

FELLOWSHIP of MAKERS and RESEARCHERS of HISTORICAL INSTRUMENTS

Bulletin 102

January, 2001

This issue has been delayed, as David explains later. Rather than delay things further by trying to finish several reviews, these will be carried over to the April Quarterly which, in order to catch up, should follow in two or three weeks time. This Bulletin concentrates on news and announcements that can wait no longer. The next will review progress with the various proposals and initiatives for the future of FoMRHI mentioned in the previous two issues.

Renewal of Subscriptions: In recognition of the late distribution of the October issue, this is the last Quarterly you will receive if you haven't renewed. Please accept this as a final reminder and, if necessary, renew immediately.

Hornworking and Personal Safety: Helen Leaf's Comm. on hornwork in Q101 prompted a query about the possible dangers of anthrax infection from the material. As a result Helen has contacted her suppliers who advised her that, though there can be a very real danger of infection, as a result of which hornworkers used to be immunised, since the nineteen-eighties the situation has changed, with new legislation and trade practices. Though potentially fatal, anthrax is now treatable with antibiotics, and horn to be imported is now boiled, fumigated, and is routinely biologically tested, leading to safety certification.

National Sound Archive On-line Catalogue: A resource of great value to anyone interested in the recorded sound of historical instruments, whether those that survived into the era of recording or modern recreations, has recently been announced by the British Library. The web site of the National Sound Archive of the British Library has just been revised to include links to a new, fully searchable on-line catalogue, accessible via the World Wide Web. The catalogue lists details of over 2.5 million sound recordings. The site is at: <http://www.bl.uk/collections/sound-archive/> or direct access to the catalogue is available at: <http://cadensa.bl.uk>.

Cremona Concorso: The international triennial Concorso of bowed instruments will take place between 20 and 30 April in Cremona. Full details from Ente triennale internazionale degli strumenti ad arco, C so Matteotti 19, 26100 Cremona, Italy. Tel/fax 0372 21454, email triennale@libero.it

Wieniawski Violin-Making Competition: The tenth international Henryk Wieniawski Violin Making Competition, organised by the Henryk Wieniawski Musical Society in collaboration with the Polish Violin Makers Society and the Museum of Musical Instruments, Poznan, is to take place between 16 and 22 September 2001. The competition is open to 'professional violin makers of all nationalities and ages'. Candidates must apply by 30 April. In addition to substantial monetary prizes, two medals are awarded, one for 'the highest violin maker qualities', and one for 'the highest acoustic qualities'. It is noteworthy that instruments rejected from the first stage of the competition due to failure to 'exhibit qualities of artistic workmanship' may be reintroduced at the second stage if they are found to have exceptionally high acoustic qualities in an 'acoustic property test' performed on the rejected instruments. Further information may be obtained from The Secretariat of the International Henryk Wieniawski Competitions, ul. Swietoslawska 7, 61-840 Poznan, Poland. Tel/Fax. (+ 4861) 852 2642, e-mail: lutniczy@wieniawski.info.poznan.pl

Instrument Conservation Vacancy at the Stockholm Music Museum: There is a vacancy for an Instrument Conservator (80% time), who will have responsibility for the care and documentation of the instrument collection. The work, principally involving the keyboard instrument collection, will include logging use and conservation activity, documenting measurement and construction details, providing information for institutions, researchers and the general public, as well as participating in the Museum's exhibition and program of events involving the collection. More details at <http://www.musikmuseet.se/ledigplats.html> or from Hans Riben, Collection Manager, The Stockholm Music Museum, P.O. Box 16326, SE-103 26 Stockholm, Sweden. Phone: +46 8 519 554 68, Fax: +46 8 663 9181.

Horniman Museum Vacancy: The Horniman Museum has a vacancy for a Deputy Keeper of Musical Instruments. They seek 'a dynamic, forward looking person to take responsibility for the development, research and interpretation of a specified area of the Horniman's internationally important collection of musical instruments.' The appointee should have 'a postgraduate qualification in a relevant subject, a recognised qualification in museum studies or extensive experience in a relevant area (these must include at least two years experience of curatorial or other relevant work.) Full details of the post and an application form can be obtained by sending an A4 stamped self addressed envelope to the Personnel Section, The Horniman Museum & Gardens, 100 London Road, London SE23 3PQ. The closing date for completed applications is 18th April 2001 and interviews will be held on 26th April 2001. The museum is undergoing major building works including the development of a new wing to celebrate its centenary.

Leipzig Instrument Museum: The museum of musical instruments at the University of Leipzig is moving from its old building. A new, very small exhibition can be seen at Thomaskirchhof 20, opening mid April 2001. Opening hours 11-17 (closed on Mondays). The exhibition in the main building is closed already. Telephone and postal addresses will be changed later. After the reconstruction of the old building they will move back, and hope to be able to open the new galleries in 2005. Universität Leipzig, Musikinstrumenten-Museum, Taubchenweg 2 c-e, 04103 Leipzig. Fax: (0341) 21 42 135. See <http://www.uni-leipzig.de/museum/musik>.

Royal College of Music Museum of Instruments Catalogue: The Royal College of Music has announced the publication of Part II of its Catalogue: Keyboard Instruments, edited by Elizabeth Wells with John Budgen, William Debenham, Jenny Nex, Christopher Nobbs and Lance Whitehead (Royal College of Music, London, 2000), to mark the 30th anniversary of the opening of the Museum. The catalogue was launched at a gathering at the College on 31 January, at which several of the instruments in playable condition were heard. In addition to detailed entries and an introduction on the history of the collection, there are indices of instruments, makers, previous owners and places of manufacture, and bibliographical references. Copies are available from the Museum at Lstg 25 each, postage per volume Lstg 3 (UK inland), Lstg 4.50 (Europe), Lstg 8.50 (elsewhere). Orders from abroad should be accompanied by a cheque in Sterling, made payable to the 'Royal College of Music'. Email: museum@rcm.ac.uk, Fax 00 44 20 7589 7740, Address: Prince Consort Road, South Kensington, London, SW7 2BS, U.K. There will be a review here shortly.

West Dean College has announced its Summer School in Early Music, from 18-24 August, directed by David Miller with Duncan Druce, Frances Kelly, Susanna Pell and Evelyn Tubb. Full details are obtainable from West Dean College, West Dean, Chichester, West Sussex.

PO18 0QZ, UK. Tel. +44 (0)1243 811 301, Fax. +44 (0)1243 811 343, e-mail: short_courses@westdean.org.uk

Workshop Courses: Though there have been no details of further instrument-making courses from West Dean College recently, the Renaissance Workshop Company in Bradford has been advertising courses based on their kits. Details are obtainable from Renaissance Workshop Company Ltd., 38 Manningham Lane, Bradford, BD1 3AE, UK. Tel. 01274 201 752; Fax. 01274 201 753; e-mail: sales@renwks.com

Renaissance Recorder Database: In Bulletin 101 I mentioned Adrian Brown's renaissance recorder database website. This has since been greatly improved, and the new address is <http://www.adrianbrown.org/database/>. For the moment, the only detailed page is for an instrument in Bruges, but Adrian hopes to be able to expand this in the future, as time and museum permission allow.

Textile Strings: Alan Dobson has submitted a Comm. on work done by his viola da gamba teacher, Alexander Rakov, who has been experimenting with twisted textile strings for violins, lutes and viols, 'with some considerable success and relevance to historical practice'. Alan has been 'a willing guinea pig for trying the strings, and encouraging Alex to get it in press.' Though we usually publish only the writings of FoMRHI members, this is of considerable interest, and is included here in what would otherwise be a particularly thin Quarterly.

Stringed instrument Materials from Orcas Island Tonewoods: Jeremy has passed on an email notice from Bruce Harvie of particular materials available in addition to his usual stock of violin woods, some of which might be of interest to makers of stringed instruments of unusual shapes and sizes. He lists, for example: a few boards of 25-year-old wood, including one board (#20) which measures 96" x 12" x 2", 'and would make a beautiful small bass or cello in highly figured birdseye maple' (see http://www.rockisland.com/~tonewoods/images/8_big.jpg); 2 bookmatched boards in fiddleback red maple (#s 21 and 22), nicely slab cut, each board measuring 120" x 10" x 2", 'and would make nice cellos' (http://www.rockisland.com/~tonewoods/images/5_big.jpg); 'incredibly gaudy curly redwood' - perhaps more suitable for the mandolins for which he recommends it, rather than for historical instruments; 'sets of burred maple that would make an interesting viola'; 'one piece viola tops in wide-grained Engelmann cut from the same tree; and bigleaf maple violin sets, quilted and fiddleback. In addition to these he has the materials usually available from Orcas Island Tonewoods, for which see: <http://www.rockisland.com/~tonewoods>. It would be interesting to have the comments of members who have experience of them on the qualities of some of these North American woods when used in instruments of historical designs.

Lost member: Quarterlies sent to our Polish member Boleslaw Bielawski have continued to be returned. Can anyone provide a current address for him?

Dates for the April Quarterly: In order to resume punctual publication after the hand-over we aim to send the April quarterly to the printer in the third - or at latest the fourth - week of the month. By June we will adhere to the regular deadlines I have proposed: end of the first week of the month for items for the bulletin, and end of the second week for comms.

Review of: *Larigot Spécial XI: Essai de Classification Alphabétique des Facteurs, Ouvriers, Inventeurs, Essayeurs, Marchands..... Français d'Instruments de Musique à Vent, première partie, A-L, Jacques Cools. ACIMV, 136 boulevard de Magenta, F-75010, Paris, September 2000. 50 FF (free to members of ACIMV; subscription 200 FF).*

This follows on from *Spécial VIII* in which Cools listed all the Belgian firms, etc, known to him. Not only do we look forward to the rest of the French makers, but in due course to those of other nations, for there are many names here not listed in any other easily accessible source. Many of course do appear in Bill Waterhouse's *New Langwill Index*, but even more do not, either because they are modern makers (deliberately excluded from *NLI*) or because they are or were not makers at all – as Lyndesay Langwill used to say when confronted by a mark he'd never previously encountered 'A dealer for sure', or inventors etc as noted in the title.

Cools gives dates for each name, addresses where possible, and the source in which he found the name, whether Waterhouse, a trade list, marked on an instrument, and so forth, so any and all can be followed up. Many are just names, with no note of what they made, invented, or whatever, and this I think is a pity, though it would of course have made the list much longer. Sometimes there is some information, eg 'trade name used for export of woodwind instruments to USA', but normally there is none save the name, dates, address, and source – but one must say that this alone is valuable and far better than nothing.

Thus the first 39 pages. The following 51 pages are a fascinating *montage* of catalogue entries, advertisements, trade cards, etc etc

from many of those who appear in the lists in the first 39 pages. Many of these are usefully factual, giving not only addresses but lists of what they do, make, or sell. Many also advertise, describe, and/or illustrate weird and improbable inventions, and also some very sensible and useful ones. An entertaining one is Couesnon's *L'amplificateur*, an additional tube for brass instrument mouthpieces, which contracts and then expands again in bore. Then there's Philippe Bolton's recorder, which has an additional key to close the end (he's one of our members), an idea which we know works. Perhaps less successful (though I've got an example) is M. Carré's brass mouthpiece, which not only has a rifled throat but a rubber rim to ease the lips. The improbable feature of this advertisement is the small picture of a group of young children blowing soap bubbles from pipes – what's that got to do with brass mouthpieces? And there are numerous others as entertaining.

But don't get me wrong. This is a very useful list as well as containing a few things that today might make us laugh but which in their own day were hoped to be just as useful and long-lasting as many of the inventions which today we take for granted. As with so many of their publications, we can only be grateful to the Association des Collectionneurs d'Instruments à Vent for the regular issues of *Larigot* and even more for its *Specials*.

Bouwerskontakt Bouwbrief 99, My Summary

Bouwbrief 99 (November 2000) starts with a detailed and 4 page long article by John Boersma on the making of a wind chest specifically to tune and voice organ pipes. It permits regulation of the wind pressure and has a normal keyboard enabling to play accords as well. The keyboard does not need to have a good touch and the link between keyboard and valves of the pipes is rather crude, however it permits the wide setup for the pipes. It has even room for more than one register. Pipes are easily inserted and replaced. There are detailed drawings and measurements and suggestions to use old keyboards and wind motors from demolished church organs, obtainable for little money from organ builders.

Piet Ravensloot describes the jig he has made to use a router, wall-mounted in a frame, to make the rough shape of a cello belly. He uses 6 mm MDF plates to build up a 3-dimensional template, which is then copied to the wood. He shows the results obtained and is satisfied. A noted disadvantage of his setup is that he is unable to see the cutter whilst running the wood under the router.

Cor Martijn has made a clamp for violin tops, which can be rotated in all 3 directions. The 2.5-page article contains reduced-scale drawings, but no measurements; however, full drawings are available from the Bouwerskontakt, and they can be consulted at the 'Bouwzolder'.

Jan Burema, who had previously written that he had never noted the existence of springs in the 'Clavecitherium', although these were mentioned in the literature (BB-95-3), has now found references. In an old little book 'Het klavier bij Bach', by Geertruida van Vladeracken, the drafted mechanism shows clearly a spring to push the jack back.

Leo Schenkelaars provides additional guidelines, refinements and small modifications for his poor man's planer ('vandiktebank'), first described in BB-69-12 (1993). Actually, it is not a planer (with knives), but a drum sander. He also refers to publications from the Taunton Press (USA), the publishers of the Fine Wood Working magazine (CSt: recommended, see their web-site at www.finewoodworking.com).

The series on tools by Gerrit Menkveld continues its 2nd part on saws with a overview of all types of hand saws for metal and wood (however he missed the dovetail saw, the one I use regularly). Still, a good catalogue would probably give the same info.

John Boersma reports on the 'Open Zolderdag' of 9 September 2000 for organ builders. He remarks that there is increased interest to tune organs in other temperaments than equal, such as baroque temperaments. During the Zolderdag, there were 3 small organs available, all three in a different temperament (mean, equal, baroque) and these were played and demonstrated by Eric-Jan van der Hel. The three different organs (a chest organ, a table positive, and one based on the Baldachin organ in the Rätische Museum in Chur) were shown and discussed in detail.

There are two book reviews, both by Gerrit Menkveld. The first book is by Ellinor Schnaus, called "Oberflächenbehandlung alter Möbel" (Surface treatment of old furniture), 180 pp. The list of contents includes, amongst others: wood; veneering; intarsia; oiling, varnish, polish and other surface treatments. The summary conclusion is "a nice and complete book".

The second review covers actually 2 books, which are part IV and V of the "Groot pianoboek", covering "Stemblokken vervangen" (replacing what??) and "Het vormen en intoneren van klavecimbelspectrums en het afregelen van klavecimbels", (or in short: the voicing and intonation of cembalos) respectively. Both books are described as very good with many practical advises, including things not to do. Even if they cover a very specific item such as "replacing the stemblokken", the books include a wide ranging commentary, making it useful for a wider readership.

Several courses (not only organised by Bouwerskontakt) are announced, including one on "recognising wood with a magnifying glass", and one on "the craft of woodworking" (or "Neander woodworking" as it is sometimes called in the US). A plan of the "klokkenspel" (see review of BB-96) by Gerrit Menkveld is now available from the Bouwerskontakt.

FoMRHI Comm: 1738

Albert Rice

Acquisitions of the Kenneth G. Fiske Museum, 1999-2000

Albert R. Rice, Curator of the Kenneth G. Fiske Museum of the Claremont Colleges (450 N. College Way, Claremont, CA 91711, U.S.A., www.cuc.claremont.edu/fiske; email, arrice@rocketmail.com) has announced the following acquisitions of the Museum in 1999 and 2000.

Gifts of the Coleman Family, Tarzana, California:

- 1999.19 Ophicleide of English origin, c. 1870.
- 1999.20 Side-blown trumpet of African origin, 20th century.
- 1999.21 Side-blown trumpet of African origin, 20th century.
- 1999.22 Side-blown trumpet of African origin, 20th century.
- 1999.23 Harp-guitar of German origin, 20th century.
- 1999.24 Vielle, Jenzat, c. 1880.
- 1999.25 Bowed zither, Kriner, Stuttgart, 20th century.
- 1999.26 Lute, Tibet, 20th century.
- 1999.27 Lute, Tibet, 20th century.
- 1999.28 Gusle, Ugoslavia, 20th century.
- 1999.29 Viola da samba, Brazil, 20th century.
- 2000.1 Simple-system Clarinet in B-flat, V. Kohlert & Sons, Graslitz, c. 1910. Gift of Eleanor Gleason Grossman, Los Angeles.
- 2000.2 Simple-system Clarinet in A, Buffet-Crampon, Paris, c. 1915. Gift of Eleanor Gleason Grossman, Los Angeles.
- 2000.3 8-key flute by William Whitely, Utica, New York, c. 1830. Gift of Trudy Gale, Ontario, California.
- 2000.4 1-key flute of U.S. origin, c. 1870. Gift of Trudy Gale Ontario, California.

Gifts of the Coleman Family, Tarzana, California:

- 2000.5 8-key B-flat clarinet, Richard Bilton, London, c. 1826.
- 2000.6 6-key B-flat clarinet, of English origin stamped G. E. Blake, Philadelphia, c. 1830.
- 2000.7 5-key E-flat clarinet, Herman Wrede, London, c. 1820.
- 2000.8 8-key B-flat clarinet, Christian Gottlieb Zencker, Jun., Adorf, c. 1840.
- 2000.9 8-key B-flat clarinet, Thomas Key, London, c. 1830.
- 2000.10 13-key C clarinet, Jean Jacques Baumann, Paris, c. 1825.
- 2000.11 2-key oboe, Gottfried August Lehnhold, Leipzig, c. 1800.
- 2000.12 12-key oboe, Johann Christoph Selboe, Copenhagen, c. 1850.
- 2000.13 4-key F flute, Friedrich Boie, Göttingen, c. 1820.
- 2000.14 6-key ivory flute, Charles Wigley, London, c. 1810.
- 2000.15 Keyless flageolet, Thomas Cahusac, Jun., London, c. 1806.

- 2000.16 3-key flageolet, Collinet, Paris, c. 1840.
 2000.17 7-key double flageolet, William Bainbridge & John Wood, London, c. 1815.
 2000.18 5-key flageolet, John Simpson, London, c. 1835.
 2000.19 1-key flageolet, Richard Bilton, London, c. 1830.
 2000.20 2-key English horn, August Grenser, Dresden, c. 1760.
 2000.21 Porcelain ocarina, Freyer & Co., Leipzig, c. 1900.
 2000.22 1-key piccolo, Firth, Hall & Pond, New York, c. 1840.
 2000.23 4-key flute, Goulding & Co., London, c. 1800.
 2000.24 7-key English horn, Jean Baptiste Tabard, Lyon, c. 1830.
 2000.25 5-key C clarinet, Naust, Paris, c. 1780-90.
 2000.26 5-key C clarinet, George Astor, London, c. 1790.
 2000.27 Coucou Whistle of French origin, c. 1850.
 2000.28 Coucou Whistle of French origin, c. 1850.

Gifts of Mike Pecanic, Upland, California:

- 2000.29 Trombone, Conn, Elkhart, 4H model, ser. 288435, c. 1932.
 2000.30 Trombone, Olds & Son, Los Angeles, Super model, ser. 164136, c. 1955.
 2000.31 Trombone, Olds & Son, Los Angeles, Super model, ser. 12958, c. 1942.
 2000.32 Bass trombone (gold plated), Williams & Wallace, Los Angeles, Symphony model, with fourth valve trigger, c. 1935.
 2000.33 Fretted clavichord, Zuckerman, 1978. Gift of Thomas A. Moore, Claremont.

BULLETIN SUPPLEMENT 1

David Armitage

I apologise for the late arrival of the January Q. Lewis and I have been extremely busy with the revision of Musical Instrument Technology courses at London Guildhall University, which has entailed many extra meetings and much re-writing and re-submission of documentation. Lewis has also been charged with overseeing the creation of our new Masters level courses, a task of awesome magnitude. Finally my wife and I had our first baby just before Christmas which, as many of you will appreciate, is something that turns your life upside down leaving you with very little slack.

We intend (I might be tempting fate here) to produce the next Q within the next month in order to get back on course. If you have a contribution please get it to us as soon as possible after receipt of this issue.

Submissions for publication in the Q can be sent to me at London Guildhall University, 41-71 Commercial Road, London, E1 1LA, U.K. They can also be sent by email to armitage@lgu.ac.uk

Early Pianos in Pennsylvania

Moravian College, in Bethlehem Pennsylvania was the venue for a most unusual exhibition running from 19 October to 26 November 2000. Visitors to the superb new concert hall necessarily pass by the glass double doors to the Payne Gallery, where they would normally expect to see art works a single spotlight in the otherwise darkened room picked out the elegant form of an 1820-ish mahogany square piano, by Jacob Till, made, so it is said, expressly for the unmarried women's seminary at Bethlehem. With their curiosity aroused, those who ventured into the gallery found a dozen more, all from local sources.

This exhibition was assembled by Dr. Paul Larson, recently retired from Moravian College, who undertook a year-long search for instruments made in this region, and was amazed by what was lurking there, waiting to be discovered. Local historic societies provided numerous square pianos. Moravian College had several instruments, and another (ruinous) example was offered gratis as a result of this renewed interest. And though some important examples could not be secured for the exhibition, those on show provided a good overview of the early enthusiasm for the piano in Pennsylvania from 1760 through to the 1840s.

Readers of my book, *The Pianoforte in the Classical Era*, may recall the photographs of a strange upright from the Whitefield House at Nazareth, Pa., equipped with hammers that had both brass and leather surfaces. The conclusion was that North German enthusiasm for hammer-action keyboard instruments based on Hebenstreit's Pantalon resurfaced among the Moravian settlers in North America around the middle of the eighteenth century. Many of the German-speaking Protestants who were attracted to Pennsylvania by the state's charter – expressly enabling them to practice their religion without hindrance – were skilled artisans before they left Europe. And once they were established with dwellings and agriculture, around 1750, they could turn their attention to other matters, including instrument making. The Moravian society encouraged music, both in public worship and private devotions. So it is not surprising that among their carefully preserved archives there is a great fund of information on musical activities in Pennsylvania. Keeping their communications to their homeland open, they knew and admired the works of CPE Bach and Joseph Haydn.

Probably the oldest American 'square piano' in the exhibition was that belonging to the Moravian Archives Collection. This is a mahogany-cased C-F³ *Tafelklavier* with a simple retro-oriented *Prellmechanik*. There is no escapement, the hammer is pivoted in a wooden *Kapsel* fixed to the rear end of the key, and there are **no dampers**. Hence I submit that this instrument should properly be designated a Pantalon. Ancillary features confirm this. The hammers are of bare wood, the use of a moderator stop provides the alternate soft tone [equivalent to Hebenstreit's cloth-covered hammers], and the sound of gut strings is approximated by the use of a buff stop, more correctly termed a *Harfenzug* in this context. This instrument unfortunately was subjected to a hideous 'restoration' in the twentieth century. A new soundboard of probably double the original thickness was substituted, the baseboard was replaced, and the original stop mechanisms were improved with more robust modern parts. The hitchpin plank having evidently failed, a new one was made with those 'improved' type of hitchpins where the two unisons are provided by one length of wire wrapped around the 3mm pin and returning to the adjacent wrestpin. Despite all of this the hammers and keys

were left untouched. Needless to say, the feeble tone and erratic mechanical performance now give a poor account of the maker's intention.

Two other eighteenth-century *Tafelklaviere* were displayed that exhibited the same musical concept. One, datable to c. 1790, is inscribed *John Huber fecit*. This has *retro Prellmechanik mit Treiber* [UR2Péc], with the expected harp stop and no dampers. It has been described in some detail by Laurence Libin in *AMIS* 1993 [pp. 5-37]. The other is a fascinating specimen that appeared at first to be a crude, anonymous folk instrument. But on closer examination it proved to be a much-altered *Tafelklavier* of the Pantalon type with intro Stossmechanik, showing several points of resemblance to London-made pianos of the Zumpe type, especially in the case construction. It has no dampers, but the hammers tell us nothing as they are later replacements of dubious design. Both specimens have C-f³ keyboards.

Also on display was a phenomenally accurate American copy of a *patent* Broadwood square piano, made I suppose about 1790-95, very likely in Philadelphia: a moderately competent attempt at a Longman & Broderip clone by Philip Bachmann of Lititz, Pa., c. 1795-1800; and a locally discovered FF - f³ square by George Frederick Schoene of London, dated 1805, which has the full specification of three pedals (allied to Schoene's distinctive action) that was so popular in Paris around 1800 when Steibelt and Adam wrote instructions on how to use these gadgets for musical effects. This instrument was discovered lying in a damp basement at Easton Pa., raising the intriguing possibility that there is an association between Zumpe's chosen successors, the Schoene family from Furth bei Nurnberg, and the founders of Schoenersville Pa., just a few miles down the road!

The early nineteenth century saw local makers adopting the English actions and case construction - more closely modeled on Clementi's square pianos than Broadwood's - with many divergent features than suggest individual experiment rather than a local uniformity of tradition. Some makers are identified on their nameboards - these include Jacob L. Till, John C. Malthaner, and George Haus - while other instruments are unsigned. Despite their English appearance many squares made in the 1820s and 1830s exhibit the American interest in the second 'soft pedal', that is the *moderator*, which endured on big American squares well into the second half of the century. The latest piano on display was a Malthaner made about 1848: massive, Gothic, and potentially big-sounding, though in poor repair. It has flange-mounted hammers, back checks, lever dampers, and type of knock-out escapement shown by Harding [p. 159] and there called *Petzold's Action*. Everything about the specification shows an affinity with squares made in the Stuttgart area, suggesting that Pennsylvanian makers of German descent were still very much influenced by the work of their relatives in western Germany.

One oddity that I cannot resist mentioning, though it was not in the exhibition, is a square piano by Anton Meyer from Nazareth, dated 1839. A big six-octave piano, as one would expect at this date, it was apparently made as a trial piece to obtain the approval of Moravian council. On it Meyer pasted a label stating that he makes pianos "equal to any that are made on the Paris or London plan". Consequently one smiles to see that this example has the most antiquated concept imaginable, being the youngest square I have ever seen with the simple, non-escapement form of *Prellmechanik*.

Sadly, by the time this appears in print the exhibition will be no more than a memory, but the good news is that Moravian College is soon to publish a retrospective catalogue so that a permanent record of this inaugural event will be obtainable. Please write to Music Department, Moravian College, Bethlehem PA 18018, Pennsylvania, U.S.A.

Tuning Recorders by Modifying the Bore

Some years back two articles appeared on tuning recorders by modifying the finger holes and the hole at the end of the recorder.¹ It is convenient to refer to these holes by numbers - 0 [the thumbhole] through 8 [the hole at the end]. The articles spelled out what notes are affected and by how much, when certain holes are modified. Since then many players have learned to modify the tuning of their recorders to make them more grateful to play. They have applied their skills to both wooden and plastic recorders. And all who have contacted me followed the wise advice of developing their skills on discarded instruments, quite often old descant recorders with the mouthpieces half chewed away! None was foolish enough to experiment on an expensive instrument. Modifying the undercutting of the holes without changing their visible shape is a fairly safe operation. If too much material, wax for example, is put into the hole it can be easily removed. If too much wood or plastic is removed it can be replaced with wax.

But modifying the finger holes does have certain limitations - namely that both the low note and its octave are either flattened or sharpened. It is impossible on the recorder, using only hole modification, to make the low note and its octave move in opposite directions - one becoming sharper, the other becoming flatter. Modifying a finger hole's shape and/or size will always result in both notes either rising in pitch or falling. If on a treble recorder the **low C** is flat, and **high C** is sharp, tuning one of them by hole modification will put the other even more out of tune. If the **low C** is sharpened until it is in tune, the **high C**, already too sharp, will become even more so! And vice versa. Another problem, in using finger hole modification, is the impossibility to sharpen or flatten any one note without affecting its octave. Both notes are always affected, and both move in the same direction, becoming either sharper or flatter.

Modifying the bore of the recorder offers greater choices - for example, one note not moving in pitch while its octave goes sharper or flatter. To cover every permutation would take too much space, but by studying a few possibilities using simple experiments, readers can work out for themselves other results.

Before going any further, it is necessary to understand that the recorder responds to the law of opposites. A few examples will explain this.

1] Play any note in the middle of the recorder's range. Play it in tune. Now blow very weakly and the note will be flat. The law of opposites states that if blowing **weakly** causes the note to go **flat** then blowing **strongly** will make the note go **sharp**.

2] Now pull out the middle section about 3 millimetres. Play the note fingered 0123. Listen carefully to its pitch. Pull out the recorder another 3 millimetres. The note becomes flatter.

Return the middle section until it is fully in. The recorder sounds sharper. The law of opposites states that making the recorder **longer** will **flatten** the instrument, making it **shorter** will **sharpen** it.

In brief, when applied to the recorder, the law of opposites states that if by carrying out modifications the recorder is in some way changed, then by carrying out the opposite modifications the recorder is changed in the opposite way.

Understanding bore modifications can begin by taking the head of a plastic treble recorder and heading off to the local hardware shop. Buy a length of squashy neoprene tubing equal to the total length of the middle section and foot when assembled. The tubing must be about the correct diameter to plug into the head socket. If it's a fraction small that's not a problem. Wrap one end of the tubing with a turn or two of sticky tape, increasing the diameter until it fits airtight and snugly. Mark the thumb and finger holes - copy their positions from the treble recorder. To make the plastic tube rigid enough to drill the holes, insert a piece of wooden dowelling. Drill 6mm diameter holes at the marked points.

Play the **low C** [O123]. Now play its octave, the **high C** [Ø123], and don't worry if the octave is a bit inaccurate.

While the left hand plays the **low C**, use the thumb and first finger of the right hand to squash the tube just south of hole 3 - about half way between holes 3 and 4. Relax the squashing. Now squash again. Notice that when squashed the pitch of the **low C** becomes lower. Now play the **high C** and squash the tube in exactly the same place. Relax the squashing. Now squash again. Notice that when squashed the pitch of **high C** is not affected.

We have now discovered a way of making the **low C** lower without it having any effect upon its **high C** octave. It can be expressed thus -

1] If, by putting material into the bore, we make the bore **smaller** at the correct spot [just south of hole 3], the **low C** can be flattened while the **high C** is not affected.

By juggling the law of opposites, and modifying the bore in the opposite fashion, then -

2] If, by removing material from the bore, we make the bore **larger** at the correct spot [just south of hole 3] the **low C** is not affected while the **high C** is sharpened.

The two above conclusions resulted from squeezing the tube a little south of hole 3. Now see what happens by squeezing the tube just north of hole 3.

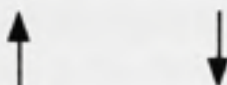
Readers might like to try the above simple tests on other notes, and of course it's easier if two people are involved - one playing and one squashing. But it's also easy for one person - instead of fingering the notes, block the holes with sticky tape or blobs of chewing gum. By partially blocking the thumbhole, notes in the upper register can be played. Some of the results of modifying the bore are quite surprising. Those working in pairs might be really astonished when the tube is squeezed in two places! It's useful when conducting experiments if the results can be put onto paper - it's easier studying them at leisure. The following diagram shows what can be achieved.

If we represent octaves by two lines,

_____ then let this line represent the upper note

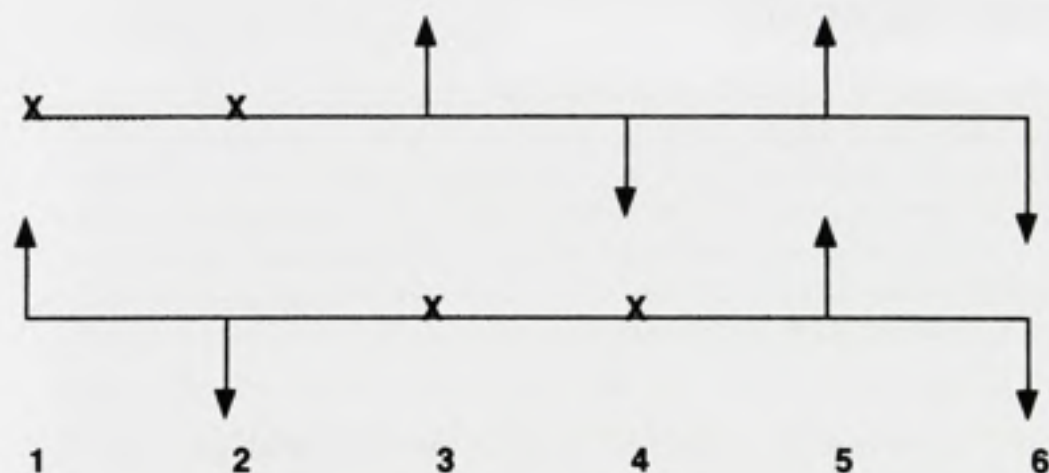
_____ and this one the lower note.

Indicate a note changing in pitch by an upward or downward arrow -



and a note not changing in pitch by an X.

Using finger hole modifications and/or the squashy tube to modify the bore, it is possible to achieve the following six results -



A table of results can be drawn up showing which octaves are affected, how they are affected and where the tubing needs to be squeezed or enlarged. Recorder makers modify the bore in a number of different ways. The bore can be made smaller by accurately positioning a blob of chewing gum, or waterproof glue or a blob of epoxy resin. The least obtrusive way is to turn a short cylinder of wood with very thin walls, coat it with a suitable adhesive and slide it accurately into position. Whatever material is inserted into the bore, it must not block any of the fingerholes! Makers find enlarging the bore a little trickier and more dangerous. Special reamers or scrapers can be used. If too much of the bore is removed it's not always easy replacing it with the right amount of material in the right place.

An article like this must always contain a warning to the over enthusiastic. On no account conduct any experiments with good instruments. Discoveries should be made using old discarded instruments - the no longer used wooden recorders are very suitable, even those with severely chewed windways!

1. The Recorder Magazine Volume 10. Numbers 1 and 2 - March and June 1990

Readers might like to refer to Communication 503 which deals with tuning woodwind instruments in rather more detail than the above.

BULLETIN SUPPLEMENT 2

David Armitage

I have managed to secure some funding from London Guildhall to buy one of Alec Loretto's recorder windway broaching machines. Some of you will already know that this is an invaluable tool for recorder manufacture as it gives precise control over the many critical parameters affecting the instrument's voicing. It is particularly useful for beginners who have not yet mastered all of the skills, as it helps them to achieve working instruments earlier than they otherwise would. I would be happy to consider making this facility available to FoMRHI members who want to try making their own recorders.

The machine will arrive and be assembled in May, and Alec will give LGU woodwind students a lecture/demonstration on its use on Tuesday 22nd of May. If any FoMRHI members are interested in attending please phone me on 020 7320 2844, or email me.

Recorder Dynamics

In presenting a useful summary of recent Bouwbriefs, [Communication 1729] Charles Stroom wonders whether the recent invention by Adriana Breuking had not already been invented by Carl Dolmetsch. Well, yes and no!

Dolmetsch: the now called Echo Key was patented in 1958. It works on the principle that a small hole drilled near the recorder's blockline will sharpen the overall pitch of the instrument. A chin operated key offers only two choices - the hole can be either open or closed. If played with the hole closed, the recorder will play at its normal pitch. If played with the hole open, the instrument plays a little sharp. This sharpness can be compensated for by reducing the breath pressure, which in turn reduces the amount of sound generated, giving an easily heard echo effect across the entire range of the recorder.

Breuking: this was patented [I think] in 1999, relies on the same Echo Key principle and is also chin operated. However, this invention features some important differences. First, the hole is not circular but elongated. Second, the elongated hole is not sealed by a key but by a sliding mechanism. The dynamic choices offered by this design are greater than those offered by the Dolmetsch Echo Key. If the recorder is at normal pitch with the elongated hole *half open*, then *fully opening* the elongated hole sharpens it and *fully closing* the elongated hole flattens it. By blowing less strongly to compensate for sharpness, or more strongly to compensate for flatness the recorder can be played both softer and louder than normal, while still maintaining pitch. In addition, because the chin controllable sliding mechanism is spring operated, the elongated hole can undergo a gradual change from fully shut to fully open - and vice versa. This can be accompanied by an appropriate gradual change in breath pressure, giving the recorder the ability to play *crescendi* and *decrescendi*.

Both devices are quite tricky to control, but if one is willing to put in the necessary work, the results can be rewarding. Time will tell whether this clever design by Adriana Breuking will prove any more popular than the Dolmetsch Echo Key, the Dolmetsch Bell Key, the Strathman adjustable windway, the Boehm System recorder [also mentioned by Charles Stroom] or the numerous other recorder extras, many of which have been patented. My guess is that the huge majority of recorders will continue to be produced without any appendages. As with so many other musical instruments, the majority of people playing recorders are amateurs and are little interested in sometimes difficult to control extras.

Readers might like to refer to Communication 1486 in FoMRHI Quarterly 85, October 1996.

Top f in a treble recorder

Over the past few years I have been trying to make baroque treble recorders based on the drawing of the Heerde treble recorder, purchased from Edinburgh University.

I have mostly used mopane, but occasionally boxwood, and while the tone has been good to very good, I have only managed to produce one head out of six or seven which played a top f.

Another plays the note occasionally. The former is a recorder which I took to a weekend course at West Dean and which was finished except for the windway. I finished it under the instruction of Eric Moulder, using his broach to form the windway and it plays well.

I made a similar broach and used it on subsequent heads, but without the same success. I also tried the method described a few months ago in FoMRHI of increasing the bore on the mouth side of the window by 0.9 mm, but with no better result. This is the dimension which I aim for, between the underside of the edge and the ceiling of the windway.

The edge is about 0.2 mm, and the chamfers of the head and block about 1 mm. The curve of the windway ceiling is about twice the bore diameter, about 36 mm, and the edge similarly curved. The ramp is flat from the window to the body outer surface and the ramp sides slightly splayed.

It may be that my broach differs slightly from Eric's, or that his critical eye is required, but I would be pleased to know if there is some specific area which requires improvement or adjustment to get the elusive top f. The drawing states that the top notes come easily. Not for me.

I have read all the articles in FoMRHI Quarterly going back about 20 years and other magazines, but without success.

I can be contacted at angus_robertson@btinternet.com (or communicate through FoMRHI Q and share it with others - Ed.)

Angus Robertson.

Some evidence from an old violin

The violin described hereafter is one of dozens "uninteresting" from a common viewpoint instruments. However, it is a rare one, that deserves some description, because it preserves a few bits of evidence about the instrument making past.

Being conveyed to paper, this information will be preserved even if the violin itself will probably be modified in the future in order to conform with the ever changing standards, and the evidence it otherwise might represent destroyed.

As in the condition before restoration:

- 4 damaged corners and 2 damaged lower edges of the table;
- A deep concave deformation under both of the bridge feet and a short sound-post crack ca.15mm;
- Presumably 19th century neck graft, 130mm long, 23.5mm (!) narrow at the upper end;
- 2 flame cracks in the ribs, and some worm damage;
- Heavy worm damage of the two lower linings along the table;
- F-hole crack, initializing at the lower curve of the *f* and extending down to the lower edge of the table;
- Damage around all 4 peg-holes; missing pegs;
- Missing bridge.

Involved procedures:

- Restoration of the corners and edges of the table;
- Restoration of the curvature of the table in the sound-post area, involving removing the original bass bar, repair of the sound-post crack, patching the table in the sound-post area, and fitting the original bass bar back into its original position;
- Neck graft, fingerboard and a tail-piece in the style of the late 18th century;
- Repair of the flame cracks in the ribs and replacement of the missing wood in the areas of worm damage;
- Replacing worm-damaged linings;
- Repairing the f-hole crack; crack filling and retouching the crack area;
- Peg-hole re-dressing and replacement of the missing pegs;
- Manufacturing a new bridge.

Table and back

The inner parts of the instrument have a deep brown color, almost black around the *ffs*. The black resembles the lamp black. Whatever the origin of that color is, apparently the instrument was never modified inside, and therefore the thicknesses of the both table and back and the original bass bar are unaltered. Dark color of the inner parts reminded about a method of smoke-drying the parts before assembly, mentioned by L.Mozart in *Versuch* (in St.Petersburg edition of 1804). The workmanship of an outmost accuracy. Fig.1 demonstrates the details.

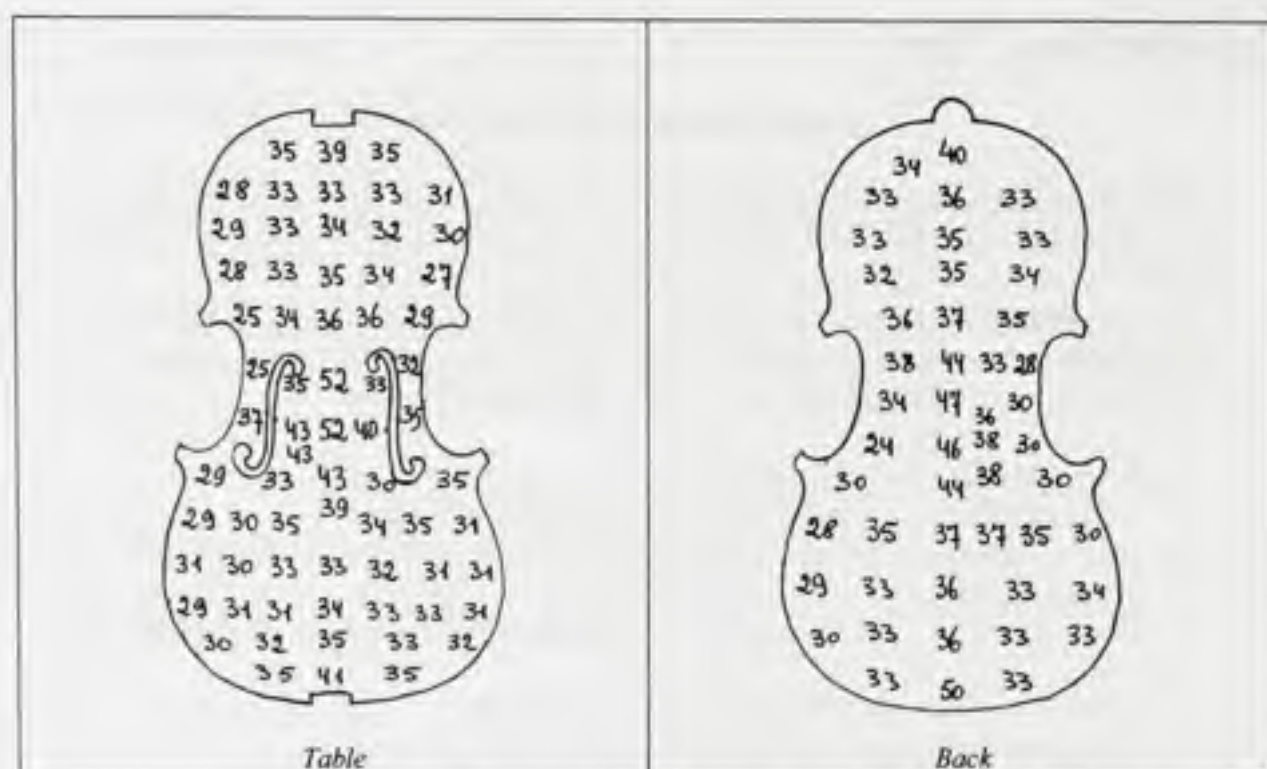


Fig.1 The thicknesses of the back and the table.

The thicknesses of the table and back are remarkably thick. For some mysterious reason this violin escaped from the late 18th century modifications, which involved scraping the backs and tables in order to achieve a different ideal of sound. Salabue expressed that ideal as follows: 'A good violin must have a robust sound, strong, but beautiful and not screaming (*striduta*), as sweet and as clear as possible, but the principal merit consists of equality of the sound on all of the four strings either the top string or the bottom.'

Bass bar

An original bass bar (fig.2) is another piece of particular interest. Since the table had to undergo an arching correction, repairing the sound-post crack and patching, the bass bar was needed to be removed. A painstaking procedure was executed in order to preserve it for consequent fitting back to the table. Fitting it to the table was executed with an aid of counterforms and molds (fig.3).

There was a popular belief that an old bass bar has to be replaced because it does not function, so to say, gets tired. For this reason old instruments are often furnished with modern bass bars, fitted with tension. However, the earliest method book, that of Bagatella (*Regole...*, 1782), does not mention that the bass bar has to fit with tension. Apparently the practice of fitting bass bars with a tension started some time in the beginning of the 19th century. Cozio di Salabue wrote: 'in setting the bass bar it is not needed to make it pull the table too much, but a little' (*Nel collocarvi la catena non bisogna molto, ma poco anzi, farle tirare il coperchio...*). However later in 1834 Mauguin does not mention that the bass bar must fit with some tension.

Regardless with the thickness or thinness of the bass bar, fitting with a tension will deform the table. Not the vice versa. Thence it is not recommendable to fit bass bars with tension on the old instruments. In most cases there is no reason to replace old bass bars. For the sake of instrument preservation (and, indeed, for the sake of its sound), the bass bar must fit without any force or springing action, even if the thicknesses of the table are little.

In that case somewhat more robust bass bar without tension will do and prevent the table from deformation under the pressure of the bridge.

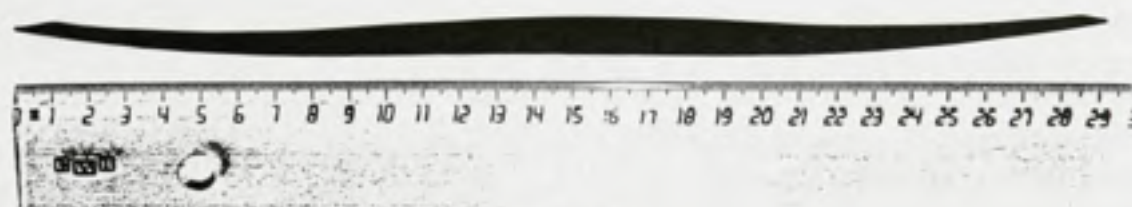


Fig.2 Bass bar.
Thickness 4 mm, length 290mm, height 12mm.

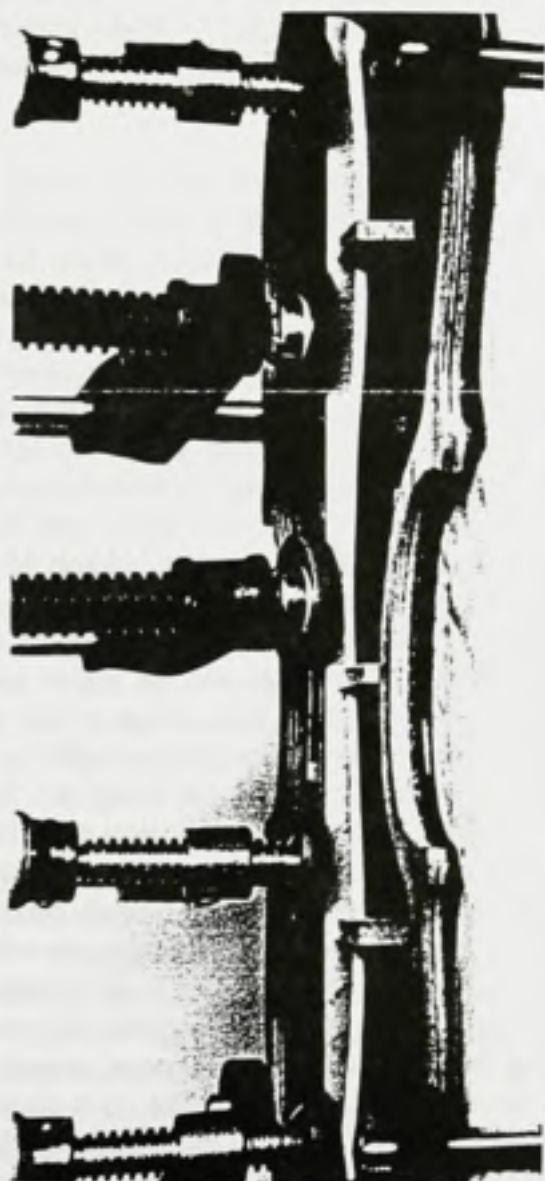


Fig.3 Re-gluing the original bass-bar into its original position



Fig.4 Photograph of the instrument.

FoMRHI Comm. 1744

Strings of Silk and other Textiles

This account of my string adventures follows reading the lively discussion between Ephraim Segermann, Mimmo Peruffo, John Catch and John Downing in FoMRHI.

My Russian friends from the Moscow University Baroque Orchestra complained to me through the years about their string problems. In particular the high e string of gut was losing its pitch during the concerts, and breaking altogether. The A string managed better, but D had different problems of its own. They tried all sorts of solutions pertaining to gut strings, and asked me if there were synthetic strings in existence, equal in sound quality but more reliable. There were other musicians with the same question on their minds, groups playing a lot outdoors in places like Florida and Texas. Finally, armed with some knowledge about Chinese and Persian silk strings, as well as some exotic horsehair strings from the Soviet Asia, I launched the twisted part of my life.

Formerly, in emergencies, I twisted some strings using fishing monofilament, with direct twist, so I just picked up from that. Soon I realized that no matter how small was the diameter of monofilament, the twisted string had mechanical problems. So I switched to nylon floss, or thread, and employed a rope twist which produced very reasonable strings. Twisting strings under working tension made them very stable pitchwise and produced a quite rich sound quality. Using alcohol based soaking sealed them up nicely and gave them the appearance of nice gut strings. I started getting comments of sort: "This is the best string I ever used" (Of course I used my students and colleagues as guinea pigs). This was the first time I had some very heretical thoughts. I kept returning to Peruffo - Segermann arguments about lute bridge hole sizes, loaded and pigmented basses, gut catlins etc. By this time my Moscow friends were happy with their es and As, and Ds, especially since the sound quality could be fine tuned by adding Mimmo Peruffo's Nylgut (thank you, Mimmo), or ZYEX, or other polymers. I was dealing, however, with gambas and lutes, and now needed matching basses. Twisted basses were coming out huge, in the manner of gut catlins. I knew already that metal wound basses would not match the fine quality sound I was getting. Chinese silk string makers were wrapping their strings in silk gauze for at least two thousand years. So I wound mine with nylon. They came out just a bit larger in diameter than metal wound basses, but were flexible, and felt like a solid gut string, say for the harp. What's more, using cotton, linen or hemp for wrapping reduced the diameter even farther and made them so responsive under a bow, that it felt like you did not have to work at all! I started using these strings in concerts and had listeners comment on "how much better my instruments sounded". I made couple of sets for my lutes, and had an eye opening experience, where I could not stop playing for a couple of weeks, thoroughly enjoying how it all was making sense, especially voice leading in the midrange and bass. Using metallic pigments allowed the basses to be even smaller, while amazingly supple and flexible. (Oh yes, I did paint some basses bright red; they sounded just fine). I made a few basses with copper pigment; they came out brown, quite nice looking, and at that point I had an amazing realization. I did hold in my hands strings like this about ten years ago, but very old and somewhat fragile. Franz Streitwieser, then the owner of Trumpet Museum in Pottstown, near Philadelphia, asked me to take a look at some string instruments in the basement which he was going to sell. There were a few peculiar

instruments (which probably attracted his collecting fancy), like viol-cello bodied types, some very old crwth, and some viola d'amores, lutes etc. A couple of these instruments (most in very poor condition) had what then appeared to me to be some textile cords attached in place of the strings. They looked graduated in size, like real strings would be, but I assumed them to be decorative rather than musical, because in my mind strings were either gut, metal, or metal wound. To satisfy this belief some of these instruments did have gut strings. But now, in the middle of my string twisting adventure, I was holding in my hand something looking and feeling exactly the same, that was actually a very good working string! So I started making twisted silk strings, using thread (I'm still not prepared to go all the way, using raw silk, and cooking in potions). They worked as well as the synthetic ones, but had more of an organic quality to their sound, very beautiful, somewhat gentler than gut. The thread cooked in fish glue (one of the main ingredients of Chinese potions) has a transparent look, more so than a gut string. The durability of silk string, however, depends tremendously on the quality of the material and the proper twist and processing, especially for the high, hard working ones. But this started taking me out of my original intent which is making working synthetic strings. I am a musician first of all, and would rather put my time into making music.

My direct experience with textile strings made me to ask the same question as John Downing in one of his comments, maybe the strings in the Renaissance were predominantly of silk, and changed to the gut with the general change in the sound attitudes, all the things growing heavier and louder, with a less need for refinement, and more for reaching out to more people? I tried an old scientific method, accepting a theorem for an axiom, at least for a couple of days to see how the data already existing fits. I also had the luxury to, sort of, keep a score with E. Segermann's and M. Peruffo's arguments. My silk strings definitely were "well twisted", anyone can see that, while gut strings appear to be a uniform body (Mace speaks of twist on every turn). I had to take care "to keep it from ruffling, or running upon crosstwists..." (also Mace), the gut string has to be broken, or of very bad quality to present such concern. "Clearness of the string to the eye..." - here is passage from Chinese zither tutor (The Mei-an Ch'in-p'u), describing properly made silk strings: "Tightly twisted and translucent ch'in strings are the best... All must be transparent like glue... If tightly twisted, they will be pliable and tough, not easily spoiled; if loose, - weak, these are easy to see." I can tie the ends of my strings into the knots, or any small curls, like in period paintings. I can wrap the bass string on a lute bridge twice around itself, again as in paintings. Neither can be done with gut. I can use the same set of strings to play in a = 440, 415, 390. Only the dynamic output changes, not the quality of the sound, because the twist picks up the slack.

Then I just went to the library and looked for the information on the silk trade. Apparently silk craft was introduced in Sicily by Arabs between X-XI cc, and around the same time or somewhat earlier in Spain. (What about the exceptional quality of Spanish strings?). Arab string instruments at the time almost invariably used silk strings for the highs, guts for the middle and wrapped silks for the basses. In Italy Venice was the center of silk industry (Venice catlins?), Pistoia was one of the earliest, but dealing mostly with silk threads and cords, not materials (Pistoy basses, anyone?), Lyon came in strong, but quite late, at the beginning of XVI c. Could this explain why Mace's "Lyons were "not too good"? I tried to find any business reference on gut production in the same places at the same time, and could not. Any references to these cities being centers of gut string production seem to be based on the names of the strings, not the other

way around. Moreover, the same craftsman responsible for making the musical strings were supplying the "military complex" with bow strings. The materials they used? Silk, hemp, linen, cotton, not gut. How did they seal their bow strings? With fish or animal glue.

I thought I did pretty well (it might be subjective, of course), and I did not have to say things like "The artist depicted string color and size just right, but took a liberty in showing the ends in tight curls." or "Maybe only lute bridges with large bass holes are the original ones." (By the way, for some reason the sizes of my lute basses correspond exactly with the measurements given by Mimmo Peruffo, thank you again, Mimmo). And if my soul ever hardens and I want to wind my basses with metal wire, I could use the same machine as I use with textiles. The transition from textile to metal winding may have occurred in the Renaissance without changing the technology.

And one more thing, to me the most important one. There are certain qualities and connections of the sounds that I worked so hard to achieve and sustain on gut strings. They are produced naturally on my instruments with twisted textile strings. Those same qualities I failed miserably to achieve on any sort of monofilament lute strings.

I do wonder now if with the gut strings, we focused on only one possibility to the exclusion of others. I do wonder also if other people would enjoy the possibilities given by twisted textile strings.

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**ORIENTAL COLOUR AND ATMOSPHERE:
WHY EXOTIC COLOUR BECAME PROMINENT IN
19TH- AND EARLY 20TH-CENTURY ORCHESTRATION**

IT was almost entirely due to the taste for the "exotic" that the art of the nineteenth century came to display a focus on colour and technique unknown before. If colour and attention to detail do indeed "abound in all aspects of Oriental life", then these are precisely the qualities that one must look for in art which is inspired by the Orient (Freeman et al. 1990: 25).

By 1840, exoticism had become the consuming passion of the French intelligentsia, "superseding the classical and medieval revivals as well as other aspects of romanticism" (Hagan 1985: 85). The desire to cultivate the "exotic" stemmed from that side of the Romantic spirit which, according to Walter Pater, revelled in "a certain audacity, or *bizarrerie* of motive", and a fascination with the "quaint" and "curious" (rpt. 1900: 225, 258). The watch-word of the nineteenth century was very much "originality". This followed Rousseau's famous dictum that "if I am not better, at least I am different" (pp.204-5). The "cult of the exotic" overlaid the Romantic thirst "for a beauty born of unlikely elements, by a profound alchemy, by a difficult initiation" (p.260). And this "strange beauty" was "to be won, by strong imagination, out of things unlikely or remote" (p.261). "Exotic" art thus typified the most glorious, and, seemingly, the most impossible of Romantic ideals, which was to achieve "the union of strangeness and beauty" (p.259). As one of the foremost aesthetic philosophers of his day, Pater stated his profound belief in the longevity of such art: he spoke of "the interest which never quite fades out of work really touched with the enthusiasm of the spiritual adventurer, the pioneer in culture" (p.261).

In his *Histoire du romantisme*, published posthumously in 1874, two years after his death, Théophile Gautier wrote of his belief that future generations would have difficulty imagining "the spiritual efflorescence" which took place in France and other European centres during the 1830s and '40s (in Richardson 1958: 272-3). The enormous upsurge in creative energy of which Gautier speaks had much to do with the stimulus of "Eastern" literature and subject matter, which was eagerly promoted and devoured by a host of artists and scholars. While an interest in the "Orient" was evinced by many artistic and aristocratic leaders in taste and fashion throughout the eighteenth century, it was only during the early years of the nineteenth century that the content of art-works was radically affected by such subject matter. Then, in the early twentieth century, when Western illusions about the Orient finally began to fade, the fecundity of "Eastern" creative power simultaneously collapsed. The great East-West divide which had existed for countless centuries showed signs of coming to an end, too. An optimistic Paul Reinsch reported in 1911:

As long as a hundred years ago a great philosopher [i.e., Friedrich von Schlegel] said, "Indian wisdom is streaming back to Europe and will bring about a fundamental change in our knowledge and thought." But it is only the events of the more recent past—the rise of Japan, the great Chinese transformation, the nationalist movement throughout the Orient—that have made us more generally conscious of the fact that the separate existence of the East and the West has come to an end, and that, in profoundly influencing each other, they will both contribute their share in developing the all-human civilization of the future. (vii.)

It was as a direct consequence of the nineteenth-century penchant for exotic and "Oriental" art that "programmatic" or descriptive forms of expression rose to new heights. Programmatic art forms came into their own during the Romantic era. According to Victor Hugo - who helped launch the Oriental vogue in the late 1820s - this development was further evidence that the final age of world history was at hand: "In a word, civilization begins by singing of its dreams, then narrates its doings, and lastly, sets about describing what it thinks" (ed. Eliot 1969: 353). The era had at last arrived when creative artists were attempting a comprehensive description of present and past worlds. But in Max Nordau's view, this was an age too weak to act, and now only capable of reflecting (see Hurley 1990: 201ff.). Likewise, Nietzsche felt such purely descriptive art to be a sign of "degeneracy", serving only to excite "jaded nerves" (trans. 1956: 107). In the early twentieth century, Constant Lambert pointed out that "nothing dates as quickly as musical sensationalism", and argued that striving after effect inevitably leads a composer "into a descending spiral spin from which only the most experienced pilot can flatten out in time" (rpt. 1948: 42). In other words, "sensationalism" can only be bettered by further sensationalism, and art ultimately becomes corrupted by such endless seeking after effect. In likening Claude Debussy's orchestral nocturnes to "an exquisitely wrought Mohammedan decoration", Lambert expressed both wonder at the detail of his craftsmanship and horror at Debussy's "cold and detached pictorialism", which seemed to him to exclude the human presence and human emotion. Lambert believed he could discern a spiritual emptiness underlying this garish "Orientalized" Western art. "Colour and atmosphere have taken the place of design and eloquence," he felt able to assert by 1934 (pp.19-20).



As descriptive techniques tended to extremes, means became an end in itself. Thus, what was once merely the icing on the cake became its main constituent. The writer/painter Eugène Fromentin provides a fine example of a creative artist whose work displays this tendency. In his writings, Fromentin set out to create a quality "detached from the person or object which it describes", so that it was "given an independent existence--a technique which is an exact literary equivalent of the parallel device in Impressionist painting, whereby colour takes precedence over form" (trans. 1965: xxxiv). In music, too, greater attention was paid to the "colours" being generated by combinations of notes, as well as the instruments which were chosen to play those notes. And it was, above all, in "Oriental" works that the greatest strides were made to create new orchestral "colours". In the hands of French Orientalist composers, chordal and instrumental "colours" did come to assume "an independent existence"; and while becoming increasingly suggestive - more "vague" in effect - they paradoxically also became more evocative. The intended result was that these numerous but distinct "colour" combinations (representative of "sense-impressions") should meld to create the atmospheres necessary to illustrate an exotic locale. Debussy was one artist who played a key role in "liberating" chords from sequence and consequence by focussing on the distinct qualities of chords and instrumental combinations. This isolation of musical "colours" and "flavours" led to the triumph of a personal aesthetic or the cult of the "sensory moment". Lambert claimed that every one of Debussy's carefully chosen chords had "powers of evocation", such that each became a self-contained world of pictorial meaning, like "an Egyptian hieroglyphic or Chinese ideograph" (rpt. 1948: 17).

All manner of artists in the nineteenth century followed Victor Hugo's famous lead and set about conjuring up "local colour". The more foreign and strange the locale, however, the more it had to be "translated" or adapted to a format suitable for digestion by Western audiences, while by no means diminishing its strangeness. Artists soon realized that their works could not merely be fashioned wholesale from "imported" ingredients without loss of effect. Realism was to be avoided at all costs according to Gautier, who pointed out that his basic artistic tenet was, in fact, a principle understood by Orientals themselves. He wrote in *La Presse* on 19th March, 1841:

In the theatre, we may agree with the Chinese on painting. They embrace only bizarre and chimerical creations. a painter who copies nature wholesale is regarded as having little talent and imagination. There is not such ecstasy in real life that a facsimile of it should appear on stage. (trans. mine.)

Idealization and stylization were clearly not only desirable, but necessary. As in caricature, this stylization often involved exaggeration. In his own work and manifestos, Hugo had demonstrated the necessity of reinforcing all colours and strengthening all flavours employed in works of "local colour". He argued that "colour and light are lost in a simple reflection". The Romantic art-work, Hugo contended, "must be a concentrating mirror, which ... concentrates and condenses the coloured rays, which makes of a mere gleam a light, and of a light a flame" (ed. Eliot 1969: 367). Thus it was that the Western mind became accustomed, over countless decades, "to the most fanciful generalizations about Oriental races" (Reinsch 1911: 5). Many of these generalizations have become so deeply ingrained in the Western psyche that even today it seems unlikely they will ever be completely eradicated.



IT is in the nature of nearly all "Oriental" works to aim to achieve an intensity of colour more remarkable than that required for artistic creations dealing with any other subject matter. The desire of composers to capture the flavour of the "Orient" as vividly as possible holds primary responsibility for driving them to innovate in terms of both orchestral and harmonic colour. In this regard, Dahlhaus sees parallels between extensions of technique in music and letters. He contends that the most important factor involved in the dissemination of exoticism amongst 'serious-minded musicians was a development in compositional technique: just as functional meter disintegrated into "musical prose" [in literature], functional harmony began to give way to coloristic harmony' (trans. 1989: 304). The new compositional techniques inspired by the "East" included use of the whole-tone scale, pentatonicism, and certain chromatic or "inflected" notes appropriate to the "Oriental" context. Lambert argues that Dargomizhsky and Glinka were driven to use the whole-tone scale in their "Oriental" works in an attempt to convey the "bizarre". He points out that the whole-tone scale was "a device which must at the time have seemed the most extreme in the vocabulary of music", and explains that only by overthrowing traditional practice in this way were they "able to convey an impression of strangeness and horror". Lambert further contends that the "Russian school, unhampered by the essential normality of Teutonic technique", were generally better able to depict the "magical", especially in orchestral music (rpt. 1948: 40-1). Certainly Russian composers such as Rimsky-Korsakov proved themselves to be far more at home in the fantastic/Oriental genre than most "Teutonic" composers, and the Russian school played a vital role in the development of the advanced orchestrational techniques of French Orientalist composers of the latter part of the nineteenth century.

In the first years of the twentieth century, the French organist and composer, Charles-Marie Widor, wrote a treatise entitled *La Technique de l'orchestre moderne*, in which he even applied an exotic Eastern parallel as a helpful guide in changing the key scheme and instrumentation structure of a musical work:

If common sense forbids us even to search for a rule, we may yet be allowed to make a comparison by analogy. *Modulating* is like leaving one's home and setting out for India, China or Japan, there to behold novel landscapes, under a sky of a different hue. Now, it is logical that the same instinct which prompts us to modulate should likewise tell us to change our tone-colour. (trans. 1906: 198.)

Since "Oriental" subjects demanded the creation of especially colourful new musical "atmospheres", the "Orient" in fact became synonymous with colour in all its forms.

In the 1891 Preface to his *Principles of Orchestration*, Rimsky-Korsakov argued that orchestral scoring had, by this stage of the century, become absolutely integral to any composition worthy of the name. Indeed, it was soon to become more important than melody, rhythm and harmony in the eyes of many leading composers. Over two decades earlier, in *The Grammar of Painting and Engraving*, a work which appeared in Paris in 1867 (two years before the Suez Canal was opened), the influential art critic Charles Blanc had already noted the tendency of contemporary fine artists to place considerations of colour before all else, to the extent of trying to convey ideas solely in terms of colouration. Discussing such works as Delacroix's *Jewish Wedding in Morocco* within a section entitled, "Colour of the Light", Blanc wrote:

Only in our own time, in fact, has the eloquence and aesthetic value of colour been revealed. ... The ardent colourist invests colour itself with form, all elements being subordinated to the brilliancy of his tints. ...

In zealously pursuing the triumph of colour ... Our colourists journey to the Orient: to Egypt, Morocco or Spain, and gather a huge repository of brilliant objects - cushions, slippers, narghiles, turbans, burnous, caftans, carpets and parasols. They create heroes of lions and tigers, accentuate a landscape's importance, redouble interest in a costume - even in inert matter - and so painting turns descriptive. Above all else, let the colourist select those harmonies of colour that conform to his thought. The pre-eminence of colouration over drawing demonstrates the usurpation of the relative over the absolute, of fleeting appearance over fixed form, of the sensual impression over the realm of the soul. Just as literature ultimately becomes decadent when images are elevated above ideas, so fine art grows material and must decline wherever the mind that draws is overrun by the impulse that colours, when, in short, the orchestra, rather than accompanying the song, becomes the entire poem. (trans. mine.)

Blanc's comments on colour in works of visual art may be compared with Rimsky-Korsakov's statements regarding orchestration as having become "*part of the very soul of the work*". Rimsky-Korsakov maintained that a musical work should be "thought out in terms of the orchestra, certain tone-colours being inseparable from it in the mind of the composer and native to it from the hour of its birth" (rpt. 1964: 2). It is no coincidence that Edwin Arnold should have noted in 1890 that there had recently burgeoned in the West an intense interest in Buddhism - an Eastern religion barely known to the general public a generation before - during precisely the same period of Rimsky-Korsakov's greatest "Oriental" inspiration (Arnold new edn. 1890: ix). A year later in 1891, Rimsky-Korsakov was describing how a preoccupation with orchestral "colour" had emerged thanks to the contemporary fascination with exotic subjects. Indeed, the fascination with all aspects of Eastern culture peaked during the years 1890-1920, as also did the interest in colour.

Rimsky-Korsakov spoke of "the secret of colour" in the creative faculty, and understood that he was living at a time when a certain attitude towards colour had reached an apex. He singled out Brahms (1833-1897), only eleven years his senior, as an example of a composer to whom timbral qualities were not a priority. Acknowledging that Brahms was in no way ignorant of orchestration, he argued that, even so, "nowhere in his works do we find evidence of brilliant tone or picturesque fancy". "The truth is," Rimsky-Korsakov concluded, "his thoughts did not turn towards colour; his mind did not exact it" (rpt. 1964: 2).

The Preface to Rimsky-Korsakov's posthumously published (1912) treatise on the art of writing for the orchestra contains a concise summary of what he felt to be the most important achievements of nineteenth-century composers, when placed in their historical context. He described the epoch in which he was living as the "post-Wagnerian age" - an age, moreover, "of brilliance and imaginative quality in orchestral tone painting". The composers who had eclipsed their predecessors as colourists are listed by Rimsky-Korsakov as: Berlioz, Glinka, Liszt and Wagner; modern French composers such as Bizet and Delibes; and those of the new Russian school - Borodin, Balakirev, Glazounov and Tchaikovsky (p.1). All the composers mentioned by Rimsky-Korsakov wrote illustrative music, many being pioneers in the field of programmatic orchestration. These musicians

showed the way forward for subsequent generations of French and Russian composers, especially through their "Oriental" compositions. Strange as it may seem today, contemporary critics could even discern "Eastern" characteristics in Tchaikovsky's absolute music. In 1897, the *Berliner Tageblatt* carried a report on Tchaikovsky's Fourth Symphony which attacked the "semi-Asiatic taste" of his orchestration - meaning his use of "the shrillest and gaudiest colors" (ed. Slonimsky rpt. 1990: 211).

Rimsky-Korsakov's three colourful "Oriental" works of the late 1880s - the *Capriccio espagnol* (Spanish [Moorish] inspiration), *Easter Festival* (Asiatic-Russian inspiration) and *Scheherazade* (Middle-Eastern inspiration) - closed a period in his work, at the end of which his orchestration - as he himself related - "reached a considerable degree of virtuosity and bright sonority without Wagner's influence" (trans. 1974: 296). Rimsky-Korsakov was one of the few composers to overcome (or perhaps to disguise) "the shadow of old Klingsor [Wagner]", as Debussy put it. Rimsky-Korsakov succeeded by pursuing "Oriental" themes, and creating "Oriental" colour fashioned from elements of "Eastern" folk music. Moreover, Rimsky-Korsakov was the first composer to have as the main focus of an orchestrational treatise the creation and blending of "tone colours". It was in the early 1870s that he first began to compile "a full treatise on orchestration", but, being confounded by the plethora of technical information available, he abandoned his initial approach. It was only in the late 1880s that it became clear to Rimsky-Korsakov that what students of music now needed, above all, was not another text documenting the capabilities of instruments, but one which "devoted considerable space to the study of tonal resonance and orchestral combination" (rpt. 1964: 1). In the end, his treatise focussed on providing multiple examples from his own works - almost all on exotic themes - of orchestral combinations illustrative of a variety of tonal colours.



IN her prize-winning essay for *The Art-Journal* on "The Harmony of Colours as exemplified in the [Great] Exhibition" of 1851, the author, Mrs. Merrifield, had felt it necessary to draw attention to "the harmony of colour" which prevailed "in the productions of Turkey, Tunis, and the Asiatic countries". She maintained that "the harmony of colours--of the more simple and positive colours, at least--was formerly well understood" by the ancient Egyptians and other "Oriental" races (*Great Exhibition* 1970: 1). But in most latter-day Western creations inspired by the "East", she was not convinced that this harmony of colours had been properly appreciated. She found that "the glitter of metallic colours" was "too frequently mistaken for richness, and violent contrasts for harmony". To her way of thinking, the decorative artist seemed often "to run riot in the riches of his palette, and to endeavour to dazzle" if he failed to please (VII). This is a charge which can also be levelled at some Orientalist composers, for as splendid new orchestral effects became available, there was always the danger of composers over-indulging in "local colour" and splashing wildly about in their tonal paint-boxes. Nevertheless, while the effects produced may not always have been in good taste, they often served, like much of Berlioz's music, as testing grounds for timbral innovation.

In 1865, having completed his "Oriental" masterpiece, *Les Troyens*, and nearing the end of his life, Berlioz wrote of his belief that "music lives only by contrast". "Berlioz's musical textures, with their fondness for combining opposites," David Cairns contends, "could almost be a direct translation into sound of Delacroix's ideas about painting" (*Berlioz* 1969: x). The creation of vivid contrasts of tone colour was the chief stylistic hallmark of "Oriental" works, and, as the end of the century approached, the rate at which these tone colours were changed increased in frequency. Chabrier, who was heavily influenced by Berlioz's orchestration, delighted in the enormously expanded palette of tone colours that became available to composers in the latter part of the century. As many other avant-garde composers discerned, it was in the illustration of "Oriental" subject matter that such colours could be used to best effect. Furthermore, Orientalism afforded the inspiration and opportunity for composers to experiment with new and bold colour combinations.

The desire to render "Oriental" scenes in terms of aural "pictures" greatly encouraged the use of new and more percussive effects - often bright and metallic sounds - especially in vigorous dance movements. The function of percussion, according to Berlioz, was "to produce special effects, or to

colour the rhythm" (trans. n.d.: 198). But since rhythm itself is also a type of "colour", we see an extraordinary array of exotic rhythms - Spanish, Algerian, Egyptian, central Asian, Indian, Chinese, Javanese, "Gypsy", and countless others - being imported into Western compositions on "Oriental" themes. The use of these exotic rhythms represents an unprecedented broadening of metrical "colour". Indeed, musical Orientalism can be said to have played a major role in revitalizing a variety of musical parameters - formal, harmonic and metrical - but especially instrumental "colour".



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