difficultés que présenteraient à cet égard les instruments de musique hybrides.

Les années 1970-80 : le catalogage

C'est seulement vers les années 1969-70 que notre groupe intitulé à l'époque "Catalogage et classification" s'est vraiment constitué. Le "noyau" du groupe était composé de Geneviève de Chambure, alors présidente du C I M C I M, de Simha Arom, Geneviève Dournon, Claudie Marcel-Dubois, Denise Perret et Yvonne Oddon, fondateur du Centre de documentation Unesco-Icom. Les avis de conservateurs de collections non-européennes comme par exemple Félix van Lamsweerde ou J.-S. Laurenty furent sollicités.

Les travaux portèrent d'abord sur le catalogage des instruments de musique ethniques. Les modèles des fiches utilisées dans un grand nombre de musées étrangers et français furent analysées. Une fiche organologique nouvelle et adaptée aux exigences ethnologiques, musicologiques et muséologiques fut établie. Elle a été publiée sous le titre "Identification et catalogage" par Claudie Marcel-Dubois et Yvonne Oddon dans "Ethnic Musical Instruments, edited by Jean Jenkins, London, Hugh Evelyn for ICOM, 1970", p. 54-55. Par la suite, le groupe de travail mit au point sous les directives d'Yvonne Oddon une "grille de codage visuel" complémentaire à la fiche organologique. Fiche et code ont été expérimentés sur les collections instrumentales du musée d'Ethnographie de Neuchâtel en 1973 et 1974 (cf. C I M C I M (IAMIC) Newsletter, III et IV, 1975 et 1976, article de Denise Perret, p. 29-34).

A la suite de la réunion à Amsterdam en 1975, le groupe de travail, endeuillé par le décès de Geneviève de Chambure, a poursuivi ses travaux notamment par la révision du code de classification organologique dans le souci de fournir aux conservateurs de musée un outil pratique d'identification et de classement. Estimant que ses travaux étaient désormais livrables au corps international des conservateurs, le groupe prépara en 1978 la publication d'un "Guide pour les collections d'instruments de musique: identification organologique et catalogage muséographique". Plan et budget en furent présentés à la réunion du C I M C I M à Leipzig en 1979 (cf. Nouvelles de l'ICOM/ICOM News, 1980).

Depuis 1980 : Typologie et classification

L'établissement de la partie "classification" du programme de travail du Groupe a entraîné de nombreuses recherches sur la systématique des instruments de musique. Suivant le même mouvement que la partie 'catalogage', la "classification" fut centrée d'abord sur les instruments de musique ethniques.

Pourtant, le propos initial étant d'envisager globalement les instruments de musique dits "savants" et les instruments de musique dits "populaires" ou "ethniques", le besoin s'est vite fait sentir de faire appel de manière plus étroite à des collègues spécialistes du domaine "savant" qui manquaient au groupe depuis la disparition de Geneviève de Chambure. A la suite de la réunion de l'ICOM à Mexico en 1980, Mme Bran-Ricci et Florence Gétreau se joignirent au Groupe. Puis Mme Lambrechts-Douillez, la future présidente du C I M C I M, apporta au Groupe son concours régulier à partir de 1981.

La révision complète et la mise au point de la partie "classification" qui avait été amorcée pour le "Guide" a été entreprise au début des années 80. Cette étude fit apparaître plus clairement encore la relation étroite rencontrée entre problèmes de typologie et questions de classification. Poser solidement un système classificatoire sous-entend débattre de la typologie du stock organologique concerné par ce système. Le Groupe étant confronté à cette double analyse se définit désormais comme une entité travaillant sur les problèmes de Typologie et de Classification en organologie musicale.

Le Groupe, auquel se joignit en 1983-84 Hélène La Rue a travaillé régulièrement de 1982 à 1984 en se réunissant soit à Paris, dans un des musées à collections d'instruments de musique (musées du Conservatoire, de l'Homme, des Arts et Traditions populaires), soit à Anvers à l'invitation de Mme Lambrechts-Douillez. La classe des cordophones a été étudiée en priorité à la lumière d'un cadre typologique rigoureux.

Le dispositif général de la classification, ses principes, ses objectifs ont été exposés en français et en anglais dans l'article de Claudie Marcel-Dubois et des autres membres du Groupe paru dans C I M C I M Newsletter, no. XI-1983/1984, p. 36-43 et explicités à l'aide des problèmes soulevés par les cordophones; la classification de ces derniers, selon l'état de janvier 1984 est publiée en annexe de l'article p. 44-52.

Pour ceux qui n'auraient pas lu cette publication, rappelons les points essentiels du dispositif.

Le postulat de départ étant que la résolution des problèmes de typologie facilite l'application muséographique des règles de classification, on s'est efforcé de fournir à l'utilisateur un minimum de connaissances sur l'objet à reconnaître et à classer, c'est-à-dire sur l'apparence de l'instrument de musique qui entre dans la collection, que cet instrument soit le plus humble des rustiques ou le plus prestigieux des instruments savants. A ces fins, le critère morphologique (structure visible et composants majeurs de l'instrument) a été retenu comme premier critère. A partir de l'énoncé d'une structure de base, la classification définit une série de formants de plus en plus fins et qui, de proche en proche décriront la constitution totale de l'instrument concerné. Ces formants représentent des critères normalisés et hiérarchisés à l'intérieur de chaque classe d'instruments (cordophones, aérophones, membranophones, idiophones, instruments hybrides, instruments mécaniques, électroniques). A chaque critère nouveau apparaît un exemple nommément désigné sous son appellation soit vernaculaire, soit historique. Un index terminal cite les provenances géographiques ou ethniques.

Le système décimal (à neuf chiffres) a été adopté pour cette classification qui ouvre la voie à l'utilisation de l'informatique.

Après les cordophones, la classification des aérophones a été établie dans le même esprit lors de deux séminaires du groupe. L'un organisé du 7 au 11 octobre 1984 à Anvers, dans des conditions de travail tout à fait exceptionnelles, par notre Présidente, Mme Lambrechts-Douillez, à la maison Rockocx et à l'invitation de la Kredietbank, l'autre à Paris, au musée national des Arts et Traditions

populaires du 29 novembre au 1er décembre 1984. La classification des aérophones est présentée à la réunion du C I M C I M à New York en mai 1985.

On citera ici les grandes divisions adoptées pour la classification des aérophones: 1. instruments faisant vibrer l'air ambiant (rhombes, etc.), 2. instruments à air contenu dans un corps tubulaire ou globulaire mis en vibration par un souffle (cette division retient, après la forme du corps, le critère de la place de l'embouchure, elle réunit indifféremment flûtes ou sifflets), 3. instruments dont l'air est mis en vibration par un souffle qui ébranle une languette (cette division réunit tous les instruments dits communément à anche et les répartit selon que la languette se meut librement dans un cadre, qu'elle bat les bords d'un cadre, enfin que deux languettes ou les deux parties d'une languette repliée, battent l'une contre l'autre; ces instruments, en forme de tuyau, sont embouchés directement ou à travers un réservoir d'air; l'orgue est traité à la suite, sous le titre "flûtes, anches avec réservoir d'air et clavier(s), 4. instruments du type trompe (cette division présente comme premier critère la place de l'embouchure que celle-ci soit intégrée ou rapportée, puis le profil du tuyau; comme pour les précédents spécimens d'aérophones le critère matière n'est pas retenu).

Une nouvelle étude des membranophones a été commencée en mars de la présente année lors d'un séminaire organisé à Anvers dans des conditions analogues à celui d'octobre 1984, du 25 février au 1er mars 1985.

Conclusion

Notre Groupe de travail, souhaité dès la création du C I M C I M, a connu jusqu'ici deux grandes étapes marquées principalement, pour la première par des publications sur le catalogage, grosso modo de 1970 à 80, et pour la deuxième par les activités (ou les publications) conduites sur les problèmes de typologie et de classification à partir de 1980-81. Le Groupe a fonctionné sous trois titres successifs, révélateurs, au fur et à mesure, de la suite logique de ses axes de travail: "normes de catalogage", "catalogage et classification", "typologie et classification en organologie musicale".

Sous ce dernier titre, notre groupe a réuni cette année les représentants de six musées européens de quatre pays différents. Tous se sont attelés avec foi et compétence à cette oeuvre de longue haleine dont la complexité est assez déomtrée par les publications déjà parues et dont l'importance ne saurait échapper à une époque où la création de collections instrumentales se multiplie et où les instruments de musique sont de plus en plus une préoccupation des jeunes générations.

Claudie MARCEL-DUBOIS
Coordinateur

La discussion s'engage sur divers points concernant les cordophones: ceux de terminologie et de description seront à revoir. L'important est de savoir si, tout d'abord, le travail tel qu'il est présenté est utilisable en ordinateur. MM. Malm et Eliason le pensent, à condition de modifier la disposition des chiffres et de se limiter à 9 chiffres. L'aide de tous les membres est demandée pour les noms vernaculaires qui manquent. En ce qui concerne les aérophones, diverses tentatives sont faites pour économiser des chiffres et éviter de placer certains instruments mineurs sur un niveau hiérarchique trop élevé. Plusieurs membres mentionnent des procédés dont ils se servent pour des instruments complexes. Des compléments sont apportés aux membranophones. La présidente demande que chacun mette par écrit ses propositions et les lui envoie afin qu'elles soient intégrées dans le système.

30 après-midi

La séance est consacrée aux affaires du CIMCIM. La présidente présente les excuses des membres absents pour raison de santé: Claudie Marcel-Dubois, Frank Holland, Felix van Lamsweerde et Vi Luithlen, celles des autres membres, retenus pour raisons personnelles ou professionnelles: Brigitte Bachmann-Geiser, Geneviève Dournon, Florence Gétreau, Veronika Gutmann, Peter Andreas Kjeldsberg, Dieter Krickeberg, Chiniyere Nwatchukwu, Frances Palmer, Fritz Thomas, Elizabeth Wells.

La présidente rend compte de l'abondante correspondance qu'elle a entretenue avec le bureau, les membres, l'ICOM, notamment à propos de Frits Knuf et de ses démarches auprès de celui-ci. La présidente parle de la vie de l'ICOM: les réformes proposées par le rapport Chavana et qui entrent en application (réorganisation du Secrétariat général); de la note de l'ICOM sur les assemblées générales; de la future conférence générale en Argentine. Ce pays a été choisi en partie parce qu'en majorité les conférences générales ont eu lieu en Europe; en outre, l'Argentine a pris un certain nombre d'engagements moreaux et matériels pour l'organisation de la conférence.

Le groupe de travail du comité consultatif sur l'éthique des musées a demandé des documents aux comités internationaux; une circulaire a été envoyée à tous les membres du CIMCIM, plusieurs réponses fournies sont arrivées; tout a été transmis au groupe de travail qui s'est réuni les 17 et 18 mars. Se basant sur la documentation considérable qu'il a reçue, il a établi un premier texte définissant le musée, la politique d'acquisition, les collections, etc. Le groupe va se réunir avant le prochain comité consultatif en juillet.

Le nouveau secrétaire général, Patrick Cardon, était sous-directeur du Musée de Brooklyn. La visite dont il a honoré le CIMCIM était sa première visite à un comité international. Il a pris connaissance avec intérêt de la marche de notre Comité et les contacts avec lui seront faciles.

La secrétaire présente aux membres l'état des finances en Mai '85.

L'impression de la Newsletter 85 peut se faire sur les fonds du CIMCIM; il n'en est pas de même du rapport sur le voyage d'études scandinave, nécessite un financement particulier.

L'éditeur, Hélène La Rue, présente ses excuses pour le retard de la lettre 84; elle espérait inclure des articles relatifs au présent séjour aux U.S.A.; mais, à la suite des 60 lettres qu'elle a envoyées, elle n'a reçu qu'une réponse! Le prochain numéro contiendra:
les rapports du Bureau; le compte-rendu du meeting; le texte des communications des membres; la bibliographie spécialisée; l'état actuel de la classification, à la suite des séances de travail au meeting; une liste des membres, spécifiant ceux qui sont membres de l'ICOM.

R. Barclay soulève la question de l'inscription de la publication sur les listes ISBN, ce qui présenterait pour avantage que la Newsletter du CIMCIM soit répertoriée dans le fichier informatique international.
Il convient de savoir quelle est la position de l'ICOM à ce sujet.

Le Rapport du Tour scandinave: le point est fait sur l'état du manuscrit; R. Eliason a envoyé à F.Hellwig le matériel issu des travaux des trois groupes de travail;
il manque encore la présentation complète des musées par eux-mêmes et certaines illustrations. Il y a en un problème de transfert d'un ordinateur à un autre. F. Hellwig estime l'importance totale du Rapport à environ Cent pages de textes et quinze pages d'illustrations; il propose un tirage à 500 exemplaires et prévoit un prix de revient d'environ Quatre dollars l'exemplaire, plus les frais de port. Il demande que les trois éditeurs soient mentionnés: H. La Rue, R. Eliason et lui-même.
Pour le financement, la présidente mentionne la proposition du Comité National norvégien, par l'entremise de P.A. Kjeldsberg, d'y participer; elle se propose de faire une demande aux autres comités scandinaves pour le complément.

Les Recommandations pour l'accès aux instruments: elles étaient presque prêtes à Oxford en 1983; un groupe de travail réuni à Nuremberg a apporté quelques modifications. Un éditeur allemand paraissait disposé à publier, mais il semble cher. Une offre a été faite par le Comité national argentin de publier le texte en quatre langues, aux frais de l'Université de La Plata. Rausa est arrivé, porteur d'une traduction espagnole.
La présidente va parler de cette question avec la présidente du Comité national argentin, Monica Garrido, lors du prochain comité consultatif en juillet.

La seconde édition du Directory: Patrick Cardon a promis de s'en occuper en priorité; le coût est de 1.700 florins. J. Montagu faut remarquer qu'elle va être démodée; elle a évidemment trop tardé à paraître, par suite d'un fâcheux concours de circonstance.
C. Adams Hoover fait remarquer qu'au moment de la préparation de cet ouvrage, un travail considérable avait été fait sur les collections américaines. Il y avait eu une grande déception du fait qu'elles n'y avaient pas été incorporées; y aurait-il une possibilité de les inclure dans la seconde édition? Ceci est à voir avec Frits Knuf.

Récapitulation des groupes de travail existants:
typologie et classification
recommandations pour l'accès aux instruments
présentation
Le rapport du tour scandinave fait partie de ce groupe conservation des instruments populaires et non-européens, groupe constituant un début de collaboration avec l'I.C.T.M. (cf. compte-rendu de la session de Bratislava, Newsletter, XI, p.29).

Compte-rendu des réunions sur la conservation par Cary Karp:
celle d'I.I.C. a eu lieu à Paris en septembre 1984, celle du comité international de Conservation de l'ICOM, à Copenhague en 1984.
Il a été discuté de matériaux qui ne concernent aucunement les instruments de musique; matériaux naturels sans rapport avec les instruments ethniques.
La question des solvants a été abordée.

R. Barclay, qui a travaillé sur les solvants, est en mesure de fournir un article à ce sujet pour la Newsletter, ainsi que quelques directives pour les précautions à prendre pendant la collecte sur le terrain.

Compte-rendu de la conférence générale d'I.C.T.M. à Stockholm en
par Cary Karp: il n'a pas été question d'une collaboration officielle avec le CIMCIM; il semble que la réunion de Bratislava ait été le résultat d'une initiative de Stockmann et des efforts de Macak, qui n'est pas membre de cette association. C. Karp va s'informer à Stockholm, en sa qualité d'organisateur.

La XIVe Conférence générale de l'ICOM, Buenos Aires (Argentine)
26 octobre - 4 novembre 1986

Le coordonateur officiel pour le CIMCIM est Mme Raquel Cassinelli de Arias; le premier schéma des réunions et activités du comité aurait dû être prêt pour le présent meeting, afin que les membres puissent en discuter.
Carlos Rausa promet que ce schéma sera prêt en juillet et que Mme Monica Garrido de Cilley l'apportera avec elle au Comité consultatif.

Thème de la Conférence générale: "Musées et survie du patrimoine: état d'urgence".
Un groupe de travail spécifique du CIMCIM a été demandé par le Comité international Conservation (président: M. Lahanier); la présidente a transmis copie de cette lettre aux membres les plus concernés par ces questions: C. Karp, F. Hellwig, R. Barclay, qui auront à définir la nature de cette participation.
Plusieurs thèmes secondaires peuvent être retenus pour nos travaux: le rôle du musée dans l'éducation des visiteurs; l'informatique.
La présidente suggère que B. Lambert coordonne ce groupe de travail.

Préparation des élections
Il est décidé qu'un comité spécifique s'occupe des élections, collecte les noms proposés par les membres avec la fonction souhaitée; Cynthia Hoover accepte de s'en charger. Une lettre-circulaire sera envoyée aux membres pour leur indiquer la marche à suivre.

Prochaines réunions du CIMCIM
Il est convenu qu'en raison de la date tardive de la Conférence générale de l'ICOM en 1986, il n'y aura pas de réunion plénière en 1987; F. Hellwig suggère une réunion au printemps de 1988. D. Droysen-Reber fait remarquer que 1988 marquera le 100e anniversaire du Musée Instrumental de Berlin; elle propose de s'informer sur les possibilités de réunion.

Autres questions:
Composition du groupe de travail informatique: R. Barcaly, D. Droysen-Reber, R. Eliason, C. Adams-Hoover, F. Hellwig, C. Karp.

La présidente remercie les membres du bureau qui l'ont aidée dans son travail, les membres présents à ce meeting et adresse des remerciements tout particuliers aux membres américains.

La séance est levée. Les participants se rendent à la galerie André Mertens où Hugh Gough les attend pour leur parler d'un clavecin de Ruckers; sa conférence est suivie d'un petit récital.

Les participants descendent ensuite dans la salle des Armures, d'où ils écoutent un récital d'orgue donné par Robert Parkins sur l'orgue Thomas Appleton, Boston 1830, installé sur la galerie.

L'après-midi s'achève par une grande réception dans l'American Wing du Musée et la soirée est consacrée au banquet final du CIMCIM, dans une ambiance joyeuse et amicale.

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A la suite du meeting du CIMCIM, la plupart des membres se rendent à Boston, afin d'assister, à l'occasion du Boston Early Music Festival & Exhibition, à la session commune de l'American Musical Instrument Society et de la Galpin Society (30 mai-3 juin 1985).
Ils peuvent ainsi prendre connaissance des communications des membres, consacrées essentiellement à l'iconographie et à l'exécution musicales, rendre visite à des collections particulières ainsi qu'à une fabrique d'orgues connue et assister aux concerts et représentations théâtrales du Festival.
Le Teseo de Haendel, dirigé par M. Mac Gegan, a été particulièrement remarqué.
Enfin, une consultation d'informatique, organisée par B. Lambert, avait été réservée aux membres des deux sociétés.

Mentionnons les précisions données par William Waterhouse au sujet de la réédition de l'Index de L. Langwill, attendue par tous les organologues: l'éditeur compte développer la bibliographie et la partie contemporaine, étendre les biographies et présenter l'ouvrage de manière à faciliter les correspondances entre lecteurs; il se servira de la banque de données de l'Université d'Oxford pour coordonner le travail. Tous les renseignements possédés par les responsables de collections seront les bienvenus afin que la nouvelle édition puisse paraître en 1988.

Josiane BRAN-RICCI,
Secrétaire

The CIMCIM Meetings in Washington, New York and Boston
May - June 1985

Washington 23 - 26 May 1985

24 June a.m.

The session opened with a welcome in the reception suite of the Smithsonian Museum, the conference then adjourned to the Hall of Musical Instruments for a welcome and presentation by each member of the staff. Their introductions are summed up as follows.

John Fesperman, curator in the department since 1965, described the main aims of the Smithsonian Institution applied to the music section; preserving the heritage, particularly the American Heritage, acquiring new material and developing documentation at the national level. Activities of the division include planning temporary exhibitions, organising exhibition tours and holding concerts in the museum. At the time of the CIMCIM visit there were two temporary exhibitions, the first of a private collection, the other showing a major new acquisition.

Scott Odell; founded the central conservation department in 1978 having first worked exclusively in the department of musical instruments. Since the opening of the new Museum Support Center he has been in charge of the laboratories there and would be conducting the CIMCIM party there later on in the conference.

Robert Sheldon; a member of the scientific personell since 1965. He showed several examples of American wind instruments that had been used until quite recently in brass bands. This was an area of music making in which there had been numerous musicians so it is not difficult to reconstruct the different aspects of this important nineteenth century style; both its musical performance and the manufacture of the instruments.

Cynthia Adams Hoover; curator in the department since 1961, she began by remembering how in 1961 she had mounted her first exhibition for a visit of CIMCIM. It was thanks to the working group composed of A. Berner, H. Glahn and J.H. van der Meer that she was able to reorganise the department. Her main interest in research is American pianos, particularly the firm of Steinway; this study has lead her into closely related sociological fields. There are about 250 keyboard instruments in the Smithsonian's collections, including examples from Europe as well as from the U.S.A. Most of these instruments are kept in the store. (The collections are concerned with instruments from Europe and America, instruments from other parts of the world being housed in the ethnographical department of the Smithsonian.) Another of Mrs Hoover's responsibilities is that of producing publications about the temporary exhibitions. Mrs Hoover does occasionally regret that the music department is not an independent museum; however, there is no denying the fact that being a part of such a great institution as the Smithsonian does present considerable advantages.

Gary Sturm; museum specialist in bowed instruments and curator of those instruments since 1976. Recently he was fortunate enough to acquire a 'cello made by Stradivarious in 1701. This had belonged to the famous french virtuoso Adrien-François Servais. He told the members of the conference the romantic story of its acquisition; how this 'cello has an exceptional sound quality. At present he is gathering documentation about this instrument.

Janos Scholz; professional musician and private collector, was there to talk about his collection of bows on loan to the Department. His collection was built up to show representative examples of the different schools of manufacture. He knows his bows 'inside out', having repaired them himself, examined them closely and played a lot. He hopes that his collection will be useful to young bow makers.

Following this introduction the members were taken to be shown the conservation laboratories and museum store situated close by the exhibition area of the department.

The conservation laboratory deals with all the objects in the Museum of American History that are made of wood and leather as well as other organic materials and metal. The heads of the different departments inform the department of those objects that are to be used for permanent or temporary exhibitions, whether instruments need restoration or storage. Each case receives careful study and the appropriate treatment is carried out, this last step usually at the museum support center. All the information collected in the laboratories is compiled on the spot and diffused through all the departments. In this way the information can be circulated at all levels. The labs. are equipped with a working library.

In the well organised stores all the instruments, with the exception of the keyboards, are kept in a single large climatized room. This is furnished with open shelving for some objects, and for the more fragile closed glass, acid free, cabinets. This room is accessible to researchers who may need to work there.

24 June p.m.

The afternoon began with a talk given by Hernan Otano at the National Archive and Space Museum. The delegates were introduced to the museum's data storage facilities. Mr Otano showed how a special camera was used to scan documents, including photographs, plans or books. The information acquired is stored in the computer data base and it was then possible to ask for any information from the documents, either to search for a particular name in a book, or to reprint the photograph. It is also possible to enter pieces of music into this system. It is hoped that development of these techniques will make them indispensible in the future. It will not only be a convenient and safe storage for visual archives as well as books but it may also lead to new methods of identifying signatures etc. At the moment some of these techniques are being used in the gallery displays so that visitors can look through some of the visual archives. Delegates were also shown a music lesson on video disc, using the Philips system. This was a project which was being undertaken by the University of Delaware.

The delegates then returned to the National Museum of American History where they heard an informative lecture on Rag-time given by John Hasse, curator in the music division. This was followed by an excellent concert of Blues music given by Charlie Sayles, singer and harmonica player, and Joe Harris, who has worked with Ray Charles, on bass guitar.

24 June evening

A concert was given on instruments from the Smithsonian collection by two talented artists, James Weaver, concert director, and Lambert Orkis, pianist. The instruments used were Benoist Stehlin's harpsichord and the concert grand by Steinway once played by Paderewski.

25 June a.m.

The morning began with a visit to the Museum Support Center. This had been completed in 1983 and is situated several kilometres outside Washington. The conference members were impressed by the vast size of the buildings and by the very well equipped laboratories. Both the research and conservation laboratories share these buildings as well as the main storage area of the Museum's collections. In the research department we met Claire Soubeyrau from Paris. She is at present studying at the Center with the aid of a French Government grant. She described her research and how she is studying the transverse flute to see how it is affected by the moisture it acquires while being played. In the laboratories she is able to observe every minute variation in size that happens as the flute is played. The director of the laboratory demonstrated the sensitive equipment that is used to take these meticulous measurements. Donatella di Giempietro, who works at the Metropolitan Museum in New York (thanks to an Andrew W. Mellon research scholarship) gave an illustrated talk about her conservation and restoration work on a harpsichord attributed to J. Couchet. In the end this will be restored with new keyboards copied from the originals, only parts of which have survived.

Scott Odell, who had organised this guided tour, then took the participants through the library and showed them the vast storage departments in which zoological and botanical specimens are stored.

25 June p.m.

Catherine Folkers guided the conference around the Drayton C. Miller Collection of flutes at the Library of Congress; she has been curator of this collection since 1984. This collection comprises 1500 flutes and associated material. The other material comprises treatises, flute methods, musical scores, engravings, sculptures as well as numerous examples of flute ephemera. This is now all kept in archival quality storage and is readily available to researchers. At the same time conference members were able to see a collection of instruments by Stradivari, as well as the Amati violin (1654) and the Guanarius which belonged to Kriesler. There was also the original manuscript of J. S. Bach's Cantata no. 10 on view from the collection. The visit ended appropriately enough with a concert of music for two flutes.

25 June evening

All the participants were invited to spend an evening at James Weavers' house. The kind and generous hospitality shown to everyone by our American hosts made this a most enjoyable evening in which we were also able to see the very beautiful countryside of the Potomac region.

26 June p.m.

After travelling from Washington to New York the conference received another warm welcome, this one at Barnard College, on Broadway, New York.

27 June a.m.

After a coach tour of New York City the conference went to Scarsdale to visit the home of Dr Robert and Ellen Rosenbaum. Dr and Mrs Rosenbaum extended a very warm welcome to everyone and we were all very priviledged to see a very large part of the Rosenbaum collection. Among the instrumentson view were seventeenth century guitars, Hotteterre's flute

violins, hurdygurdies, Blanchet's harpsichord and many other prestigious pieces..... After lunch in the garden the board of CIMCIM met, this included the president, secretary, editor,together with their advisors, Mette Müller and Friedemann Hellwig.

The day continued with a visit to Eric Selch's collection of instruments and books. Here the conference participated in a little impromptu music making.

28 June a.m.

The day began with a visit to the André Mertens Gallery in which a talk was given to the participants by Laurence Libin. The collections here comprise about 4,000 specimens of which only one fifth is exhibited. The Museum encourages musical instrument makers and young artists as well as holding concerts and planning a varied programme of exhibitions.

28 June p.m.

In the afternoon the first conference session was held. This opened with a presentation organised by Barbara Lambert. The session was devoted to the use of computers in museum information. The panel consisted of Mike Holmes, computer and music instrument specialist, William P. Malm, ethnomusicologist of the University of Michigan. Mike Holmes outlined the main problems this was not so much concerned with the hardware, as the choice here is limitless, but the need for a standard context and language. To organise museum information in a way which can be used by other museums there has to be discussion to determine which items of data should be included on every programme as a matter of course.

At this point there was an animated discussion between the American and European members of the conference. The American members have already found computers to be of great assistance in facilitating their museum publications, and had already begun experimenting with cataloguing systems for their collections.

European members expressed their misgivings; points that were raised concerned the problems of giving a location to instruments or to makers when place names or country borders had changed during the course of history. Several members shared their experiences with computers in their own collections, Stuart Pollens (piano catalogue), Friedemann Hellwig, Cary Karp, Dagmar Droyseon-Reber, Robert Eliason. American members had been exchanging information for several years with the minimum of difficulty. A group of members united to propose a scheme of points of information which should be entered as fields in any computer program used. (The papers given by these members follow the minutes.)

1.	collection	collection
2.	number (accession or catalogue)	numéro (entrée ou catalogue)
3.	last name of maker	nom de famille du facteur
4.	first name	prénom
5.	middle name	second prénom
6.	date	date
7.	origin (location of maker's workshop)	origin
8.	type	type
9.	comments	remarques complémentaires

If any of these factsare not known, or are uncertain, it is better to put a question mark than nothing at all. The date must always be entered in the same order, i.e. year, month, day.

28 June evening

After the computer session members had a preview of the exhibition "Keynotes; two centuries of Piano Design", followed by a piano recital given by Igor Kipnis on two of the Collection's pianos. The first was by Ferdinand Hofman, Vienna c. 1790, the other by Joseph Böhn, Vienna, c.1820.

29 June a.m. and p.m.

Both morning and afternoon were dedicated to the conference papers. These are printed in the section following the minutes.

29 June evening

After the meeting a visit was arranged to the firm of Curt Swidler, Artist Pianos and then on to the home of Mr Guinness who holds a most important collection of mechanical music and automats. Mr Guinness himself welcomed the conference and demonstrated the major pieces in his collection in which all aspects of mechanical music are represented.

30 June a.m.

Dr Jeannine Lambrechts-Douillez presided over the opening session which was to discuss the work of the typology and classification group. She began by reading a paper by Madame Claudie Marcel-Dubois which traced the history of this work. (v. page 9) Discussion then followed on the work that had been completed on the cordophones. The main issue raised was whether it would be possible to make use of this work on a computer. William Malm and Bob Eliason discussed whether it would be possible to modify it so that there were 9 figures. An appeal was made to members to supply any of the missing vernacular names. Further discussion then followed on the aerophone list and whether some rearrangement could rationalise the numbers to limit the number of digits without upsetting the 'hierarchy'. Several members made helpful suggestions concerning how they approached the problem of complex types of instruments. The membranophones were also considered. The president then asked anyone who had suggestions to make to write to her so that they could be included in the system.

30 June p.m.

CIMCIM meeting. Apologies for absence were sent by Claudie Marcel-Dubois, Frank Holland, Felix van Lamsweerde, Victor Luithlen, Brigitte Bachmann-Geiser, Geneviève Dournon, Florence Gétreau, Veronika Gutmann, Peter Andreas Kjeldsberg, Dieter Krikeberg, Chinyere Nwatchukwu, Frances Palmer, Fritz Thomas, Elizabeth Wells.

The president chronicled the copiouscorrespondence that she had with the members of the board and I.C.O.M. She gave a report of her work with I.C.O.M., the reforms suggested by the Chavanne report concerning the reorganisation of the general secretariat; the notice from I.C.O.M. concerning general assemblies, and the future general conference in Argentina. This country had been chosen to ensure that the conference met in a country outside Europe; Argentina was particularly appropriate as they had taken the opportunity to prepare for organising a conference such as this.

The consultative committee concerned with museum ethics had asked for documents from international committees, as a part of this a circular had been sent to CIMCIM members. Several repies had been received, all of which had been forwarded to the committee for their meeting on 17 -18 March. From all the material sent in, a first text had been drafted; this included a report on collecting policies, collections etc. This group will reconvene in July.

Patrick Cardon, the new Secretary General, who had been the deputy director of the Brooklyn Museum, paid a visit to CIMCIM members. This visit was the first that he had made to an international committee. He expressed great interest in the running of the committee and promised to be very supportive when he took up office later in the year.

The secretary presented the finances to members, taking them up to May 1985. From this it was apparent that the Newsletter can be produced from the accounts but that the Scandinavian reports would have to have separate funding.

Recommendations for Access; this was almost ready at the Oxford session in 1983. Since then a working group had met in Nuremberg and made some changes. An estimate for printing had been received from a German publisher but this seemed rather dear. The national Argentinian Committee has made a most generous offer to publish the text in four languages through La Plata University. Carlos Rausa had arrived with a Spanish translation. This was to be discussed further at presidential level.

Hélène La Rue presented her apologies for the delay of the 1984 Newsletter. In her defence she could only say that to 60 letters sent out to members she hadn't received one reply. Future numbers would always depend on receiving material from colleagues. The future number will contain reports from the board; minutes from the meeting; papers from the meeting; the texts of the classification and a membership list specifying those members who are also I.C.O.M. members. Bob Barclay raised the important issue of whether the Newsletter should be registered in the ISBN lists. This would have the advantage that the Newsletter would be included in the lists of international information. It was decided to find out what the I.C.O.M. procedure towards this was.

Scandinavian Report; A report was made concerning the progress of the papers. Bob Eliason had sent the texts from the three working groups to F. Hellwig. The only parts now missing were the presentations from each museum, and certain illustrations. To begin with there had been a problem in translating the material from one computer to another. F. Hellwig estimated that the finished report would contain about 100 pages of text and 15 pages of illustrations. He suggested that 500 copies should be printed at a cost of 4 dollars each. He asked for three editors to be mentioned; H. La Rue, R. Eliason and himself.

To finish, the president mentioned that the Norwegian National Committee, through the intervention of Peter Andreas Kjeldsberg, had offered to support the publication. She said that she would try to obtain matching support from the other Scandinavian committees.

Directory, second edition: Patrick Cardon promised to make this a priority: the cost is estimated at 1,700 florins. Jeremy Montagu commented that it was already out of date; it is late in appearing as a result of a number of unfortunate delays. C. A. Hoover commented that as a great deal of work had already been done on the American collections it seemed a large ommission not to include them in the next edition. It was decided that this should be discussed with Frits Knuf.

Existing Working Groups:

Typology and Classification
Recommendations for Access to Musical Instruments
Presentation
As a result of the Report on the Scandinavian Tour a group had been formed concerned with the conservation of popular instruments from European and non-European traditions. A group was formed which has collaborated with I.C.T.M. (a complete report on their session in Bratislava will be found in Newsletter, XI, p.29).

Cary Karp gave a report on the conservation meetings that had taken place, the first, I.I.C. was held in Paris in September 1984, the second, the International Committee of Conservation of I.C.O.M. was held in Copenhagen later that same year. Discussion has been on the subject of natural materials and the problems of their conservation on ethnic musical instruments. R. Barclay, who had worked on solvants, is in the process of writing an article on this subject for the Newsletter.

Cary Karp gave a short report about the Conference of I.C.T.M. in Stockholm. It seems that the meeting at Bratislava was the result of the personal initiative of Stockmann and Macak. The latter is not a member of I.C.T.M.. C. Karp, in his position of organiser, is going to try to clarify the situation.

The XIVth General Conference of ICOM, Buenos Aires (Argentina), 26 October - 4 November 1986.

The official co-ordinator for CIMCIM is Raquel Cassinelli de Aries. The first draft of meetings and activities should have been completed by this present meeting so that they could be discussed by the members. Carlos Rausa promised that the draft would be ready by July and that it would be brought to the Consultative Committtee by Monica Garrido de Cilley.

The general theme of this conference was to be: "Museums and the Future of our Heritage: Emergency Call."
The International Committee of Conservation (President: M. Lahanier) have asked for a conservation working group. CIMCIM's president has passed on this request to those members who are most concerned with this subject: C. Karp, F. Hellwig, R. Barclay, who will work out our best contribution. There are many secondary themes which ought to be of interest to our working groups: 'the role of museums in educating visitors'; information. The President suggested that B. Lambert should co-ordinate this working group.

Preparations of the Next Elections.

It has been decided that the committee concerned with elections collect the names of those proposed. Cynthia Hoover accepted the job of gathering these names together. A cicular letter would be sent to all members to explain the procedure they should follow.

Next CIMCIM Meetings:

Because of the late date of the General Meeting of I.C.O.M. in 1986 there would not be a plenary meeting in 1987. F. Hellwig suggested a meeting in the spring of 1988. D. Droysen Reber reminded everyone that 1988 is the centenary of the Berlin Musical Instrument Museum; she proposed that she would look into the possibilities of a meeting there.

Other Questions

Composition of the Information Working Group: R. Barclay, D. Droysen-Reber, R. Eliason, C. Adams-Hoover, F. Hellwig, C. Karp.

The President thanked the members of the board who had helped her in her work. She thanked her American hosts for their kind hospitality.

The session rose and the delegates made their way to the Andre Mertens Gallery where Hugh Gough gave a talk about the Ruckers Harpsichord. this was followed by a short recital. Afterwards there was an organ recital in the Armory given on the Thomas Appleton organ (Boston, 1830) by Robert Parkins. In the afternoon there was a grand reception in the Museum's American Wing and in the evening there was the CIMCIM farewell banquet.

Following the New York Sessions most of the members travelled on to Boston to participate in the Boston Early Music Festival and Exhibition, which was held jointly with the A.M.I.S. and Galpin Society, 30 May-3 June 1985. Here they attended papers given on iconography and musical interpretation, visited museums and special exhibitions connected with the conference and attended concerts. Particularly noteworthy was the performance of Handel's Teseo conducted by N. MacGegan. Barbara Lambert organised an information session for all the societies.

Another important matter under discussion was that of L. Langwill's Index. William Waterhouse chronicled its progress, how he was adding to the bibliography and to the modern section, adding biographical notes and bringing the whole together in a way that would make research easier. All the lists of instruments held by curators will soon be collated and the new edition should appear by 1988.

Josiane Bran - Ricci
Secretary

CIMCIM Meeting

New York City May 26 - 31, 1985

Agenda

1. Adoption of the Agenda

2. Apologies for absence

3. Reports

   Secretary
   Finance
   ICOM Paris

4. Membership list; Status of members; Subscriptions

5. Publications; Newsletter; Scandinavian Tour; Recommendations; Directory, 2nd edition.

6. Working Groups

   Typology and Cataloguing

   Others

7. Next ICOM Conference, Argentina

8. Election

9. Suggestions for 1987 meeting

10. Any other business

Are Computers Anything for Us?

by Cary Karp

The recent CIMCIM extravaganza in Washington D.C., New York City, and Boston provided CIMCIM members with a number of opportunities for discussions about various aspects of the applications of computers to our work. A formal CIMCIM meeting devoted to the subject was arranged in New York City by Barbara Lambert both for CIMCIM members and guests. The Boston Computer Exchange was host to a second meeting arranged both for CIMCIM members, and for interested colleagues who were in Boston for the AMIS/GS meetings. In addition, the Historical Instruments Conservators Computer Users' Programming Society (see Appendix) met in Washington D.C. during the week of CIMCIM's gathering there. This conference was also attended by several of our members.

This article is not intended as a detailed report of what was said at these meetings. Instead, it will attempt to provide a selective review of that portion of the material presented which is most likely to be of direct practical use for future development within the CIMCIM community.

The question of greatest interest, and most extensive discussion, was the means by which microcomputers could be used to establish electronically-based catalogues of our collections. This gave rise to a second question concerning the possibilities of making each museum's individual computerized catalogues available to other museums. Applications of telecommunications technology, such as allowing one computer access to another via direct telephone connection, were also discussed.

It was obvious that the CIMCIM membership spans a broad range of experience and erudition when it actually comes to having worked with computers. Several members had been using personal computers for some time, and were well aware of their possibilities for extensive use in cataloguing. Others had used terminal connections to larger computers, as well. There were also a number of people who knew relatively little about the technology being discussed and had difficulty envisioning how these machines could help us do our work substantially more efficiently than we already were doing it. (The reader who is similarly unfamiliar with the fundamentals of the subject will find that bookstores and libraries abound with introductory literature. Technical jargon has been avoided to the extent possible in this article.)

Despite all this, little more than brief discussion was necessary before there was general agreement that computerized catalogues indeed might prove to be more useful than conventional accession books and card files. The reasons for this become obvious if one considers a typical card catalogue of a museum collection arranged systematically according to instrument type. It would be quite easy to use this catalogue to locate, for example, all saxhorns in the collection. Difficult, if not impossible, would be the use of the same catalogue to determine the collection's holdings of all instruments from a given builder, or all instruments made during a given period regardless of type. A computerized database may be searched with no difficulty for all conceivable combinations of information which it contains, as for example every hornbostel made in London before 1873, signed by someone who also made timpani. The largest portion of the time at the meetings was therefore spent in considering realistic means for initiating a transition away from the familiar techniques, towards those of potentially greater utility.

With due consideration taken to the various levels of our individual involvement with computers, the New York meeting was summarized in two more or less emphatic suggestions. First, no general recommendations about computer hardware or software could, or should, be given. Our membership is international and must deal with different languages, alphabets, and systems of alphabetization -- as well as often substantially different local market offerings of hardware and software. Advice about the acquisition of basic systems should therefore be obtained from local sources. For similar linguistic reasons, if none others, it was regarded as unrealistic to hope to establish a uniform format for the computerized catalogues of all our member museums. Therefore, the second recommendation made, and by far the most important aspect of all the meetings, was what in effect was a CIMCIM policy decision about the adopting of a small number of elements which all our individually developed databases should contain. A provisional working group, led by Barbara Lambert, was established to serve as a forum for discussing our continuing experiences with computers.

* * *

The initial structuring of a database determines its ultimate utility. The individual needs of the collection at hand will determine the most sensible structure for its computerized catalogue, given the limitations imposed by available technology. (In fact, it would be extremely wise to have considered both aspects of this with the greatest care before making any hardware or software acquisitions.) A large collection of mixed types of instruments from all parts of the world should not be treated in the same manner as a smaller specialized collection of 18th century central-European woodwind instruments. There will, however, be a certain number of descriptive elements which will be relevant to both of these collections. Every object will have a name, catalogue number, place of origin, etc. For this reason CIMCIM has decided to urge its members to include nine common fields in any computerized catalogues which they may develop. This will enable us to exchange basic information from our catalogues in the most efficient manner possible. For example, a search for information from these nine fields in one catalogue can be repeated in identical form in any other catalogue using the same nine fields. This will also provide straightforward means for initiating more specific inquiries about the detailed, individually structured information in these catalogues, as well as enabling more advanced searching techniques (more about this below).

Here then are the "CIMCIM Big Nine":

1. COLLECTION — The first field in any catalogue entry should bear this name, and will simply contain the name of the collection which holds the object.

2. NUMBER — This is the signum and catalogue number of the object, in the format normally used by the collection.

3. LASTNAME — This is the last name of the maker of the object. This, and the following two fields may be used as appears most sensible from case to case. The names of these fields do not impose any rigid constraints on the nature of the information which they may contain.

4. FIRSTNAME

5. MIDDLENAME

6. DATE — This is the known or assumed date of the instrument's manufacture.

7. ORIGIN — This is the geographic location at which the instrument was made. If no information is available which might otherwise be placed in the three name fields, this field may contain more elaborate details about the instrument's point of origin.

8. TYPE — This is the name by which the instrument is identified (discussed below).

9. COMMENTS — This is quite simply any additional commentary which might be felt necessary, such as reference to where additional information about the object may be found.

If the information in any of the fields is to be used as a key for the generation of a sorted list, such as a chronological list of trumpets according to date of manufacture, it will be necessary to place the sorting key as the first word in the field. For the example given, the numerical value of the dates would be the first entry in the date field, followed by any additional commentary. Those fields for which no information is available may be kept empty. The vitally important point is that the basic structure of the database must contain each of these fields bearing the exact names, and in the exact order given above. These fields are not intended to be exhaustive, and should not be used to store information lying entirely outside the basic framework described. Highly detailed additional information, such as measurements and similar data, is best stored in separate fields.

The TYPE field can present substantial problems. If a correct non-ambiguous name for the instrument is known to whomever is cataloguing it, there should be little difficulty. In absence of this information, writing an easily locatable catalogue entry will be no less difficult when using a computer than it otherwise would be. The process of searching through a catalogue containing objects with unspecified names is, however, greatly eased by using a computer. A blank TYPE field will indicate that a proper name for the object was unknown to the cataloguer. The search must then be conducted on the basis of the other fields. It may be useful in such cases to provide a summary description of the instrument's appearance in the COMMENTS field. An entry here of the type, "looks like a pitchfork", will be found by anyone imaginative enough to suspect that such a commentary might have been made, and therefore to search for words describing the appearance of the sought object. It would be difficult to design similar techniques for use with a card file.

Since each field will be searched by the computer with little effort on the part of whomever it is that is conducting the inquiry, there is no need for the systematological stringency which conventional cataloguing requires. Assume that of three player pianos, one is catalogued as a "player piano", another as a "piano, player", and a third as a "great big thing with wide pedals -- player piano?". A catalogue search on the TYPE field for everything containing the words "piano" and "player" will turn up these three objects.

Additional player pianos not catalogued using both these words might be revealed by examining the contents of all TYPE fields in the catalogue containing the word "piano" and more than one additional word. One could also check to see if there were any "pianers" by looking for TYPE entries containing the letters "pian" at the beginning of all words. The advantages of this kind of catalogue search should be apparent. (Dare one suggest that the problem of developing a logically perfect terminological and systematological means for classifying musical instruments hereby loses the urgency which has plagued us all for so long?)

* * *

Implementing all that has been said thus far will greatly aid the individual museum in retrieving information from its own catalogues. It can thereby enable speedier and more effective communication between museums about information to be found in these catalogues. This is a goal well worth working towards. It will also be discovered that the word-processing abilities of even the most unassuming microcomputer are overwhelmingly superior to those of a typewriter. In fact, alleviating the drudgery of daily correspondence and other scribal chores is probably more than enough justification for the acquisition of a computer, whether or not it ever will do actual service in connection with database management. (To say nothing of the utility of computers in such things as climate monitoring and control, and surveillance.)

The meeting in Boston dealt with means by which the information in our computerized catalogues might be exchanged on a computer-to-computer basis. At present it is common for one museum to write a letter requesting a database search at another museum, with the second museum performing the search and writing a return letter containing the results. In this case it is essentially irrelevant if the database itself is stored on pieces of paper, or on a magnetic medium. Assuming, however, that the entire database could easily be placed on magnetic tape or a few diskettes, it would be possible to provide copies of this database to be searched in at liberty by anyone with a suitable computer. Providing updates of this information would be a simple task. There is no equivalent procedure for dealing with substantial card catalogues other than having their contents distributed in printed form. Making photocopies of a limited number of cards may be easy enough. Printing a full catalogue in book form is not.

It would also be possible for the first museum to use its computer as a terminal to the other museum's computer and search directly in the latter's database. The techniques by which this can be done are very well established and require no expensive hardware. Although they have yet to be implemented in our field they would involve no substantially greater expense than the telephone calls necessary to connect the computers.

To illustrate this type of cost we may consider another telecommunications task which would in all likelihood be of immediate interest to most of us. Assume that the full text of this article were to be transmitted via a normal telephone from the computer on which it was written (a real cheapo machine, of the sort unlikely to be beyond any museum's or individual's financial means) to a similar computer which, for the sake of argument, might be found at the editorial offices of the CIMCIM Newsletter. At the fastest rate presently in common use for this sort of task, this would take just under three minutes. (Current or foreseeable technological developments will result in a

substantial decrease in this transmission time during the next few years.) The Swedish telephone company charges less for a three minute connection to the United Kingdom than it costs to purchase the postage necessary to forward the typescript for this article as an airmail letter.

The telephone option would, however, result in substantial additional savings. The manuscript could be sent immediately upon its completion without the expense of having it typed out, or any delay in the post. It could then be edited without any typing or retyping of anything. The final typescript copy could be produced directly under computer control using no more elaborate a device than an electric typewriter connected to the computer. (The market abounds with such machines.) It would also be possible to adopt the very common procedure of having the editor's computer forward the entire text file to a typesetting establishment. Almost all of the manuscripts submitted for publication in this Newsletter will have been retyped manually subsequent to their having been submitted to the editor. The present article was typed in its final form by an electric typewriter under the control of the author's computer. A preliminary draft had also been printed out, sent to the editor, discussed in a far longer than three-minute telephone conversation, and then printed out a second time and posted once again to the editor. The services of a typist were not necessary for the final transcription, thereby resulting in tangible savings of time and labor. These costs could, however, easily have been reduced even more substantially if only the Newsletter editor also had been working with a computer. All this makes it reasonable to wonder when, and not if, it would be sensible to computerize the entire process.

Searching another museum's database over the telephone may take noticeably more time than that used in the previous example. If, however, the "Big Nine" format is widely adopted, this search time will be reduced to a minimum. Since we would know the basic structure of each database with which we would be dealing, the search procedure could be prepared in detail before going on-line. It may, nonetheless, be difficult to evaluate the justification for any expense of this type at present. We have no comparable items currently in our budgets, and any costs for joining our computers to telenetworks may possibly appear extreme if for no other reason than their novelty. Once the desirability of this type of communication has been established we will presumably find little difficulty in allocating what, despite everything, will be the rather modest funding which it requires. It should also be noted that the currently available alternatives to directly dialed telephone connections may cost as little as one quarter of normal telephone time.

There is much which could be said about various alternatives for this type of communication. As we have yet to determine if we will successfully deal with the basic task of setting up our computerized catalogues, this is probably best regarded as a "Phase 2" project for CIMCIM. (Nonetheless, experimental work in various forms of non-paper information interchange is already being conducted by several CIMCIM members!) First we must get started cataloguing our new acquisitions with the help of computers, and then we must worry about transferring the contents of our older catalogues into the new databases. Here as well, help may be on the horizon in the form of optical character reading equipment which can read catalogue cards directly into computer memory. We were shown quite an impressive, yet relatively inexpensive set up for doing exactly this type of work, at the National Air and Space Museum of the Smithsonian Institution. The first advertisements for genuinely inexpensive equipment of this type have already begun to appear in computer magazines.

By whatever means it might ultimately be attained, there can be little doubt as to the potential value of a museum having immediate access both to its own up-to-date catalogues, and to those of as many other museums as possible. Although this may presently appear as somewhat of a utopian vision, it should not be forgotten that there are many professions which have long since accomplished comparable electronic revolutionary feats. Should we succeed in similarly broadening the scope of our own field, we would certainly have achieved something of inestimable organological value.

* * *

APPENDIX

The Historical Instrument Conservators Computer Users' Programming Society was established in 1982, both in reaction to the growing practice of organizations choosing names with cute acronyms, and to provide a corporate identity for musical instrument conservators interested in electronic computational devices. By the time it was realized that their own name entirely coincidentally had an acronym which might be regarded as deliberately mirthful, they had become so widely established that it was no longer possible to consider a change. Quoting from their own material, the organization, "is dedicated to encouraging the use of CAC-CAO (Computer Aided Conservation - Computer Aided Organology) techniques in both the musical instrument museum field and in general conservation". Several research projects in this field have been conducted by the membership, resulting both in journal articles and books. Additionally, HICCUPS has produced its own series of "Applications Notes", which thus far have given documented programs for pocket calculators, dealing with various organological and museum climatological problems. (Initially, the second C in HICCUPS stood for "Calculator", having been changed to "Computer" at their 1985 Global Convocation held in Washington D.C.)

As might be expected, a large number of HICCUPS members are also members of CIMCIM. Hopefully both organizations will often collaborate on projects of mutual interest. The experiments in various types of computerized information interchange which are mentioned in the main body of this article are, for example, being conducted by individuals who are members of both groups. Anyone interested in further details about the Historical Instrument Conservators Computer Users' Programming Society may contact them care of the present author.

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PREPARING FOR THE COMPUTER AGE

Friedemann Hellwig

I would like to quote two people in order to demonstrate the different attitude towards the use of computers in the US and Europe. The first is an American colleague who, in a letter briefly describing the various computer systems being used by other colleagues and museums in the US, described the situation at one of the large museums with the words :"'Believe it or not, they don't have a main-frame!" The other is our Nuremberg Museum's chief conservator talking about my own plans of acquiring for the musical instrument conservation lab a personal computer which he called "Hellwig's electric railway."

The story behind the raising of funds for this machine may be interesting for you, so I will explain briefly how it came about.
Late in 1983 I was approached by the President of the Nuremburg Technical College, whether he and three of his friends would be allowed to play on the instruments in our museum, their piece being the Bach Concerto for four harpsichords and strings. Having in mind the strict CIMCIM reccomendations on access to museum objects, I was very reluctant to agree to such a project. Knowing that the other players would be two members of the Nuremberg City Council and the director engineer of a silicon producing firm, I finally promised to let them play on the very first day of my temporary rôle as leader of the musical instrument department, after John Henry van der Meer's retirement. So the musicians came on Monday, the 2nd of January 1984 and they did not play badly. In fact, the whole session was quite enjoyable and especially so its end, when I asked the manager of the silicon firm whether he could not give us a small computer. After a brief moment he replied that this would be possible and that he would send one of his people to discuss our needs.
To make a long story short, it was in February of this year that the sum of DM 10.000,-- was transferred to the Museum's accounts. I was specially pleased that this money came from a man who through his love of music would more easily understand the purpose for which the computer would be used.

The many months between the verbal promise of such a donation and its materialisation gave me ample time to occupy myself with the hardware aspects of computers, and I became deeply fascinated by the many possibilities that such machines would offer to me. However, it took me some time to realize that it is the software that actually decides on the usability of a computer. In the course of the past year, five projects were formulated to be realized with the aids of the computer:

1. Word Processing.
2. The Establishment of a Data Base for Musical Instruments.
3. Calculation of Stringing Data for Keyboard Instruments.
4. Semi-Automatic Data Acquisition from Dendrochronological Examination.
5. Establishing a Data Base of Moulding Profiles, in other words:
   an Electronic Inventory of Moulding Profiles from Early Keyboard Instruments, based at the beginning on the data in my recent publication.

First priority would be given to tasks 1 to 3, that is Word Processing, the Data Base for Musical Instruments in our Museum, and the Calculation of Stringing Data.
An international exchange of information would be especially desirable with regard to project No. 2, the Data Base for Musical Instruments.

Word Processing may also be interesting when the exchange of lengthy texts is desirable (this may apply to the task of editing the results of our Scandinavian tour).

An exchange of information in form of diskettes certainly is very desirable and appears to be feasible. The requirements would relate to the hardware, the software, the language used when feeding in the data (English, French, German etc.), and finally the thesaurus of terms used in the description of instruments. Compatibility does not seem impossible, yet a practical standard will not be easy to establish. Besidesthe various needs deriving from an international exchange, national projects have also to be taken into account. One such project is currently being realized at Foto Marburg, which one day may become the central German data pool for information on works of art.

The Germanisches Nationalmuseum has employed during the past two years a specialist on electronic data processing, who, in the course of the past months has developed a concept on the question of centralizing and decentralizing such data. In the meantime this concept has also been favourably acknowledged by the Bavarian Culture Ministry, and it is presently discussed at various other institutions, including the already mentioned Foto Marburg. The proposal from our Museum is directed towards dividing the complete amount of data on a specific object, for example a historic musical instrument, into two sections, a header and a trailer. The header would contain the general data in standardized form for use both in the owner museum and in a national or even international data pool. Typical data in such a header would relate to the administrative data of an object, its maker, place of manufacture and dating, its size etc. The type of instrument, both in its historic terminology and modern systematic nomenclature, a numeric or alpha-numeric code of its type would be especially important.

The trailer would consist of more detailed data, usually available only at the owner museum. The existence of such trailer data would already be indicated in the header. There appears to be no need to standardize the form of the trailer, as long as it is only accessible at the owner museum. It may therefore serve the individual needs of this museum.

This header-trailer concept may help, I feel, to develop within CIMCIM the exchange of information compiled by means of a computer. I would indeed be very pleased if this concept could at least be briefly discussed during our meetings.

So far I have abstained from mentioning specific hardware or software systems. My own thoughts are directed either towards the new Commodore PC which is an IBM compatible computer, or towards the Siemens PC-D, also to a good degree compatible with the IBM PC. At any rate, I very much hope that the specifications of the IBM PC may for some time form something like a CIMCIM standard, that is diskettes with 360 kB, an 80-88 or 8086 CPU in connection with MS-DOS as the operating system, dBase II or III for the data management and Wordstar or MS-Word for the word processing.

In closing, I would like to refer to a speaker at the Fifth International ICOM Conference at Lindau, Lake Constance, which ended only a few days before I flew over the Atlantic. The subject of this meeting: Potentials and limits in the application of modern technology in museums. The director of a museum told us about his observation that neither personnel nor time is saved when using a computer. However, the computer, he reported, can greatly

contribute to the cohesion of the museum staff through the fascination of such a new tool. Personally, I very much hope that this new tool may further enhance the cohesion of larger parts of the CIMCIM membership for the benefit of our professional tasks.

(I have to thank Ian Watchorn for improving on my English.)

P.S. Since this paper was written the following outfit has been acquired:

Commodore PC 10 with
512 KB RAM
2 disk drives of 360 KB each
internal hard disk of 10 MB
Printer Star SR-10
Database dBase III
Wordstar 2000 (not yet delivered)

We are in the process of entering material for two databases on early varnish recipes for musical instruments and on the instruments in our museum. The latter aims at a printed checklist which is hoped to be ready in early 1986.

The database on musical instruments uses the field names that were agreed upon during our meeting in New York, however with slight modifications in view of the very flexible dBase III program. This question will have to be discussed within the Computer Group.

EXTRACTS FROM A COMPUTER DATABASE OF PIANOS

Stewart Pollens
1985

CONTENTS

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PIANOS

****

ACCESSION.NO TYPE
EX.COLL MAKER
DATE CENTURY COUNTRY
CITY SERIAL.NOS
NO.KEYS RANGE STRING.L.LOWEST c2 TOP
GAUGE.MARKINGS STR.METHOD
STR.PER.NOTE OVERSPUN
SOUNDBOARD FRAMING
CASE.MAT ACTION
HAMMERS DAMPERS
PEDALS.STOPS STAND
DECORATION
LENGTH WIDTH DEPTH HEIGHT
NEG.NOS LOAN.CLASS
CREDIT.LINE CAT.DATE
CATALOGERS EXHIBITIONS
LOCATION BIBLIOGRAPHY
INSCRIPTION
NOTES

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PIANOS

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ACCESSION.NO 89.4.2768 TYPE upright
EX.COLL MAKER John Broadwood & Sons
DATE ca.1835 CENTURY 19 COUNTRY England
CITY London SERIAL.NOS 4042 (on pinblock,hammer rail)
NO.KEYS 73 RANGE FF-f4 STRING.L.LOWEST 145.0 c2 28.6 TOP 5.6
GAUGE.MARKINGS STR.METHOD straight;vertical
STR.PER.NOTE 2 throughout OVERSPUN lowest 11 notes
SOUNDBOARD spruce FRAMING wood
CASE.MAT soft and hard woods ACTION English sticker
HAMMERS leather covered DAMPERS arms lifted by stickers
PEDALS.STOPS 2 pedals;una corda;damper(see note) STAND
DECORATION mahogany veneer;framed cloth panel;brass molding;pillars flank kybd.
LENGTH 61.0 WIDTH 117.5 DEPTH HEIGHT 186.3
NEG.NOS MUS988(8x10 shows action);82273 82274 (3x4;8x10) LOAN.CLASS III
CREDIT.LINE The Crosby Brown Collection of Mus.Inst.,1889 CAT.DATE 1976
CATALOGERS S.Pollens;L.Libin EXHIBITIONS
LOCATION Mus.Inst.dept.storeroom BIBLIOGRAPHY
INSCRIPTION John Broadwood&Sons,/Makers to His Majesty&the Princesses/Great...
NOTES right pedal raises dampers and shifts action away from strings simult.

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PIANOS

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ACCESSION.NO 57.134 TYPE grand
EX.COLL Jerome C. Neuhoff MAKER John Broadwood
DATE 1792 CENTURY 18 COUNTRY England
CITY London SERIAL.NOS 452;8419
NO.KEYS 61 RANGE FF-f3 STRING.L.LOWEST 172.6 c2 31.2 TOP 10.8
GAUGE.MARKINGS STR.METHOD straight;div.brdg
STR.PER.NOTE 3 throughout OVERSPUN none
SOUNDBOARD spruce FRAMING wood;3 metal gap spacers
CASE.MAT veneered hardwood ACTION English;sprung escape.levers w/adjust.
HAMMERS leather covered DAMPERS cloth;racked jacks
PEDALS.STOPS 2 pedals;shift(1or2strings);damper STAND trestle stand;4legs
DECORATION Mahogany veneer;holly stringing;crossbanding;figured sycamore namebd
LENGTH 226.5 WIDTH 97.8 DEPTH 30.0 HEIGHT 92.0
NEG.NOS 166066 165801 165802 165803 166067 166068 166069 LOAN.CLASS III
CREDIT.LINE Gift of Mr. and Mrs. Jerome C. Neuhoff, 1957 CAT.DATE 1976
CATALOGERS S.Pollens;L.Libin EXHIBITIONS
LOCATION Mus.Inst.Dept.storeroom BIBLIOGRAPHY
INSCRIPTION Johannes Broadwood Londini Fecit 1792/Great Pulteney Street Golden
NOTES (inscription) Square (nameboard); Walter 8419(lowest key)

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PIANOS

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ACCESSION.NO 58.188 TYPE square
EX.COLL Curtis Freshel MAKER John Broadwood and Son
DATE 1801 CENTURY 19 COUNTRY England
CITY London SERIAL.NOS 6246;5922(action frame)
NO.KEYS 68 RANGE FF-c4 STRING.L.LOWEST 137.8 c2 27.5 TOP 7.2
GAUGE.MARKINGS STR.METHOD oblique
STR.PER.NOTE 2 throughout OVERSPUN bottom 7 notes
SOUNDBOARD spruce FRAMING wood
CASE.MAT mahogany veneered oak ACTION English;no intermed.or escapemt.levers

HAMMERS leather covered DAMPERS cloth;brass underlevers
PEDALS.STOPS none STAND 4 tapered legs
DECORATION mahogany veneer;painted decoration in style of Angelica Kauffmann
LENGTH 60.6 WIDTH 165.9 DEPTH 22.1 HEIGHT 78.4
NEG.NOS 170221 170222 170223 (3x4;8x10) LOAN.CLASS III
CREDIT.LINE Gift of Curtis Freshel, 1958 CAT.DATE 1976
CATALOGERS S.Pollens;L.Libin EXHIBITIONS
LOCATION Mus.Inst.Dept.Storeroom BIBLIOGRAPHY
INSCRIPTION John Broadwood and Son./Makers to his Majesty and the Princesses./
NOTES (inscription)Great Pulteney Street Golden Square/London 1801

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PIANOS

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ACCESSION.NO 1972.109 TYPE grand
EX.COLL Stoddard Lincoln MAKER John Broadwood & Sons
DATE 1827 CENTURY 19 COUNTRY England
CITY London SERIAL.NOS 11186;N1186
NO.KEYS 78 RANGE CC-f4 STRING.L.LOWEST 189.0 c2 27.6 TOP 5.7
GAUGE.MARKINGS STR.METHOD straight
STR.PER.NOTE 2(6) 3(72) OVERSPUN bottom 10 notes
SOUNDBOARD spruce FRAMING 11 metal struts; 6 gap spacers
CASE.MAT veneered oak ACTION English w/adjustible escapement jacks
HAMMERS leathered with new felt layer DAMPERS cloth;jack
PEDALS.STOPS 2 pedals;action shift;damper STAND 4 tapered legs
DECORATION rosewood veneer;turned ovolo moldings;rosewood carving at right chk
LENGTH 248.7 WIDTH 126.4 DEPTH 30.2 HEIGHT 92.5
NEG.NOS 198103 (3x4;8x10) LOAN.CLASS III
CREDIT.LINE Gift of Professor Stoddard Lincoln, 1972 CAT.DATE 1976
CATALOGERS S.Pollens;L.Libin EXHIBITIONS
LOCATION Mus.Inst.Dept.storeroom BIBLIOGRAPHY
INSCRIPTION John Broadwood&Sons/Makers to His Majesty&the Princesses/Great
NOTES (inscription)Pulteney Street,Golden Square/London (nmbd);Murray(action)

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PIANOS

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ACCESSION.NO 1980.428 TYPE grand
EX.COLL Irving Schorsch, Jr. MAKER John Broadwood & Sons
DATE ca.1808 CENTURY 19 COUNTRY England
CITY London SERIAL.NOS 4032
NO.KEYS 68 RANGE FF-c4 STRING.L.LOWEST 172.2 c2 27.3 TOP 7.4
GAUGE.MARKINGS STR.METHOD straight;div.brdg
STR.PER.NOTE 3 throughout OVERSPUN
SOUNDBOARD spruce FRAMING wood;iron gap spacers
CASE.MAT veneered soft&hardwood ACTION English w/sprung esc.lever;backcheck
HAMMERS leathered;later felt outer cov. DAMPERS cloth;jacks
PEDALS.STOPS 3 pedals;shift;divided damper STAND trestle stand;4legs
DECORATION mahogany veneer with satinwood banding;rosewood banding on legs
LENGTH 227.3 WIDTH 106.9 DEPTH 29.6 HEIGHT 91.0
NEG.NOS photographed, but no numbers in files LOAN.CLASS III
CREDIT.LINE Gift of Irving Schorsch, Jr., 1980 CAT.DATE 1981
CATALOGERS S.Pollens;L.Libin EXHIBITIONS Keynotes, 1985
LOCATION Mus.Inst.Dept.storeroom BIBLIOGRAPHY
INSCRIPTION John Broadwood & Sons/Makers/to His Majesty & the Princesses(cont.)
NOTES (inscrip)great Pulteney Street Golden Square/London(namebd);Marshall(act)

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PIANOS

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ACCESSION.NO 1982.76 TYPE square
EX.COLL Virginia Pleasants MAKER John Broadwood & Son
DATE 1797 CENTURY 18 COUNTRY England
CITY London SERIAL.NOS 3817
NO.KEYS 68 RANGE FF-c4 STRING.L.LOWEST 137.1 c2 28.6 TOP 7.3
GAUGE.MARKINGS STR.METHOD oblique
STR.PER.NOTE 2 throughout OVERSPUN lowest 12 notes
SOUNDBOARD spruce FRAMING wood
CASE.MAT veneered hardwood ACTION English w/sprung escapement
HAMMERS leathered DAMPERS brass underdamper levers
PEDALS.STOPS 1 wood pedal;swell STAND sep.;4 tapered legs
DECORATION mahogany veneer;sycamore;boxwood;ebony;purplewood inlay;shelf
LENGTH 57.3 WIDTH 162.9 DEPTH 22.0 HEIGHT 86.3
NEG.NOS LOAN.CLASS II
CREDIT.LINE Gift of Henry and Virginia Pleasants, 1982 CAT.DATE 1982
CATALOGERS S.Pollens;L.Libin EXHIBITIONS Keynotes, 1985
LOCATION Mus.Inst.Dept.Storeroom BIBLIOGRAPHY
INSCRIPTION John Broadwood and Son London 1797 Patent/Great Pulteney Street
NOTES (inscrip)Golden Square;restrung and refinished by Derek Adlam

(5)

ACCESSION.NO	DATE	SERIAL.NOS	TYPE
89.4.2768	ca.1835	4042 (on pinblock,hammer rail)	upright
67.134	1792	452;8419	grand
68.188	1801	6246;5922(action frame)	square
972.109	1827	11186;N1186	grand
980.428	ca.1808	4032	grand
982.76	1797	3817	square

(6)

ACCESSION.NO	MAKER	DATE	CITY
L2866	Friedrich B. Voigt	ca.1835	Berlin
89.4.1197	anonymous	ca.1790	Nurnberg
89.4.1203	Carl Lang	ca.1835	Nurnberg
89.4.2910	style of Johann Matthaus Schmahl	ca.1790	possibly U
89.4.3136	Ignace-Joseph Senft	ca.1780	Augsburg
89.4.3161		ca.1780	
89.4.3254		ca.1780	
89.4.3347	Johann Christian Schleip	ca.1820-44	Berlin
89.4.3508		ca.1830	
89.4.3552	Johann Christoph&Christian Jeckel	Feb.19th 1790(label)	Worms
11.176.4		ca.1770-80	
26.183	Friedrich Carl Wilhelm Lemme	1797	Braunschwe
68.47	Johann Christian Schleip	ca.1820-44	Berlin
1977.218	F.B.Voigt;L.Voigt	1832	Berlin

ACCESSION.NO	MAKER	DATE	CITY
89.4.1206	F.S.C.?	1800	
89.4.1855	Thomas Western	ca.1785	London
89.4.2768	John Broadwood & Sons	ca.1835	London
89.4.2803	Longman and Broderip	1786	London
89.4.2804	M.and W. Stodart	1801	London
89.4.2849	Longman and Broderip	1782-1798	London
89.4.2965	Johannes Zumpe	1767	London
43.36	Muzio Clementi & Co.	ca.1830	London
44.58	F.Beale & Co.	1843	London
57.134	John Broadwood	1792	London
58.188	John Broadwood and Son	1801	London
59.76	Erard & Co.	ca.1840	London
1972.109	John Broadwood & Sons	1827	London
1977.95	Collard & Collard	ca.1835	London
1977.347	George Astor	ca1800	London
1978.218	J.Green	ca.1825	London
1980.82	George Astor	1784-98	London
1980.217	John Preston	1787	London
1980.428	John Broadwood & Sons	ca.1808	London
1980.478	Thomas Wornum	ca.1844	London
1982.76	John Broadwood & Son	1797	London

MAKER	DATE	FRAMING	c2
Ludwig Bosendorfer	ca. 1940	full cast iron frame	34.3
Friedrich B. Voigt	ca.1835	wood	29.8
Charles Albrecht	ca.1798	wood	29.0
Henry Kroeger	ca.1860	full metal plate	32.3
anonymous	ca.1790	wood	34.0
John Tallman	ca.1835	half iron plate	29.5
Carl Lang	ca.1835	wood	26.5
	ca.1875	wood	27.6
F.S.C.?	1800	wood	29.5
Anton Vatter (possibly A.Walter)	ca.1800	wood	29.5
Bartolomeo Cristofori	1720	poplar;fir	27.9
		metal gap spacer	16.2
	ca.1800	wood;metal pinblock plate	26.0
Thomas Western	ca.1785	wood	31.0
Caspar Katholnik	ca.1801-05	wood	30.2
George Hicks	ca.1860	wood	
	ca.1835	wood;metal gap spacers	28.
Erard Freres et Co	ca.1800	wood	29.2
	ca.1880	wood	30.5
Thomas L. Evenden and Son	ca.1810	wood	26.9
Franciscus Bonafinis	1585 or 1587	wood	31.4
John Broadwood & Sons	ca.1835	wood	28.6
W.HM?	ca.1850	wood	29.2
Longman and Broderip	1786	wood	28.8
M.and W. Stodart	1801	wood	27.9
Loud & Brothers	May 18,1830	wood	28.7
Longman and Broderip	1782-1798	wood	29.3
Benjamin Crehore	ca.1800	wood	28.5
style of Johann Matthaus Schmahl	ca.1790	wood	28.4
Johannes Zumpe	1767	wood	29.6
	ca.1820	wood	
Ignace-Joseph Senft	ca.1780	wood	29.2
	ca.1780	wood	36.0
Johann Schmidt	ca.1790	wood	27.5
	ca.1780	wood	28.5
Mathias Muller	1800-1801	wood	27.2
Johann Christian Schleip	ca.1820-44	wood	31.0
	ca.1830	wood	29.5
Johann Christoph&Christian Jeckel	Feb.19th 1790(label)	wood	31.8
Van der Does	ca.1800	wood	28.4
Nunns and Clark	1853	half metal plate;metal tube & strut	28.8
	ca.1770-80	wood	29.5
K.J.F		wood	
Alpheus Babcock	ca.1820	wood	29.5
Friedrich Carl Wilhelm Lemme	1797	wood	29.5
Chickering & Sons	ca.1870	full iron plate	30.4
Muzio Clementi & Co.	ca.1830	wood	28.5
Firth, Hall & Pond	1835	wood	29.0
F.Beale & Co.	1843	full iron frame	28.7
Johannes Goermans	1754	wood	32.8
Adam and William Geib	ca.1825	wood	28.8
John Broadwood	1792	wood;3 metal gap spacers	31.2
John Broadwood and Son	1801	wood	27.5
Erard & Co.	ca.1840	constructed metal frame	28.7
Gibson and Davis	ca.1815	wood	29.9

(9)

Frere et Soeur Stein	ca.1795	wood;wood gap spacer	27.:
Alpheus Babcock	1822-29	wood	28.'
Errico Gustadt	1798	wood	29.:
Johann Christian Schleip	ca.1820-44	wood	29.!
John Geib and Son	ca.1816	wood	30.:
John Broadwood & Sons	1827	11 metal struts; 6 gap spacers	27.(
Matthaus Andreas Stein	ca.1830	wood;metal gap spacer	27.(
Jonas Chickering	ca.1850	full cast iron frame	30.:
Loud Brothers	1831	wood	30.-
Collard & Collard	ca.1835	metal hitchpin plate;wood	27.f
F.B.Voigt;L.Voigt	1832	wood	47.(
George Astor	ca1800	wood	
J.Green	ca.1825	wood	29.:
Johann Jacob Seydel	1792 or 1795	wood	28.1
Dodds and Claus	1791-2	wood	28.(
George Astor	1784-98	wood	31.:
John Preston	1787	wood	28.:
Johann Jacob Konnicke	ca.1810	wood;later metal bass hitchplate	27.(
John Broadwood & Sons	ca.1808	wood;iron gap spacers	27.:
Thomas Wornum	ca.1844	wood	28.8
James Pirsson	ca.1840	full cast iron plate	28.9
John Broadwood & Son	1797	wood	28.6
Joseph Bohm	ca.1815-20	wood	27.0
Jonas Chickering	1829	wood	29.8
Ferdinand Hofmann	ca.1790	wood;wood gap spacer	29.0
Ferdinand Hofmann	ca.1815	wood;1 iron gap spacer	26.3
Stewart & Chickering	ca.1824	wood	29.6

(10)

ACCESSION.NO	DATE	COUNTRY	MAKER
89.4.1198	ca.1835	U.S.A.	John Tallman
89.4.1204	ca.1875	Austria or Germany	
89.4.2812	May 18,1830	U.S.A.	Loud & Brothers
89.4.2858	ca.1800	U.S.A.	Benjamin Crehore
89.4.3508	ca.1830	Germany	
06.1312	1853	U.S.A.	Nunns and Clark
26.195	ca.1870	U.S.A.	Chickering & Sons
66.82	1822-29	U.S.A.	Alpheus Babcock
1972.109	1827	England	John Broadwood & Sons
1975.309	ca.1850	U.S.A.	Jonas Chickering
1976.317.1	1831	U.S.A.	Loud Brothers
1980.217	1787	England	John Preston
1980.428	ca.1808	England	John Broadwood & Sons
1980.478	ca.1844	England	Thomas Wornum
1981.29	ca.1840	U.S.A.	James Pirsson
1983.75	1829	U.S.A.	Jonas Chickering
1984.610.1	ca.1824	U.S.A.	Stewart & Chickering

The Glen Account Book: Insights of Musical Instrument Usage in a Time of Change

Arnold Myers

The Edinburgh University Collection of Historic Musical Instruments is publishing a transcription of a purchase day-book kept by the instrument maker and dealer Thomas Glen from 1838 to 1853. The book was known only to visitors to the Collection, several of whom suggested that its importance justified publication.

In 1838 Glen was well established, and had recently moved to 2 North Bank Street, Edinburgh, not far from the Castle. By 1853, at least the elder of his sons and successors John and Robert had entered the business.

The book shows many aspects of the use of instruments of all kinds such as the decline of sales of keyed bugles (fig.1) and the rise of sales of larger valved brass from Sax and other makers. There is much evidence of Glen's activity as an instrument maker, with records of purchases including ivory, wood of various sorts, castings for wood-wind keys, brass tubing (from a Sheffield optician) and materials for violin making.

It is interesting to see how far the numbers of the different kinds of instruments that Glen sold differ from those in our museums and instrument collections. For instance, tenor trombones in C outnumber tenor trombones in $B^{\flat}$ by 3 to 1, but C trombones of this period are not represented in our collections at all.

The text has been transcribed (the handwriting is difficult in places), retaining the rather erratic spelling of the original (see sample page). An index to the names of makers and suppliers of instruments and an analytical index to the instruments by kind has been included in the publication. There is also an extract from a sales daybook kept by Thomas Glen showing credit sales of instruments from 1847 to 1857, which provides interesting complementary information.

The Collection of Historic Musical Instruments is publishing this as a source material for curators and other scholars.

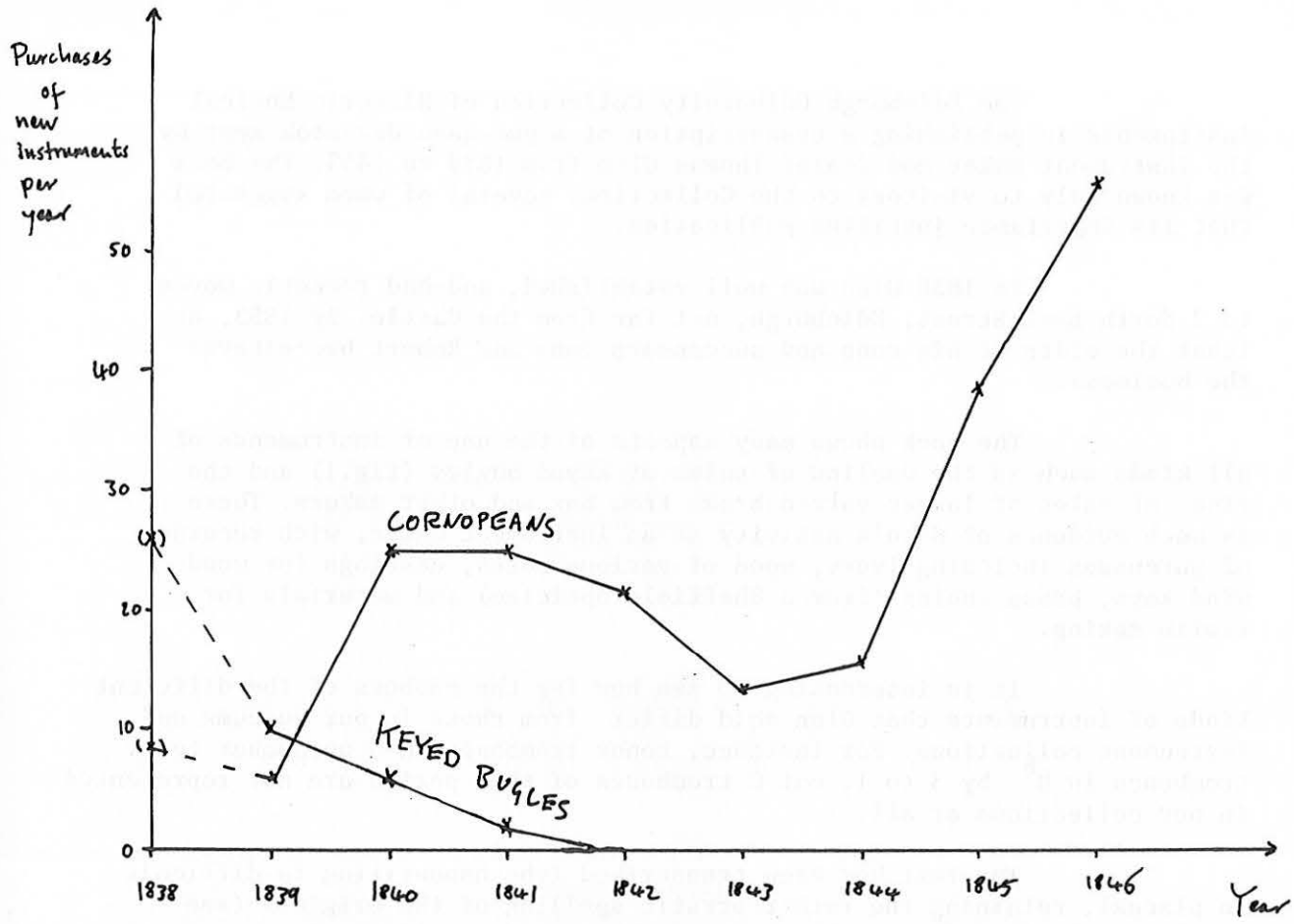


FIGURE 1: Purchases of new Keyed Bugles and Cornopeans.

15th November 1852

Bought of George Metzler & Co London

6	French German & Cotillion Cases	20/.	6	. .
2	Valve Trumpets 2 Keys	24/.	2	8 .
1	Tenor & Trombone Trunks	13/.		13 —
			9	5 .

22 Bank of Scot No 1768 £9.5.

15th November 1852

Bought of Henry Solomon & Co London

3	Tenor Trombones	15/	2	5 .
1	12 " "	15/		15 .
1	German Flutes	16/.		16
2	doz Town Made Violin Bows	8/.		16
3	" French Brazilwood "	12/.	1	16 .
		Case		2 .
			6	10 .

22 Bank of Scotland No 1766 £6.10/.

17th November 1852

Bought of Thomas Hawkins London

18	Bundles Violin Strs	5/	4	10 .
1	— Bass	16/.		16
2	— Bass	5/.		10
2	Books of Gut No 10	1/3		2 6
1	Gross Plain Bore Pegs			8 .
1	Cornet			17 6
	Packing Box			6
			7	4 6
	Discount			6 6
22	Bank of Scot for this and last A°1767 £7.1.		£7	18 0

19th November 1852

Bought of W. E. Dilton London

4	B♭ Clarinets 16 keys Tubes	34/	6	16 .
	Discount			7 .
27	Post office orders No 8873 £5. & No 8874 £4.		£6	9 .

REPORT ON THE BATE COLLECTION

JEREMY MONTAGU

Since members of CIMCIM visited the Bate collection in 1983 there have been many activities and developments. Members will remember the collection as it was then and how much the display had benefited from the Scandinavian meeting; it is to be hoped that the reports from that meeting will be published soon so that members who were not there can similarly benefit.

One of the new developments in the Bate Collection has been the changing exhibitions which highlight different groups of instruments each term. Special exhibitions have been held on the following subjects:

Hausa Instruments of Nigeria
Reeds and Reed making
Survey of European Musical Strings
Ritual Instruments of Tibet
Oboes of the World
Clarinets of the Near, Middle and Far East

and the latest which is on Instruments of the Bible.
These exhibitions are planned quite simply making use of one exhibition case and then marking other instruments in the display with distinctive tags. The Bate's music weekends are also often linked to the same subject. The presence of the European Baroque Orchestra in Oxford has lead to some symbiosis.

Souvenirs have been one experiment with Bate Collection pens, badges and bookmarks. These have not been as successful as it was hoped. Books have also had slow sales (even the special exhibition catalogues which don't seem to go well), probably because the collection is always well labelled, and thus the catalogue is not a necessity but only a reminder to take home. More effective as a money raiser has been the drum which I use as a collecting box.

A major development, and the most effective fund raiser, has been the sale of instrument plans. These have been drawn by Ken Williams and others and are priced at about £ 1 a sheet. Most of them are two sheets in length, and a few complex ones are more expensive. A spin off of these has been the sale of postcards, or miniplans, which are reduced copies made into cards and sold for 20 p each.

While on the subject of measuring instruments I have been asked to show you a new development in plastic calipers, a measuring tool designed by Heinz Amman (Bergstrasse 63F, CH-8712 Stafa) with digital read-out in either inches or mm.

Recent major acquisitions are:

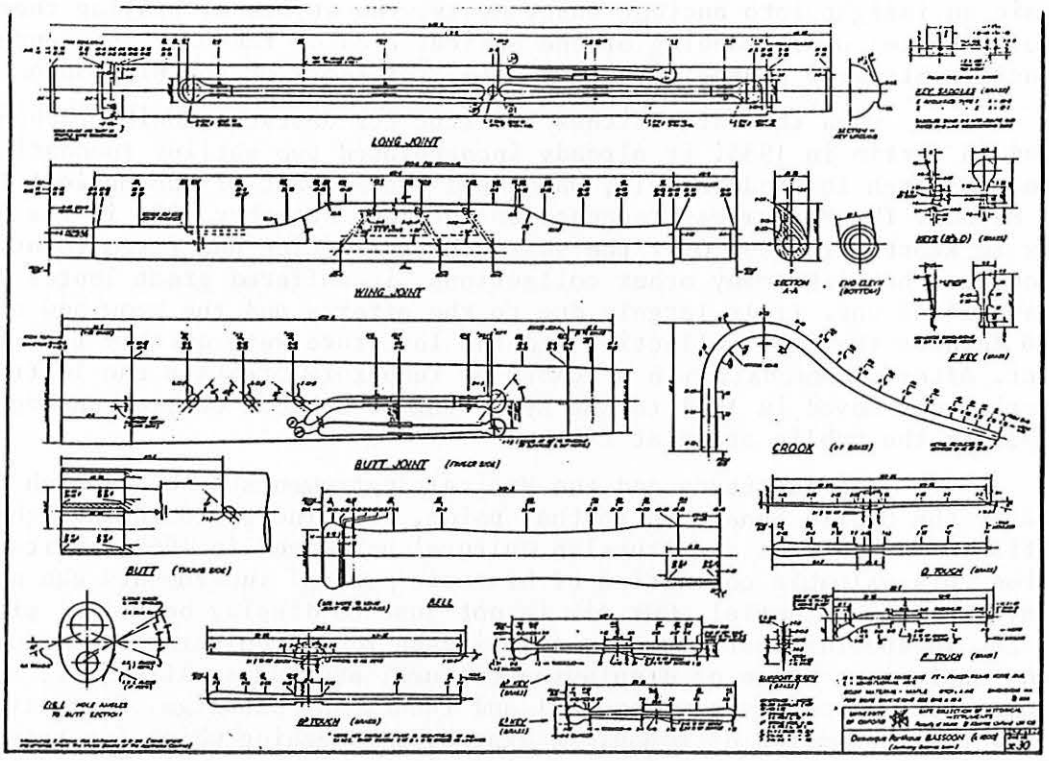
Flutes	Stanesby jr. d'amour
	Eugene Albert Boehm system with extension to low Bb (a bequest from Winston T. Ely, Florida)
Oboes	Cahusac 2 key, ex MacGillivray
	Grundmann and Floth 1800 (5 key) ex van Trigt.
Tarogato	Mogyorossy
Bassoon	Carl August Grenser, 4 Key, 1776, ex van Trigt

together with a number of lesser instruments.

All of this has been done without a purchase grant; some help has been provided by various trusts:
towards the Stanesby from the National Heritage Memorial Fund, for the Grenser from the National Art Collections Fund, and for the Cahusac and Grundmann from one of the University funds. Other acquisitions have been paid for from the donations in the drum and the revenue from the sales.

Visitors have doubled each year and the donations rise fairly proportionately. Our most exciting acquisition came to us only 12 days ago, this was the presentation of the Gamelan Kyai Madu Laras. This was the gift of the Indonesian Embassy and they particularly wished this to come to the Faculty of Music. Because it is their music. They refused the suggestion that it should go to the Pitt Rivers, an ethnographic museum, and now that the world is getting smaller I think we should keep this in mind: everybody's music is music, not ethnography, and perhaps we should expand our musical instrument museums accordingly. (As they do not think of themselves as ethnographic, this is an important point for us all to bear in mind.)

Jeremy Montagu



THE NEW MUSICAL INSTRUMENTS MUSEUM
ITS ACTIVITIES AND CONCEPTS

DAGMAR DROYSEN-REBER

The Musical Instruments Museum was opened with due ceremony on the 14th December 1984. It is housed in the new building of the State Institute for Musical Research (SIM) and is part of the state-owned Foundation for Prussian Cultural Heritage. After a somewhat varied and eventful past on split sites, the Institute now combines a scientific establishment, the Musical Instruments Museum with its own restoration workshops, high quality technical installations, a library and archives under one roof.

The new building was designed by the Berlin architect Hans Scharoun and after his death in 1972 it was completed by his partner, Edgar Wisniewski, who had been involved with the project from the start. The concept had always been to establish a direct connection with the Berliner Philharmonie. This development presents the idea of the cultural forum in a new light; musical life, as presented by the Philharmonie and the shortly to be completed Hall for Chamber Music close by, is now linked to modern scientific research and the opportunity to utilise the musical and cultural assets the Museum has to offer. The Musical Instruments Museum is the oldest part of this association. It was founded in 1888 at the instigation of Philipp Spitta and Joseph Joachim under the title of "The Collection of old musical instruments in Berlin". Its opening was delayed until the 14th February 1893 when it was housed at the Royal Academic High School for Music on Schinkelplatz, formerly the Building Academy. The collection remained an integral part of the High School for Music until 1935 and up to this time the general public had only limited access to the collection. Its main purpose was to give students of music an insight into ancient instruments, the styles of playing them and a generally better understanding of the musical eras of the past. At concerts, the instruments were played largely by the Professors of the High School.

When the "Staatliches Institut für deutsche Musikforschung" was founded in Berlin in 1935, it already incorporated two earlier foundations for musical research founded in 1917, which had become part of the Musical Instruments Museum. The Museum was reopened on the 18th December 1936 in the Palais Kreutz in Klosterstrasse. Over the years the collection had risen to around 4000 objects but like many other collections, it suffered great losses due to the ravages of war. It is largely due to the efforts and the know-how of Alfred Berners that the collection and the Institute were quickly rebuilt after the war. After accommodation in a number of temporary premises the Instrument Collection was moved in 1951 to the West Wing of Schloss Charlottenburg and was now open to the public again at last.

The Institute and the Musical Instruments Museum, which had been funded by the Berlin Senate up to that point, were incorporated into the newly established "Foundation for Prussian Cultural Heritage" in 1962. In its present location this valuable collection of historic musical instruments can now display its full potential. Our aim is not just to display beautiful pieces but to assist in showing that music is a manifestation of cultural behaviour and to present music as a means of displaying cultural attitudes. After all, a musical instrument is not merely a mechanical and functional paradigm of an invented mode for the production of sound, it expresses something which far transcends the functional and has, therefore, a place in the great continuity of cultural history. This is why particular attention is focussed on these connections and why other aspects of musical and cultural history are included. The scientific

knowledge of the Institute is a great asset in this enterprise. In our context, the term 'Museum' means that the possibility exists to deepen understanding of subject and problem areas by means of information (display boards, pamphlets or cassettes) and the fact that we can produce sound from the exhibits on display. Our new building is designed to provide the facility to recreate the sound of a particular musical era and this is one of the special features of our Museum. Obviously, the Museum is not just a static display of musical instruments, it is designed to be a personal experience for every visitor. Within the framework of conducted tours around a particular area of interest which are available for school groups and for adults, visitors are free to explore the exhibits according to their own interests. (After the Summer break there will be conducted tours every Saturday morning at 11 a.m.)

Whether the visitor enters the Museum from the Tiergartenstrasse entrance or from the parking areas of the Philharmonie, the foyer opens out into the large main hall with the gallery above. Of the 2400 objects in the collection, about 500 are on display in the Museum. Our three restorers look after the instruments and maintain them in playable condition - they also restore them when necessary. We plan to extend our collection in certain areas and may exchange some valuable items from our storehouse to make this possible. This would certainly create new interests for our visitors but such change requires careful planning - financial resources, staff who are already stretched to the limit and external demands must all be taken into consideration.

The oldest instruments, dating back to the 16th and 17th centuries, include a valuable stock of wind instruments from St. Wenzel at Naumburg, a very decorative portable organ from North Germany, and two of the four harpsichords produced by Ruckers the famous Flemish instrument makers, attract the attention of visitors as much as the mighty Wurlitzer Organ, representative of the silent film era. On this cinema organ one can admire not only the playing platform with its manifold possibilities but, from the gallery above, the interested visitor can see the innerworkings of the instrument through three large viewing chambers. Other treasures, such as some very rare lutes (Chitarrone and Theorbe) and the two church organs at the northern end are revealed as one walks through the Museum. One of these is a three-manual Gray organ built in England around 1820 and above it is a smaller, romantic organ built by Marcussen in 1905.

Although it is by no means compulsory, a tour round the ground floor presents instruments chronologically from the 16th to the 20th century. The grouping of instruments is largely dictated by the disposition of the load-bearing pillars of the building. One is invited to linger by collections of famous violas and violins (by Stradivari, Stainer and Vuillaume) or other specialised areas such as Viennese Classics, Biedermeier (Victorian) era or the Gründerzeit (the period of German unification). The sunken area in the centre of the Museum is devoted to Prussia, its exhibits include the travelling harpsichord of Frederic the Great, which had been presented to his grandmother, Sophie Charlotte, by the Duchess of Orleans, two of his flutes and a number of other valuable items. Other pieces which are intended to remind the visitor of the location of the Museum are some little-known stringed instruments built by Berlin instrument makers and a very decorative flute clock, which plays an original composition by Mozart.

Represented on the gallery are musical institutions in Berlin such as the Berlin Song Academy and the Berlin Philharmonic Orchestra, and experiments in acoustics and musical theory which provide the link with the research carried out at the Institute. The 20th century area gives an insight into scientific musical research of the present day and incorporates electronic data processing.

The Museum was especially interested in honouring a man who had long been denied recognition here. His name is Curt Sachs, who was an eminent scholar and a distinguished director of the Collection from 1919 until his emigration in 1933. To this day his inspired ideas and his profuse writings provide rich material for continual new insights. Military music, ceremonial music, the renaissance of the old music and some aspects of folk music all create their own aura. Apart from the guided tours mentioned earlier, our instruments are presented in matinée concerts which take place on Sundays at 11 a.m. In spite of a rather tight budget, we have been able to stage these concerts monthly. They take place in the middle of the Museum and are much enjoyed by the public, so we hope very much that funding and staffing will enable us to continue this pattern. Special exhibitions, conferences and co-productions with radio, TV and other institutions associated with music, all help to keep us in touch with the public. The Association of Friends and Patrons of the Museum has been in existence, in a small way, for some time. This asset is being re-examined at present, with a view to further increasing the scope of contact and presentation.

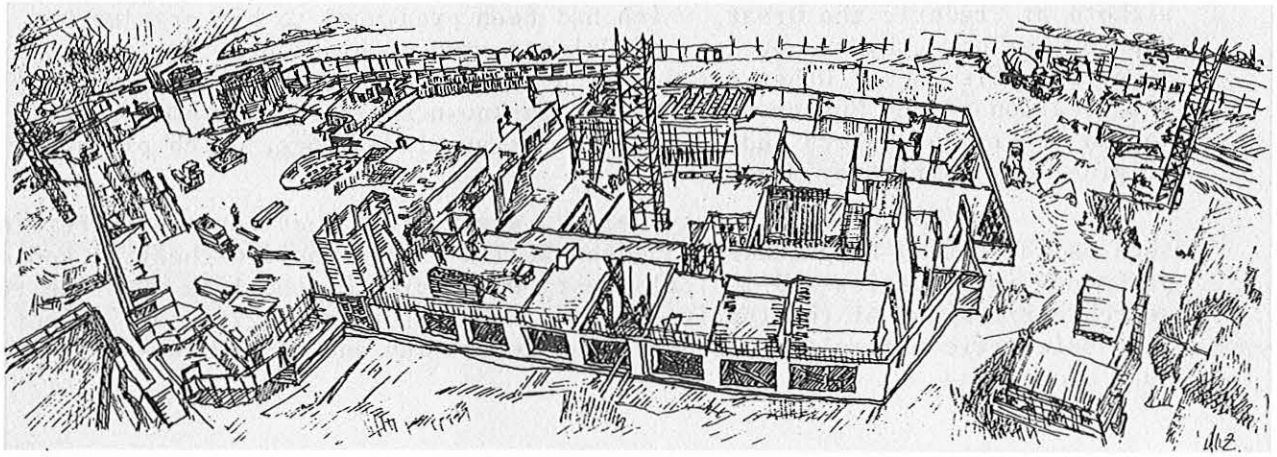
A part of the Institute and the Museum is a lecture theatre-cum-concert hall with a seating capacity for 196 people, equipped with the most up-to-date studio technology. Excellent recording facilities are available here and in other parts of the Museum such as the Jazz and Folk area, in the Junior Museum, by the Wurlitzter Organ and in the SIM Café, where rest and refreshment are also on offer.

A number of publications about the work of the Institute and the Museum are on display around the Museum and for sale in the Sales Kiosk. Detailed technical drawings with accurate measurements of instruments are also available to the student; not only do they provide detailed knowledge, but they could be used to make reproductions of the instruments.

For those who want to read more about the exhibits in the Museum, the specialised library of about 40,000 volumes is available to the general public. Yet further information may be gained from the 20,000 plus documents, letters of patent and from the graphic collection in the picture archives.

Entrance to the Museum is free and it is open Tuesday to Saturday from 9 a.m. to 5 p.m. and Sundays from 10 a.m. to 5 p.m. It can be reached by bus (routes 24, 29, 48 and 83) and by underground Line 1 as far as Kurfürstenstrasse and then on by bus (routes 48 and 83). If in doubt, please phone (030) 254 810.

Staatliches Institut für Musikforschung Preußischer Kulturbesitz mit Musikinstrumenten-Museum, Berlin



Baustellensituation nach Abstellen der Wasserhaltung

RECENT ACQUISITIONS AT THE SHRINE TO MUSIC MUSEUM: THE WITTEN-RAWLINS COLLECTION

Compiled by Dr. Margaret Downie Banks, Associate Curator

In 1984 the Shrine to Music Museum purchased the Laurence Witten Family Collection of 16th, 17th and 18th-century Italian stringed instruments, bows, labels, tools and documentary source materials. The Witten-Rawlins Collection, as it is now known, consists of 70 violins, violas, cellos, viols, lutes, and guitars, most of which were made by the great Italian masters, plus 40 bows representative of various national schools, as well as a wealth of documentary material.

The following checklist represents the collection's holdings. Requests for additional information should be addressed to: Dr. André P. Larson, Director.

Checklist of
The Witten-Rawlins Collection
and other early Italian stringed instruments
at
The Shrine to Music Museum

I. Musical Instruments

Instrument	Maker	Place	Date	Catalog No.
Archlute	Railich, Pieter (for Matteo Sellas)	Italy, Venice	1630	3383
Bow, viola	Dodd, John Kew	England, London	ca. 1840	3399
Bow, viola	Lolly, Leon	France	mid 18th c.	3471
Bow, viola	Norris and Barnes	England, London	ca. 1790	3398
Bow, viola	Pajeot	France, Mirecourt	ca. 1840	3445
Bow, viola	Panormo, Louis	England, London	ca. 1835	3401
Bow, viola	Tubbs, James	England, London	ca. 1870	3400
Bow, viola	Unsigned	English school	ca. 1830	3402
Bow, viola	Unsigned	French or German school	ca. 1830	3404
Bow, viola	Unsigned (possibly Benjamin Banks)	English school	ca. 1810	3446
Bow, viola	Unsigned (spurious stamp, "Henry A Paris")	German school	ca. 1900	3448
Bow, viola (?) or violin (?)	Unsigned, attr. François Xavier Tourte 'le jeune'	France, Paris	ca. 1820	3392
Bow, viola da gamba	Unsigned	French school	ca. 1760	3388
Bow, violin (?) or viola (?)	Unsigned	Italian school (?)	ca. 1725	3410
Bow, violin	Banks, Benjamin	England, Salisbury	ca. 1800	3396
Bow, violin	Betts, Edward	England, London	ca. 1790	3407
Bow, violin	Dodd, James II	England, London	ca. 1820	3395
Bow, violin	Dodd, John Kew	England, London	ca. 1820	3411
Bow, violin	"HD" (?)	French or English school	ca. 1830	3412
Bow, violin	Ouchard, Emile A.	USA, NY, New York	1960	3447
Bow, violin	Vuillaume	France, Paris	19th c.	3472
Bow, violin	Vuillaume	France, Paris	19th c.	3475
Bow, violin	Unsigned	Nationality uncertain	ca. 1680	3389
Bow, violin	Unsigned	Italian school (?)	ca. 1740	3390
Bow, violin	Unsigned, attr. Tourte Aine'	France	ca. 1790	3391
Bow, violin	Unsigned	French school	ca. 1850	3393
Bow, violin	Unsigned	English school	ca. 1780	3397
Bow, violin	Unsigned	French or German school	ca. 1830	3408

Instrument	Maker	Place	Date	Catalog No.
Bow, violin	Unsigned, attr. François Xavier Tourte 'le jeune'	France, Paris	ca. 1790	3409
Bow, violin	Unsigned	Italian school	ca. 1760	3444
Bow, violin	Unsigned		19th c. (?)	3471
Bow, violin	Unsigned		19th c.	3473
Bow, violin	Unsigned		19th c.	3474
Bow, violin	Unsigned		19th c.	3476
Bow, violin	Unsigned		19th c.	3477
Bow, violin	Unsigned		19th c.	3478
Bow, violoncello	Forster (made for Forster by member of Dodd family)	England, London	ca. 1800	3403
Bow, violoncello	Unsigned	French or German school	ca. 1830	3405
Bow, violoncello	Unsigned (made for Jean Baptiste Vuillaume)	France, Paris	ca. 1850	3406
Case, violin	Unsigned	Italy	18th c.	3482
Case, violin	Unsigned	Italy	18th c.	3483
Case, violin	Unsigned	Italy	18th c.	3484
Case, double violin	Unsigned	France	18th c.	3485
Case, double, violin and viola	Unsigned	Italy	early 19th c.	3487
Case, double, violin and viola d'amore	Unsigned	Italy	18th c.	3481
Case, mandolin	Unsigned	Italy	18th c.	3486
Chittara battente	Unsigned	North Italian	late 17th c.	3452
Cittern	Deleplanque, Gerard	France, Lille	1777	3440
Cittern	Unsigned (possibly Girolamo Virchi)	Italy, Brescian School	ca. 1550	3386
Guitar	Martin	USA, NY, New York	ca. 1890	3441
Guitar	Panormo, Louis	England, London	1836	3437
Guitar	Sellas, Domenico	Italy, Venice	ca. 1670	3346
Guitar	Vernon	USA, NY, New York	ca. 1900	3442
Guitar	Unsigned, attr. Matteo Sellas	Italy, Venice	ca. 1640	3385
Guitar	Unsigned	Italy, Venetian School	ca. 1650	3438
Harp	Unsigned	North Italian (?)	ca. 1550	3387
Harpsichord, miniature spinet	Unsigned	Italian school	ca. 1600	3449
Lira da braccio (fragment)	Unsigned, attr. Ventura Linarol	Italy, Venice (?)	ca. 1580	3427
Lute, bass	Harton, Andrea	Italy, Venice	ca. 1600	3381
Lute, treble	Master D.G.	Italy, Venice	ca. 1550	3384

Instrument	Maker	Place	Date	Catalog No.
Mandolin	Unsigned	Italy, Neapolitan	ca. 1775	3436
Mandolino Lombardo (Cittern)	Unsigned	Italian	ca. 1750	3439
Mandora (or octave lute)	Unsigned	Italian	ca. 1900	3435
Orpharion (?)	Unsigned	Italian	ca. 1900 (?)	3443
Pochette	Unsigned	French or Italian (?)	ca. 1650-1700	3350
Quinton	Grancino, Giovanni	Italy, Milan	1693	3353
Theorbo	Tieffenbrucker, Magnus	Italy, Venice	ca. 1600	3382
Viola	Amati, Andrea	Italy, Cremona	before 1581	3370
Viola	Mantegazza, Pietro Giovanni	Italy, Milan	1793	3369
Viola	Maussiel, Leonhard	Germany, Nuremberg	1731 (?)	3428
Viola	Salo, Gasparo Bertolotti da	Italy, Brescia	before 1609	3368
Viola	Zanetto de' Micheli, Peregrino di	Italy, Brescia	ca. 1580	3367
Viola, tenor	Guarneri, Andrea	Italy, Cremona	1664	3354
Viola, tenor	Stainer, Jakob	Austria, Absam	ca. 1650	3371
Viola d'amore	Calcanio, Bernardo	Italy, Genoa	1742	3379
Viola d'amore	Gagliano, Niccolo	Italy, Naples	175(?)	3380
Viola d'amore	Unsigned	German or Italian (?)	18th c. (?)	3479
Viola da gamba, bass	Guidantus, Johannes Florenus	Italy, Bologna	1728	3352
Viola da gamba, bass	Linarol, Ventura di Francesco de' Macchettis	Italy, Venice	1582	3377
Viola da gamba, bass	Salo, Gasparo Bertolotti da	Italy, Brescia	before 1609	3378
Viola da gamba, bass	Salo, Gasparo Bertolotti da	Italy, Brescia	ca. 1600	3432
Viola da gamba, bass	Unsigned	Italy, Venetian school	ca. 1540	3375
Viola da gamba, bass	Unsigned, attr. Gasparo Bertolotti da Salo or Gio. Paolo Maggini	Italy, Brescia	ca. 1610	3430
Viola da gamba, bass	Unsigned	North Italian	ca. 1720	3434
Viola da gamba, double bass	Salo, Gasparo Bertolotti da	Italy, Brescia	ca. 1600	3431
Violin	Amati, Andrea	Italy, Cremona	before 1581	3366
Violin	Amati, Andrea	Italy, Cremona	before 1581	3413
Violin	Amati, Andrea	Italy, Cremona	before 1581	3426

Instrument	Maker	Place	Date	Catalog No.
Violin (1/2 size)	Amati, Antonio & Girolamo	Italy, Cremona	1613	3361
Violin	Signed Amati, Antonius & Hieronymus, but built entirely by Nicolo Amati	Italy, Cremona	1628	3356
Violin (7/8 size)	Amati, Hieronymus I	Italy, Cremona	1609	3364
Violin (7/8 size)	Amati, Hieronymus I	Italy, Cremona	1604	3423
Violin	Cerin, Marco Antonio	Italy, Venice	1792	3355
Violin	Gragnani, Antonio	Italy, Livorno	1788	3357
Violin	Maggini, Gio. Paolo	Italy, Brescia	before 1632	3365
Violin	Mariani, Lodovico	Italy, Pesaro	ca. 1620	3422
Violin	Rogeri (Ruggerius), Pietro Giacomo	Italy, Brescia	1715	3362
Violin (1/2 size)	Storioni, Lorenzo	Italy, Cremona	1793	3359
Violin (1/2 size)	Storioni, Lorenzo	Italy, Cremona	ca. 1790	3415
Violin, "The Harrison"	Stradivari, Antonio	Italy, Cremona	1693	3598
Violin (7/8 size)	Unsigned	Italy, Brescian school	ca. 1760	3360
Violin	Unsigned	Italy, Brescian school	ca. 1630	3363
Violin	Unsigned (repaired and belly made by Antonio Stradivari, ca. 1719)	North Italian	ca. 1660	3414
Violin (1/2 size)	Unsigned	Dutch school	ca. 1780	3416
Violin (1/4 size)	Unsigned, attr. Louis Panormo	English school	ca. 1850	3417
Violin	Unsigned	Italy, Brescian school	ca. 1625	3418
Violin	Unsigned (possibly Luigi Pierotti)	Italy, Gubbio	ca. 1830	3419
Violin	Unsigned	North Italian	ca. 1600	3420
Violin	Unsigned	Italy, Venice (?)	ca. 1630	3424
Violin, miniature	Gemuender, George	USA, NY, New York	1855	3421
Violin, mute	Unsigned	France (?)	ca. 1900	3425
Violoncello, "The King"	Amati, Andrea	Italy, Cremona	ca. 1560-74	3351
Violoncello	Gagliano, Ferdinando	Italy, Naples	1793	3374
Violoncello	Schnabel, Wilhelm	USA, NY, New York	1876	3429
Violoncello	Unsigned	Italy, Brescian School	ca. 1625	3372
Violoncello	Unsigned	Italy, Mantuan school	ca. 1740	3373
Violoncello	Unsigned			3480

II. Books

BAGATELLA, Antonio (1755-1829). Regole per la costruzione dei violini, violoncelli, e violoni. Padova: 1786.

CARTARI, Vincenzo. Le Imagini de i dei de gli antichi. Venice: Vincentio Valgrissi, 1571.

CHAMPIER, Symphorien (1471-c. 1539). Symphonia Platonis cum Aristotele & Galeni cum Hippocrate. Paris: Jodocus Badius Ascensianus, 19 May 1514.

DOLCE, M. Lodovico, Le trasformationi. Venice: Gabriel Giolito de Farrarie Fratel, 1555.

DUPORT, Jean-Louis (1749-1819). Essai sur le doigté du violoncelle. Paris: c. 1815.

GUIDONI, Bernardino. Profetie dell' Abbate Gioachino . . . Padoua: Pietro Paolo Tozzi, 1625.

LANFRANCO, Giovan Maria (d. 1545). Scintille di musica. Brescia: Lodovico Britannico, April 1533.

OVID, P. Metamorphosis, 1526.

POLITIANO, Angelo. Stanze per la giostra del Magnifico Guiliano di Piero de Medici. Venice: Nicolo Zopino e Vicentio compagno, March 12, 1524.

SIBIRE, Sébastien-André, Abbé. La Chélonomie, ou le parfait luthier. Paris: The Author, 1806.

STOA, Johannes Franciscus Quintianus. Epographiae sex. Venice: Gulielmus de Monteferrato, June 20, 1519.

III. Graphics

DELEM, Christoff van. Drawing on brown prepared paper, ink, white and brown washes, signed and dated by van Delem at Prague, 1596. Figures playing the positive organ and Satan playing a fiddle.

MASTER IMF. Engraving, the Flaying of Marsyas, oblong quarto, dated 1536 (North Italian). Clearly visible is a bowed chordophone of the violin family, probably a Lira representing Apollo's Lyre (the head is not shown), which is of very modern design, including the earliest dated depiction of ff-holes known to us.

MASTER of the Sforza Book of Hours (=Giovanni Birago?), c. 1515. Ornament panel, engraving, early impression, showing at foot a Satyr with an early fiddle having a scroll head.

PENZ, Georg. Circular engraving dated 1544. Naked woman (a mythological subject) with harp and fiddle.

RIJKEL, Coenrad, an instrument maker at Amsterdam (son-in-law of Hacka). His very finely engraved trade card depicting wind instruments.

WOERIOT, Pierre. Portrait engraving of the Lyonnese instrument maker Caspar Dieffoprugcar (Tieffenbrucker) surrounded by his instruments.

Unsigned, attributed to PARMIGIANINO. Drawing of music-making chamber players, brown ink, c. 1580.

Unsigned, attributed to LANCRET. Eighteenth century French drawing on prepared blue paper in pencil, ink, and washes of music-making chamber players including a violinist.

Unsigned, N. Italian (or Spanish?), ca. 1600. Orange-tinted drawing of a saint with crucifix and an angel tuning a violin (?).

IV. Other Items

The Salabue-Fiorini-DeWit-Herrmann Collection of Violinmaker's Labels. Ca. 250 labels of Italian makers, 17th-19th c. plus numerous non-Italian labels.

The Herrmann and Bisiach collections of antique parts, fittings, tools, drawings, bridges, and other paraphernalia associated with violinmaking, including original tools from Cremonese shop of Giovanni Battista Ceruti (ca. 1750-after 1817), the pupil of Lorenzo Storioni.

THE WITTEN-RAWLINS COLLECTION

THE MOUNTING OF A PERMANENT EXHIBIT

My name is Darcy Kuronen and I am a Research Associate at The Shrine to Music Museum in Vermillion, South Dakota. I am currently completing my graduate studies in a program administered through the Museum and I'll soon be starting a year of work at the Museum, helping to develop two new galleries for the display of musical instruments and also a 100-seat recital and lecture hall. One of the new galleries will house the recently acquired Witten-Rawlins Collection of 16th, 17th, and 18th century Italian stringed instruments. I am going to discuss the design and construction of the exhibit for this collection. I have worked closely with the Museum's director, André Larson, and the Museum's conservator, Gary Stewart, to create a design for the display cases that balances the elements of aesthetics, preservation of the instruments, and cost. Contrary to popular belief, The Shrine to Music Museum does not have unlimited financial resources. This presentation reflects the work "in progress" as we have thus far built one prototype case and have just begun to experiment with mounting procedures for the instruments. I do have together enough information to give an idea of the overall look of the exhibit and the procedures and guidelines that we intend to follow. I would welcome input from any of you on this matter at the end of the paper or, perhaps, better yet, individually when you have time.

The Witten-Rawlins Collection contains members of the violin and viol families and a number of plucked string instruments. The exhibit will contain about 36 instruments from the collection as well as tools and fittings, also from the collection. The exhibit will be housed in a gallery on the Museum's main floor, measuring roughly 30 by 40 feet with a 13 foot high ceiling. The room will have no windows and, as with the rest of the Museum, will be served by a central climate control system providing a more or less constant temperature of 65° to 68° F and 50% humidity. This system was designed by the Minneapolis architectural firm of Hamel, Green, and Abrahamson, a company experienced in dealing with climate control in museums in cold climates such as we have in South Dakota. The system is also double-phased, which means that if one half of the system fails, the other half will continue to operate and attempt to maintain the climate until the faulty portion of the system is repaired.

The instruments themselves will be contained in 15 free-standing display cases placed throughout the room, varying in size from 2 feet by 6 feet down to about 3 feet square, with a height of 6 feet. The decorative nature of the instruments makes it desirable to view them from all sides; consequently, all sides and top of the cases will be transparent. Lighting will be provided by track mounted fixtures on the ceiling, manufactured by Lighting Services Inc., similar to ones found in some of the exhibits here at the Metropolitan Museum.

I now have some slides showing the construction of our prototype display case.

1. This shows the completed case. This is the largest of the planned cases; the base is 2 feet high and the case itself is 6 feet long, 4 feet high, and 2 feet deep.
2. The base is constructed of 3/4 inch thick plywood glued and nailed together.
3. The base is then covered with a 3/4 inch plywood platform overhanging 2 inches on all sides.

4. The actual case is made up of 5 individually constructed glass panels framed in oak. Rather than use a readily available aluminum channel for framing the glass, we chose to use wood to create a distinctive and custom-made appearance. The use of oak also matches with previously constructed cases in the Museum as well as oak trim and furnishings in the building. All wood surfaces are covered with two coats of plastic-type varnish (polyurethane) to seal in undesirable acids, glues, and other elements.
5. The oak framework has a ¼ inch wide channel cut into it to receive the glass and the ends of the horizontal oak rails are cut to a ¼ inch tenon to also fit into the channel. The glass used for the sides of the case is plate glass with an ultra violet filter added. For safety from possible falling objects, such as a light fixture or tool, we have chosen to use acrylic sheet for the top panel of the case, also with an ultra violet filter.
6. In addition to gluing and clamping the oak frame together, we found it desirable to reinforce the joint with either a screw through the end into the tenon (on the narrow stiles) or (on wide stiles) with a metal plate screwed down to pull the joint together.
7. To allow some circulation of air through the case we have drilled holes through the edge of the base platform
8. and through the top panel framework. There will be a loose tuft of cotton in each hole to act as a filter. With external lighting there should be no build-up of heat inside the case so ventilation is not as critical as it would be with internal lighting.
9. The 5 glass panels are screwed to the base and to each other, allowing for one 4 x 6 panel to be removed for access. It is hoped that opening the case will be kept to an extreme minimum; however, when the access panel is removed it will be with the assistance of commercial suction cup handles to prevent undue strain on the wooden frame.
10. The base is wrapped in black cloth and the edges covered with mouldings.
11. The platform of the case receives a synthetic velveteen fabric which varies in color from case to case.
12. For the mounting of the instruments we intend to use individually designed acrylic stands basically similar to the one pictured here. It is our desire to support the instruments from underneath as much as possible without the use of any suspension wires. This may prove to be challenging with some of the larger instruments.
13. Here then is a guitar on the same acrylic mount.

Let me close then with an invitation for you to visit the Shrine to Music Museum a year from now, perhaps at the next AMIS meeting, to see this marvellouscollection on display. Thank you.

AN ITALIAN HARPSICHORD AT THE MUSEO NACIONAL DE ARTE DECORATIVO

CARLOS E. RAUSA

In 1984 a survey of Western musical instruments in museums and private collections in Buenos Aires was started under the headship of Prof. Raquel Cassinelli de Arias with the sponsorship of CONICET (National Council for Scientific and Technical Research) through a grant for further training which still continues. This paper deals with one of the instruments in the MUSEO NACIONAL DE ARTE DECORATIVO included in the survey.

The Museum's collection has only four instruments, but each of them is representative of its kind. There is a square pianoforte by Nicolas Blanchet dated 1796, a vielle à rue en luth made by Pierre Louvet in 1731 or 1738 (the date's last number on the handwritten label is blurred), a chitarrone, unsigned, probably originatedfrom Italy or Spain; and a harpsichord (inventory no. 1815) which appeared in a catalogue published by the museum in 1947 as item no. 82 which described it as follows:

> "CLAVICEMBALO.x/FRANCIA. EPOCA REGENCIA/Es de laca roja y dorada. Los temas tratados por el artista en/la laca reproducen escenas familiares de estilo chinesco; persona-/jes (algunos a caballo), ciervos, aves, perros, etc, enlazados por los/elementos típicos del paisaje chino; puentes, pabellones y árboles./Alto, 1.03 cm.; ancho, 2.53 cm.; profundidad, 0.91cm."
> ("HARPSICHORD.xFRANCE. REGENCY PERIOD. Red and golden lacquer. The subjects depicted by the artist on the lacquer show familiar scenes in Chinese style: people (some on horseback), deer, fowl, and dogs linked together by bridges, pavilions and trees, i.e. the typical elements in Chinese landscapes. Height: 1.03 cm, Width: 2.53 cm. Depth: 0.91 cm.")

The asterisk next to the name of the instrument indicates its source: the collection of Matías Errázuriz and his wife, Josefina de Alvear. This collection was bought by the Argentine Executive Power in 1937 together with the house built by the couple which has, since its foundation, become the MUSEO NACIONAL DE ARTE DECORATIVO.

A dossier containing "Documentation in connection with Matías Errázuriz and letters from artists" includes several invoices detailing purchases made by him in Europe. Although there is no specific invoice referring to the harpsichord, it is likely that - like most of the items in the collection - it was bought in Europe.

Going back to the 1947 catalogue, although the text indicates the measurements of the instrument's outer case and describes, quite logically, its decor due to the nature of the museum , it says little about the instrument itself. That outer case contains an unsigned thin-case harpsichord. The instrument is, most probably, owing to its design, musical features and decor, a 17th century harpsichord of Italian origin. It could be of Spanish or Portuguese origin, but this is difficult to determine. This possibility arises from the fact that, while the Netherlands, France, Germany and England had specific patrons for the construction of their harpsichords, Spain and Portugal followed Italian designs. This is mentioned by Raymond Russell in his The Harpsichord and Clavichord and is the only reference to this fact found in the whole bibliography consulted. Unfortunately, not only documenta-

tion but also harpsichords of Spanish or Portuguese origin are very scarce.

Construction

Once the outer case is removed, there appears an elegant looking instrument. Its general measurements are as follows: Length: 247 cm; width: 82 cm; height: 28.5 cm.

The sides are 5 mm thick and join in a 70° tail angle. The bent side presents only one very pronounced bent at the treble's end due to the wide octave span which is 16.1 cm (the average octave span in Italy being, according to John Barnes, 16.5 cm) and an 18.5 cm string scale for c" - not too short for a typical Italian harpsichord. According to a theory advocated by William R. Thomas and J.J.K. Rhodes, the latter measurements would prove that the instrument originally had iron alloy strings. According to Barnes and John D. Shortridge, these measurements would indicate that it is a non-transposing harpsichord.

The soundboard, like the sides of the box, is in thin cypress and has no rose. It has a curved bass bridge edged with pear 1.3 cm high stuck to it and strengthened by 12 wedges added at a later date.

A break on the right-hand side of the soundboard allowed a glimpse at the box's inner structure which is similar to the outlay by Hubbard shown below.

Like the bridge's wedges, the jack rail (of rough manufacture) is not original. However, it follows the Italian tradition in that it has only one box slide that runs diagonally close to the keyboard towards the right-hand side.

The jacks are in fruit wood and have two dampers in red felt. The jacks have a tongue held in position by means of an iron spring and the tongue has a quill plectrum 0.2 cm long. The direction in which the plectra in the row of jacks should be pointing is not known.

The wrest plank is cut in one block of spruce with a cypress veneer and has a pear nut that runs along a diagonal opposite that of the jack rail and iron wrest pins. The plucking point for c" is 7 cm.

The beech keys are held in position by the balance rail with iron pins from four-rail key bed and the wooden slips glued into the rear end of the key levers.

Musical features

The harpsichord in the Museo Nacional de Arte Decorativo has only one manual for the two eight-foot registers which are permanently locked except for the end notes that have only one eight-foot register.

The compass of the keyboard is now FF to c"', lacking FF♯ and GG♯. The last two keys are cut in angle for easy adjust to the key bed's width, and there is a false key at the righthand end of the keyboard to balance visually the distance between the brackets and the ends of the keyboard.

This gives room to assume that the original compass went from GG to c"', without GG♯, the common compass in the 17th century according to Edward M. Ripin and Howard Schott. This date is confirmed by a figure written in ink on the unveneered top of the highest key lever: 1650 and, as Russell says in

The Harpsichord and Clavichord on page 39:

> "The Italians/generally left their instruments unsigned; but, when the maker's name and date appear,/they are to be found written on the highest or lowest key or burned into the case above the/keys by means of a branding iron."

Décor

The instrument has the typical Italian decor: simple but elegant pear mouldings bordering the top of the case and accented by turned ivory studs every circa 4 cm; brackets of scroll profile; ivory diatonic keys with arcades on the vertical front; chromatics in ebony.

The outer case (made of spruce and having legs) has been oil-painted in red and the décor on the lid and outer sides is the so-called Chinoiserie executed in black paint and gold leaf. As indicated in the 1947 catalogue, the style is Regency. Therefore, the outer case would be at least 65 years later than the date of the instrument. This is quite common with Italian outer case harpsichords.

Carlos E. Rausa,

Buenos Aires

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Provenance of Harpsichord by Jacques Germain, Paris, 1785

Shrine to Music Museum No. 3327

Date and Place	
1785 Paris, France	The German harpsichord appears to have been black with goldleaf trim when built. It was apparently built with the standard two keyboards and four registers, the fourth being a "peau de buffle".
ca. 1860 Paris (?)	The original finish was retained until about 1860 when all original finish and gesso was stripped to bare wood. A comparatively thick layer of a light salmon-colored gesso was applied and decorative cartouches were applied over a grey/green background. The ground color was then applied. It was a magenta, probably toned to a subtle darkness with colored or tinted varnish. (The magenta/lavender color was referred to as "Madame Pompadour lavender" by Ephraim Truesdell, who worked for Challis in 1950.)
ca. 1920 Paris	The harpsichord was in the Marcel Salomon Collection/Gallery, Paris, and was photographed, showing considerable damage to the gesso and decoration on the sides, possibly caused by contact with other furniture. The damage was apparently only gesso deep, judging by the photograph.
ca. 1930 Paris to San Francisco, CA	The instrument was purchased by Leander Sherman of the Sherman, Clay Music Company, San Francisco, California, presumably from Salomon. Sherman took the instrument with him to San Francisco. (Records of purchase later destroyed by fire.)
February 14, 1950 San Francisco, CA	Harpsichord is in the possession of Fred R. Sherman, son of Leander Sherman. Copies of correspondence between John Challis of Detroit, Michigan, and Sherman, Clay and Co. document the sales offer to Challis. The correspondence also indicates that the instrument's mechanics - jacks, registers, keyboards, etc. - were present, but "not in perfect condition."
March 31, 1950 San Francisco, CA	John Challis purchased the harpsichord from Sherman, Clay and Co., for $ 150 plus $ 22.50 crating charge. The harpsichord was shipped via Railway Express from San Francisco to Detroit, insured for $ 175.00. Challis' request for documentation of the harpsichord resulted in his learning that a warehouse fire at Sherman, Clay and Co. had destroyed all records of previous ownership and purchase.
April 21, 1950 Detroit, MI	The harpsichord arrived safely in Detroit. R.K. Lee, now a well-known authority on early keyboard instruments, was visiting the Challis shop at the time: "I saw the Germain when Challis first obtained it from the West Coast. The ground color of the case was dark purplish brown. The keyboard well

./.

was white (?) overpainted with a streaky, blotchy red/violet resembling nail polish; the name board was badly hacked up, and possibly lowered so that a music desk would pass over it. I do not remember details of the keyboards, except that they were there. The varnish covering was then cleaned off the case revealing a matte magenta ground around the cartouches; the cartouches were now quite bright and unobscured. The magenta was in horrible taste, so John painted it typical green; I never knew whether the magenta was overpainted or removed. I am quite clear in my recollection of this paint episode, as we in Boston believed it to be an incompetent destruction of a ground, toned with dark varnish type of decorative scheme."

According to Ephraim Truesdell, the Challis employee who dealt with the Germain's decoration, he stripped off the dark varnish with "strong alcohol." After repairs to gesso, gold, leaf, and other decorations, including some subjective additions to the strands of foliage around the cartouches, the lavender ground color was overpainted. The keyboard well, inner case rim, etc., were stripped of the "streaky, blotchy, red/violet" overpainting, and painted a "cream color." While in Challis' possession, the altered soundboard date, 1735, was changed to what Challis believed to be the original date, 1785. Challis also remade the instrument mechanically at this time, adding an array of pedals to change registers, a 16-foot stop, and an aluminum wrest plank. (The original wrest plank managed to survive, and was replaced by Hugh Gough.)

February 4, 1952
Detroit, MI to
Hagerstown, MD

Challis sold the harpsichord to E. Elwee of Hagerstown, Maryland, for $4,095 (information from Challis' ledger book). McElwee, or a later custodian of the instrument, grew tired of the green Challis painted the instrument, and painted it a light "mustard brown" color. The additions to the foliage that Ephraim Truesdell had made in 1950 were covered by this layer.

Hagerstown, MD to
Washington, DC

The harpsichord was acquired at the McElwee estate sale by Thomas and Barbara Wolf of Washington, D.C.

The Wolf's sold the instrument to Hugh Gough, Inc. of New York City together with another original instrument.

The Wolf's continued to be involved with the harpsichord, making the jacks, slides, and guides for the four registers, to replace Challis' parts. The new parts were then fitted by Gough, who also restored the interior framing and case bottom in a way Tom Wolf called "responsible". The "mustard" or "golden-brown" paint was removed by Cristabel Gough and the lavender losses inpainted. This included a glaze coating of koalin and a removable-type varnish over the instrument's stand, which was much darker than the instrument's case. The cream-colored paint was removed from the keyboard well, inner case rim, etc. Cristabel Gough reported that all paint and grounds beneath the cream-colored paint had been removed at some previous time. She therefore applied a thin white gesso ground to these areas before painting them vermilion.

October 22, 1983
New York, NY to
Vermillion, SD

The harpsichord was sold by Hugh Gough to The Shrine to Music Museum Foundation, Vermillion, South Dakota.

May 10, 1985 Gary Stewart

My work on the instrument thus far has centered mainly on repairing the gesso grounds, the gold leaf, and attempting to match the greenish color of the cartouches to the rim of the lid and inside the instrument.

Also, I have attempted to restore to the harpsichord some of the architectural details that have been lost over the years. The most obvious of these is the front apron, which had been cut down in order that the player could place his knees well under the instrument. This was undoubtedly done by Challis, who had fitted the instrument with pedals for quick registration change.

Other smaller details are the hinge screws, jackrail hook (which is a copy of the original hook on the 1760 Stehlin harpsichord at the Smithsonian NMAH), and the small brass cup located on the center of the lid crosspiece that secures the propstick. Challis had apparently drilled a new hole for the propstick somewhat closer to the edge of the lid.

The primary objective of any restoration work done on the Germain harpsichord at the Museum is to return the instrument as nearly as possible to the decorative scheme that was the intention of the mid-19th century redecorator.

Since each major "restoration" of the instrument thus far has included scraping, sanding, and otherwise complete removal of previous paint layers, it is not possible to be absolutely certain of the mid-19th century redecorator's intentions for this instrument. For that reason, and more importantly, for reasons of museum ethics, nothing is removed from the instrument's lid; only added, and in such a manner that the addition can be entirely and safely removed.

Gary M. Stewart
Conservator
May 21, 1985

Some Notes on Japanese drum making

From the Museum of the Miyamoto Unosuke Shoten Factory

Many important religious sites use this large and impressive shop's shrines and drums. Meiji Shrine and the Imperial Court are of this two of its best customers, and the 1964 Olympics were opened with gagaku drums made here.

There are two categories of Japanese drums: Ohdaiko, usually large, barrel-shaped drums with cowhide tacked to each end; and Shime-daiko, smaller, hourglass-shaped drums which have horsehide coverings strung together with a silk cord. Ohdaiko are used in both Shinto and Buddhist ceremonies. Although the drum itself is rather plain, its wooden stand is often carved and decorated. The most popular kind of Shime-daiko is the Tsuzumi used in Noh and Kabuki dramas. It is held over the shoulder and played with one hand.

Mikoshi, the portable tabernacle-like shrines jostled around at festivals (by a required 60 people or more), are ordered in the spring for formal dedication in the fall. Jibori-style is decorated with engraved bronze or copper, while Uchimono-style uses cheaper moulded sheets of metal. About 100 Mikoshi, whose minimum cost is ¥ 1.480.000.- are sold by the Miyamoto family each year.

Head Office : 1-15, Asakusa 6-Chome, Taito-Ku, Tokyo 111
Tel.(874) 2141 Hours: 8; 10-5:10 (Closed Sun.& Hols.)
Nishiasakusa Branch & Gallery (Drum Museum)
: 1-1, Nishiasakusa 2-Chome, Taito-Ku, Tokyo 111
Tel.(844) 4131 Hours: 9.00-6.00 (Closed Tues.)
Ginza Branch : 108, Korido-Gai, Ginza 7-Chome, Tokyo 104
Tel.(572) 6321 Hours: 9.30-6.30 (Closed Sun.& Hols.)

Established : 1861
Specialty : festival drums and portable shrines (Taiko & Mikoshi)
Owner : Unosuke VII Miyamoto Yoshihiro Miyamoto & 50 employees)

Catherine Megumi Ochi
29th May 1985

1. Materials for the Body of the Drum

The wood of the zelkova tree (zelkova acuminata) is used for making the body of the drums. This tree grows in northern Japan, in Aizu (Fukushima prefecture) where the snowfall is heavy. Where there is a lot of snow the trees grow slowly; but trees growing in fields by rivers have more moisture and grow more quickly. These trees are easily split. The trees are cut after the last leaves fall. New rings have developed and there is not so much moisture in the trees at that time. Trees are cut below the first joint, that is, the top branches are not used.

2. Drying the Wood

The wood is left to dry naturally for three years. About two-thirds of the wood is actually usable. If the wood does not dry for a full three years, the tone of the drums will not be good and the body will break. Craftsmen check the wood to see if there is any smell. If there is a smell to the wood, it has not been dried long enough. Wood that comes from areas with a heavy snowfall is less likely to split and warp.

3. Making the Drum

1. The body is prepared. The outer layer of wood is removed. This takes about two days. There are two ways of planing the wood:

    1. horizontal direction - following the circumference of the drum body, and
    2. vertical direction - up and down.

    Next, the wood is hollowed out. There are three techniques used for this. Each technique affects the drum's tone, and the technique chosen depends on the customer's request. The most common methods are to 1) hollow the wood out with a straight back-and-forth cutting motion, and 2) cut the wood out in circular strokes. A third technique, used for special orders, required cutting in a zig-zag fashion. This technique is often used in making shamisens and kotos.

2. The rim is prepared

    The surface of the rim, where the skin will be attached is carefully smoothed down. An uneven surface would affect the sound of the drum.

3. A protective coating (called "rakkunisu") is applied to the outer surface of the drum. After the rakkunisu dries the surface is polished.

4. The skin is attached. The skin is placed over the body and ropes are used to stretch it into place. Pieces of bamboo are inserted between the ropes to achieve a better twist. Plastic and metal rods have also been tried, but plastic rods break, and metal rods break the skin. Bamboo has just the right amount of "give" so it works best.

   Craftsmen use a tool called kebiki to determine the placement of tacks. There are three patterns used.

   1. tacks arranged in a single straight line
   2. tacks arranged in two rows, placed directly in line with each other
   3. tacks arranged in two rows in alternate spaces.

   The drum is then turned over and the process is repeated.

4. Preparing the skin

The maker needs to know how the drum will be used so he can choose what kind of skin to use for the heads. Usually, cow skin is used. Skin from (female) cows is preferred, but for very large drums (about 180 cm. in diameter) skin from a bull will be used. Horse skin is not used quite so often, but is usually used for making smaller hand-held drums like kotsuzumi and ōkawa. Different animals' skins give different sounds. Cow skin gives a higher tone to the drum ("kan-kan") and horse skin makes for a sharper sound ("don-don").

On the larger drums (Ohayashi daiko) cow skin is often used nowadays, but in the past, in Tokyo, Saitama, and Chiba, horse skin was used. In fact, the choice of skin has traditionally varied from place to place. Even today, especially older customers can detect a difference in the tone of the drum. That is one reason why customers come to the shop to hear how the drum sounds before the tacks are hammered into place.

5. Treatment of the skin

1. Dealers in skins look for hides that could make good drums, and inform the company when they find a good one.

2. A representative of Miyamoto Company then checks the skin for strength, thickness, holes, etc., and to see how much of the skin can actually be used for drum heads.

3. Hair is removed from the skin. No chemicals are used, but rice bran is rubbed repeatedly over the surface to remove hair.

4. At this point the skin is called rawhide (Japanese: rōhaido). This is not the same "rawhide" referred to in the American west, but was probably a word coined in the early Showa period (after 1926) when many foreign words were adopted into the Japanese language.

5. Salt is rubbed into the rōhaido to preserve it. For example, on a skin of 150 square centimeters about 200 layers of salt are applied. The salting process takes about one year. Salting the skin also removes any excess oil from the skin, which might cause it to shrink.

6. After the salting process is finished the skins are washed in large wooden vats for about one hour. When there is no trace of salt left on the skins they are ready to be made into drum heads.

CATEGORIES OF DOCUMENTATION

BOB BARCLAY

This paper dealt with the documentation of musical instruments in museum collections and outlined the various techniques which have been applied to instruments in order to extract information from them and to record it for posterity. The point was made that the majority of the more technical methods were often carried out by conservators during treatment of the instruments. The following eight categories were considered:

Written
Graphic
Template
Photographic
Radiographic
Acoustic
Holographic
Analytical

The categories were then examined in more detail.

Written documentation is one of the oldest forms, although in recent years with the advent of computer data bases there has been much refinement. It was made clear that the conservation profession would soon need to face the problem of consistent terminology.

Graphic documentation is another early technique which has been much refined. The problems of accuracy in rendering of drawings were discussed, a topic which has a bearing on CIMCIM's recent work on classification.

Recommendations for Access

Templates were defined as any method of retaining profile information from instruments. Historic examples are the preserved forms used by early violin makers.

Photographic techniques include the use of visible light, infra-red and ultra-violet. The drawbacks of photographs as a documentation tool were examined and the use of graphic before and after treatment pictures was discussed. These kinds of photographs project an image which is at odds with good conservation practice.

Radiographic documentation can be performed with X-ray apparatus where no other access to an instrument is possible. Measurements can be made from the X-ray photographs and stereoscopic images can also be produced.

Acoustic techniques are divided into analytical methods for the examination of conditions in the abstract, and recording techniques for documentation. A suggestion for acoustic measuring of instruments as a museum documentation tool was discussed.

Holographic techniques are largely inapplicable for documentation although they have been used for the analysis of sound formation in musical instruments.

The analytical techniques include the wide range of sampling methods available for the documentation of musical instruments, and for modifying the approaches to conservation treatment.

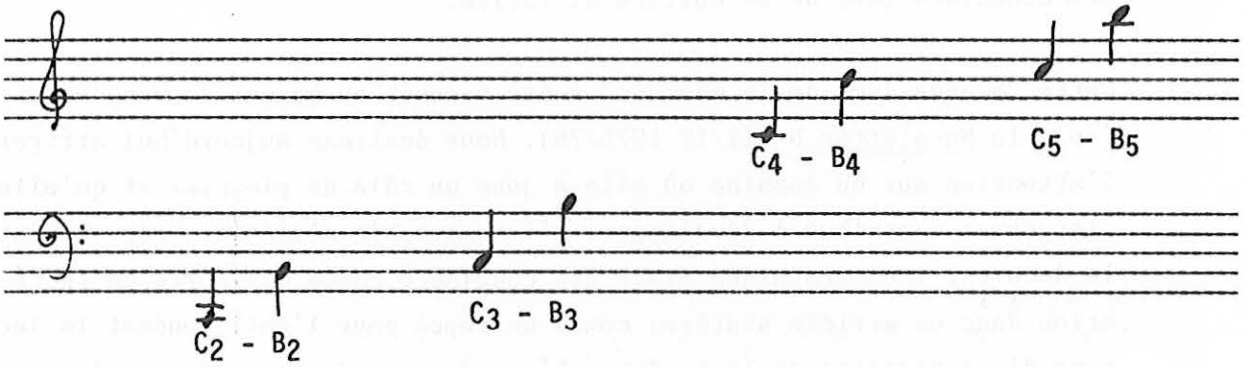
Although a large part of the paper discussed techniques which were familiar to the author's conservation colleagues, it was felt that a survey of this kind could be of great use to the non-conservation museum personnel. The increasing emphasis which the conservation profession places upon documentation makes this a highly desirable exercise.

Pitch Notation: A Plea to End Confusion

Musicians have for centuries agreed on names for notes within the octave: C, D, E ... B. Identifying octaves, however, has been remarkably confused. The Helmholtz notation employing upper and lower case letters with super- and subscript primes ($C_{,}$, D", e"") has been used in many books on musical instruments. Piano and organ makers have used a variety of systems, none of them helpful to players and makers of other instruments. Musicians have tended to resort to cumbersome relations to the staff ('E on the fourth space of the treble clef').

A much simpler and less error-prone nomenclature was proposed by R.W. Young in 1939 (1), and this has since been adopted by the U.S.A. National Standards Institute(2). Each note in the whole range used in practical music can be identified by two symbols - the familiar note letter and a single digit to specify the octave.

STANDARD PITCH NOTATION



Thus many typesetting and proof-reading problems are eliminated, and one is left with notation very easily pronounced ('E_6' rather than 'lower case E with three dashes'). The standard notation is easily learnt: one merely needs to remember the pitch standard A_4 = 440 hertz or that the usual piano keyboard runs from A_0 to C_8.

The standard specifies a subscript digit (B_3) but in typewriting and computer entry the digit can be on the same level as the letter (B3) without risking loss of definition.

This notation applies to musical pitch rather than frequency and often a pitch standard or a transposition will be stated or implied (eg. A_4 = 415 hertz or 'G_5 for trumpet in F').

There are, of course, some instruments whose compass extends below C_0: notes lower than this are designated by negative subscripts. However, as in most people the pitch threshold of hearing is close to C_0 (16.352 hertz at A_4 = 440 hertz) only the overtones of these lower notes are heard - the fundamentals can only be felt as vibrations.

I propose the general use of this standard notation by musical instrument scholars. Acousticians have already largely adopted it and we would all benefit if the musical world at large followed.

(1) R.W. Young, J. Acoust.Soc.Am 11, 134-139 (1939).
(2) American Standard Acoustical Terminology, S1.1-1960 of the U.S.A. National Standards Institute (formerly American Standards Association).

Arnold MYERS
June 1985

DE L'IMAGE A L'OBJET

Hommage à G.Thibault de Chambure. Exposition et colloque à Paris.

Dix ans se sont écoulés depuis la disparition de Madame de Chambure; il était important de rendre hommage à son action et à l'impulsion qu'elle a donnée à certaines branches de la musicologie. Sa personnalité hors du commun y était pour beaucoup, sa force de persuasion venant augmenter auprès de nombre de ses disciples l'influence de sa méthode, de ses profondes connaissances, de sa culture si variée.

Cette "grande dame de la musique" a été évoquée au moment de son décès (vois la Newsletter N°III/IV 1975/76). Nous désirons aujourd'hui attirer l'attention sur un domaine où elle a joué un rôle de pionnier et qu'elle a largement contribué à développer: l'iconographie musicale. Trop souvent, le document iconographique avait été considéré comme une sorte de récréation dans un article austère, comme un repos pour l'oeil pendant la lecture d'une histoire de la musique. L'une des premières, elle a pris au sérieux le document figuré et l'a étudié au même titre que les autres sources musicologiques, établissant de nouvelles correspondances entre elles.

C'est pourquoi l'hommage rendu à sa mémoire au Musée Instrumental du Conservatoire de Paris a été axé sur l'iconographie, sous la forme d'une exposition (4-26 octobre 1985) retraçant sa vie et son activité au Musée, composée de partitions musicales, des photos inédites d'elle-même, de programmes de concerts et de manuscrits; l'un de ses articles les plus marquants avait été illustré; l'exposition comprenait en outre plusieurs thèmes iconographiques se rattachant aux divers centres d'intérêt de G.Thibault de Chambure en matière d'iconographie musicale. Elle avait bien compris l'importance de cette source pour un musée instrumental, puisqu'elle avait fondé auprès du Musée dont elle était devenue le conservateur un Centre d'Iconographie et d'Organologie, au sein d'une équipe de recherche soutenue par le Centre National de la Recherche Scientifique; elle est dirigée depuis 1975 par M.Jacques Thuillier, professeur au Collège de France.

L'exposition a été ouverte à l'occasion d'un colloque international, qui était placé sous l'égide du RIdIM et organisé par l'équipe du Centre d'Iconographie; la secrétaire du colloque, Mme Paule Guiomar, est également chargée de l'édition des actes du colloque. Celui-ci s'est tenu au Collège de France à Paris du 4 au 7 septembre 1985.

Celle que ses disciples continuent à appeler "Madame de Chambure" aurait certainement apprécié de voir se développer avec autant d'ampleur une étude qui lui était particulièrement chère.

Josiane BRAN-RICCI

Conservateur du Musée Instrumental du Conservatoire National Supérieur de Musique de Paris.

A New Gallery of Musical Instruments

Royal Ontario Museum, Toronto, Canada

The Royal Ontario Museum is Canada's largest museum, and its collections are among the most diverse in the country. Its collection of musical instruments is the largest of its kind in a public museum in Canada, but it is rather small when compared to the great collections in Europe and the U.S.A. It comprises some 210 instruments, mostly European, mostly 18th and 19th century, and mostly in the art-music category

As with many collections, this one derives principally from donations that private collectors have made over the years. The consequences of this derivation are predictable: a collection that is far from comprehensive, that contains a disproportionate number of unusual instruments, and that includes relatively few outstanding examples.

Among the more notable instruments in this collection are a double bass attributed to Gasparo da Salo and once owned by Dragonetti; a fake 16th-century violin attributed to Vuillaume; a beautiful Italian mandora dated 1726; a harpsichord dated 1591 by Celestini; an Austrian brass contrabassoon of about 1840; an early keyed bugle by Matthew Pace; and a couple of Canadian melodeons (reed organs) -- these two being products of a remarkably large industry in 19th century Canada.

Although this is not a world-class collection, it is an important one in the Canadian context, and the Museum decided to develop a small (305 m2) permanent exhibition for it. "European Musical Instruments 1500-1900" was designed and built in six months, a very short period by most museums' standards. It opened in July 1984. On exhibit are about 125 instruments, plus several music books and manuscripts, and a few works of art with musical themes.

At the commencement of the design process, the question arose: how best to exhibit such a collection? The design department suggested using the instruments to create thematic exhibits, e.g., the performance of music in different kinds of ensembles, from solo to symphony; or the different sorts of music that these instruments performed: military, religious, chamber, operatic, etc; or the causes of changes in instrumental design over time; or the different physical, social, and cultural environments of music-making. In short, it was hoped to develop some kind of "musical history display".[x]

However, the curator decided that the only option was to display as many as possible of the better preserved examples, and to divide them first into broad conventional categories -- bowed strings, plucked strings, woodwinds, etc. -- and then to subdivide these into families -- violins, viols, citterns, etc. The design department accepted his wishes, and so designed an essentially conservative exhibition.

In retrospect, the curator may well have been right. But the design department still believes that it would have been more interesting to explore some alternatives to the traditional mode adopted, which amounts simply to presenting the best of the collection. Besides, in order to mount a proper typological exhibition, one must possess a comprehensive assemblage of objects. Some

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[x] see Friedemann Hellwig, "The Presentation of Musical Instruments in Three Scandinavian Museums." CIMCIM Newsletter 10 (1982): 10-11.

visitors have criticised the Museum for having left out their favorites, notably French horns and percussion instruments. The truth is that the Museum does not have any of these to display.

From a museological perspective, one can criticise this approach in another way: a typological exhibit tends to appeal most to the connoisseur, and least to the inexpert 'general visitor'. This is a relevant criticism, because the vast majority of visitors to this gallery are unquestionably general visitors.

Another hazard of the typological exhibit is that it rarely inspires designers to do truly creative work; it has so little 'story' to it. After some thought, the designer of this exhibition decided simply to create an atmosphere that complemented the objects. He attempted to do this in several ways: by giving the gallery an architecturally interesting 'look', i.e., one that hinted at styles of the past; by designing cases and railed-off platforms that interfered as little as possible with the visitor's sight; by placing all the instruments except the keyboards against surfaces richly covered in burgundy felt; by confining most of the lighting in the gallery to the instruments themselves; and by evoking the musical past through the copious use of suitable images and artifacts.

On the whole, the designer succeeded in complementing the instruments through these techniques, although the Museum has not yet provided the gallery with all the images of past musical life that he envisaged. Visitors have certainly expressed a liking for the gallery. With its somewhat Post-Modernist air, it does have a 'classic' feel to it. One may be forgiven, however, for wondering what the design has exactly to do with the major theme of the gallery, which is simply 'to show the best of the collection.'

To fulfil an educational intention, a text panel accompanies each family of instruments. The text provides two sorts of information: the history and musical importance of the family in question, and the chief physical characteristics and manner of playing instruments within the family. No text runs longer than 160 words -- we have found that visitors tend not to read anything longer than this. Usually a period image appears on the panel as well. It shows a musician playing an instrument similar to one of those displayed. This image functions in two quite different ways: it shows how the instrument was held, and it counteracts the negative impact of large blocks of print.

A label appears with each instrument. Label information includes the instrument's name, maker, place and date of origin, material composition, maker's marking, registration number, and credit line, along with special information pertaining to that instrument.

Like the texts and labels of many exhibitions, those here are almost exclusively expository in style. In effect, they treat the visitor as a passive recipient of information, and transmit little of the excitement and even joy that comes from the study, appreciation, and knowledge of musical instruments and music. To general visitors without special knowledge in the subject, this type of exhibition presents an assemblage of seemingly unrelated assertions about the objects on view. An expository style does not encourage visitors to think about what they are viewing, nor does it fire their imagination. The whole structure of information in this exhibiton reminds one of introductory passages and individual entries in a catalogue. But an exhibition is a medium very different to a catalogue, which is why museologists try to avoid this style of presentation. Unfortunately, an exhibition organized typologically tends to encourage it.

The gallery has one excellent aspect. A sound system provides visitors with musical examples of the sound of instruments similar to about thirty-eight of those on display. The visitor wears a pair of headphones and plugs them into 'listening posts' in the gallery. There are twenty posts, each with its own recorded programme. Each post stands near the instrument(s) whose sound it plays to the visitor. The twenty programmes are recorded on tape loops in a remote bank of tape decks. A narration introduces each programme; the visitor can select an English or French version by pressing a button on the post. The great advantage of this kind of system is that it allows visitors to select their own route through the gallery, and to stop and listen where they please.

Is there a point to an exhibition like this? It teaches little, after all: one observes the instruments in their discrete groups; one reads this fact here and that fact there; one can listen to the sound of some of the instruments. It does not add up to a connected whole. Yet the small amount of evaluation that the Museum has carried out suggests that many visitors are pleased with the gallery. It does have a semi-rich, 'hushed' atmosphere: somehow this gallery manages to recreate the air of the traditional, grand museum without looking old-fashioned. And it presents the visitor with many objects to look at. It is clear that a significant proportion of those who visit museums do so primarily to see the objects, and to enjoy themselves, rather than to be instructed.

On the other hand, public museums usually have a mandate to function as institutions of informal learning; certainly the Royal Ontario Museum does. In this respect, the gallery is evidently less successful.

Perhaps in twenty years' time the Museum will have the opportunity to try again. Meanwhile, the major part of this important Canadian collection is on public view in an attractive gallery. For lovers of music and musical instruments, to have this much is indeed a pleasure.

OUVERTURE D'UNE NOUVELLE GALERIE AU MUSEE DE L'HOMME

" LE SALON DE MUSIQUE "

Conçu par notre collègue Geneviève Dournon, Maître de Conférences, Conservatrice des collections d'instruments de musique, et réalisé dans le cadre du département d'ethnomusicologie du Musée de l'Homme dont elle a maintenant la charge, " LE SALON DE MUSIQUE " a été inauguré le 4 Juin 1985 à Paris. G. Dournon présente brièvement ici les grandes lignes de cette exposition permanente. H.L.R.

" LE SALON DE MUSIQUE DU MUSEE DE L'HOMME ", ouvert dans les galeries du second étage, est un nouvel espace de 200 M2 aménagé pour présenter à travers un grand nombre d'instruments, différents aspects du phénomène musical. Il est dédié à André Schaeffner, un des fondateurs du Musée et créateur du département d'ethnomusicologie.

Le salon de musique offre au public, dans une première section, une présentation typologique x des quatre grandes familles d'instruments - "Matières rigides", "Membranes", "Cordes", "Air" définies en fonction de deux interrogations : Qu'est-ce qui vibre? Comment?

"Thème et variations" centré sur la cithare (tubulaire, radeau, cuvette, sur table, sur caisse, avec clavier) prise comme exemple de diversité typologique, sert de transition avec la seconde section qui s'articule autour des différents thèmes suivants :

"Sources corporelles": mouvement rythmé et voix sont illustrés, d'une part avec des parures sonores destinées aux différentes parties du corps du danseur d'autre part, avec des photographies montrant certaines attitudes liées au cha pratiquées depuis des millénaires à travers le monde.

"Signes" présente l'instrument comme marqueur culturel. Les pièces choisies (rhombes, conques, sistres, trompes anthropomorphes, vièle, hochet, tambours zoomorphes, etc.) montrent comment les instruments, à travers leur forme, leur matière, leur décor ou la fonction dont ils sont investis par une société donnée, sont révélateurs des valeurs sociales, religieuses, ethiques ou esthétiques sur laquelle cette culture se fonde.

"Continuité". Le thème de la permanence de l'instrument à travers le temps et l'espace s'exprime à travers trois aires géo-culturelles. Dans Afrique et Méditerranée harpes, sistres, tambours sur cadre, hochets, hautbois en usage de nos jours sur le continent africain sont mis en parallèle avec leurs homologues de Mésopotamie, d'Egypte et de la Grèce antique. Pour le monde asiatique harpe birmane, tambour de bronze, orgues à bouche et luths de Chine ou du Japon témoignent des phénomènes de survivance, de diffusion ou d'évolution. Pour l'Amérique indienne, les constantes sont claires entre instruments contemporains et précolombiens - flûtes en terre ou en roseau, conques, racleurs en os, teponatzli - et leurs représentations dans des statuettes de céramique ou des images de codes.
"Récupération" évoque comment l'invention dans la facture instrumentale se manifeste face à la pénurie de matériaux traditionnels (notamment le milieu urbain) avec le ré-emploi de boîtes de conserve, éléments de véhicules, tubes de plastique etc., ou face à la répression, comme c'est le cas pour les steel-band quand l'usage des tambours fut frappé d'interdiction dans les Caraïbes.

"Polyphonies et ensembles instrumentaux". Ce thème présentant les instruments dans leur fonction musicale, est introduit par un tableau synoptique expliquant les composantes de la musique et les échelles musicales tandis qu'un autre schématise les différents procédés polyphoniques. Dans cette partie sont exposés différents ensembles formés d'instruments de même type (orchestre de flûtes de Pan des Salomon, angklung indonésien) ou de type différent (gamelan de Java, orchestre rituel tibétain) ainsi que des instruments polyphoniques utilisant techniques du bourdon (vielle à roue, cornemuse, flûtes doubles et clarinette triple, orgue à bouche, accordéon, harmonica) ou du contrepoint (xylophone, harpe, harpe-luth d'Afrique).

Parmi les quelques quatre cents instruments présentés avec une abondante documentation photographique, des textes et schémas explicatifs, deux pièces maîtresses sont à l'honneur :
- Le gamelan de Java du début du XIXè siècle, provenant d'une cour princière de Cirebon. Il comprend seize instruments : jeux de lames et de gongs de bronze, tambour, xylophone et viële tarawanosa sur leurs supports d'origine en bois sculpté, peints en rouge souligné de vert et d'or. Il fut offert en 1887 au Musée du Conservatoire National de Musique de Paris puis confié en 1933 au Musée de l'Homme. Ce magnifique orchestre est aujourd'hui présenté en position de jeu sur un podium devant lequel les visiteurs peuvent s'asseoir pour écouter un programme musical enregistré ou les répétitions du groupe de gamelan du Musée de l'Homme, constitué pour la circonstance et qu'entraîne un musicien indonésien.
- Le lithophone préhistorique qui est exposé pour la première fois depuis sa mise au jour au Vietnam en 1949. Unique en son genre, il comprend dix lames de pierres taillées dont les plus grandes mesurent plus d'un mètre de long et dont les sonorités étonnantes peuvent être entendues dans un des trois programmes musicaux illustrant l'exposition et diffusés dans deux cabines et dans la salle.

Dans animations musicales et culturelles sont régulièrement assurées dans le Salon de Musique : répétitions-concerts du gamelan, ateliers de pratique instrumentale pour les scolaires, conférences-récitals, visites commentées.

Le guide-catalogue du "Salon de musique", en préparation, sera publié au début de 1986. Des programmes de films vidéo sur la musique et les musiciens traditionnels seront mis en place multérieurement.

Geneviève DOURNON

x qui tient compte des travaux menés par le groupe du CIMCIM auxquels l'auteur de ces lignes participent régulièrement.

THE LEVI FOUNDATION CONFERENCE, VENICE

16-19 October 1985

Several CIMCIM members participated in this study conference entitled 'Conservation, Restoration and Use of Antique Musical Instruments: For a European Restoration Charter', organised by the Fondazione Levi as part of the European Music Year.

Nearly 40 papers were presented, covering a wider field than the Conference's title might suggest. The organising committee, chaired by Vinicio Gai of Florence, is to be congratulated on attracting speakers from nearly a dozen European countries. Simultaneous translation into Italian and English was provided.

Most of the ideas currently circulating on the ethics of historic musical instrument restoration and use were aired, revealing differing values placed on the conservation for posterity and the restoration and re-use of instruments in different quarters. Nevertheless, the principles of sound conservation practice were emphasised by many speakers, demonstrating the intellectual qualities as well as the craftsmanship demanded of conservators in this field: the necessary transition from purely craft-based practice to scientifically directed policy making.

The Conference did not in the end adopt a restoration charter: a less ambitious code of practice was drafted at the conclusion of the Conference, with the suggestion that the issues should be discussed again in 1987 (possibly in Madrid).

It is understood that the conference papers will be published. Enquiries to: Fondazione Levi, I-30124 Venezia, San Vidal 2893, Italy.

Arnold Myers

University of Edinburgh

THE ACQUISITION, USE AND RESTORATION OF WIND INSTRUMENTS IN COLLECTIONS

The greater part of our heritage of musical instruments has come to us through private collectors, and it will probably continue to do so, because collectors will always be active in the borderline area where items are not old enough to be patently museum pieces, and not new enough to be in current musical usage. Our museums, therefore, have an interest in promoting good conservation practice among private collectors.

The questions of acquisition policy and conservation policy cannot be separated: they are bound together by the main policy decision for any wind instrument in a collection - should it be played? For wind instruments the answers to this question are slightly different from those relating to other classes of instrument because breathing into an artifact imposes loads not experienced by stringed or percussion instruments, though the policy decisions will be broadly similar.

Now, what are our museums and collections for, if not to provide a pool of instruments for making music? Instruments are built for music, not to be viewed through glass in showcases! The answer of the professional curator is that we have a responsibility to posterity to preserve items from the present that will enrich the future. Being involved with a University Collection, I tend to think in terms of maximising our store of information.

The unavoidable truth is that using wind instruments subjects them to certain wear and risk of possible damage. Our collections are underrepresented in many areas (such as 18th and 19th century trombones) because they have worn out long ago. The surviving instruments have come to us by good fortune rather than rational decision. What we appreciate in our collections is the information that contributes to the performance of the music of past generations and beauty of design and workmanship. How can we best serve our kindred spirits in future generations? We, with our small museum budgets, must decide carefully what to preserve. Both our acquisition policies and our conservation policies must span the entire history of wind instruments, including the modern. On the other hand, we cannot collect everything.

I would like to suggest five categories of instruments:

1. The currently replaceable. These include collectors' modern playing instruments and specimens kept in collections for use in performance, such as modern copies of old instruments. This is not the territory of the traditional museum, but we must ensure that some survive. For any single item, though, playing value outweighs information value.

2. The superseded. This category includes the victims of fashion, such as the narrow-bore trombones, woodwind laid aside because of pitch-standard changes, band instruments of dwindling amateur music-making traditions, etc. They can be quite recent or a generation old, prime examples or cheaper models, they may be low-priced and in embarrassingly large supply. Superseded instruments may be only slightly different from the modern, but enough to make valuable comparisons. There is finite supply because they are not in current manufacture.

3. Truly historic instruments that are fairly common. We may include one-keyed flutes, the later boxwood clarinets, cornopeans, keyed

bugles, etc. These are the typical elements of private collections as well as museum collections. If some of these were damaged by use it would be a real loss, but not a disaster.

4. The rare. These are the prized items, the instruments of Denner, Bressan and the Stanesbys and our 18th century brass. We should include here good instruments of known provenance and the playing instruments of the great musicians of any period.

5. The unique. This is our heritage of renaissance wind, of course, but also the prototypes of the great inventors. This class is nearly all in museums by now.

I suggest that museums and collectors might have different policies for the use of these five categories.

The Use of Instruments

A regularly played instrument has an apparent resilience and sturdiness, and maintains its musical response to the player - it seems to live. Yet this cannot be maintained for ever. Drastic rebuilding will be needed when keywork wears out; the body is worn where it is held, slides and valves wear to the point of leaking, corrosion attacks from the inside. Regular use cannot be a policy for any museum wind instrument.

At a public performance there is pressure on the performer to demonstrate mastery of the instrument which leads to risks being taken. There can be pressure on restorers to set playability above conservation requirements. Maintenance is carried out, such as oiling the bores of woodwind, which might detract from the long-term integrity and information value of the instrument. Certainly, any wooden instrument that has not been used for some time needs to be 'run in' gradually, and must only be practised for short periods at first. This may be difficult for a curator to supervise. Sudden heavy use results in drastic disturbance of the equilibrium of moisture content of the wood. As wood swells on taking in water, cracking can easily result from playing an instrument which is in equilibrium with the museum atmosphere.

What policies, then, can a museum or a responsible private collector adopt? If instruments are over-played, we will deplete a non-renewable resource. If nothing is played at all, our fund of knowledge about the instruments in our collections is severely limited. Each generation is entitled to a share of its heritage.

I suggest five categories of use:

A. Instruments freely lent to players for performance, practice and learning on. A museum adopting this policy for any instrument should not have qualms about de-accessioning it.

B. Instruments used on rationed occasions for specific performances and recording sessions by established musicians accustomed to the kind and period of instrument.

C. Instruments used by specialist performers who can learn from the instrument and communicate their findings, generally on the premises of the museum so that environmental conditions and length of use can be controlled. Any resulting performance is recorded, the recording being kept in the archive of the museum. Here the gain in information

is expected to outweigh the marginal increment in wear: the playing is for information rather than for pleasure.

D. Instruments played for short periods by an appropriate player purely for information extraction (such as cataloguing). All information is recorded.

E. Instruments not played at all, all information coming from measurements and non-destructive tests.

All collections need to have a policy, which must be subject to revision as we re-assess rarity and conservation techniques. Many museums and component collections in museums are bound by terms of establishment, bequest or donation. The terms can be for or against use. Other museums, like private collectors, can determine their own policies. The former have a duty to conserve, the latter have at least a financial inducement to keep their instruments undamaged. Many private collectors do see themselves as custodians for posterity, though some consider they have purchased the right to play their instruments regardless of the consequences. The climate of opinion, luckily, is improving, but we must encourage more widespread use of modern copies of old instruments. Since private collectors tend to allow the use of their instruments, museums should follow a tighter policy of conservation. I suggest, as a general policy for collections free to choose, that categories of instrument 1 to 5 could be matched by policies for use A to E.

In collections where instruments are played, the nature and duration of use should be permanently recorded on each occasion.

Restoration

I will now look at restoration purely from the point of view of conservation, meaning the arresting of decay in the existing fabric of an instrument. Many musical instrument restoration methods are not consistent with the principles of conservation. The existing fabric is altered and the information content of the instrument is diminished.

Restoration usually aims either

- to make the instrument playable for performance or for information extraction purposes, or
- to improve the appearance of the instrument, or both.

The latter generally involves the removal of relatively recent accretions and supplying any missing parts. The restorer can, in fact, learn a great deal about the instrument's construction and history.

Reversibility is widely accepted as a criterion for conservation and restoration policies. In fact, many restoration procedures are not reversible including such basic steps as removing old pads from woodwind keys, removing old lapping from joints and any soldering. Note that conservation procedures are non-reversible in remedial treatment, but reversible in protective measures.

Each collection should establish a restoration policy within which any restoration programme can proceed. The policy must be reviewed in the light of research and reports of condition monitoring.

Future generations will ask questions we cannot envisage. Information may be destroyed by restoration, even if we maintain the information-bearing features of the instrument that we now recognise. Therefore anything that goes beyond arresting decay or reducing risk of damage is restoration at the expense of conservation. To attempt no restoration is irreproachable.

At the most, and at the present time, I would suggest as a viable policy for a collection (referring to the categories of rarity above):

A. For category 1, any repair or restoration.

B. For category 2, repair or restoration by traditional repairer's methods.

C. For category 3, limited irreversible restoration.

D. For category 4, only truly reversible restoration.

E. For category 5, no restoration at all.

If any restoration is attempted, the owner's contract with the restorer must require:

- detailed documentation of the original condition, the work done and the final condition;
- preservation of any replaced parts; and
- agreement on conservation principles. For example, facts discovered after work has started may require the aim of the restoration to change.

The principle of maximising of information and our understanding (with a long-term perspective) must be paramount.

Information Feedback

Compared with the age of our oldest instruments, our conservation methods have been in use for a brief time. It is imperative to monitor the condition of the instruments to assess the long-term effects of the conservation treatment and the storage conditions they have experienced. The variety of techniques practised in different collections will only lead to valuable comparisons if compatible parameters are monitored. There is a need for worldwide international cooperation. Part of the conservator's code of ethics must be to make public any cases where conservation techniques have failed or where restoration has caused damage.

For example, if in a public museum employing a highly professional conservation staff, and where one can assume a controlled environment, a glass flute suddenly starts to decay, we should all have the right to know about this. We can then learn more about the causes of the problem and reduce the likelihood of any similar instrument being affected. I suggest that, as a start, condition reports, records of environmental conditions and records of use of instruments should be as accessible in museums as the instruments themselves.

Research is urgently needed on the long-term effects of different oils (or not oiling at all) on the bore of woodwinds, on the phenomenon of stress-corrosion cracking in brass, and many other conservation problems.

Finally, I suggest that international cooperation is required in our acquisition programmes - perhaps the most difficult of all! The rare and the unique are probably fairly safe, but we must ensure that we are preserving good examples of our more common instruments with the highest standards of conservation practice.

[Based on a paper 'The Conservation of Wind Instruments' presented at the Conference 'Conservazione, Restauro e Riuso Degli Strumenti Musicali Antichi: per Una Carta Europea Del Restauro', organised by the Fondazione Levi, Venice. 16-19 October 1985.]

Arnold Myers
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Collection of Historic
Musical Instruments

AEROPHONES

41 Air ambiant
411 ...plaque vrombissante
411.1 .....avec perforation terminale pour cordelette de .....tournoiement - rhombe
411.11 .....oblongue à bord lisse, ex.: berbaling (Malaya) .....(Europe etc.)
411.12 .....oblongue à bord craneté, ex.: thunner-spehl .....(Scotland)
411.13 .....autre forme
411.13.1 .....avec accessoire sonore, ex.: bumble-bee .....(Angleterre)
411.2 .....avec double perforation centrale pour cordelette, ...ex.: diable
411.21 .....disque,ex: fuk (Bosnie, Herzegovinie)
411.22 .....autre forme
411.3 .....avec perforations périphériques
411.31 .....avec système de soufflerie, ex: sirène (Europe)
411.4 .....série d'aillettes avec tube d'insufflation
411.5 .....série de plaques végétales avec manche, ex: fuyerade .....(France)
412 ...corps creux vrombissant
412.1 .....avec cordelette terminale de tournoiement
412.11 .....cylindre à fente longitudinale,ex: kura (Hausa, Afrique)
412.12 .....sphère perforée, ex: (Hawaii)
412.2 .....sans cordelette
412.21 .....tube souple
412.22 .....autres formes
413 ...corp creux avec perforations périphériques
413.1 .....avec cordelette de rotation, ex: yoyo musical .....(Etats Unis, Angleterre), ex: toupie ronflante (Inde)
413.2 .....avec axe-ressort de rotation, ex: toupie ronflante .....(Europe), maama (Papua, Nouv. Guinee)
414 ...lanière fouettante, ex: geisle (Suisse)
415 ...lame fouettante, ex: épée de danse (Turquie)

AEROPHONES

41 . Surrounded by air
411 ...humming plaques
411.1 .....with a hole at one end for twirling string : bullroarer
411.11 .....oblong in shape with a straight edge, e.g.:berbaling .....(Malaya)
411.12 .....oblong, with a notched edge, e.g.: thunner-spehl .....(Scotland)
411.13 .....other shape
411.13.1 .....with sounding accessory, e.g.: bumble-bee .....(England)
411.2 .....with a pair of holes in the centre for the twirling .....string, e.g.: diable (France)
411.21 .....disc, e.g.: fuk (Bosnia, Herzegovina)
411.22 .....other shape
411.3 .....with holes all round the edge
411.31 .....with a system for blowing, e.g.: siren (Europe)
411.4 .....series of blades with blowing tube
411.5 .....series of plaques with handle,e.g.: fuyerade (France)
412 ...instruments with hollow bodies which hum
412.1 .....with twirling string
412.11 .....cylinder with longitudinal slit, e.g.: kura (Hausa, ...Africa)
412.12 .....perforated sphere, e.g.: (Hawaii)
412.2 .....without string
412.21 .....supple tube
412.22 .....other forms
413 ...hollow bodies with holes in the sides
413.1 .....with twirling string, e.g.: musical yoyo (U.S.A., ...England), humming top (India)
413.2 .....with moving spindle in its axis, e.g. humming top .....(Europe) maama (Central Papua New Guinea)
414 ...whip lash, e.g.: geisle (Switzerland)
415 ...whipping sheet, e.g.: dance sword (Turkey)

42 Instrument à air contenu dans un corps tubulaire ou globulaire* mis en vibration par un souffle.

421 ...Flutes**
...Le souffle est dirigé sur une arête située le plus ...souvent au niveau de l'embouchure.***

421.1 .....corps tubulaire
421.11 .....embouchure terminale
421.111 .....non aménagée, ex.: clef creuse
421.111.1 .....tuyau unique
421.111.2 .....plusieurs tuyaux de longeurs différentes .....ex.: flûtes de Pan
421.111.21 .....forés dans la masse
421.111.211 ..... pierre
421.111.211.1 .....avec trou de jeu, ex.: instruments ..... anciennes (Ecuador, Peru, Chile)
421.111.212 ..... poterie
421.111.213 ..... bois, ex.: fiould (Purenees), flûte ..... de Pan (gallo-Romaine)
421.111.214 ..... autres materiaux
412.111.22 .....assemblés (Amérique, Europe, Afrique, ...Océanie)
421.111.221 ..... sur un rang, ex.: tsungali (Campa, ... Amerique du Sud
421.111.222 .....sur deux rangs, ex.: nesusur (Malekula, ... Nouv. Hébrides)
421.111.223 .....en faisçeau, ex.: susuriek (Arawe, ... Nouv.Bretagne)

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* le critère de perce n'a pas été retenu parcequ' il ne s'agit pas d'un critère morphologique apparent.

** le groupe comprend les flûtes et les instruments communément appelés "sifflets".

*** embouchure : ouverture située à l'extrémité ou sur le côté du corps tubulaire ou globulaire, par où l'air est insufflé.

42 Instrument in which the air is contained in a tubular or globular* body made to vibrate by breath.

421 ...Flutes **
...The air is directed against an edge usually situated ...at the level of the mouthpiece.***

421.1 .....Tubular body
421.11 .....mouthpiece situated at the end of the tube
421.111 .....unprepared mouthpiece, e.g.: milk bottle (England)
421.111.1 ..... single pipe
421.111.2 .....several pipes of different lengths, ...e.g.: panpipes
421.111.21 .....drilled out of one single piece
421.111.211 ..... stone
421.111.211.1 .....with finger holes, e.g.: archaeological .....finds (Ecuador, Peru, Chile)
421.111.212 .....pottery
421.111.213 ..... wood, e.g.: fiould (Pyrenees), ... panpipes, (Gallo-Roman)
421.111.214 ..... other material
421.111.22 .....tied together (America, Europe, Africa, ...Oceania)
421.111.221 ..... one row,e.g.: tsungali (Campa, S.America)
421.111.222 ..... two rows, e.g.: nesusur (Malekula, ...New Hebrides)
421.111.223 .....in a bundle, e.g.: susuriek (Arawe, ... New Britain)

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* the shape of the bore is not taken into consideration.

** this group comprises flutes and those instruments usually called whistles.

*** mouthpiece : opening situated at the end or on the side of a tubular or globular body, through which air is blown.

421.112 .....aménagée avec bourrelet (Afrique).
421.112.1 .....sans trou de jeu, ex.: daf (Ethipie)
421.112.2 .....avec trou de jeu, ex.: wasant (Ethiopie)
421.113 ..... aménagée en biseau
421.113.1 ..... tuyaux en une seule piece, ex.: nay (Iran)
..... narh (Inde).
421.113.11 ..... avec embout de métal rapporté, ex.: nay (Iran),
..... narh (Inde).
421.113.2 ..... tuyaux en plusieurs pièces, ex.: cigirtma (Turkey)
421.114 ..... aménagée avec encoche
421.114.1 ..... en V
421.114.11 ..... tuyau unique, ex.: kete (Dahomey, Afrique)
421.113.12 ..... plusieurs tuyaux, ex.: (Bresil)
421.114.2 ..... en U, ex.: gena (Bolivie), paldong (Phippines)
421.114.3 ..... en demi-cercle, ex.: shakuhachi (Japon)
421.115 ..... aménagée avec conduit d'air et lumière *
421.115.1 ..... avec bandeau externe immobile, ex.: suling (Java).
421.115.2 ..... avec bloc et bandeau externe
421.115.21 ..... situés dans la partie supérieure du
..... tuyau: dit flûte à bloc antérieur.
421.115.211 ..... tuyau unique, ex.: suling (Sunda, Indonesie
421.115.212 ..... deux tuyaux, ex.: Bansali (Madhyr
..... Pradesh).
421.115.213 ..... plus de deux, ou plusieurs tuyaux
..... (Flores).

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* lumière : ouverture (pratiquée dans la paroi du tuyau) généralement rectangulaire et présentant une arête.

421.112 .....shaped with a rim (Africa)
421.112.1 .....without finger holes, e.g.: daf (Ethiopia)
421.112.2 .....with finger holes, e.g.: wasant (Ethiopia)
421.113 .....bevelled edge
421.113.1 .....pipe in a single piece, e.g.: nay (Iran)
..... narh (India)
421.113.11 .....with an added metal edge, e.g.: nay
.....(Iran), narh (India)
421.113.2 .....pipe in several pieces, e.g.: cigirtma
.....(Turkey)
421.114 .....shaped with a notch
421.114.1 .....a V shape
421.114.11 .....single pipe, e.g.: kete (Dahomey, Africa)
421.114.12 .....several pipes, e.g.: (Brazil)
421.114.2 .....a U shape, e.g.: cuena (Bolivia) paldong
.....(Philippines)
421.114.3 .....a semicircle, e.g.: shakuhachi (Japan)
421.115 .....with an air duct and a window*
421.115.1 .....with an external imovable band, e.g.: suling
..... (Java)
421.115.2 .....with an external block and band
421.115.21 ..... on the upper part of the tube: outside duct
..... flute
421.115.211 .....single pipe, e.g.: suling (Sunda,
.....Indonesia)
421.115.212 .....two pipes, e.g.: bansali (Madhya Pradesh)
421.115.213 ..... more than two pipes, or many pipes,
..... e.g.: (Flores)

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* window : an opening, made in the side of the pipe, usually rectangular in shape and containing an edge.

421.115.22 .....situés dans la partie médiane du tuyau dite
.....(flûte à bloc médian
421.115.221 .....tuyau unique
421.115.222 .....tuyau bipartite,ex.: (Inde, Madhya Pradesh)
421.115.222.1 .....avec tube d'insufflation rapporté,
.....ex.: (Inde Centrale)

421.115.3 ..... à bloc
421.115.31 .....conduit d'air au ras du tuyau
421.115.311 .....tuyau unique
421.115.311.1 .....d'une pièce,ex.:khlui (Thailand), dessus
.....du XVI (Europe), algoja (Inde, Madhya
..... Pradesh)
421.115.311.11 .....avec tube d'insufflation rectiligne
.....accolé au tuyau, ex.: fujera (Slovaquie)
421.115.311.12 .....avec tube d'insufflation sinusoidal
.....emboîté sur le tuyau et manchon
..... de protection dit "fontanelle" ex.:
..... flûtes basse et contre basse du
.....XVIe s. (Europe)
421.115.311.2 .....en plusieurs pièces, avec tube d'insuf-
..... flation et clefs apparentes,ex.:
.....flûtes basse et contre basse du XVIIIe s
.....(Europe)
421.115.312 ..... deux tuyaux
421.115.312.1 .....pris dans la masse
421.115.312.11 .....avec trous de jeu
421.115.312.12 ..... un tuyau avec trous de jeu et un
.....sans
421.115.312.2 .....ligaturés, ex.: appeau (Californie)

421.115.32 .....prolongation du conduit d'air
421.115.321 .....en forme de bec
421.115.321.1 .....tuyau unique
421.115.321.11 .....d'une seule pièce,ex.: galoubet
..... (Provence) flageolet à six trous
..... des XVIIe et XVIIIe s(Europe)
421.115.321.111 .....avec dispositif interne mobile,
.....ex.: swannee whistle, (Angleterre)
.....diapason à pompe, jazzo flûte (France)

421.115.22 .....placed in the middle of the pipe

421.115.221 .....single pipe
421.115.222 .....double pipe, e.g.:(India, Madhya Pradesh)
421.115.222.1 .....with an added blowpipe,
.....e.g.: (Central India)
421.115.3 ..... with a block
421.115.31 .....air duct's opening level with the end of
.....the pipe
421.115.311 ..... single pipe
421.115.311.1 .....without a joint, e.g.: khlui
.....(Thailand),XIVc. dessus (Europe),
.....algoja (India, Madhya Pradesh)
421.115.311.11 .....with a straight blowpipe attached to
.....the pipe, e.g.: fujera (Czechoslovakia
421.115.311.12 .....with a curved blowpipe, enclosed in
..... the pipe in a protective case known
.....as the "fontanelle", e.g.: XIVc. bass
.....and great bass recorders (Europe)
421.115.312 .....two pipes
421.115.312.1 .....drilled out of one single piece
421.115.312.11 .....with finger holes,e.g.:
412.115.312.12 .....one pipe with fingerholes, the other
.....without, e.g.:
412.115.312.2 .....tied together,e.g.:"mataco whistle"
.....(S.America)

412.115.21 .....extended air duct
421.115.321 .....beak shaped
421.115.321.1 .....single pipe
421.115.321.11 ..... without a joint,e.g.: galoubet
.....(Provence), XIIc. to XVIIIc. six
.....holed flageolet (Europe)
421.115.321.111 .....with an internal movable device,
.....e.g.: swannee whistle (England)
.....jazzo flûte, diapason à pompe
.....(France)

421.115.321.12.....en plusieurs pièces,ex.: flaviol,Rous-
.....sillon) flûtes à bec du XVIIIe.s
..... (Europe)
421.115.321.2.....deux tuyaux
421.115.321.21.....indépendants utilisés en paire ex.:
.....satara (Inde)
421.115.321.22.....ligaturés,ex.: (Tibet, Inde du
.....Nord)
421.115.321.23.....pris dans la masse
421.115.321.231.....avec trous de jeu,ex.: dvoynice
.....(Yougoslavie)
421.115.321.232.....un tuyau avec trous de jeu, un
.....sans, ex.: (Roumanie)

421.115.321.3.....plus de deux tuyaux
421.115.321.31..... embouchure unique ex.: flûte précolom-
.....bienne (Mexique)

421.115.321.32 .....embouchures multiplés,ex.: ugisu-bue(Japon)

421.115.322.....autre dispositif
421.115.322.1.....tuyau unique
421.115.322.11.....d'une seule pièce,ex.: flageolet
.....d'oiseaux du XVIIIe (France)
421.115.322.12.....plusieurs pièces, ex.: flageolet
.....XIXes(France, Angleterre)
421.115.322.2 .....deux tuyaux ex.: flageolet des XVIIIe.s
.....(France, Angleterre)
421.115.322.3.....trois tuyaux,ex.: flageolet des XVIIIe
.....et XIXes (France et Angleterre)

421.115.321.12 .....with several joints, e.g.: flaviol
.....(Roussillon), XVIIIc. recorders
.....(Europe)
421.115.321.1 .....two pipes
421.115.321.21 .....separate, but used in pairs,
.....e.g.: satara (India)
421.115.321.22 .....tied together, e.g.: (Tibet, Northern
.....India)
421.115.321.23 .....drilled out of one single piece
421.115.321.231 .....with fingerholes, e.g.: dvoynice
.....(Yugoslavia)
421.115.321.232.....one pipe with fingerholes, one
.....without, e.g.: (Romania)

421.115.321.3.....more than two pipes
421.115.321.31 .....with a single mouthpiece,
.....e.g.: precolombian flute (Mexico)

421.115.321.32.....many mouthpieces, e.g.:ugisu-bue(Japan)

421.115.322.....other device
421.115.322.1 .....single pipe
421.115.322.11 .....without a joint, e.g.: XVIIIc. bird
.....whistle (France)
421.115.322.12 .....with several joints,
.....e.g. : XIXc. flageolet (France, England
421.115.322.2 .....two pipes, e.g.: XVIII and XIXc. flageole
..... (France, England)
421.115.322.3.....three pipes, e.g.: XVIII and XIXc.
.....flageolet (France, England)

421.12 .....Embouchure latérale
421.121 .....situation proximale
421.121.1 .....embouchure circulaire ou ovale
421.121.11.....tuyau rectiligne
421.121.111.....sans trou de jeu (Norvège)
421.121.112..... avec trous de jeu,ex.: fifre (Provence)
..... bansuri, (Inde).
421.121.112.1..... sans clef,ex.: flûte traversière
.....Renaissance)
421.121.112.2 .....avec clef
421.121.112.21.....avec une clef,ex.: flûte traversière
.....du XVIIIe s. (Europe)
421.121.112.211.....avec une clef et avec parties
.....de tuyau interchangeables dite
....."corps de rechange",ex.: flûte
..... traversière du XVIIIs. (Europe)
421.121.112.22 .....avec deux clefs,ex.: flûte Quantz,XVIIIe.s
421.121.112.221.....avec deux clefs et avec parties
.....de tuyau interchangeables ("corps
.....de rechange"),ex.: flûte XVIIIe.s
.....(Europe)
421.121.112.23.....trois clefs,ex.: flûte versière.
421.121.112.231.....trois clefs avec parties de tuyau
.....interchangeables, ("corps de rechange",)
.....ex.: flûte traversière XVIIIe.s

421.121.112.24 .....plus de trois clefs,ex.: flûte
.....traversière a partir de la fin
.....du XVIIIes)

421.121.113.....trous de jeu et un orifice latéral recouvert
.....d'une membrane, ex.: fue (Japon)

421.121.12 .....tuyau à tête repliée,ex.: mirliton (Japon).
421.121.121.....avec trous de jeu et clefs.

421.12 .....Mouthpiece at the side (lateral mouthpiece)
421.121 .....placed near the end
421.121.1 .....circular or oval mouthpiece
421.121.11 ..... straight pipe
421.121.111 .....without fingerholes, e.g.: (Norway)
421.121.112 .....with fingerholes, e.g.: fifre (Provence)
..... bansuri (India)
421.121.112.1.....without keys, e.g.: renaissance
.....transverse flute (Europe) shinobue (Japan
421.121.112.2.....with keys
421.121.112.21.....with one key, e.g.: XVIIIc. transverse
.....flute (Europe)
421.121.112.211.....with one key and with changeable
.....joints, known as "corps de rechange",
.....e.g.: XVIIIc. flute (Europe)
421.121.112.22.....with two keys, e.g.: Quantz flute,
..... XVIIIc. (Europe)
421.121.112.221.....with two keys and changeable joints,
....."corps de rechange", e.g.: XVIIIc.
.....flute (Europe)
421.121.112.23.....with three keys, e.g.: transverse flute
421.121.112.231.....three keys with changeable joints,
....."corps de rechange",e.g.: XVIIIc.
.....transverse flute

421.121.112.24.....more than three keys, e.g.: transverse
.....flute at the end of the XVIIIc.

421.121.113 .....finger holes and a hole at the side covered
.....with a membrane, e.g.: fue (Japan)

421.121.12 .....pipe with its head bent back, e.g.: mirliton
.....(Japan)
421.121.121 .....with fingerholes and keys

421.121.2 .....embouchure avec dispositif rapporté pour support
.....de lèvre
421.121.21.....plaque,ex.: flûte traversiere du XXe (Europe)
421.121.22.....autre dispositif, bourrelet de cire, ex.:
.....(Afrique, Amérique).

421.121.3 .....autre forme d'embouchure
421.121.31.....tuyau rectiligne avec trou
421.121.311.....de petite taille, s'adaptant à une narine,
.....ex.: flûte nasale (Tonga).
421.121.32.....tuyau courbe sans trou
421.121.321 .....de petite taille, s'adaptant à une narine,
.....ex,: flûte nasale (Nouv.Calédonie).

421.122 .....situation médiane
421.122.1 .....embouchure circulaire ou ovale
421.122.11.....trous de jeu aux deux extrémités des tuyaux
421.122.2 .....en forme de gouttière (Indiens d'Amérique)
421.122.21.....avec trous de jeu (Amérique Indienne)
421.122.22..... sans trou de jeu (Amérique Indienne)

421.122.3 .....circulaire avec conduit d'air par bloc interne
..... et bandeau externe dans un tuyau bipartite
421.122.31..... double embouchure,ex.: bansi
421.122.32.....simple embouchure avec tube d'insufflation,
.....ex.: (Inde)

421.2 ...corps globulaire
421.21 .....embouchure briseautée
421.211 .....sans trou de jeu,ex.: (Afrique)
421.212 ..... avec trous de jeu,ex.: (Afrique)
421.22 ..... à conduit d'air avec bloc interne prolongé en bec
..... et lumière
421.221 .....sans trou de jeu
421.221.1 .....un corps fermé,ex.: (Pérou, Précolombien)
421.221.2 .....un corps ouvert destiné à contenir de l'eau,
..... ex.: rossignol,(Europe)
421.221.21..... avec conduit interne,ex.: appeau du Berry,
..... (France)

421.121.2 .....mouthpiece with a device added to support the lips
421.121.21.....a plate, e.g.: XXc transverse flute (Europe)
421.121.22.....other device, copper rim, e.g.: (Africa,
.....America)
421.121.3 .....other type of mouthpiece
421.121.31..... straight pipe with a hole
421.121.311.....a small hole adapted for the nose,
.....e.g.: tongali (Philippines)
421.121.32.....bent pipe without holes
421.121.321 .....a small hole adapted for the nose
.....e.g.: nose flute (New Caledonia)

421.122 .....placed in the centre
421.122.1 .....circular or oval mouthpiece
421.122.11.....fingerholes at both ends of the pipe,
.....e.g.: birundek (New Guinea)
421.122.2 ..... gutter shaped mouthpiece, e.g.: (Amerindian)
421.122.21.....with finger holes, e.g.: (Amerindian)
421.122.22 .....without fingerholes, e.g.: (Amerindian)

421.122.3 .....circular mouthpiece with a duct of air over an
.....internal block and an external band without a
.....divided pipe
421.122.31.....double mouthpiece, e.g.: bansi (India)
421.122.32.....simple mouthpiece with blowpipe, e.g.: India

421.2 .....globular body
421.21 .....bevelled mouthpiece
421.211 .....without fingerholes, e.g.: (Africa)
421.212 .....with fingerholes, e.g.: shiwaya (Thonga, Africa)
421.22 .....with and air duct and internal block extended
.....into a beak and a window
421.221 ..... without fingerholes
421.221.1 .....an enclosed body, e.g.: precolombian Peru
421.221.2 ..... an open body designed to contain water,
.....e.g.: nightingale (Europe), bulbul testisi
.....(Turkey)
421.221.21..... with an internal air duct, e.g.: appeau du
.....Berry (France)

421.221.3 ..... deux corps dont l'un est ouvert,ex.: vase
.....siffleur,(précolombien)
421.222 .....avec trous de jeu,ex.: ocarina(Italie,Chine)
421.223 .....sans bloc avec lumière,ex.: coucou (Alsace,France.
.....Turquie)

422 Flûtes éoliennes *

422.1 ...corps tubulaire fermé
422.11 .....fente à l'extrémité
422.111 ..... un tuyau
422.112 ..... plusieurs tuyaux,ex.: cerf volant musical (Cambodge),
..... sawagan (Solo, Java)

422.12 .....fente sur la paroi latérale
422.121 .....un tuyau segmenté avec plusieurs fentes,
.....ex.:flûte éoliennne (Kukukuku, Nouvelle Guinée)
422.122 .....plusieurs tuyaux de longue s différentes (une
.....fente par tuyau),ex.: "orgue éolien" (Iles Salomon),
.....dit "orgue hydraulique"

422.2 ...corps globulaire
422.21 .....une fente,ex.: kotse (Chine)
422.22 .....plusieurs fentes (flèche musicale),ex.: hao-shi (China)

422.3 ...combinant corps tubulaire et globulaire,ex.: koling
...(Chine)

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* le courant d'air se trouve dirigé sur une fente biseautée.

421.221.3 .....two bodies of which one is open,
..... e.g.: whistling vase (Precolombian)
421.221.4 .....with fingerholes, e.g.: ocarina (Italy, China)
421.222 ..... without block and with window, e.g.: cuckoo
..... (Alsace, France, Turkey)

422 Aeolian Flutes*

422.1 .....tubular closed bodies
422.11 .....slit at one end
422.111 ..... one pipe
422.112 .....several pipes, e.g.: musical kite (Cambodia)
.....sawagan (Solo, Central Java)

422.12 ..... slit on the side
422.121 .....one segmented pipe with many slits, e.g.: aeolian
..... flute (Kukukuku, New Guinea)
422.122 ..... several pipes of different lengths (one slit in
..... each pipe) e.g.: "aeolian organ" (Solomon
..... Islands) known as "orgue hydraulique"

422.2 .....globular bodies
422.21 .....one slit, e.g.: kotse (China)
422.22 .....several slits (whistling arrows), e.g.: hao-shi
.....(China)
422.3 .....combination of globular and tubular body,
.....e.g.: koling (China)

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* The current of air is directed onto a bevelled edge

423 ...Languette(s) - instruments à anche
...Le souffle ébranle une languette - trois cas:
....- la languette se meut librement dans un cadre
... (anche libre)
....- la languette bat sur le bord d'un support/cadre
... (anche battante simple)
... - deux languettes battent l'une contre l'autre ou une
...languette en deux parties battant l'un contre l'autre
..... (anche battente double)
423.1 .....anche libre
423.11 ..... avec tuyau
423.111 .....tuyau unique, ex.: ga (Birma)
423.111.1 .....avec trous, ex.: palwe (Birma)
423.112 .....plusieurs tuyaux dans une boîte à anche, dit
..... "orgue" à bouche, ex.: sheng, khene (Asie,S.E.,
..... Chine, Japon)
423.12 ..... sans tuyau
423.121 ..... anche unique, ex.: anche à ruban (Europe) écaille
..... de poisson (Roumanie)
423.122. ..... anches en série, ex.: harmonica (Europe)
423.122.1 ..... avec soufflerie actionnée manuellement et clavier,
..... ex.: guide-chant (Europe), accordion (Europe)
423.122.12 .....soufflerie actionnée par pédales et clavier,
.....ex.: harmonium (Europe)
423.2 .....anche battante simple - clarinettes
423.21 .....découpée directment dans le tuyau: anche idioglotte,
.....ex.: clarinette . versiere (Afrique), dil-tyuduk
.....(Afghanistan), duduk (Turquie)
423.22 .....découpée directement dans un tube/support rapporté
.....dans le tuyau
423.221 .....un tuyau
423.221.1 .....en plusieurs pièces
423.221.2 .....en une pièce
423.221.21 .....avec pavillon, ex.: duduk (Grèce)
423.222 .....deux tuyaux
423.222.1 .....de même longueur
423.222.11 .....accolés, ex.: argun (Turquie)
423.222.111.....avec pavillon, ex.: zamr (Maroc)

423 ...Reeds - Instruments with a reed
...the reed is caused to vibrate by breath - three ways
... - the reed moves freely in a frame
... (free reed)
... - the reed beats against the edge of its support/frame
... (simple beating reed)
... - two reeds beat against each other or one reed in two
...parts beats
... (double beating reed)
423.1 .....free reed
423.11 .....with a pipe
423.111 .....single pipe, e.g.: ga (Burma)
423.111.1 ..... with holes, e.g.: palwe (Burma)
423.112 .....several pipes in a reed box: "mouth organ",
..... e.g.: sheng,khene (S.E.Asia, China Japan)
423.12 .....without a pipe
423.121 .....single reed, e.g.: ribbon reed (Europe), fish
.....scale (Roumania)
423.122 .....series of reeds, e.g.: harmonica (Europe)
423.122.1 .....air blown through manually and with a keyboard,
.....e.g.: accordion (Europe)
423.122.12.....air blown through by the use of pedals and with
.....a keyboard, e.g.: harmonium
423.2 .....simple beating reeds : clarinets
423.21 .....cut directly in the tube - idioglot reed
.....e.g.: transverse clarinet (Africa) dil-tyuduk
.....(Afghanistan) duduk (Turkey)
423.22 .....cut directly in the tube or support which is then
..... added to the pipe
423.221 .....one pipe
423.221.1 .....in several parts
423.221.2 .. ..in one piece
423.221.21 .....with a bell, e.g.: duduk (Greece)
423.222 .....two pipes
423.222.1 .....the same length
423.222.11.....tied together,e.g.: argun (Turkey)
423.222.111.....with a bell,e.g.: zamr (Morocco)

423.222.112 ..... avec boîte à anches ouverte et pavillon,
..... ex.: alboka (Pays Basque), pibcorn
..... (Pays de Galles)
423.222.113 ..... avec boîte à anches fermée et tube d'insuf-
..... flation, ex.: pungi (Inde)
423.222.12 ..... creusés dans la masse
423.222.121 ..... avec boîte à anches ouverte
423.222.121.1 ..... deux tuyau avec trous de jeu,
..... ex.: diplice (Jugoslavie)
423.222.121.2 ..... un tuyau avec, un sans trous de jeu
423.222.2 ..... de longueur inégale, ex.: argal (Egypt)

423.223 ..... trois tuyaux
423.223.1 ..... de même longueur
423.223.2 ..... de longueur inégale
423.223.21 ..... deux tuyau accolés et un séparé, ex.: launeddas
..... (Sardaigne)
423.223.22 ..... trois tuyau séparés

423.23 ..... anche rapportée sur un bec, ex.: clarinette (Europe)
423.231 ..... tuyau rectiligne
423.231.1 ..... cylindrique, ex.: chalumeau XVIIIe s. (Europe)
..... clarinette, XVIIIe - XXe s. (Europe)
423.231.11 ..... avec tube d'insufflation dit "bocal"
..... ex.: clarinette d'amour XVIIIe s., clarinette
..... basse XIXe s. (Europe)
423.231.12 ..... tuyau se terminant par une boîte contenant
..... trois tuyaux parallèles et supportant le
..... pavillon, ex.: cor de basset XVIIIe s.
..... (Europe)
423.232.2 ..... conique, ex.: saxophone soprano XIXe s. (Europe)
..... tarogato XIXe s. (Hongrie)
423.232.21 ..... avec pavillon replié, ex.: saxophone ténor
..... XIXe s. (Europe)
423.232 ..... tuyau courbe ou formant un angle, ex.: cor de
..... basset XVIIIe s. (Europe)
423.233 ..... tuyau replié, ex.: clarinette bass et contrebasse
..... XVIIIe - XIXe s. (Europe)
423.234 ..... tuyau sinusoïdal, ex.: clarinette basse de Papalini
..... XIXe s. (Europe)

423.222.112 ..... with open reed box and bell
..... e.g.: alboka (Basque), pibcorn (Wales)
423.222.113 ..... with closed reed box and blowpipe
..... e.g.: pungi (India)
423.222.12 ..... hollowed out from a solid block
423.222.121 ..... with open reed box
423.222.121.1 ..... two pipes with fingerholes, diplice
..... (Yugoslavia)
423.222.121.2 ..... one pipe with the other without

423.222.2 ..... different lengths, e.g.: argal (Egypt)

423.223 ..... three pipes
423.223.1 ..... of the same length
423.223.2 ..... of different lengths
423.223.21 ..... two pipes joined together and one separate
..... e.g.: launeddas (Sardinia)
423.223.22 ..... three separate pipes

423.23 ..... reed attached to a beak, e.g. clarinet (Europe)
423.231 ..... straight pipe
423.231.1 ..... cylindrical, e.g.: XVIIIc. chalumeau (Europe)
..... XVIII - XXc. clarinets (Europe)
423.231.11 ..... with a blowpipe known as a crook,
..... e.g.: XVIIc. clarinette d'amour, XIXc. bass
..... clarinet (Europe)
423.231.12 ..... with a box containing three parallel pipes
..... at the end of the pipe which supports the
..... bell, e.g.: XVIIIc. basset horn (Europe)
423.231.2 ..... conical, e.g.: XIXc. soprano saxophone (Europe)
..... XIXc. tarogato (Hungary)
423.231.21 ..... with a turned up bell, e.g.: XIXc. tenor
..... saxophone (Europe)
423.232 ..... curved or angular tube, e.g.: XVIIIc. basset horn
..... (Europe)
423.233 ..... bent tube, eg.: XVIII-XXc. bass and contrabass clarinet
..... (Europe)
423.234 ..... double s-shaped tube, e.g.: Papalini's bass
..... clarinet XIXc. (Europe)

423.3 ...anche battante double - hautbois
423.31 .....extrémité du tuyau aplatie (ou idioglotte),
.....ex.: hautbois en écorce :tontarde(France)
423.32 .....anche rapportée
423.321 .....en une partie,ex.:whithorn(Angleterre)
423.322 .....en deux parties
423.322.1 .....sans pied, ex.: hitchiriki (Japon)
423.322.2 .....avec pied
423.322.21 .....tuyau en une partie,ex.:bombarde(Bretagne)
.....musette militaire du XIXe (Europe)
423.322.22 .....tuyau en plusieurs parties,ex.:hautbois
.....des XVIIe au XXes(Europe)
423.322.3 ..... avec pied et pirouette
423.322.31 .....en entonnoir",ex.:chalemie du XVIes(Europe)
423.322.311 .....tuyau rectiligne, ex.: pommer du XVIe s.
.....(Europe)
423.322.312 ..... tuyau replié dans un cylindre,ex.:racket
..... du XVIes (Europe)
423.322.32 ..... en "anneau", ex.: tenora(Catalogne), karamouza
.....(Grèce)
423.322.33 .....en disque, ex.:shanaï(Inde),rhaïta(Maghreb)
423.322.4 ..... avec pied et tube d'insufflation dit "bocal"
423.322.41 ..... tuyau replié
423.322.411 ..... d'une seule pièce (pris dans la masse)
..... ex.:courtaud du XVIe s. (Europe)
423.322.412 .....en plusieurs parties, ex.: basson et
..... contrebasson(Europe), hautbois-baryton
..... des XVIIIes et XIXe s(Europe)
423.322.42 .....tuyau rectiligne,ex.: bombarde du XVIIIe s.
.....(Suisse), hautbois d'amour du XVIIIes(Europe)
423.322.43 ..... tuyau courbe,ex.: cor anglais du XIXes(Europe)
423.322.5 .....avec pied et anche couvert par une capsule,
.....ex.: hautbois de Poitou, cromorne, Rauschpfeife
..... bladder pipe (Europe)

423.3 .....double beating reed - oboe
423.31 .....the end of the tube itself flattened (or idioglot)
.....e.g.: "hautbois en ecorce" : tontarde (France)
423.32 .....added reed
423.321 .....made in one piece, e.g.: whithorn (England)
423.322 .....made in two pieces
423.322.1 .....without staple, e.g.: hichiriki (Japan)
423.322.2 .....with staple
423.322.21 .....tube from a single piece, e.g.: bombarde
.....(Brittany) XIXc. musette militaire (Europe)
423.322.22 .....tube in several parts, e.g.: XVII to XXc.
.....oboe (Europe)
423.322.3 .....with staple and pirouette
423.322.31 ..... funnel-shaped, e.g.: XVIc. shawm (Europe)
423.322.311 .....straight tube, e.g.: XVIc. bombarde
.....(Europe)
423.322.312 .....folded tube contained in a cylinder,
.....e.g.: XVIc. racket (Europe)
423.322.32 ..... ring-shaped, e.g.: tenora (Catalonia)
.....karamouza (Greece)
423.322.33 .....disc-shaped, e.g.:shanai (India) rhaita
.....(Maghreb)
423.322.4 .....with a staple and blowpipe known as a crook
423.322.41 .....bent tube
423.322.411 .....made in one piece, e.g.: XVIc. curtal
.....(Europe)
423.322.412 .....in several pieces,e.g.: bassoon and
.....contrabassoon (Europe), XVIIIc. and XIXc.
.....baritone oboe (Europe)
423.322.42 ..... straight tube, e.g.: XVIIIc. bombarde
.....(Switzerland) XVIIIc. hautbois d'amour
.....(Europe)
423.322.43 .....curved tube, e.g.: XIXc. cor anglais (Europe)
423.322.5 ..... with staple and reed covered by a reedcap,
.....e.g.: hautbois de poitou, crumhorn, rausch-
.....pfeife, bladderpipe (Europe)

423.4 ...anches battantes avec réservoir d'air - cornemuse
423.41 .....avec tube d'insufflation
423.411 .....un tuyau à anche simple, ex.: siesinki (Pologne)
.....turti (Inde du Sud)
423.412 .....deux tuyaux d'égale longueur accolés ou pris
.....dans la masse et anche simple, ex.: tsabouna
.....(Grèce), mashak (Rajasthan), bouhe (Gasco gne)
423.413 .....deux tuyaux d'inégale longueur divergents: un
.....avec anche double, un avec anche simple,
..... ex.: biniou coz (Bretagne)
423.414 .....deux tuyaux d'inégale longueur contigus: un anche
.....double et un anche simple,ex.: cabrette du XIXe
.....au XXe s(Auvergne)
423.414.1 .....plus un tuyau divergent, ex.: musette XIXes.
.....et XXe s(Bourbonnais)
423.415 .....trois tuyaux d'inégales longueurs divergents.
.....un tuyau à anche double, un à anche simple,
.....ex.: ghaita (Espagne)
423.416 .....quatre tuyaux d'inégale longueur divergents un
.....tuyau anche double, trois anche simple,
.....ex.: piob mhor (Ecosse)
423.417 ..... quatre tuyaux d'inégale longueur à anches doubles
.....emboîtés dans un baillet,ex.: zampogna (Italie)

423.42 .....avec soufflet
423.421 ..... deux tuyaux de longueur inégale contigus un anche
.....double et un anche simple, ex.: cabrette moderne
.....(Massif Central)
423.422 .....trois tuyaux de longueur inégale continus et
.....un tuyau divergent. Un à anche double, trois
.....à anche simple, ex.: cornemuse Béchonnet (Massif
.....Central)
423.423 .....deux tuyaux divergents, un avec anche double,
.....un anche simple, ex.: dudy (Hongrie)
423.424 .....trois tuyaux regroupés dans un baillet et un
.....indépendant, ex.: lowland pipes (Ecosse)
423.425 .....quatre tuyaux regroupés dans un baillet et un
.....indépendant, ex.: small-pipe (Northumberland)

423.4 .....beating reeds with a reservoir of air - bagpipes
423.41 .....with blowpipe
423.411 .....one pipe with single reed, e.g.: siesinki
.....(Poland), turti (S. India)
423.412 .....two pipes of equal length carved from one block,
.....or tied together, with single reed,
.....e.g.: tsabouna (Greece), mashak (Rajasthan) bouhe
..... (Gascony)
423.413 .....two diverging pipes of different lengths: one with
.....a double reed, one with a single reed,
.....e.g.: biniou coz (Brittany)
423.414 .....two pipes of different lengths joined together:
.....one with a single, one with a double reed,
.....e.g.: XIX and XXc. cabrette (Auvergne)
423.414.1 .....one further diverging pipe, e.g.: XIX and XXc.
.....musette (Bourbonnais)
423.415 .....three diverging pipes of different lengths, one
.....double reed, two single reeds, e.g.: ghaita (Spain)
423.416 .....four diverging pipes of different lengths, one
.....pipe with double reeds, three with single,
.....e.g.: piob mhor (Scotland)
423.417 .....four pipes of unequal length with double reeds
.....all enclosed in one large stock, e.g.: zampogna
.....(Italy)

423.42 .....with bellows
423.421 .....two pipes of equal length tied together, one single
.....and one double reed, e.g.: modern cabrette
.....(Massif Central)
423.422 .....three pipes of unequal length tied together and
.....one diverging pipe.. One double reed, three single
.....e.g.: cornemuse Bechonnet (Massif Central)
423.423 .....two diverging pipes, one with double reed, one
.....single, e.g.: dudy (Hungary)
423.424 .....three pipes enclosed in one stock and one separate,
.....e.g.: lowland pipes (Scotland)
423.425 .....four pipes in one stock and one separate,
.....e.g.: small pipes (Northumbria)

423.43 ..... avec soufflet et "boîte à bourdon"
423.431 .....un tuyau à anche double, ex.: musette de cour
.....du XVIIes(Europe)
423.432 .....deux tuyau avec anche double, ex.: musette de
.....cour du XVIIIes(Europe)
423.5 .....flûtes, anches avec réservoir d'air et clavier(s)
.....ex.: orgue de XVe-XXe s. (Europe)
423.51 .....tuyaux inclus dans un petit meuble, ex.: orgue
.....portatif de XVe-XVIe s. (Europe)
423.52 .....tuyaux dans un meuble, ex.: orgue positif de XVe-XIXe s.
.....(Europe)
423.53 .....tuyaux dans plusieurs parties séparées, ex.: grandes
.....orgues, XVIe-XXe s.

424 Trompes*
424.1 ..embouchure terminale
424.11 .....tuyau rectili
424.111 .....cylindrique, ex.: djigeridu (Australie)
424.111.1 .....avec extrémité évasée, ex.: trompette (Chine),
.....trompette droite du XIXes(Europe)
424.111.11 .....à piston(s), ex.: trompette d'Aida XIXe s.
.....(Europe)
424.112 .....conique
424.112.1 .....sans trou de jeu
424.112.11 .....à une seule pièce, ex.:burloir (France)
.....(Afrique, Europe Centrale)
424.112.12 .....en plusieurs pièces, ex.:rag-dung (Tibet)
424.112.2 .....avec trous de jeu, ex.: cornet droit du XVIe s.
(Europe)

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* Pour rester cohérent avec les autres aérophones le critère matière n'a pas été retenu. D'autre part la notion de pavillon n'a pas été incluse: en effet, dans les instruments "savants" occidentaux, il est souvent difficile de déterminer le point de départ du pavillon.

423.43 .....with bellows and "boite a bourdon"
423.431 .....one pipe with double reed, e.g.: XVIIc. musette
.....de cour (Europe)
423.432 .....two pipes with double reeds, e.g.: XVIIc. musette
.....de cour (Europe)

423.5 .....Flutes and reeds with a reservoir of air and keyboard(s)
..... - organ from the XV-XVIc. (Europe)
423.51 .....pipes enclosed in a case, e.g.: XV-XXc. portable
.....organ (Europe)
423.52 ..... pipes in a large case, e.g.: XV-XIXc. portative
.....organ (Europe)
423.53 .....pipes in several different places, e.g.: XVI-XXc.
.....organ (Europe)

424 Trumpets*
424.1 .....mouthpiece at the end
424.11 .....straight pipe
424.111 .....cylindrical, e.g.: didgeridu (Australia)
424.111.1 .....with flared bell,e.g.: trumpet (China)
.....XIXc. straight trumpet (Europe)
424.111.11.....with piston(s), e.g.:XIXc. "Aida" trumpet
.....(Europe)
424.112 .....conical
424.112.1 .....without fingerholes
424.112.11.....in one piece, e.g. burloir (France)
424.112.12.....in several pieces, e.g.: rag-dung (Tibet)
424.112.2 .....with fingerholes, e.g.: XVIc. straight cornett
.....(Europe)

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* In order to conform with the other aerophones the material from which the trumpets have been made has not been made a criterion. Also we do not include consideration of the bell as in many Western "Art" instruments it is often difficult to tell where the bell begins.

424.12 .....tuyau courbe*
424.121 ..... embouchure non aménagée, ex.: shofar (Israel)
.....et différentes cornes animales (Afrique etc.)
424.122 .....embouchure aménagée
424.122.1 .....intégrée, ex.: cor du XVIIe s.(Europe) et différentes
.....trompes en terre cuite (Mexique, Europe)
424.122.11.....avec trous de jeu, ex.: paimensarvi (Finlande)
424.122.2 .....rapportée, ex.: cor du XIXes(Europe)midwinterhoorn
.....(Twente)
424.122.21..... avec trous de jeu, ex.: dessu de cornet
.....a bouquin du XVI au XVIII (Europe)

424.13 .....tuyau en S à embouchure aménagée
424.131 .....embouchure intégrée, ex.: sringa (Inde)
424.132 .....embouchure rapportée
424.132.1 .....avec trous de jeu et clés, ex.: tenore de
.....cornet à bouquin du XVI au XVIIIes(Europe)

424.14 .....tuyau sinusoidal à embouchure aménagée
424.141 .....embouchure rapportée sur "bocal"
424.141.1 .....trous de jeu, ex.: serpent du XVIIe au XXe s.
.....(Europe)
424.141.11..... trous de jeu et clé(s), ex.: serpent du
..... XVIIIes(Europe)

424.15 tuyau replié à embouchure amenagée
424.151 .....embouchure intégrée, ex.: trompette en terre
.....cuite (Mexique), tuturo (Provence)
424.152 .....embouchure rapportée, ex.: trompette dite naturelle,
..... clarion (Europe)
424.152.1 ..... avec coulisse, ex.: trombone (Europe), trompette
..... à coulisse (Europe)
424.152.2 ..... avec clef(s), ex.: trompette a cles XIXes(Europe)
424.152.21 ..... et "bocal", ex.: ophicléide XIXes.(Europe)
424.152.211..... tuyau en plusieurs parties, ex.: basson
russe XIXes(Europe)

* La courbure du tuyau est plus ou moins accentuée, dans certains cas elle décrit en cercle ou vert, ex.: reconstruction de buccins antiques.

424.12 ..... curved pipe*
424.121 .....unprepared mouthpiece, e.g.: shofar (Israel), many
.....other horns from animal horns (Africa etc)
424.122 .....prepared mouthpiece
424.122.1 .....integral, e.g.: XVIIc. horn (Europe) and
.....different pottery horns, (Mexico, Europe)
424.122.11.....with fingerholes, e.g.: paimensarvi
.....(Finland)

424.122.2 .....added, e.g.: XIXc. horn (Europe), Midwinterhoorn
.....(Twente)
424.122.21.....with fingerholes, e.g.: treble cornett from
.....the XVI-XVIIIc. (Europe)

424.13 .....S shaped tube with prepared mouthpiece
424.131 .....integral mouthpiece, e.g.: sringa (India)
424.132 .....added mouthpiece
424.132.1 .....with fingerholes and keys, e.g.: tenor cornett
.....from the XVI-XVIIIc. (Europe)

424.14 .....double S shaped tube with prepared mouthpiece
424.141 .....added mouthpiece on a crook
424.141.1 ..... with fingerholes, e.g.: serpent from the XVII
.....to the XXc. (Europe)

424.15 .....folded tube with prepared mouthpiece
424.151 .....integral mouthpiece, e.g.: pottery trumpet (Mexico),
.....tuturo (Provence)
424.152 ,,,,,,,,,,,added mouthpiece, e.g.: "natural trumpet",
.....clarion (Europe)
424.152.1 ..... with a slide, e.g.: trombone (Europe),
.....slide trumpet (Europe)
424.152.2 .....with key(s), e.g.: XIXc. keyed trumpet (Europe)
424.152.21.....with crook, e.g.: XIXc. ophicleide (Europe)
424.152.211..... tube in several parts, e.g.: Russian
.....bassoon (Europe)

* The curve of the tube is more or less accentuated, in certain cases it describes an open circle, e.g.: the reconstruction of ancient buccinas.

424.152.3 .....avec pistons
424.152.31 .....disposés perpendiculairement à l'axe de
.....l'instrument, ex.: bugle, trombone, trompette
.....et cornet a piston a partir du XIXes. (Europe)
424.152.32 .....disposés parallelement a l'axe de l'instrument,
.....ex.: tuba, saxhorn à partir du XIXes (Europe)
424.152.4 .....tuyaux supplémentaires, dits "tons de rechange,"
.....ex.: trompette début XIXes (Europe)
424.152.5 .....pistons et système mixte

424.16 .....tuyau enroulé à embouchure aménagée
424.161 .....embouchure intégrée, ex.: trompe en poterie (Mexique)
..... cor de poste XVIIIe au XIXes (Europe)

424.162 .....embouchure rapportée, ex.: cor et trompe de
.....chasse, à partir du XVIIIes (Europe).
424.162.1 .....avec tuyaux supplémentaires dits "tons de
.....rechange"
424.162.11 .....amovible ex.: Inventionshorn du XVIIIe s.
.....(Allemagne)
424.162.12 ..... fixés avec coulisse d'accord, ex.: cor
.....omnitonique du XIXes (Belgique)
424.162.2 .....avec pistons ex.: cor d'harmonie à partir
..... du XIXes (Europe)

424.17 .....tuyau en spirale - conque
424.171 .....embouchure non aménagée, ex.: ganga (Tibet)
424.172 ..... embouchure rapportée, ex.: pu (Oceanie)

424.2 ...embouchure latérale
424.21 .....tuyau rectiligne
424.211 ..... cylindrique
424.211.1 .....pavillon rapporté ,(Amérindiens)
424.212 .....conique

424.22 .....tuyau courbé
424.221 .....simple
424.221.1 ..... embouchure avec bourrelet, ex.: trompes d'ivoire
..... (Afrique)
424.221.2 ..... embouchure avec dispositif rapporté

424.152.3 ..... with valves
424.152.31 ..... in a perpendicular plane to the axis of the
.....instrument, e.g.: bugle, trombone, valve
.....trumpet and cornet at the end of the XIXc.
..... (Europe)
424.152.32 .....in a parallel plane to the axis of the
.....instrument, e.g.: tuba, saxhorn at the end
.....of the XIXc. (Europe)
424.152.4 .....with supplementary pipes, known as crooks,
.....e.g.: trumpet at the beginning of the XIXc.
.....(Europe)
424.152.5 ..... mixed system - valves with an other device

424.16 ..... rolled tube with prepared mouthpiece
424.161 ..... integral mouthpiece, e.g.: pottery trumpet (Mexico)
.....XVIII-XIXc. post horn (Europe)
424.162 .....added mouthpiece, e.g.: hunting horn and trumpet
..... at the end of the XVIIIIc.(Europe)
424.162.1 ..... with supplementary pipes known as crooks
424.162.11 ..... interchangeable, e.g.: inventions-horn
..... (Germany)
424.162.12 .....with marked slide and plunger,
.....e.g.: XIXc. omnitonic horn (Belgium)
424.162.2 .....with valves, e.g.: french horn at the end of
..... the XIXc. (Europe)

424.17 ..... spiral tube - conches
424.171 ..... unprepared mouthpiece, e.g.:canga (Tibet)
424.172 ..... added mouthpiece, e.g.: pu (Oceania)

424.2 ..... mouthpiece at the side
424.21 .....straight tube
424.211 .....cylindrical, e.g.: (New Hebrides)
424.211.1 .....added bell, e.g.: (Amerindian)
424.212 .....conical

424.22 .....curved tube
424.221 .....simple
424.221.1 .....raised mouthpiece, e.g.: ivory trumpets (Africa)
424.221.2 .....mouthpiece with added device

424.222 ..... avec pavillon rapporté, ex.: midwinterhoorn (Twente)
.....trompe, (Soudan)
424.23 .....tuyau en spirale
424.231 .....embouchure non aménagée, ex.: (Amérique du Sud)
424.232 .....embouchure aménagée à bourrelet, ex.: (Mélanésie)

424.222 .....with added bell, e.g.: trumpet (Sudan)

424.23 ..... spiral tube
424.231 ..... unprepared mouthpiece, e.g.: (South America)
424.232 .....raised mouthpiece, e.g.: (Melanesia)