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Elena Dal Cortivo

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FELLOWSHIP OF MAKERS AND RESEARCHERS OF HISTORICAL INSTRUMENTS

Hon. Sec. J. Montagu, c/o Faculty of Music, St. Aldate's, Oxford OX1 1DB, U.K.
Not quite as sharp off the mark as I'd hoped, but better than sometimes. For a week, I've had an assistant in the Bate (a school-leaver getting work experience, sent by her school) and I didn't want to waste a moment of the opportunity of having someone to help me. So, I'm sitting here a week later than I intended.

GIRO CREDITS: Margaret tells me that she has had two GIRO credits recently with no indication of whom they are from. Both come from the Netherlands. If any of our Dutch members hear from their friends that they sent their subs but haven't had their Qs, please let me or Margaret know; they may be the ones. One was a surface sub and the other was an airmail one. Whether it is the Dutch GIRO bank that lost the pink cards or our end up in Bootle, I don't know, but perhaps it would be safer if anybody who pays through a bank of any sort (is who does not put the cheque or whatever in an envelope themselves and thus knows whether they have included name and address) would also send a note to Margaret saying what they have sent and quoting, if possible, any relevant numbers that may help to identify what arrives through 'official channels'. You may remember that I said in the last Bulletin that I had a cryptic one from Milan; that one did sort itself out, but only with difficulty. What you send yourselves is not always fool-proof. There is a poor frustrated chap somewhere who wanted information about FoMRHI; as he didn't put his address on his letter, he didn't get it. I can't even tell you who he is because I can't read the signature (somebody may know him); it looks like H.T. Coe or Cae or Cox and he enclosed a Postal Replay Coupon for 400 öre from Haslev (that may not mean anything; I often send on to someone else a reply coupon someone has sent me!).

FORMAT, FREQUENCY & FIZZLING OUT: A Couple more comments:

Ian Gould:

May I, as an avid reader of the Q but infrequent communicator to it, join the debate on formats, periodicity, and the like. My vote is for regular publication (i.e. as regular as it ever is), and in the present format, for all the good reasons offered in Bull 31, plus the fact that it has been shown to work. Please don't go for loose leaf, it all too easily becomes lost leaf. I imagine that for most of us the time spent in occasionally searching for an early Comm is far less than we would need to shuffle bits of paper into our own preferred ordering. Of course, if anyone ever gets round to doing that cumulative index that has been talked about from time to time ...

Of course what we really should do is to proceed in the manner adopted by our distinguished predecessors, and someone will no doubt fill up a bit of spare space for you by writing a Comm on how they dealt with their bumph. This brings me to the perennial vexed question of authenticity, about which I have been meaning to write for some time. I fear that FoMRHI is suffering a severe attack of preciosity; with some members I suspect it is already chronic. It seems to me that we must distinguish between understanding and imitating: it is entirely sensible and right that we should do all we can to understand how the early makers went to work, what their materials were like, and so on, but to slavishly imitate their procedures (if we can find out enough about them) merely for the sake of being able to say 'Sucks boo, I'm more authentick than you' is arrant and arrogant nonsense. One of the most interesting and enjoyable Comm I have read for a long time was 452, but how many harpsichordists are now going to refuse to play an instrument that isn't strung with warranted oseborniron?

...then will someone give us a quantitative assessment of the tonal results of using, say, copal varnish instead of some modern stuff? And when will someone explain how wood from a tree grown in a 20th century environment can be deemed equivalent to wood grown in the 17th century? I am no botanist, but I suspect that the differences are greater than any you will introduce by, for example, modern methods of naching.
In Bull31 Carl Willetts pointed out that it's the music that matters. It's sad that such a reminder should be necessary, but it certainly is.

John Downing: "...I believe that the Bulletin is a success as it stands and I do not want to see any change in the style or format. I don't mind some thin or late issues - as long as they arrive eventually...... Regarding communications I have been generally disappointed at the general lack of contributions (the Segermans excepted!) from Fellows. A modest single contribution per Fellow per year would certainly boost the content of the quarterly - might even improve the quality a bit."

JM: Judging by what I've got sitting here, we are by no means fizzling out. But do please keep it up; a good batch of material arriving for one or two issues isn't the whole answer (not that I'm not grateful for what has arrived, and I'm sure that Djilda will be too; it's just that those who run Qs are never satisfied!); what we need is the steady flow of Comms that we're sure that you could produce. Perhaps I might add that I do agree with John Downing. The basic criteria for election as a Fellow are that one has helped one's colleagues with reliable information and, since this is the normal way of doing so, that one has published material relevant to our field. The trouble with criteria for election is that inevitably they refer to the past; no one can say 'If I'm elected I will publish...'. And I must admit that it has been a disappointment how few have either done so or have continued to do so after election. Some Fellows, of course, have commitments to other periodicals and therefore publish there. Some are in the sort of academic posts where one has to publish or be damned (ie lose promotion or even one's job) and FoMRHI is probably not formal enough to count for such purposes. But a lot could do more and I hope that they/you will. Anyway, I'm covered for the moment; I've flown one of my kites for this issue.

FURTHER TO: Comm. 443: Cary Karp writes:

In Comm 443 a method was presented for interrelating pitch names and frequencies using a reference of A4 = 440Hz. This notation is widely accepted in America, at least, and is as good a suggestion as any for a "FoMRHI Standard". The idea is that CQ is the lowest pitch in the octave in which the lower threshold of audibility is found (CQ = 16Hz). In other words, noone can hear anything in any octave lower than the one numbered zero. This aural, rather than organ register approach seems a good way to avoid any arguments about the matter. In any case, the method presented in Comm 443 can easily be modified for use with any system of consecutively numbered octaves with any reference frequency. Details are slated for publication elsewhere, although anyone interested may write me for details.

Comm. 460: Cary again:

In Comm 460 Eph quite rightly points out that one of the mathematical expressions in my 1978 GSJ article had not been reduced to its simplest terms. There are other errors and misprints in the article and anyone who wants a correction sheet is welcome to write me for one. I sometimes wonder, however, just how much attention gets paid to the mathematics in articles and Comms such as the one in question. Pre-publication copies of the GSJ article were given to several colleagues (including Eph)-- all more proficient mathematicians than I am -- in the hope that exactly this type of error might not make it into print. Noone spotted anything (about which they told me, anyway) until now, six years later, although I am sure that none of them overlooked any errors for lack of ability to locate them. Plenty of F...Q space has been taken up by material containing mathematical expressions. Is me? Comments please.
As to what makes woodwind bores shrink -- appreciable contraction with age independent of contraction due to decreased moisture content or mechanical constraint is a new concept for me. I have not noticed any such distinction made in the wood technological and conservation technical literature with which I am familiar, nor can I easily envision how such a mechanism might be quantifiable. How does one determine how much a wooden object may have shrunk solely as a function of time (i.e., under constant atmospheric conditions) over a period of several hundred years? At what point does time dependent shrinkage cease to be an important factor? (I assume that Eph is not suggesting that it will continue until wooden objects shrink into invisibility.)

As to the reasons for concern with woodwind bore shrinkage -- there are several functions of aging which can conceivably cause the pitch of a woodwind to change. Bore shrinkage ought, indeed, to raise the pitch of an instrument. However, if the sides of the fingerholes are pressed together as this happens, their effective diameters will decrease, thus lowering pitch. A bore surface which becomes rough due to use and/or shrinkage will also lower pitch. I doubt that any net shift in pitch due to aging can be determined by approximate mathematical compensation for shrinkage due to moisture loss. Despite this it is necessary to realize that diameter measurements taken along a single axis of an oval bore are not adequate for the description of that bore if any attempt, whatsoever, is to be made at deducing the original dimensions of that instrument.

FINISHES: David Crookes writes: "A colleague of mine has got a bit browned off with acid-staining boxwood, and the other day he saw brown or orange food-colouring in the pantry, grabbed the bottle and ran out to the workshop. He tells me that he can get exactly the right colour by adding a couple of drops of blue food dye to a large dollop of the orange stuff. I set this down here (quantities are only approximate!) in case anybody wants to try it."

Kevin Smale (address in the List of Members) writes: "It is my intention to research the history of the finishes used on musical instruments through the ages and prepare samples of otherwise forgotten recipes. I have found a supplier of the basic ingredients (gum lac, copal, aloes, tragacanth, various aromatic oils, etc, etc) and now need to compile a directory of finishes together with some information on when they were used, by whom and any reasons for them to have been forgotten. Can you suggest anyone that I can contact or books to read that might assist me in this venture." I told him that it wasn't my line at all and referred him to the back file of Qs (we have had a fair number of Qs and Bull items on this) and said that I would put a note in here. Can anyone help him? I assume, perhaps wrongly, that he knows the obvious violin books (Secret of Stradivari, etc etc); there was a fair amount of nonsense written on this in the last century.

INSTRUMENTS: There's a Comm in this issue from Geoff Bridges on Portative Organs with Reservoirs. When it arrived, I wrote to him saying: "Personally I'm not convinced that such a thing existed (though anything is always possible). The first time we used a portative in Musica Reservata, we borrowed one with a vacuum cleaner motor in it and thus producing a continuous sound. Later Jantina Noorman bought her own, a Memlinc type, and we found that there was a positive musical advantage in having an organ which had to breathe like, and with, the singer. More research is needed, but my impression has been that the difference between portative and positive was, among other matters (one/two hands etc), continuous versus breathed sound. On the other hand, the use of a drone, such as one assumes from the tower at the treble end, does seem more probable if the sound is continuous."

As you know, we don't normally comment in the same issue as a Comm.
because it gives Djilda, Eph and me too much advantage over the rest of you, but I've done so because my letter produced the following reply from Geoff which you also should see:

The modern version of the 1490 Memlinc portative is to-day treated as a poor man's mini positive, which is nothing like the medieval use, but was probably similar to the concertina centuries later on. The point of the exercise is firstly and most importantly to produce a medieval portative (that conforms to Groves as well as paintings and social history), and suggest makers and players go back to the medieval instrument and the way it was used. For this reason I am more interested in the 1479 Memlinc type. This one and Orcagna's portative are essentially for playing while walking or standing... indeed the latter can only be played supported by the shoulder strap.

Secondly to see whether it would have been possible for 15th century craftsmen to include a reservoir, partly because all the portatives I've come across run out of breath before any but modest amateur singers. Both 1479 and 1480 Memlincs could have had reservoirs in their bases, but the 1479 instrument is obviously the more challenging in that a bellows has to be squeezed into the base in addition to the reservoir. Photos of the relevant paintings would make all this so much clearer but unfortunately FoMRHIQ repro isn't up to it.

Carl Willetts has sent a note on Supporting Larger Woodwinds:

If I was four inches shorter I would be able to rest the bell of my C basset (tenor) shawm on the floor whilst playing. I'm not, so I can't. I thought of having a neck or shoulder strap connected to a hook-eye screwed into the instrument. This would involve damage to the instrument and the weight near my breathing apparatus. A bassontype spike, whilst used by some players, seemed decidedly unauthentic. The use of a block of wood on the floor proved to be clumsy and sometimes smothered the tone.

I then noticed the drawing of the nicolo (tenor) shawm player in Gabinetto Armonico (Dover Edition, plate 69). The supporting system used here I copied using a leather dog collar round the instrument and a detachable lead fastened to a belt. I can envisage for a curtal or other butt ended instrument, a leather cup, like those used by military flag bearers, suspended from a belt. Is there any evidence for this?

Carl also sent three Comms that you will find in this issue and added, in relation to one of them: "The solution to moisture blocking of fipples is certainly non-authentic, but it does work and the problem often crops up on the non-authentic instruments that the vast majority of people use. One day plastic instruments will be antiques!"
Peter Forrester has sent a note:

An Early Bow? cursorily noticed whilst on holiday but perhaps of interest to viol-makers.

There exists in the museum of the Loggia of San Marco in Venice an instrument labelled a contrabasso and attributed to Gasparo da Salo. It carries three strings, now with worm tuning, and has a string length of about 108cm. It is exhibited, unfortunately behind glass, together with its case and bow. The bow is perhaps of most interest. Although by no means necessarily by Gasparo it is evidently almost straight but now with a curve towards the hair, a deep head, and with the frog held in place by two metal ferrules in the manner of a fishing rod reel. Perhaps somebody would like to investigate further?

JM adds: Do please send any such notes of things that you spot while on holiday that may interest others.

PLANS: Luis Esteves Pereira (address in List of Members) writes:

I am writing to ask you to be so kind to put in the Q a note saying that I am in need of information regarding harpsichords made by Bukart Shudi & John Broadwood. A complete plan, concerning a single keyboard instrument with 2 x 8' plus 4', plus buff stop, if available, will be welcome for buying. Anyway, if any member who has restored such an instrument, would be so kind to put himself in touch with me for consultation, it will be very good.

David Crookes asks whether anyone has plans for a sheng; he wants to make one "but at the minute all I know is it looks like a teapot with a lot of bamboo sticking out of the top." I have told him that he's welcome to come and measure mine (and referred him to the photo of it in my Rom & Mod) and told him, too, where he can buy one in London, but neither of these suggestions may be helpful as he lives in Belfast (address in List of Members); can anyone help?

John Downing (also in List of Members) says that he notes that Bowbrief members are looking for a technical drawing of a small harp. He has a full size drawing of the 'Queen Mary' celtic harp (Hippins ND Gibb, plate 27) which he would be prepared to make available if demand were sufficient. The drawing represents the harp in what he believes is the original undistorted condition. Those interested, please write to him.

APPRENTICE: David Crookes asks whether any one could offer to take on an apprentice from Brazil whose English is very reasonable; he wrote to him (to David I mean) originally, but he can't take him. He is coming here for the academic year 1983-4, starting on September or October and is mainly interested in flutes, recorders and gembongs. If you can take him, please write to him: Flávio Stein, Solar do Barão, Casa da Musica, Rua Presidente Carlos Cavalcanti 553, 80000 Curitiba, Paraná, Brazil.

GRANTS: Some of you got Churchill travel grants last time. Each year they award grants to people in different professions and, since so many of you are not full time instrument makers, you may also come into one of this years batch: Dressmakers, tailors and makers of fashion accessories; Workers in youth organisations and projects for the unemployed (what about encouraging unemployed to make instruments?); Nurses and other workers caring for the elderly; Penal institutions and their alternatives; Sport and adventure for disabled; Commercial and graphic artists; Dance and dancers (quite a possible one for some of us); Creation of small businesses (very possible surely); Care,
maintenance and appearance of the countryside; Animals and society - practical aspects of humane conduct. If you think you could come under any of these, write between mid-August and mid-October to: Winston Churchill Memorial Trust, 15 Queen's Gate Terrace, London SW7 5PR, sending just your name and address on a postcard.

EXHIBITIONS: William Waterhouse and the Edinburgh University Collection of Instruments are putting on a special exhibition The Proud Bassoon in the Reid Concert Hall, Bristo Square, Edinburgh, from 17th to 31st August, 11-6 daily except Sundays. There will be a catalogue available, but I don't yet know the price (if you want one urgently, write to Arnold Myers; otherwise wait till he sends us a review copy or till you get there). Admission is free. Arnold hasn't told me whether the Edinburgh Collection will be open every day over the same period, or whether just on Wednesdays as usual, but it has usually been open during the Festival. If you're going to Edinburgh it's certainly worth asking (and don't forget the Russell Collection of Keyboards in St.Cecilia Hall in the Cowgate only five minutes walk from the Reid). For those of you who don't know, Bill Waterhouse has the best private collection of bassoons that there is.

I hope that all of you who are within reach of London will be coming to the Horticultural Hall for the Early Musical Instrument Exhibition. The dates are Friday 18th November (later in the year than usual) to Sunday 20th (the first time they've included a Sunday, which should make it easier for those coming from further away), from 10 am to 6 pm. FoMRHI will be there as usual (after all, we started at the second one; we could not miss it) and so will most of the UK and a fair number of overseas makers. Also music publishers, shops, and suppliers of tools and materials. If you want to exhibit and have not yet booked a stand, you'll have to be very quick about it; I just rang Richard Wood and he said that there were very few spaces left, so do make it quick. The address is: Richard Wood, Early Music Shop, 28 Sunbridge Road, Bradford, West Yorks BD1 2AE. As for the past three or four, the Exhibition itself is at the New Horticultural Hall, which is between Vincent Square and Horseferry Road in Westminster; nearest tubes, Victoria and St.James's Park. I look forward to seeing a good many of you there.

FESTIVAL: Short notice: the Utrecht Early Music Festival runs from 26th August to 4th September. There are concerts and so on all over the town, plus lectures, workshops and, at the weekends, Early Music Markets with instrument builders, etc. They say that last year's markets attracted over 5000 visitors. They wrote to me too late to tell you in time to book, but if you want to be on their mailing list for next year, write to: Pratum Musicum, Obrechtstraat 63, NL-3572 ED Utrecht, Netherlands. Prices for stands are very reasonable: 100 or 75 Hfl for instrument makers; 150 Hfl for dealers.

COURSE: There is a Baroque Trumpet Course in Nuremberg in November, from 12th to 15th, at the Germanisches Nationalmuseum. Edward Tarr and Alfons Verwooy are teaching playing; Heinrich & Max Thein (who are FoMRHI members) are teaching making; Dr. John-Henry van der Meer and Friedemann Hellwig (also a FoMRHI member) are doing something unspecified, but since J.H.van der Meer is the Curator in charge of the instruments and Friedemann is the chief restorer, I imagine that they will be covering those aspects. They welcome beginners both in making and in playing the baroque trumpet as well as those more experienced. If you're interested, write to: STIMU, Drift 21, NL-3512 BR Utrecht before October 1st.

OTHER SOCIETIES: There are two more Early Music Forums (? Fora) now: One for the Southern Counties (Hampshire to Kent judging from the
map on the leaflet) run by Ian Graham-Jones, The Tilings, Creek End, Fishbourne, Chichester, West Sussex PO19 3JS. The other is run by Ian Gould who writes:

On a totally different topic, may I take opportunity to mention the existence of the Midlands Early Music Forum? (West Midlands, actually, as there's now an East Midlands one, but that's its official name.) Like the other regional forums, MEF runs concerts and workshops in a wide variety of early music areas - not always very authentically, but we do our best - and although we do have one or two instrument makers among our membership we would be glad to have more. I have recently been appointed Secretary, and will be very pleased to hear from any interested FoMRHI members.

Ian's address is in the List of Members. If you're involved in Early Music at all (and I assume that you are if you're a member of FoMRHI) you ought to be a member of your local Forum if there is one. If there isn't one, perhaps it should be you who organises one (or talks a friend into doing so). I would think that someone running one now would be able to help with advice etc for any prospective Forum. They seem such a good idea that I'm surprised that we've not heard of them from abroad as well. They cover everybody interested in Early Music: makers, players, audiences, the lot, and so provide a good deal of feedback and contact between producers and customers of all the aspects of Early Music.

A RATHER SILLY SUGGESTION: I've had a letter from a firm that makes ties. Do we want a FoMRHI tie? (I'm not one to judge; I never wear a tie if I can possibly avoid it; I don't see why one has to tie a rag round one's neck to look respectable). I don't know what the economic figure is, but if enough members feel that they'd like a tie, I'll find out. We'd have to have a FoMRHI emblem (unless they can weave our name in, which is quite possible) and what should that be? A lute rampant? A lathe passant? One can have all sorts of things, of course; badges, cuff-links, brooches and so forth.

BATE NEWS: Everything is now (or will be by the time you read this) on permanent brackets, instead of nylon and hooks, and everything also fully labelled. This is chiefly because we are expecting a visitation from CIMCIM (Comité International des Musées et Collections des Instruments de Musique) at the end of this month. You may remember that I was in Scandinavia last summer for the CIMCIM travelling conference, and I got enough ideas then from the museums we visited and from Bob Barclay to design all the brackets we need.

Next job is to check right round and see what needs conservation or repair. The job after that is to produce a Supplement to our Catalogue (I have done a little 20p one for everything that we got from Edgar Hunt). I will, of course, let you know when the Supplement is available.

We shall be closed for the last two weeks of August (20th August to 4th September); otherwise, we are as likely to be open during the vacations as not (ring first to check). I say this because a few people have assumed we were closed out of term. We have no rules about it, but my own view is that if I'm here, we might as well be open as usual. The only risk is that I've taken the day off, which is why I say ring first.

DEADLINE FOR NEXT Q: 3rd October please.

That's the lot unless anything more comes in while I'm doing the Members' List Supplement and a few reviews. Have a good rest of the summer, and see you at the Horticultural Hall.

Jeremy Montagu
Odd Aanstad writes: I wish to thank John Paul and Graham Cochrane for their answer to my problem concerning date of making of a Grand Piano Clementi & Co nr. 1140 (FoMTRHI nr. 31, p. 11).

We are now able to state the following:
1. The firm Clementi, Collard, Davis & Collard exist from 1818-1822.
2. King George III died in 1820. (Georg IV Prince Regent from 1810-1811 to 1820).
3. Date of making 1818-1820.

Gaita Gallega: Workshop and Concert in Oxford (Note From Peter Stacey)

On Thursday 18th August Os Raparigos (N.W.Spain) will perform the traditional music of their country. The concert starts at 7.30 and is at the Old Fire Station Arts Centre, 40 George Street, Oxford. The members of the group are Juan Silvar, Anton Varela and Xabier Farinas; gaitas, Rafa Vitoria and Anxel Munezi; percussion.

Os Raparigos are the leading exponents of Gallego traditional music and have won all the major competitions in their country. Their latest record in the Gaiteros Gallegos series has been widely acclaimed.

Juan Silver will hold an informal workshop on the gaita gallega - an instrument of unique importance in the reconstruction of medieval bagpipe music. For further details contact Peter Stacey, 63 Lonsdale Road, Oxford OX2 7ES.

Comm. 457 According to Paul Gretton, G.J. van der Heide, the writer of this Comm. in the original Dutch in Bouwbrief, is unhappy about the quality of this English translation, and has authorized Paul to do another translation which should appear in the October FoMTRHI Q.

Cary Carp has sanctioned same-issue answers to his queries this Q. Eph Segerman writes:

With respect to age contraction in Bulletin p.4, I hadn't noticed an overt discussion of age contraction in the tiny bit of conservation literature I have at my fingertips. Nevertheless I can't imagine that conservationists would not already have described a phenomenon so obvious in old musical instruments. An indication that it exists would be that the vast majority of wooden objects originally turned about the grain direction (except perhaps those that have recently been bulked for preservation) are now narrower along the ring direction than along the radial direction. It is highly unlikely that the humidity at which we observe them now is so consistently lower than at the time of turning. The only uncertainty here is the question as to whether well-seasoned or 'green' wood was used in the making. Perhaps conservationists have avoided conclusions involving age contraction because of this ambiguity. The case for using well-seasoned wood to avoid warping after construction is particularly strong in musical-instrument making.

There is no difficulty in devising a qualitative explanation for age contraction based on the theory of physical degradation presented by Stamm in his article in the IIC preprints of the 1970 N.Y. Conference (second ed. (1971) p.3).

Physical degradation results from humidity gradients causing tension between the surface and inside wood. Either the surface is stretched and the inside compressed during drying, or the other way about during wetting. In a strong humidity gradient the wood can be distorted beyond the elastic limit, so wood being stretched can check (this is more prevalent on the surface than inside) and wood in compression can suffer from some collapsing of the voids. Much of the void collapsing can be recovered if rewetting is quick but the ability to recover reduces with time. Since checked wood can easily return to its original dimensions but collapsed wood cannot, the overall tendency is towards contraction.

The above process will be enhanced if the woodworker used surface treatment to prevent unsightly surface checking during natural humidity cycling while he was still responsible for his product. He could have used treatments with the primary component being a cohesive material like animal glue, water glass of linseed oil which penetrates the surface and increases the tensile strength perpendicular to the grain in the surface wood. By thus avoiding surface checking he enhanced void collapse in the interior when there was a strong humidity gradient during drying from a fairly wet condition.
With respect to 1/3 comma meantone in Comm.465. A couple of years ago at the Lute Society Summer School I attended a concert by Anthony Bailes in which his fretting pattern on the lute was quite astonishing. The wide spaces were about double the width of adjacent narrow spaces. In 1/3 comma meantone the diatonic semitone is 126 cents wide and the chromatic semitone is 63 1/2 cents wide (see Comm. 88), or frequency ratios of 1.076 and 1.037 respectively (see Comm. 459, for which we can add the general frequency ratio of

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\frac{16}{15} \left( \frac{\text{5}}{\text{8}} \right) \quad \text{and} \quad \frac{25}{24} \left( \frac{\text{2}}{\text{3}} \right) \quad \text{respectively}.
\]

I don't recall the programme, but think that it was 17th century French baroque lute music in minor keys. The music sounded very fine to me. Perhaps dissonant intervals were papered over by ornamentation as Roger North suggested.

Finally just a personal comment on the question of not forgetting that the purpose of historical instruments is the music (Bulletin, top of p.3, Gould quoting Willetts). I would like to add that one should not forget the 'historical' or 'early' adjective that applies to the music.

FoMRHI BOOK NEWS

Jeremy Montagu

A couple of books have arrived, too late for review in this issue, but which you may like to know about:

Ronald Zachary Taylor, Make and Play a Lute, £12.50, and
W.K.Robertson, A Fiddlemaker's Worksheets, £6.95.

Both are published by Argus Books, and they seemed so much in our line that I asked what else they published on instruments. There are two others, Gildas Jaffrenou, Folk Harps, which appeared in 1973 and thus before we existed to review it, and Bruce Graham, Music and the Synthesiser, which isn't really in our line.

Carl Willetts wrote: "I notice that you have another book due out shortly, "World of Ethnic Mus.I", ...." A sad story. The publishers ratted on it. It was supposed to be the last book in the David & Charles series (3 books on 500 years of European history; 1 on 20,000 years of the rest of the world, including Europe, but that's how things go; I had asked them to split Ethnic from Antique, but they weren't having any). The trouble was that there was a deadline and, what with moving house and doing a 9-5 job for the first time in my life, I was 10 months late. Most people say 'What, only ten months?' but there was a contract and they were entitled to cancel, and so they did. As a result, if a nyone else is expecting it, it won't be out 'shortly'. There is another publisher looking at it, but since it will no longer be part of a series, it will have to be rewritten from top to bottom, so even if they take it, it'll be some time before it appears.

They did this with the small books that I've been trying to write for years (mainly for the people who write to me saying in effect, Dear Sir, will you please write my thesis; asking me to tell them everything I know about whatever instrument they are working on). David & Charles got as far as announcing the first three or four, and I'd written two of them, when they changed their minds and cancelled. A pity because they'd be useful books to sell in the museum here (and in other museums I think); they were going to be small, about 50 pp. and cheap (under £4) and well illustrated, and each cover one instrument on a world basis, but mainly, of course, European; at least an attempt to avoid the suggestion that flutes or fiddles or whatever else only existed in our culture, which is very necessary now that we have members of so many other cultures living among us.

So now you know why various books you may have heard of coming never forthcame.
Eph. Segerman’s ingenious Comm. 456 probably raises rather more questions than it would seem to answer. Much of the weight of his argument rests on Doni’s (1640) comparisons of Organ pitch in various parts of Italy. The difficulty is clear: how much credence can be attached to Doni’s observations and, in particular, how are they related to the pitching of contemporary Lutes?

As a brief aside, may I here introduce yet another candidate for a catch-all name to cover Lute-type instruments with two or more pegheads and nuts: Spencer (Comm. 337) calls them ‘extended Lutes’, which, as Segerman points out, could refer to many features of a Lute; Segerman (Comm. 339) prefers ‘two-necked Lutes’, which is just as misleading since historically very few instruments actually had two necks. I would now suggest ‘extended peghead Lutes’, and propose to use the term here.

Assuming the best, that is Doni employed some accurate measuring device when taking his observations, the problem still remains of whether his sample was quite representative and how well it reflected the various pitches found within each area. In his interesting and thoughtful Comm. 442, Eph. discusses some early observations of pitch variation (Quauntz and Agricola disagree about Venetian pitch). However, whilst accepting the possibility of localised variations, he does not appear to allow their existence and prefers to assume that some observers (e.g. Agricola) were wrong and that some were right (e.g. Doni). Until relatively modern times, the same area could contain different pitch standards: for Opera, Church music, Chamber music etc., and from the available evidence it would be hard to imagine that 17th C. Italy was an exception. Indeed, whilst there was no doubt, variation of some specialised pitches over the country as a whole, the relative variation within each area may well have been even greater. So that, for example, music with the ‘Liuto’ could have been played on the same size of instrument at the same pitch in Venice (where it might have been at a locally low pitch) as in Naples (where it might be high).

Various strands of evidence combine to suggest rather more standardised Archlute sizes and pitches, than is allowed in Comm. 456. These strands are explored in the following sections.

The transposing Archlute

An important piece of data, overlooked in Comm. 456, is to be found in Neli’s ‘Intavolatura di Liuto attiorbato. Libro Quarto’, Venice 1616. At the end of the book is ‘un Balletto concertato con nove Instromenti’. The music is scored for:

- Violin
- Flute
- Bass Violin and double Harp (both playing the bass line)
- Harpsichord (essentially a short score)
- Theorboed Cittern (7 course used: A B c d f b g d’ e’)
- Lute in G (10 course used)
Lute in F (10 course used)
Lute in C (10 course used).

Of course, no absolute pitch is given as such but, comparing the tablature of the plucked fretted instruments with the staff notation employed by the others, the nominal pitches of the Lutes and Cittern may be deduced.

Although Lutes a tone apart are commonly thought of as being pitched in a nominal A and G, it is clear that Nelli encountered some difficulty introducing such instruments into his band and had to treat them as transposing instruments (in a nominal G and E); thereby solving the problem of pitch differential within the band without recourse to much smaller Lutes, which presumably were non-existent or at least very scarce.

The idea of transposing instruments is, of course, hardly revolutionary except, perhaps, for Lutes. However, to consider Archlutes as possible transposing instruments, where necessary (e.g., when playing with fixed pitch instruments), certainly solves many problems associated with pitch differentials. In my view, it even enables us to make some sort of sense of Talbot's (c. 1700) remarks about the unsuitability of Archlutes in ensemble: 'Pr. single Theorbo... fitter for Thorough bass than Arch lute, its trebles being neither below the voice nor instruments in consort, as Arch lute' (Spencer's query in Early Music, 1976 page 414). One possible interpretation is that the Theorbo could be taken up to consort pitch without its highest pitched string (3rd course) breaking, whereas the Archlute could not. Talbot would not mean that the highest pitched string of the Archlute (1st course) was lower than that of the Theorbo, but that the highest pitch its trebles would go still left the instrument below consort pitch. To use an Archlute in such a consort would therefore require it to be treated as a transposing instrument and thus less 'fitter'.

Big/bass Lutes versus 'bass Archlute'

Although Epp supposes that Banchieri's (1609) 'liuto grosso' was not an archlute but an ordinary bass Lute, he assumes that Piccinini's 'liuto grande' was, in fact, a 'bass Archlute'. However, since Piccinini only requires 7 course on his 'liuto grande', it is difficult to see the necessity for assuming any instrument other than an ordinary bass Lute with a single nut and peghead. Nevertheless, on this evidence is based the existence of the 'bass Archlute'. Neither is there any pressing reason to suppose that Nelli's 10 course bass Lute was anything more than an ordinary big Lute with a few extra basses added, as was then the fashion. Rather surprisingly, for it might have been expected that all bass Lutes would have been converted to Theorboes to keep them in service, a few such instruments with extra basses have even survived.

The need for an instrument such as a 'bass Archlute' is also really quite difficult to appreciate, since a Theorbo could cover approximately the same range (minus a few ridiculously low notes and a tone or so in the highest register). If the concept of such instruments were accepted, it is hard to see where the process of substitution would stop; the
largest of Theorboes could conceivably be thought of as a double bassVenetian Archlute!

In short, the circumstantial evidence surrounding 'bass Archlutes' is insufficient to support the view that such instruments actually existed. The weight of the argument must still favour considering Italian extended peghead Lutes, with a fingered string length in excess of about 70cm (see later), as Theorboes.

Size variation of other contemporary instruments

Whilst other 17th C. Italian instruments (e.g. Violins and Harpsichords) do show some variation in size, this is nothing like as large as would obtain were Comm. 456's procedures applied. Indeed, to take Violins, it is astonishing how uniform sizes were; not only in Italy, but throughout Europe (Comm. 442 puts the range of sizes around 10). This surely reflects a degree of consensus amongst the instrument makers, which was accepted by players. Certainly, odd sizes of these instruments were made, but these seem to be in response to conscious wishes to develop and change the instrument itself (e.g. Violino piccolo), rather than being due to the vagaries of pitch variation. I would prefer to believe (along with Comm. 442) that makers generally made instruments in a limited number of sizes.

With the high status enjoyed by Italian makers throughout the 17th C., it is hard to accept that they admitted the whims of their customers for tiny variations in instrument sizes. If the Paduan Lute makers could brush aside the wishes of a wealthy nobleman (Piccinini's letter to Duc Alfonso d'Este, 31st February 1595), it would be strange were they to cater to the precise requirements of lesser mortals.

In the more immediately relevant area of Theorboes, if local pitch really was precisely standardised and ruled instrument sizes quite so rigidly, as is suggested, then the largest Venetian Theorbo would not exceed 33cm fingered string length. This is not confirmed by the N. Tieffenbrucker (Venice 1601) with a length of 93cm.

Sizes of extant double Archlutes

The implication of Comm. 456 is that almost any extended peghead Lute, with single basses more than 1½ x the length of the fingered strings, could well be an Archlute. Such a wide definition might be thought to preclude the possibility of arriving at any conclusions whatsoever about the size differences between Theorboes and Archlutes.

Fortunately, there is one group of extended peghead Lutes, which exhibit features allowing them to be considered separately from the general mass of Italian instruments. These are what Spencer (Comm. 337) calls 'Solo archlutes' (Liuto attiorbato, Arciliuto, Liuto, etc.), but which I, following Talbot's example, would prefer to call 'double Archlutes' (i.e. Archlutes with double strings for the bass courses). As with most types of Lute, few examples of double Archlutes have survived intact and those that have must be treated with some degree of scepticism. However, the distinctly squat shape of many seems to discouraged
most later makers from carrying out alterations. Indeed, one such instrument, which was converted, seems to make the point rather well: it resulted in one of the most bizarre 13 course baroque Lutes (an instrument by Hoch/Coch of Venice converted by Widhalm in 1757).

The parameters used to distinguish double Archlutes are:
- Extended peghead Lutes with doubled basses and no obvious alteration;
- Labelled instruments by Italianate makers;
- No instrument before 1600 (the first Archlute, a failure, was made around 1595, Piccinini 1623);
- No instrument after 1670 (about a generation after the last printed music for 'liuto' and a decade after the latest manuscript);
- No instrument with less than 8 possible fret spaces on the neck (in fact Archlutes generally seemed to have at least 9 and up to 11);
- Fingered string length not to exceed 70cm (no 'bass Archlutes').

The resulting, rather small, list is given below and represents only those instruments, on which I have collected data. **No doubt other**, relatively unscathed and genuine, double Archlutes exist and I would welcome any additions and/or alterations.

<table>
<thead>
<tr>
<th>Maker</th>
<th>Place</th>
<th>Date</th>
<th>Number of course</th>
<th>Length of open strings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marton</td>
<td>Padua</td>
<td>c.1600</td>
<td>7? 4? 11?</td>
<td>64 91</td>
</tr>
<tr>
<td>Nest/Marton</td>
<td>Fassan/Padua</td>
<td>1617</td>
<td>7 7 14</td>
<td>65 92</td>
</tr>
<tr>
<td>Sellas</td>
<td>Venice</td>
<td>1637</td>
<td>7 7 14</td>
<td>65\frac{4}{3}(64\frac{4}{3}) 92</td>
</tr>
<tr>
<td>&quot;</td>
<td></td>
<td>1633\frac{3}{4}</td>
<td>7 7 14</td>
<td>58\frac{1}{3}(58) 84\frac{1}{3}(84)</td>
</tr>
<tr>
<td>&quot;</td>
<td></td>
<td>1640</td>
<td>7 6/7 13/14</td>
<td>64\frac{1}{3} 94</td>
</tr>
<tr>
<td>Mailich/Sellas</td>
<td></td>
<td>1639</td>
<td>7 7 14</td>
<td>57 83</td>
</tr>
<tr>
<td>Coch</td>
<td></td>
<td>c.1640</td>
<td>7 6/7 13/14</td>
<td>57 84</td>
</tr>
<tr>
<td>Basiano</td>
<td>Rome</td>
<td>1666</td>
<td>7 6 13</td>
<td>64 93</td>
</tr>
</tbody>
</table>

* rather doubtful, but possibly early models.
** original bridge position about 1cm higher, on treble side only.
*** original bridge position about \(1/2\)cm higher.

Three main points emerge from analysing the string lengths:
- The fingered string lengths lie within \(7\%\) of a median 61cm. The wide variation in string lengths of \(41\%\), as suggested in Comm. 456, is not evident;
- Double Archlutes tend to fall into two fairly distinct sizes, grouped around 57/58cm and 64/65cm, conveniently a tone apart as indicated in early sources. The fine instruments by Venetian makers (significantly larger than the Venetian Archlutes calculated in the earlier Comm.) are particularly representative examples and have, understandably, been much copied;
- The ratio of bass string length to fingered string length is \(1.44\pm0.03\) (a mere \(2\%\) variation around the median), surely indicating some uniformity in the design of Archlutes.

**Sizes of single Archlutes**

Here we really do enter into the realms of fantasy, for probably no other type of Lute has been the subject of so much inventive attention:
ranging from genuine conversions of quite early instruments to meet changing musical fashions, through to a lot of downright fakes.

The fingered string length of Italian extended peghead lutes with single basses can extend from about 45 cm (probably Theorboes as Spencer suggests) to almost 100 cm. Although, excluding the most highly dubious instruments, some clustering of sizes is just apparent around 66, 74 and 89 cm, it must be said quite frankly that no very definite pattern emerges from such a general survey.

Were this the sole evidence available, it would indeed be difficult to arrive at any findings about the sizes of Italian single archlutes. Fortunately, there are other pointers, which indicate rather more specific conclusions:

- Early writers give a little evidence on size (Prætorius 1619: c. 70 cm; Talbot c. 1700: 65.5 cm);
- The larger double Archlutes with a fingered string length around 64 cm must surely be related in some way to single archlutes in a nominal G;
- A few, genuinely unaltered specimens, exist which cannot really be considered as Theorboes; generally with string lengths 67/68 cm, (e.g. Harzi Dome 1665, with original case, string length 67 cm);
- The nominal pitch of the highest course is given by early writers as g' (Prætorius 1619, Talbot c. 1700, Sauveur 1701, Mersenne 1637 gives a', but that is a small (?) double Archlute). In Venice, perhaps the place with the highest pitches, the shortest string length (on Netti's indication) would be about 56 cm; even transposing a minor third down, the maximum string length would be around 69 cm. In areas where much lower pitch standards might be conceivable, there would be no need to transpose at all.
- The open string range of Theorboes is about 2 octaves and that of Archlutes about 3. Since the highest pitched course of Lutes was generally pitched pretty close to breaking, then the length of Archlute basses relative to their fingered strings would need to be greater than for Theorboes to achieve a good tone (excluding double archlutes, where octave doubling of the basses improved the quality of the lowest notes). If, therefore, those instruments with a bass/fingered string length ratio over 2.0 (Archlutes) are separated from the rest (Theorboes), an interesting feature emerges: most instruments with the larger ratio have a fingered string length of 66.4 cm, whereas the remainder (excluding doubles) are almost all significantly larger instruments. The smaller instruments (Archlutes) have a bass/fingered ratio of 2.2±0.2 and the larger (Theorboes) a ratio of 1.7±0.2.

Although the above is by no means conclusive, the balance of proof points to a typical single Archlute as having a fingered string length of 67±3 cm, with a bass/fingered ratio of 2.2±0.2. Instruments with string lengths outside this range and with a smaller ratio should still seriously be considered as Theorboes (octave, lesser or greater).
Some Italian Archlute and Theorbo pitches

Naturally, the comments on pitch by Doni et al. and the views expressed in Comm. 456 should be taken into account but, as mentioned earlier, there are serious reservations to a general application of these observations, particularly to Lute and Chamber music. In fact, yet another point has just occurred to me: even were Doni's measurements accurate, the common practice of Organ transposition may rather blur the relationship between Organ and other pitches. There are, therefore, some major problems in trying to impose a totally rigid pitch framework. Whilst by no means denying all of the conclusions in Comm. 442, the sizes of Archlutes indicated here may perhaps alter some of those conceptions about Italian pitches.

As Eph points out, the Roman Theorhoes of string lengths c.89 and 99cm by Buechenberg are likely to have been made for a tuning a tone apart in a nominal Roman A and G pitch. Instruments of this size can be taken up to a tone below modern pitch or at least a tone below. Since such instruments are known to have been used in the Church and Opera House, it is not unreasonable to suppose that Theorbo (and Organ?) pitch at Rome was about (or 1) tone below modern.

Now, a Lute with a string length of 64cm can reach f' at modern pitch, which is identical to the tuning required by Melli's middling Lute. Thus, Venetian bands of this type possibly played at around modern pitch. Since such a pitch is also suitable for a Theorbo in G of string length 93½cm (H. Tieffenbrucker, Venice 1608), it is also likely that Venetian Theorhoes commonly played at around modern pitch (or at the most a ½ tone below). Clearly the conclusion is that at least one accepted pitch variation between Rome and Venice was only about a tone; rather less than the 1½ tones indicated by Doni for Organs and generally advocated in Comm. 442.

This ½ tone pitch difference between Rome and Venice (possibly a bit more elsewhere) would have allowed a Lute with a string length of around 64cm to have been played closer to its nominal pitch in Rome or, and in my opinion, more likely allowed the use of slightly larger transposing Archlutes (i.e. most single Archlutes, which are conveniently about ½ tone larger). Provided the actual pitch was not too far off nominal, the larger size of single Archlute would be favoured for continuo since the bigger body cavity and soundboard area would favour the important bass register.

In short, considering the fairly small difference in Lute pitch throughout Italy (probably at most a tone) together with the transposing capabilities of the Archlute, it is evident that roughly similar sized instruments could have been employed throughout 17th C. Italy.

Conclusions

It is appreciated that some of the forgoing is rather less than overwhelmingly conclusive. Nevertheless, by balancing the weight of evidence, I believe that some judgement may be made about the sizes and pitches of Italian Archlutes:

- 3½-4½ 17th C. double Archlutes probably represent a reasonable
sample of early instruments and appear to come in two main sizes about a tone apart (c.57½ and 64½cm with basses c. 1.4 longer). They were probably pitched as high as possible (g' and f' at modern pitch) and could be used as transposing instruments where different pitch standards prevailed:

- Single Archlutes often seem to have been a little larger (c.67cm fingered string length) and to have relatively longer basses (c. 2.2 longer than fingered). They were pitched as high as possible (say, around e' at modern pitch) in a nominal G tuning, but would frequently have to be considered as transposing instruments to accommodate the voice and fixed pitch instruments;

- Extended peghead Lutes with single basses, fingered strings longer than about 70cm and with a bass/fingered ratio between 1.5 and 1.9 should probably be considered as Theorhoes;

- The regional pitch variation within Italy may not have been as large as that indicated by Doni for Organ pitches;

- There are very few grounds for favouring the idea of an enormous range of Archlute and Theorbo sizes. There is no reason to suppose the existence of a 'bass Archlute';

Finally, I would not wish to succumb to the failing of being too dogmatic, and would readily accept an error of about a semitone's worth in any of the preceding figures.

FoMRHI Comm. 465 The Meantone
Cary Karp

Although it can't be put to practical use on conventional fixed pitch instruments, there is a "just" tuning system in which all octaves, sixths, fifths, fourths, and thirds are pure (="beat-free"). This system contains two different sized whole tones. The sum of one large whole tone and one small whole tone is the pure major third. If this third is divided into two equally-sized whole tones, the new whole tone will be the mean value of the large and small whole tones -- the meantone.

As long as we are dealing with twelve note divisions of the octave, there is only one temperament in which all major thirds will be pure. This temperament will also be characterized by the meantone whole tone, and is termed meantone temperament. The fifth in meantone temperament is 1/4 (syntonic) comma narrower than a pure fifth, and meantone temperament could as easily be termed 1/4 comma temperament. The term meantone temperaments is, however, often used generically for other temperaments which are derived in basically the same manner as is meantone temperament, i.e. by using one half of the major third as a whole tone. Such systems are identified in terms of the comma fraction with which their fifths are tempered (= narrowed, in this case). Thus the strict meantone temperament may be called 1/4 comma meantone, with a variety of additional comma division meantone temperaments being at least some musical interest.
This is the subject of Comm 459. As explained there, any meantone tempera-
ment will have two different sizes of semitones; the diatonic and chromatic. 
Although the author of that Comm regards all temperaments with only two 
different sized semitones as meantone temperaments, many other authors use 
a somewhat narrower definition of the term. As long as the chromatic semi-
tone is smaller than the diatonic semitone the term meantone temperaments 
is used. When the two semitones are equal the term equal temperament is 
used. When the chromatic semitone is the larger the term Pythagorean tem-
peraments is used. The collective name otherwise used to cover all these 
types of temperament is "regular" temperaments. One way of avoiding termi-
nological confusion is simply to refer to temperaments in terms of their 
comma fraction basis, where the comma is taken to mean the syntonic comma 
unless otherwise stated. Thus, meantone = 1/4 comma; equal = 1/11 comma; 
Pythagorean = 0 comma; etc.

It is generally regarded as musically desirable for major thirds to be 
widened if tempered, and for fifths to be narrowed if tempered. If this view 
is justified, the range of temperaments worth considering will be between 
1/4 comma meantone and 0 comma Pythagorean. In Comm 459, however, the 1/3 
comma temperament (characterized by pure minor thirds) is recommended as 
being of use for some Baroque music, whereas the 1/4 comma temperament is 
recommended for much of the other music of the same period. The former 
system is suggested as being suitable when the minor third is more impor-
tant than either the major third or the fifth. Does this situation ever 
really arise? Baroque harmonic practice is pretty consistent in its use of 
the major dominant and major final tonic triads even in the most solidly 
minor tonality. Also, both major and minor triads consist of one fifth, 
one major third, and one minor third. The 1/4 comma system contains the 
pure major third, with both the fifth and minor third 5 cents narrower 
than pure. The 1/3 comma system has the minor third pure, but sets both 
the fifth and major third 7 cents too narrow. (Equal temperament has the 
fifth 2 cents narrow, the major third 14 cents wide, and the minor third 
16 cents narrow.) It would therefore seem highly unlikely that anyone 
using 1/4 comma as a mainstay temperament would find any advantage in 
occasionally switching to 1/3 comma. Nor is it likely that 1/3 comma 
could under any circumstances be a mainstay, itself.

Anyone unconvinced by numbers may wish to experiment directly with the 
very easily set 1/3 comma temperament:
Tune A-C as a pure minor third.
Transfer the C down one octave and the A up one octave. 
Tune G a pure fifth above C, and D a pure fifth above G. 
The fifth D-A will be 1 comma too narrow. Divide this comma into three 
parts by lowering both the D and the G, juggling them about until each of 
the fifths sounds "the same". The D must be lowered twice as much as the G 
for each fifth to be 1/3 comma narrow. The beat rate of each successive 
fifth will, of course, be faster than the one below it.
Having done this, tune the remainder of the scale as pure minor thirds 
from the C-D-G-A: E<C, D>F, B<D, C<E, C>Eb, F#<A, F>A#, G>Bb.

Can anyone refer me to any music for which this temperament actually sounds 
appropriate?
Some notes on cittern fingerboards and stringing

This is an attempt to summarise some present knowledge of cittern fretting and tuning as evidenced by data from 25 instruments together with one representation (Eglantine table, Hardwick Hall) and the Talbot ms. The amount of data available for each instrument varied considerably. Future research may well cause modifications.

Fret wedges

Citterns built before about 1650 have fingerboards which are scalloped between frets. The actual shape of the scallop varies considerably.

 bridge

Notice that (1) allows freedom to adjust the tuning by finger pressure; (2) ensures a clean cut-off; (3), found from the end of the 16th c. onwards, has the same effect as modern fret-wire. The total depth of the fret and scallop varies considerably - between 0.5 and 1.5mm. Frets are almost always of brass; Talbot's mention of 'four of copper, remainder of brass' is perhaps due to a repair. Certainly it does not occur on any of the admittedly franco-flemish and Italian citterns that I have seen. They often take the form of a folded strip, U or V; in one instance UU but this may be a repair. The folded strip does not experimentally seem to have any value as a spring which could aid the wedges. Perhaps hammering it out work-hardened the metal, or perhaps this thickness was conveniently available.

Although many wedges are no longer parallel-sided (evidence that they have indeed been subject to removal and replacement), I have found no cittern where they are intentionally angled as seen from above. (But see note below). The wedge shape viewed from the side seems intended merely to prevent them becoming loose. They are often inserted into blind slots. Occasionally the fingerboard has an edge-strip on the bass, or on both sides, covering their ends.

The main reason for their existence seems to be to reduce wear on the fingerboard by placing the grain of the wood immediately adjacent to the fret at right angles to the strings. They are usually of ebony or another dense hardwood. However on chromatically fretted citterns they seem to have had an additional purpose.

Of the eleven chromatic citterns examined, 6 have light and dark wedges arranged in a diatonic pattern - the light coloured were placed behind the 1st, and what would be missing or partial frets on a diatonic cittern. Two I cannot be certain about - the Ashmolean 'Strad' has been refretted, the woods of the Armada cittern fingerboard have not yet been identified. The remaining three are all late - from towards 1700 - and lack both scallops and wedges. In addition, the Eglantine table representation shows alternating (perhaps artistic license) light and dark inlay, and Talbot refers to "natural notes distinguished by colour of fret".

Unless the Paris 'Strad' is in fact by Stradivari (the label is agreed to be authentic and the carving seems to be similar to that on a harp for which a pattern exists), the most recent instrument to show patterning is the bell-cittern by Tielke in the Royal College of Music, dated 1676. According to Hellwig this is his earliest extant instrument of this type, his later citrhrinchen have neither scallops nor wedges. Possibly it had originally a cittern tuning. Its short string length (34cm) makes
similar in size to Praetorius' 'small English cittern'. The bell shape could be standard or experimental in Hamburg at this period, or a stage in the development of the cithrinchen. A cittern of guitar form and a similar string length and probable date is in the Dean Castle collection.

Further evidence that this inlay pattern was usual for chromatic citterns comes from Robinson, whose first exercise deals with left-hand positions. In all runs the left forefinger is positioned behind what would be a dark fret. In addition, 'first position' seems to be with the forefinger behind the 2nd fret.

One immediate practical application is the much greater freedom with which a player can find his way around the fingerboard. A second is the possibility of playing some of the music written for partially-fretted diatonic citterns on a chromatic instrument.

Fret positions. By placing a tracing of an original fingerboard over a chart of equal temperament divisions such as that published by N.R.I., it is easy to check visually the deviation from equal temperament of each fret. The 12th fret should of course coincide exactly (at 1200 cents). The 5th and 7th at perhaps 502 and 698 cents nearly so. The nut position is ignored because it is dependant on the height of the frets (or depth of the scallops). So far I have been able to do this for sixteen citterns and two orpharions. In no case has a temperament suggested itself exactly. However, in all cases there has been an approximation to a mean-tone fretting of around 1/5 comma, where the fifth equals 698 cents. Possible reasons for non-exactitude could be a) The particular repertoire for which the cittern was built - some fret positions being governed by chord shapes used more frequently than others. b) Bad workmanship, especially in the upper frets which would perhaps have been less often used by mediocre players or in consort (the Morlaye Lessons cittern player's part seems very easy compared with the other instruments). Or the idiosyncracy of a particular builder who preferred the sound that certain fret positions gave. We should not really expect adherence to a list of numbers at this period. Instructions for fretting lutes demonstrate this. Almost certainly the fret positions would have been copied off a marked rule, and this rule would have been evolved by rule-of-thumb. Eph. Segerman's analysis of the Campi cittern fretting (Comm.124) would seem to demonstrate the use (and misuse) of a rule in this way.

Ultimately fret positions depend upon the note required and for this it is necessary to look at the tablature. We might expect that there would be considerable variation. However this does not generally seem to be the case. With one exception (the Plebanus cittern of 1536 in Paris) all the citterns examined had a nominal E top course giving a particular pattern of wide and narrow spaces between frets, and the tablatures that I have examined in detail seem to have been written for this fret pattern by avoiding the use of enharmonic notes (using one position for both c# and d♭ for example) in chord shapes, although they occasionally occur in runs, where the shortness of the sound and lack of a referant note can be expected to deceive the ear.

The following diagram shows the notes available on a four course cittern tuned in the Italian manner, as used in the bulk of the English repertoire.
for a diatonic instrument tuned in the French manner, the notes available on the fourth course are:

This range of notes seems also to be that available on the Campi cittern (probably hexachord tuning, see Comm. 124) and that required for the Paolo Virchi tablature and extant on Girolamo Virchi’s cittern.

Three methods of setting fret positions are available to the modern maker in the absence of contemporary instructions.

Firstly, by ear. This presumes both a good ear and an awareness of the nuances intended by Renaissance harmony, together with a knowledge of the intended repertoire.

Secondly, by copying an existing fingerboard. Unfortunately because of the lack of English citterns, scarcity of others, and possible repairs or inaccuracies on extant instruments, this is not necessarily a perfect solution.

Thirdly, by calculation. Ephraim Segerman’s Comm. 88 has helped myself and others considerably here. I would however suggest some modifications to his figures for the cittern. These arise because of the tablature’s tendency to use the useful frets only. Hence no 'averaged' frets need occur in cf. Holborne, and other music from the English school. The sixth fret in particular is used for the important G chord, but very little elsewhere. The only fret where averaging might occur is the eleventh.

Using Comm. 88 the recommended figures for calculating fret positions on an Italian-tuned instrument for the English repertoire are as follows. They are given for both 1 2 comma, where the fifth is 698 cents and for the 'Gerle tuning’ suggested by Eugen M. Dombois.

<table>
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For the eleventh fret, an 'averaged' value of 1102 cents is a possibility as it would approximate more closely to a potentially useful C# on the second course, and can easily be 'pulled' to a sharper pitch on the first when required. It may well be that the ability to push or pull notes into tune was as necessary for the cittern as for Renaissance woodwind.

These figures also suit the Italian hexachord and Virchi tunings. They also seem very close indeed, using M. Dombois’ list, to the fret positions on the only extant Franco-Flemish four course instrument, in Brussels. (Obviously it is not possible to easily see a ½ cent difference in the position of one fret, however it is possible to see by comparison, as suggested above, that the fret positions are slightly closer to equal temperament than 1/2 comma meantone would be.)

Pegs and stringing. Cittern pegs need to have wider heads than lutes, in order to make small tuning movements easier.
One at least seems to have original T-shaped pegs similar to those on some Persian and Indian folk instruments. Many have a clover-leaf or banana shape. 

It would seem that each pair of a course was a single string. On built-up citterns they go around a bone or metal pin at the lower end of the belly. On carved citterns with a comb, each string seems to have passed between two teeth, around a horizontal wood or metal rod, and returned through the adjacent slot. The ceterone in Florence (as seen in photographs kindly made available by Stephen Gottlieb) has what is perhaps its original rod. Its presence can be deduced on other instruments by the frequent lack of expected wear behind the teeth of the comb. In practice, friction makes a doubled string no more difficult to tune; the potential hazard of cuts to the player's wrist is also reduced.

Many of the citterns with a peg-head do not have holes in the pegs. A clover-leaf or T-shaped head makes string attachment easy.

Notes
1. On later instruments, towards the last quarter of the 17th c., fret-wedges and scallops seem to disappear at about the same time. Perhaps both were a survival from an earlier instrument.
2. The cittern tablature in Morlaye's fourth book for guitar of 1553 is for a diatonic cittern without a first fret.
5. An analysis of the Fretting of the Campi cittern at the Royal College of Music in London. Eph Segerman, 1978. I would disagree in some ways with Eph's analysis and suggest that the original tuning was in a nominal E, with all brass stringing.

Additional Bibliography
1. Peter S. Forrester, Citters and their Fingerboard, The Lute, volume XXIII, part 1, 1983. This contains some suggestions for original instruments to fit particular repertoires.

A possible query about wedges. They could present a parallel-sided upper surface and still act as wedges if the base of the slot was inclined. I have so far seen no evidence of this. It would be necessary to find one easily removable, or, on an instrument where they pass completely through the fingerboard, to notice that they appear deeper on one side than on the other.

Fret diagram for the colour-coded cittern

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On Restoration

The argument about including the word 'restorers' in the name is important because it signals our attempt to formulate a new morality regarding antique instruments. An outright ban on all restoration would be as absurd, and perhaps as harmful, as our former passion to restore everything to working order, even forbidding the repair of instruments that have been continually in use (organs, violins, fortepianos). It would condemn a fine old instruments to stand mute if a string should break, a hammershank break. I think of an Hemsch in Paris that we must rejoice in, even though it has a new bentside, and a Taskin with very many repairs to its soundboard that nevertheless speaks with authentic glory.

On the other hand, one thinks of Franciolini-style pastiches that are still be perpetrated, of floating double-bentsides ripped out in favor of more 'sensible' construction, of seventeenth-century barring on old soundboards being changed to what was imperfectly understood about eighteenth-century barring, resulting in the destruction of the instrument for any scholarly or musical use. One thinks of extensive repairs and even reconstruction of old instruments without the keeping of photographic and written records. The decision whether to restore or to conserve (and some 'conservation' methods have been as destructive as as restoration), was, until a short time ago (in some quarters at least) automatic: Restore to playing condition if possible. An equally automatic ban on all restoration would be foolish.

I can defend the decision by one of our most important collections here to replace the wrestplank in one of the earliest Bösendorfer pianos so it could be made to play again and its timbre contrasted with a new instrument. The work was done by a very able craftsman, using materials similar to the original and preserving all the original parts, either restoring them to the structure or keeping them for future reference. Considerations entering into the decision: age of the instrument, existence of other instruments like it, either restored or merely conserved, the skill of the craftsman, usefulness of the restored instrument, effect of restoration of part of the instrument on the rest of the structure, what could be learned of the art of instrument making of that time, etc., etc. A 'cost-benefit analysis', in other words.

Contrast this decision, taken responsibly, and with reverence, with the decision by the previous administration of the same institution which allowed restoration of a magnificent Hass harpsichord using a plywood bottom which subjects the instrument to strains that have parted previously sound glue joints in several places inside the case. (There was a time over here when instrument makers felt sorry for the old builders who did not have such marvellous modern stuff as plywood.)

If we do less restoration in the future, and more conservation, still there will be no exact dividing line between the two functions, and perhaps we should have some kind of guidelines, or set of principles, that FoMHRI fellows (and others) can agree upon. I'm sure I could not formulate such a credo to satisfy the Fellows, but I suggest the following:

1. We should first of all pledge that we will do no harm--to the function of the instrument (if it is still playing), or to those who will come after us seeking information from the instrument.

Most of the harm that has come to old instruments from the hands of restorers and conservers has resulted from a profound lack of respect for the men
who made them, for the technology they used. Until very recently in this century, we have believed that 'what comes later is necessarily better', an attitude summed up in a recent public television show where the musicians who had just played Schubert's Trout Quintet nattered about what a shame it was that the composer could never have heard his great music played on modern steel-strung, long-necked fiddles and the magnificent modern piano. The same point of view is at work when wrestplanks are drilled out to accept those marvellous modern zither pins, when the 'crude' antique actions are replaced with modern bushed keyboards and tight-fitting plastic jacks, etc., etc. When plank wood is replaced with plywood (which is unstable in two directions, and so defeats the careful balance achieved by the old builders).

Yet even here one cannot forbid all change. Assuming that an instrument is a legitimate candidate for reverent restoration, obvious failures due to mistakes of the original builder need not be perpetuated. Such problems arise in restoration of old pianos, the structure of which was in transition for a hundred years. If we replace a Nanette Streicher wrestplank, must we incorporate the mistake that caused the failure in the first place?

And I think we may have some modern chemicals or other means of preservation that will arrest further damage to instruments in our care.

2. No member of FoMRHI would participate in an assemblage of several antique instruments into one. Yet the practice does go on, and private collectors (and also some museums) continue to acquire such 'restorations'—sometimes nowadays artfully left in 'unrestored' (i.e. non-playing) condition. Surely, if a part must be replaced, it should be a new part, and recorded as such.

There is a magnificent set of French eighteenth-century tapestried furniture in the Frick Collection in New York, with a leg here and an arm there most carefully made to match the original carving, gesso, painting and gilding. To the connoisseur's eye these are identifiable at a glance, but a truer impression of the ensemble is presented by the pieces as restored than would be the case if the missing arm and leg were called to attention. No fakery is involved here, I think.

But fakery to induce a purchase, or assemblage of old cut disparate parts in any form, is reprehensible, and play the very hob with scholarship.

3. We should agree, I think, not to invent what we do not understand, not to invent 'how it must have been' without evidence and thorough understanding of the methods and techniques of the historical period involved. And here a little learning is as dangerous as it is elsewhere. One thinks of a piano of 1830 in which the action was completely changed to let off like an action by Andreas Stein. One must pity the builder of 'historical instruments' who happens upon such an anachronism. Sometimes I think we should all be forbidden to touch any old instrument.

I think I have gone on far enough to give the idea—a set of groundrules like the Hippocratic Oath for Restorers and Keepers, which should be publicised and accepted by all honest men.

'Restoration'has a bad odour, not entirely undeserved. The problem is not the name (any repair is in a sense restoration), but the morality of (some) restorers. Let's change the practice and give honour to the name.
Lost Traditions — or are they?

Jeremy Montagu

We had Len Stanners staying with us for a few days on his recent world tour. While he was here, we went over to visit Robert Longstaff, and next morning we were talking about the instruments we'd seen there. There were a couple of rebec bodies which Robert was carving out in the traditional manner and a pair of nakers, the first that Robert had made and an experimental pair. One of the things Len said was that a major problem in making such instruments, and in making viols as well, was that there was a gap in the tradition, so that in some respects we were starting from scratch, and dealing with a lost tradition. The resulting conversation interested us both to the extent that it seemed worth setting the gist of it down. Len said that it had given him some new ideas to think about and that perhaps it would interest other members of FoMRHI as well — with luck it may spur some of you to respond with further ideas and suggestions.

My first point was that one must divide viol making, and perhaps also the making of other instruments, into two parts: design and details of construction, or rather of pattern, on the one hand, and the actual making, the putting together as well as the making of many of the parts, on the other. In many of our instruments, as HI makers, there is a gap, there is a lost tradition, in the first part, which is why we have to be R as well as M now that R stands for Researchers. But in a great many there is no gap, if we know where to look for the evidence and the practical help, in the second part.

Viols are easy; if you are trained in modern violin making, there is little difference in carving bellies and backs, bending ribs and glueing the lot together; pegs are pegs, fingerboards, necks, tail-pieces, bridges and so on are all made the same way. How much you carve, the shapes you make and so on, all belong to the first part. Nevertheless, it is worth emphasising that it isn't the whole art of viol making that has a lost tradition, but only part of it; the second part can be learned in the traditional way of learning any continuing skill, either through apprenticeship or tuition.

Nakers are also fairly easy. Any drum-maker knows how much to allow for a snare bed, how to recognise a good skin, how tight to knot a buff (these details are all covered in my book on Making Early Percussion Instruments, published by OUP). These are facts and control whether the instruments are going to work properly. Whether in fact you want snares, what nakers look like, what size they were, and so on, these are opinions (and some of them guesswork) and anybody's opinions or guesses are as good as mine if he's studied the source material.

The other instruments we were talking about need looking for further afield. Take the lute for example. Again there is a gap in the tradition in the first part, but a living tradition for the second. If you go to North Africa or the Middle East, they are still making the 'ud; similar instruments are still common in the Balkans and some of the Greek Islands. The necks are different; the peg-boxes are a different shape and so are the bridges, but they have never lost the tradition of making and shaping ribs and sticking them under a flat belly of piriform outline. What's more, they do it with a good deal less fuss than some of our lute makers do. We had a member who was working on this (professionally he was a Middle-Eastern archaeologist and
so had the opportunity to watch 'ud makers at work) and I hoped would write it up for us, but he never did. The tradition is there, however, for the picking up and could well make an interesting holiday for any lute maker.

Rebecs are more of a problem. There are plenty of surviving lutes so that at least we can see what the finished product looked like even if we can't watch Laux Maler at work, but so far as I know there aren't any rebecs surviving except for some late and rather swish instruments, veneered, inlaid and so on; obviously much further up-market than the things we see in Virdung and therefore rather dangerous as models. However, there is a Yugoslav instrument in the Horniman, identical in appearance with the early instruments; Michael Morrow acquired a Polish instrument ditto which Cat Mackintosh played as a treble rebec with Musica Reservata; rather different but basically similar instruments are still played in Greece and the Islands (the lyra) and Bulgaria (the gadulka), while the Yugoslav gusle often has a similar shape of body even though it only has one string. The instrument we used as a tenor rebec in Musica Reservata was a Sumatran gambus with the skin belly removed and wooden belly fitted. One of the things that Len and I were discussing was body-wall thickness. As near as we can judge my gambus, by prodding through the skin, it's about 1/8 inch at the edge. Laurence Picken (in his Folk Musical Instruments of Turkey, also OUP) cites saz bodies down to 2mm thick. The saz is different in shape; the back of the body comes to a pointed edge, rather than smoothly rounded, and the instrument is plucked rather than bowed, but they get it to that thickness with an adze. So there is plenty of skill available for picking up without going too far afield, and there are plenty of folk instruments lying round museums which give parallels for an instrument otherwise extinct.

Fiddles are even worse. Again there are no extant examples (the only instrument I can think off hand carved from the block is the Violeta of Santa Caterina (published by Marco Tiella in GSJ 28), and here I cannot think of any folk instruments with flat back and a waist. There is at least one unwaisted example, though: the Pontic or Turkish lira. Looking at my example, the side wall seems no more than 1/16 inch thick, if that. Unfortunately there is no hole in the bottom and the sound holes are too small to peer into, so that we couldn't see how thin the bottom was nor could we tell how neatly the corners where sides meet bottom were done. So if you want to see how to carve out a box body from the solid, whether for a fiddle or for a harp for that matter, a trip to Turkey could be the answer. What you won't learn, except by trial and error, is how to stop the wood splitting out when the grain runs across the incurring waist line. You'd have to look at Indian instruments for that and a) their backs aren't flat, which may make a difference, and b) their sides are rather thicker (perhaps that's why they are thicker); more important, their sides aren't vertical to the plan of the belly, and perhaps this helps. Looking at my Pontic lira, both Len and I thought that the belly, which is narrow and very sharply curved, is bent rather than shaped. We may be wrong (I'm certainly no expert in that area), but if we're right, this could also be an useful example for any one who has problems in doing that.

There must be many other examples than these, but we were talking after breakfast and I had to go and vote on my way in to the Bate and Len had to catch a bus to London, so that's where we stopped. Perhaps others of you could produce further living
traditions useful to us; if so, I hope that you will.
The point is not to recreate old technologies. Personally I'm in favour of going at it with an adze (see Tim Hobrough, Comm.375) but I haven't got my living to earn making instruments; a router is quicker and easier. The point is that there are people slinging lutes together to earn their bread and butter, and they do it more easily and more quickly than we do, so why not learn from them? Also that there are people making instruments today which we can't find surviving early examples of in our museums; allowing for some differences, we can pick up a good deal of evidence from them.

Traditions may be dead in our culture, but a number of them are alive and well not that far away. It could be worth the fare to go and have a look.

PS If you are interested in old technologies, Picken's Folk Musical Instruments of Turkey is full of information, for wind and drum makers as well as for strings of all sorts.

FoMRHI Comm. 469
PORTATIVES WITH RESERVOIRS?
by Geoff Bridges

"The trouble with portative organs is that they are so short of breath". "But surely the contemporary musicians must have felt the same way IF their portatives WERE short winded" . . . and so I got hooked on research into the problem.

Some while after that snatch of conversation I was in the National Gallery in London and came across the altar triptitch "The Coronation of the Virgin, with Adoring Angels" by the School of Orcagna - circa 1370 - which shows a portative blown from below and fitted with a second bellows or a reservoir on the back of the instrument. Later I discovered that Jeremy had commented that the angel's fingers would have got somewhat knotted negotiating the two bellows. The organ has 12 button keys and there is a 1 ft octave of wood pipes. To the side of them are nine wood pipes all about 2 ft, presumably a selection of drones: if so, the second bellows might well be a reservoir. Either way it indicates that a continuous air supply was envisaged.

I wanted to make a portative, as Groves Dictionary puts it . . . (that) could be carried and played simultaneously by one person . . . supported by a strap over the shoulder when standing, or on the knee when sitting, with the left hand operating the bellows and the right the keyboard". Bellows would have to be underneath for playing while standing so that the left hand as well as operating the bellows would steady the organ and hold it in position for playing. The sideways action of the bellows at the back would only be practical for playing when sitting or kneeling on one knee; the thigh holding the portative in place.

Hans Memling's 1479 and 1480 paintings suggest that there were two separate types of portatives at that time. One is depicted in "The Mystic Marriage of Saint Catherine" in the Hopitale de St Jean in Bruges in which the pipes face outwards, the two ranks being back to back and not encased. The bellows cannot be seen.
In "The Musicians' Angels" in the Koninklijk Museum in Antwerp the pipes are encased on three sides and the bellows is on the back. The angel seems to be standing on one leg with the right knee up supporting the organ.

I favoured the St Catherine portative type because being able to promenade and play offers scope for leading processions, waits, dances and so on, more characteristically lively and rumbustious typical of the period. Furthermore it is a greater challenge: if efficient bellows and reservoir could be fitted into the base of the one it would be easy to fit a reservoir only into the Virgin's Angel portative case. Some large organs at that time had reservoirs and by using only contemporary tools and knowhow it could be shown that there is no physical reason why they shouldn't have been so built and a good reason why they should: drones were popular then, and continuous supply of air offers more scope.

The two octave 2 ft portative I have made weighs under 20 lb. and is fitted with a crumhorn drone. With energetic blowing it can sustain a continuous four or five note chord for so long as one goes on pumping, which is far in excess of what would normally be asked of such an instrument. It looks exactly as in 13th-15th century paintings and carvings, but is not a copy of any particular instrument.

One of the problems that had to be overcome was that weights would have been unsatisfactory to supply pressure to the reservoir due to the bumping about while walking, dancing etc. intended. There were of course no steel springs available then, in fact no suitable metal spring and medieval skeins-of-hair springs proved convenient and efficient. (Nylon fishing line has been substituted for hair or sinews in my medieval spring). It is linked to an offset lever so that the wind pressure (2½ ins) remains very nearly constant; and I think with further research I will be able to get it absolutely so.

Apart from my own lack of expertise it has to be confessed that whether or not portatives had reservoirs is an area in which subjective opinion counts for much, and in which very little can be demonstrated with confidence; except that there is no physical reason why some portatives could not have been built with reservoirs, and it would seem desirable indeed if drones were used it would be a pre-requisite.

The design concept in making it is of a 14th-15th century craftsman wanting to make a useful portative, rather than basing the design solely on surviving historical or visual evidence (which by definition must be incomplete). There is nothing in the organ (except pallet springs and the nylon fishing line) that was not available or could be made at that time: the knowhow and materials were there and in use.
When playing a recorder nothing is so annoying as when the windway becomes blocked with moisture. This must be sucked out (unhygienic), blown out (very high squeaks to be heard) or knocked and shaken out (risk of damage and an interrupted performance).

There has been a tip circulating in the recorder playing fraternity for a number of years which I wish to impart. I do not know, but suspect, it originates from Edgar Hunt. I do know that it works.

When a drop of water is placed on a surface it can sit on it two ways:

If the surface is 'greasy':

If the surface is 'non-greasy':

The first will remain static as discrete droplets and will cause the problem in the windway. The second will flow together, coalescing to form a thin even film and will also flow away down the instrument. We must therefore find a way to change a naturally greasy or oily wood into a non-greasy surface. This is why it is important never to oil the windway of a recorder. In the case of a plastic recorder the problem is even worse.

The remedy lies in the use of chemical surfactants. If a film of a suitable surfactant is allowed to dry round the windway area it will reduce the 'greasiness' or what chemists call 'surface tension' of the surface, thus allowing water droplets to flow.

For plastic instruments use a high quality dish washing liquid. I use Proctor and Gamble's 'Fairy Liquid'. For wood use one that will not remove natural oils from the wood. I use Lever Brothers' 'Liquid Stergene'.

1. Dilute the commercial product 1 to 1 in a cup of cold water.
2. Immerse the mouthpiece in the liquid.
3. Remove and allow excess liquid to drain away.
4. Do not wipe dry except for the part that will enter the mouth. Gently blow out any liquid actually blocking the windway.
5. Allow to dry thoroughly for, say, 24 hours before playing. If you play too soon you will start blowing bubbles!
6. Repeat on plastic recorders every six months or so.
1985 FoMRHI List of Members - 1st Supplement as at 12th July 1985
* in left-hand margin denotes a change of address etc.

Gillian Alcock - see Terence McGee. (dulcmr, virgni, clavchd, hpschd; M, A).

Wilfred Allwood, Manor Wood, Watcombe Heights Road, Torquay, Devon
TQ1 4SG, UK; t: 0383-37646 (hpschd, clavchd, frtp; M).

AMLI Central Library for Music & Dance, 26 Bialik Street, POB 4882,
Tel-Aviv, Israel; t: Tel-Aviv 58106.

Peter Bevington, 7 Elmsdale Road, Walthamstowe, London E17 6PN, UK
(keybds; M).

T.J. Bosklopper, Wilhelminastraat 90, NL-9611 JX Sappemeer, Netherlands;
t: 05980-90709 (flemsh hpschd; M, P).

Brian A. Butler, 40 The Esplanade, Wagga Wagga, NSW 2650, Australia
(all instrs, M, R; Austral. woods).

David Fallows, 16 Brooks Road, Manchester 16, UK; t: 881 5071.

Craig Fischer, 2 Nichols St, Forestville, SA 5035, Australia; t:
03-2971187 (gart, mandolin, etc; M, R).

W.Terence McGee & Gillian Alcock, 25 Woodgate Street, Farrer, ACT
2607, Australia (flutes, M, P; Australian timber for flutes, res).

Robert Mavrinac, 2605 Parent, Windsor, Ontario, Canada N8X 4K3
(lute, bar/class gtar; M).

PG-image

John E. Sawyer, Dept of Music, University of British Columbia,
Vancouver, BC V6T 1W5, Canada.
D.B. Singleton, 57 Currie Hse, Abbott Rd, London E14, UK.  
Andrew J. Smith, Workshop, Music Dept, Coomhbhurst, Kingston Polytechnic,  
Gipsy Hill Centre, Kenry House, Kingston Hill, Kingston upon Thames  
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P. Ian Theakston, 72A Main Street, Burton Joyce, Notts NG14 5EH, UK;  
t: Burton Joyce 3714 (lute, bar/ren gtar, M; NRI Design librarian).  
John Thomson, Music Dept, Victoria University of Wellington, Private  
Bag, Wellington, New Zealand.  
Ronald W. H. Wick, Beukenlaan 4, NL-5581 HC Waalre, Netherlands; t:  
04904-6301 (bar/med ww; M, R).  
David Yelverton, 19 Queen's Road, Felixstowe, Suffolk IP11 7QT, UK;  
t: Felixstowe 283014 (gtar, lute; M).  

Museums:  
Barcelona: Museu de Musica (Romà Escalas)  
The Hague: Gemeente (Rob van Acht)  
Tel-Aviv: AMLI Central Library (Yaacov Snir)  

Woods: Brian Butler, Doug Eaton, Terence McGee  

Organological Index  
All Instrs: Brian Butler, Andrew Smith  
Dulcimers: Gillian Alcock  
Keyboard Decoration: Betty George  
Keyboards general: Peter Bavington, Joseph Rigby  
Piano etc: Wilfred Allwood  
Hugh George  
Francis Harlow  
Joseph Rigby  
Harpsichord etc: Gillian Alcock, h  
Hugh George, h  
Wilfred Allwood, h  
Tony Hemnant, hs  
T. J. Bosklopper, h  

Clavichord: Gillian Alcock Wilfred Allwood  
Lute: Paul Doyle, Robert Mavrinac, Ian Theakston, David Yelverton  
Guitar: Paul Doyle  
Craig Fischer  
Hugh George  
Ian Theakston  
Robert Mavrinac  
David Yelverton  

Vihuela: Paul Doyle  
Cittern etc: Paul Doyle, cm  
Mandolin: Paul Doyle, Craig Fischer  

Bowed Strings: Jens Egeberg  
Bows: Doug Eaton  

Violin family: Hugh George, Francis Harlow  

Hurdy-gurdy: Paul Doyle  

Woodwind general: Jens Egeberg, Ronald Wick  

Transverse Flute: Doug Eaton  
Terence McGee  
Ken Paul  
Akira Ishii Conrad Mollenhauer  

Recorder: Hugh George, Akira Ishii, Conrad Mollenhauer  

Organ: Hugh George  

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|    Terence McGee, ACT                     | **Doug Eaton**, Qld  
| **Canada**: John Sawyer, BC                 | **Robert Mavrinac**, Ont  
| **Denmark**: Jens Egeberg                  |  
| **West Germany**: Monika May               | **Éire**: Paul Doyle  
| **Isreal**: AMLI Library                   | **Italy**: Alberto Galletti  
| **Japan**: Akira Ishii                      |  
| **Netherlands**: Haags Gemeentemuseum, T.J.Bosklopper, Ronald Wick |  
| **New Zealand**: John Thomson                | **Spain**: Barcelona Museum  
| **UK**: Joseph Rigby, Beds  
|    Wilfred Allwood, Devon  
|    Brian Jordan, Cambs  
|    Tony Hemmatt, Glos |  
| **London**: D.B.Singleton, E14  
|    Nicholas Kenyon, W1                 |  
|    Peter Bavington, E17                |  
| **Manchester**: David Fallowse          |  
|    Hugh & Betty George, Middx  
|    Ian Theakston, Notts                 | **USA**: Francis Harlow, MI  
| **USA**: Francis Harlow, MI | **David Yelverton**, Suffk  
|                                            | **Andrew Smith**, Surry  
|                                            | **Ken Peal**, NY  

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**FoMRHI Comm. 471**

**E.A.Mathew.**

Comments on Bows and their Screws, Taps, Dies and Lathes

Eph" Seg" in Comm 458 is quite right in that taps, dies and chasers were known in pre-Christian times.

Screws and square nails attributed to the Roman visits to Britain were found in a pit of coloured clay in Ingthutill. Some of these I have seen. The screws it is assumed were chase cut, a process which does not require any type of lead screwed or mandrell type lathe.

On chase cutting: when I was nine years old (at which age incidentally I was already turning) (more youthful enthusiasm eh")I watched one-William Abbott of Haydock Lancs, chase cut a right and left hand threaded adjusting screw for a pair of springbow compasses. See Sketch.
This screw, produced all in one piece, worked in two split nuts, and was made of brass. The lengthy precarious process require the utmost skill, and was done on a treadle lathe. The screws slender dia necessitated an improvised steady to prevent the thing breaking, and it was cut, half an inch at a time!

Re Eph in para two Comm. 458, and speed and cheapness to produce a bowscrew; - Amongst turners, there is no doubt whatsoever that a die would be the quickest method of production! I can’t envisage a bowmaker repeatedly re- visiting a turner of the day, only to be waiting whilst he were cut some screws! The man would almost certainly become impatient and therefore purchase a suitable tap and die (as he would today) and these rather than any lathe!!

On speed, I turn, knurl and screw with a die, the small thumbscrews for my Carving Planes in brass in about two minutes. The screwing process takes about four seconds, and I would gladly demonstrate this to any visitor, along with proper screw cutting procedure, as I am sure Rob' Bigio would also. The bowscrew I estimate would take about eight minutes to cut, and from this; on the cheapness of cost, I can’t for the life of me see why a "long thin screw" would be cheaper done on or even warrant the use of a mandrell lathe!!

Now on the machinability of the metals of the day, this "hard iron" or "stiff strong metal" referred to by Eph' for bowscrews, would be much softer than any cutting tool, and would cause problems if a full width chaser were used! My dear old friend cutting the compass screw, used a three toothed chaser to minimise area of contact. Again contrary to Eph’s statement, the cutting of a thread on hard iron or steel does not necessarily dull the cutting tool quickly. It is the softer materials which reduce cutting tool life, and it is the softer grindstones with which we sharpen the hardest cutting tools! The wearing

The wearing properties of materials upon tools is something quite apart from, and irrelevant to, their ground cutting angles, and if several different materials be cut with a tool whose grinding nomenclature is kept constant it will be noticed that some turnings shear or come off more easily than others. It is for this reason we have arrived at different cutting angles and cutting speeds recommended.

On chasers, I was taught that they used before screw lathes proper. They are form tools, and as such are ground on their upper face only, for if any rake or decreased cutting angle is put on they do not produce the correct thread form. This is an obvious conflicting factor in their use. They work best on brass, for which material no cutting rake is necessary.
Returning to lathes; from the considered opinions of a number of questioned turners, there is no likelihood think they, of any "relatively semi-skilled cheap none guild labour" being used on early screw cutting or mandrell lathes". This work would have been taboo until a bound apprentice was well on his way to becoming a journeyman. Even today unions still differentiate between the skilled, who grind tools by hand and use the screw cutting lathe, and those semi-skilled who use dies, The Coventry diehead, or Landis collapsible tap and dieheads etc.

Regarding screw adjusting and notched bowfrogs, these are of more than a marginal benefit both to hairer and player alike because both these adjustment systems cater for some depreciation in bowstick temper.

If a longbow or violinbow be left under tension for any longer than is necessary for its ordinary use, its spring power will begin to die as the lignin in the wood slowly assumes the altered shape. Having two "bows to your strings" ensures that whilst the one is in play, the other is indeed "at rest", and therefore farther away from any sooner than later necessary a re-tempering job. Now the particular tempering and balance properties of a good bowstick are only realised upon it nearing its completion of manufacture. Lawrence Cocker of Derby could not only temper his bows to a fine art at any point on the stick, but he could and did lode them for preferred balance to individual requirements. His cane bows might not look as asthetically pleasing as his others made from one type of wood, but built cane is much easier to manipulate at the tempering stage! (than other woods). (This giant of skilled experiences incidentally made his own taps, dies and drills, and I was fortunate to be treated as indeed others were at his home - like a son!

Perhaps comments from practicising bowmakers, on tempering, and the frequency of any re-tempering found to be required in bowsticks, made particularly of various woods, would be an interesting Comm. for FOMRHI Members? I agree that the benefit of the screw is only marginal in the case of an overly stiff stick, but the whole thing is more subtle than this, the frightening possibility of smashing the stick being of paramount importance to beginners attempting re-temper work!

In conclusion the basis of any discussion on screws in bowfrogs, in my opinion (for what its worth) should be upon their authentic purpose and function and not on the speculated economics of their manufacture.

If one wants something badly enough one will pay any amount for it!
Over the last few years a torrent of dogma (mostly in the form of prohibitions) has begun to pour from the lips and pens of self-appointed Orphic priests in the instrument-making world. I am becoming concerned about the increasing number and influence of these tweed-suited timberyard philosophers, whose personal rejection of modernity has rendered their pursuit of authenticity quite pathological. I want not to write an article, but only to make a point, so I content myself with an examination of two Sinaitic pronouncements that I keep hearing from the gurus:

1. **You can't make authentic instruments unless you use authentic tools**, in association with

2. **The vibration of modern machines like the bandsaw causes serious damage to wood tissue.**

Of course it is desirable to be able to do manually all that the early makers did manually. Such ability will come into play in every part of every job that we ever do. But I am concerned only with results, with finished instruments and their sounds. If someone tells me that bandsaw vibration damages wood tissue, I want to know exactly what the damage is and how it affects an instrument's sound. In other words, I want proof, not a lot of superstition. To my mind a piece of wood 8"x4"x1" is a piece of wood 8"x4"x1" whether it's been cut to that size by a bowsaw or a bandsaw or a bowie knife or a bit of broken bottle. If any maker (say a luthier) seriously posits vibration damage, he should make at least a dozen fiddles using only hand tools, and at least another dozen using evil machines; then, having made a detailed scientific comparison, he should tabulate his findings and tell us all what, if anything, vibration damage is. Until someone does this I shall continue to believe that vibration damage is a piece of the merest mythology, like phlogiston.

Let me also say something about "authentic tools". Exactly the same caveat applies to early tools as to early instruments: since we have neither records of Dowland nor videos of Denner, we can't know precisely how the things were used. So there is the danger of transposing our present knowledge and techniques across the chasm of our ignorance (we've all heard viols played like 'cellos and cornetts played like trumpets). But this is
only a small point: I don't give two hoots if people use their authentic tools anachroniously. What really worries me is that authenticity-rabies is always on the move. First it was instruments. Then it was performance styles. So far, so exceeding good. But then came the playing-from-early-notation nonsense. And now it's tools. What will it be tomorrow? It can only be one thing - a fatuous, imagined authenticity of lifestyle. Instruments made in "authentic" surroundings. (Our glue is boiled on an open fire. We work by candlelight. We have no W.C. ....) I am compelled to write like this because I know some people who have already gone completely overboard.

Our little department of the world is getting cluttered up with fantasies and histrionics. One of the most grotesque features of the early music revival has been the mania for dressing up performers in "authentic" ruffs, cuffs, and codpieces. (Why on earth? - do we need periwigs to play Bach, or spats to play Elgar?) It looks mad. It is mad: and now the madness is spreading into our very workshops. If it rages on for another ten years we will all be addressing our apprentices in Chaucerian English. And maybe some of us will actually think we're Barak Norman. Can you guess where we'll be then? In the same place as people who think they're Napoleon and Boadicea - the madhouse.

So let me borrow a non-synthetic, "authentic" cure for lunacy from Daniel IV.32, and suggest that we put the gurus out to grass. -

David Z. Crookes
Comments on Comm.448.

Jeremy Montagu

Djilda and I had a long discussion on this Comm; whether it should be printed or not. In the end, we both felt that the technological information was so good that it should appear, but I promised to write this Comment on it for the next issue.

The problem is that the resulting instrument bears little resemblance to the iconographic evidence. For one thing, the basic shape is wrong. All the pictures show instruments whose non-parallel sides are longer than the parallel. The best picture I know comes from the manuscript encyclopædia Recherche de plusieurs Singularités by François Merlin and Jacques Cellier (Paris, Bibliothèque Nationale, ms français 9152); the triangle is on f.185 and can be seen in my Med & Ren, plate 83. Let’s try a paste-up; the Med & Ren plate is reduced, and it’ll be reduced again here, as will being a xerox of a xerox, but it should still show something. It is quite clear here, and in other sources, that the body is continuous; there is no gap as there is on the modern triangle, nor are there overlapping parallel lower sides as there are in Marcel’s plan. The main problem in reconstructing the instrument is this lack of a gap. I got a blacksmith in Dorset to make me one, using one bar of steel, hammer-welded. The result, which can be seen in the Drum Case in the Bate Collection, looks fine but just goes clank.

Whether Merlin & Cellier were right in showing it to be square-section rod, we don’t know; we also don’t know whether the ring rivet passing through the upper parallel side was right or normal. I have a suspicion that Marcel’s design with the looped top might allow the finger to deaden the vibration, but only experiment will tell. If it doesn’t deaden it, then his design is just as likely as that shown here.

Marcel’s proportions are easily adjusted to those shown here, which is a fairly typical shape (they’re all different, after all). What cannot be adjusted is the double bottom bar and the presence of a gap, which is effectively what there is, even though it is covered by the long overlap of the bottom bars. The result of making his triangle will be something that looks a lot more authentic than what I’ve finished up with (a conventional triangle held with the gap uppermost by drilling a small hole in the end of each side and tying nylon through each hole to make a suspension loop) but which is in fact no nearer than mine to what seems to have been used in the Middle Ages and Renaissance, and therefore is equally unauthentic.

I still don’t know what the right answer is.

One possible answer: A few years ago I appeared on a magazine TV programme, Pebble Mill at One. On the same programme were some medieval jousters. They had stirrups identical in appearance with Merlin & Cellier (no rings on them, though) which rang beautifully when struck. They promised to let me know who made them, but they never did. If anybody knows who makes trapezoidal stirrups for medieval jousters, please let me know.
ACID STAINING OF HARDWOODS

Carl Willetts

The use of acid staining has the advantage over oil based dyes in that the depth of colour is often more even over slight variations in wood grain porosity.

It is best used for hard, close grained woods. Soft woods may soak up too much acid, which whilst not affecting the colour too seriously will mean that excess acid cannot easily be neutralized afterwards. A light coloured wood such as box or some of its 'South American Jungle substitutes' can be expected to give a golden brown by this method.

The recipe calls for concentrated (fuming) nitric acid (HNO₃). This is essential as a non-acid oxidising reaction is required rather than an acid burning reaction by hydrogen ions. It is a very dangerous substance so goggles and impervious gloves (preferably gauntlets) must be worn.

1. Finish the instrument in the normal way to give a smooth surface. Do not use wire wool as tiny fragments left in the wood can produce dark green or dark brown blemishes in the finished job.

2. Plug the ends and finger holes.

3. Swab the instrument all over the outside with the acid. Working as fast as possible - commensurate with safety. At most take one minute over this stage.

4. Douse the instrument in running water to wash away all external traces of acid.

5. Dry the outside with a cloth.

6. Swab the instrument with raw linseed oil.

The residual acid will react with the oil to give two effects, a) remaining acid will be neutralized and b) the oil will crosslink or polymerize to harden on the surface of the instrument. As much acid was present to start the hardening reaction this will be fast (24 hours) and no further hardening should occur in future years, which is one of the worries when normally applying linseed oil.

7. After a few days polish with beeswax in turpentine. Oil the bore with almond oil.

8. Any acid spillages must be neutralized immediately with sodium bicarbonate (NaH CO₃) of which a plentiful supply should be kept.

If you cannot obtain the nitric acid then persuade a chemist friend who works in an industrial or educational laboratory to do the job in the laboratory. It only takes about five minutes and is worth the price of a pint (of beer that is!)
WOODWIND BORE OIL

Carl Willette

This is further to Comm 406 (no 27, April 1982) by Cary Karp.

The accoustical effect of an oil filling pores provides a ready test to discover if an instrument requires oiling. Play the instrument and note its tone quality, "Whet your whistle", ie hold it under a water tap for a couple of seconds, swab it out and play again. An improvement in tone shows the need for oiling.

Sometimes oiling can raise the pitch of a very dry and flat instrument. The tone and pitch often do not settle down until two or three playing sessions after oiling.

To perform its function properly an oil must not be so chemically reactive as to become very hard and brittle and exert forces on the instrument nor must it be so chemically unreactive as not to adhere to the wood. Parafin wax and mineral oils come into the latter category and this is why wax impregnated cheap recorders are able to sweat out their wax if left in the sunlight.

This balance of chemical reactivity is governed by chemical groups in the oils. Carbon - carbon double bonds (c=c) give the polymerizing, cross-linking or 'hardening' properties. Carboxyl groups (c=o) give adhesion to the lignin or cellulose of the wood. Linseed oil is rich in c=c bonds and so hardens readily. Parafin has none and so does not harden.

Many of the oils suggested for use have a suitable balance of c=c and c=o groups including peanut oil and olive oil. However, the one I favour I was surprised to find no mention of by Mr Karp. To quote from Edward Reilly's translation of Quantz, chapter 1, paragraph 19 (Faber & Faber 1966, page 35): "Since harmful moisture forms in the flute when it is blown, it must be frequently and carefully cleaned with a rag attached to a little stick. And, so that the moisture is not absorbed by the wood, it must be smeared occasionally with oil of almonds".

I take it that the sweet variety is meant rather than the bitter. It is in the British Pharmacopeia and so is readily available from all dispensing chemists in the UK.

On the grounds that Quantz's lifetime experience in making and playing flutes must count for something, I started to apply his advice long before I knew of the existence of carboxyl groups. I use it on all my instruments and none, whether played regularly or infrequently has ever cracked whilst in my possession.
HOW TO MAKE YOUR OWN MOULDINGS IN WOOD

Small wooden mouldings of any pattern or section can be made cheaply and easily using a home-made tool called a scratch stock. This simple tool can produce an infinite variety of intricate or simple mouldings to remarkably high standards.

As a harpsichord maker I have found it capable of producing all the mouldings necessary for instruments eg. the moulding round the soundboard or decorative case and cap-mouldings. The interesting part is that you can design your own mouldings or copy existing ones.

MAKING A SCRATCH STOCK

Obtain a piece of fairly hard dense wood such as beech or oak and prepare a piece 20mm X 30mm X 180mm. The wood is then cut out as Fig. 1 below. Remove the shaded part and finish to the lines using a saw followed by chisels. Next drill the two 5mm holes to take the bolts.

Having thus completed the work above take a saw and carefully make a cut through the centre of the stock (Fig. 2) stopping the cut as shown. The cutting blade will be fitted to this saw cut and held in place by the the two 5mm bolts.
The cutter, or blade of the scratch stock is made from a 'blank' of steel, part of an old scraper is ideal, so too is the blade of an old table knife if the steel is good quality. Use something which will take and keep a keen edge but is not too hard to file. A thickness of 2 - 3mm is about correct. Prepare a blank approx. 8 x 30mm.

Next, on a piece of white paper, draw the profile (actual size) of the moulding you wish to produce. Fig. 3 gives an example of a typical moulding. Now glue the drawing on to the 'blade' upside down and file out the inverted form of the moulding. A grinder is useful to remove the most of the waste then finish with jeweller's files. The back (be careful you get the back) of the blade is then bevelled with a file being careful not to alter its outline. Fig 4 shows the blade cut to the inverted shape of the moulding. Fig 5 shows the bevel.

Fit the newly filed blade into the saw cut in the stock and tighten the bolts, first carefully setting the projection of the blade from face AB (Fig 2) to give the width and depth of cut required.

Mouldings can now be produced using a gentle pushing action the action used being similar to that used in 'scraping'. It is often helpful to angle the top of the stock slightly forward in use. As there is no provision for shavings to clear away from the blade it will be found necessary to 'clear' the blade using a small nail whilst removing the bulk of material at the beginning of the work. Always keep face AB pushed hard against the edge of the work and try to arrange the wood so that you are cutting 'with the grain'. Finished mouldings can be further improved using wire wool.

As a general rule harder timbers produce better defined work (These are very hard on the hands too) but softwoods can be used if care is taken.

Finally - Difficulty may be encountered when trying to clamp small sections to the bench and the author has found the jig below Fig 7 very useful. If large quantities of the same moulding are to be produced, make a stock from metal such as brass or aluminium as the wooden ones wear out along face AB eventually and the produce ragged work.

William D. Hendry.
What is an Historical Instrument?

The amount of vituperous hyperbole in Paul Getton’s letter about editorial policy on authenticity (Bull. 31, p.7) shows his deep commitment to the maker’s freedom to do whatever he likes and to announce his inventions proudly on the pages of FoMRHIQ.

Our members clearly hold two distinct definitions of what is an historical instrument. One is to match as closely as possible the actual instruments as they were played hundreds of years ago. The other, at best, is to invent instruments that fulfill ‘modern requirements’ and yet convey the spirit of the original early instruments. At worst, the other is to copy someone else’s invention because that is what the customer wants. Some of the arguments that I’ve heard for the second approach are:

1. The first approach includes much invention since there is so much we don’t know about what most early instruments were originally like, how they were made, and how they were set up to be played. Therefore, since the distinction between the two approaches is far from clear, the decision as to where one draws the line is quite arbitrary and should be left to the maker’s discretion.

2. The maker’s primary responsibility is to his player-customers, and if they are happy with the degree to which he has captured the spirit of the early instrument, irrespective of unauthentic aspects in the design or construction, he has fulfilled his responsibility and others have no right to object.

3. This approach is authentic since early makers designed their instruments in individual creative ways to fulfill practical requirements.

The first argument above tries to exploit the uncertainties of our knowledge about original instruments to justify ignoring the information we do have. There is a clear dividing line between using our imagination and good sense to fill in the difference between what there is historical guidance on and a complete playable instrument, and incorporating features in an instrument which are clearly different from those that typical original instruments had.

Of course the approach 2 man will argue that the historical information is not certain enough to convince him. We all know that pieces of surviving historical information could easily be atypical, could contain outright errors due to incompetence or carelessness, could unrecognizably have been modified between its origin and now, and we could be unable properly to understand it. If one is not going to do anything with the information from the sources one can afford the luxury of distrusting them. But if we are in the business of interpreting history or (heaven forbid) trying to recreate it, we have the choice of distrusting our sources and making our history into whatever we like, or trusting our sources simply because they are the best we have, and doing as well as we can in making sense of them. The central issue here is whether one is seeking historical probability (there can be very little historical certainty) or whether one is part of a modern movement that pays lip service to history but goes its own way.

The second argument is tantamount to trying to justify a conspiracy between the maker and his player-customer to defraud the listening public. If the player informed his public about the compromises with authenticity he was indulging in, there would be no fraud. But he knows perfectly well that such admissions would not be welcomed by the audience that perhaps naively assumes that if early instruments instead of modern ones are used, then the performance must be just as it was originally hundreds of years ago.
The performer may feel that his primary responsibility is to entertain or give a meaningful musical experience to his audience and not to educate them. Compared to success in this, the deception (which could be considered self-deception since the performer has not made any overt claims of complete authenticity) is relatively unimportant. Perhaps I am amongst a minority that considers this attitude immoral.

A more serious problem with the second argument is deciding what constitutes the spirit of the music or the instrument. When the performer devises his interpretation, it is based on his understanding of the music, but the extent to which this has similarities to a typical understanding of the music at the time of composition is highly debatable. Alternatively, the "spirit" of the music could be defined by what it is considered to be by a broad consensus amongst musicians, critics and perhaps scholars now in 1983. This consensus is quite different from that which existed in 1963 and is most probably quite different from that which will exist in 2003. Yet "the spirit" implies an intrinsic property of the music as it was written. There is obviously an element of self-deception here.

The same considerations identically apply to the instrument maker who designs his own instrument "in the spirit" of original instruments. If we look back at the "early" instruments made some years ago, the amount of respect they command today turns out to be directly related to the degree of copying of original models and inversely related to the amount of invention or "improvement" they contain. 'Practical' modifications to original designs of early instruments can be very popular for a while, but eventually the players find that the original design components are just as practical, and instruments with the design modifications become seriously unfashionable.

Artists and craftsmen of all sorts seem to believe strongly that the understanding of their mediums that they have today is as deep as it can possibly be. Of course this is nonsense, but for many it may be the only way that they can produce their best. This arrogance may be necessary on the concert platform or at the work bench, but must we suffer it on the pages of FoMRHIQ?

The problem with the third argument is similar. We do not fully know what the acoustic objectives of the early makers were, and a newly-designed instrument based on one's best guess today is rather less likely to hit the mark than an intelligent faithful copy of an original model. By an intelligent faithful copy, I mean not reproducing every tool mark and every dip and hump in the wood thicknessing. One needs enough knowledge of instrument acoustics to know what the effects of variation could be. Where the variation could reasonably have been intentional, copy it to the highest accuracy that the traditional craft method allows, and where it could only be rough, copy it roughly.

Many makers and players today intend eventually to be as historically accurate as possible, but for practical reasons of current technique or financial state or perceived customer preferences, indulge in unauthentic compromises. There is a serious danger in this, especially if they are excellent practitioners of their crafts. The problem is one similar to imprinting made famous by Conrad Lorenz and his ducklings. The importance of first impressions cannot be over-emphasized. What the practitioners produce can be so aesthetically pleasing to someone first experiencing the type of early music involved that nothing else, including more authentic versions, can subsequently match the emotional impact. I first heard Monteverdi's music in the famous 1936 recordings with modern instruments directed by Nadia Boulanger. It was so musical and beautiful that it bowled me over completely. To my aesthetic sense, those recordings have the definitive performances of those works and I can't fully appreciate more recent, more authentic performances of them. This is a great pity.

Gretton made various statements about the "NRI pundit-pandits" which grossly misrepresent the truth. I am not reluctant to admit that I've changed my mind. Some
years ago I was in favour of the Lute Society and the Viola de Gamba Society getting the
genuine early instruments they possessed (and which had become embarrassments) restored to early states. I was even able to get high officials at the Arts Council interested in financially backing the ventures. Then Ian Harwood convinced me of the dangers of restoration and I changed sides, favouring conservation in a museum. (As for the final fates of the instruments, don't ask.) I doubt whether the Arts Council will ever take me seriously again. But I honestly don't think I've ever changed my mind about authenticity in instrument making, as Paul Gretton states.

We at MPI still "enthuse about electric drying-cabinets... and electric bending-irons." This is because we believe that these so well simulate original methods that we cannot imagine any test of a finished instrument could ever tell the difference. Our current lack of enthusiasm for fibre-glass lutes is that they are impractical — getting the fibre-glass shell as light and strong as a wooden one is remarkably difficult, and it was easier and at least as cheap to make backs the authentic way.

We do approve of obviously non-authentic simulations of early instruments if they are so much cheaper than any attempt at an authentic version that they provide opportunities for playing early music to people who cannot otherwise afford it. We therefore approve of Woodlark lutes, plastic recorders and cortols. What we do not approve of is makers inventing new instruments (or adapting folk instruments) with no serious attempt at following historical models and then presenting them as if they were proper instruments for the public performance of early music. Our objection in the "Great Communication: 100 Controversy" was that Tolley invented his own designs when it is quite possible to generate designs as simple and easy-to-make based on consistent historical models. He was learned, skillful and intelligent enough to do this, but he didn't even try. We stand by that objection. (I wanted to stand up and fight when the Knights of the Crusade of the Defenders of the Innocents ganged up on us, but I wasn't the Editor and domestic tranquility was very needed at the time; incidentally, the medieval fiddle we then promised was made by George Stoppani in a day — using no glue of course — and will soon be heard in the concerts of a well-known professional early music group.)

We applaud simple, easy-to-make instruments and have no objection in principle to simplified early instruments for beginners to make or play which work the way they are supposed to and for which there is no equally simple historical model. Nevertheless, we would wonder whether we've missed the point on such instruments since we presume that early makers were just as reluctant to do unnecessary work as we are. (In this discussion I am not including the question of purely non-functional decoration which doesn't have the psychological associations today that it might have originally had.)

The crucial phrase in the paragraph above is "work the way they are supposed to". The point here is that the historical instruments we make should sound and handle in an historically probable way and they should not in any way discourage a player from developing an historically probable technique. Instrument inventors don't usually think that this is important. Respect for history is the essential point here. The word in the name of FoMRHI is "historical", not "fake historical", and if this upsets a dozen instrument inventors enough to resign from membership, I for one will not weep. Why ever did they join anyway? The Creative Anachronism movement is growing rapidly and that's where they belong.

I said in Comm. 447 that the Free Reed and Misc Catalogue must be the last fascicle of the Edinburgh Collection Catalogue; I was wrong; this is. And in many ways the best. As I said in Book News last time, the whole set is now available at £9 in UK and £13.50 abroad. Where this one scores is in its long Introduction, which sorts out a number of misconceptions, the most important perhaps that the instrument usually called the uillean pipes is a peculiarly Irish instrument. Examples here show that it was used elsewhere also. The Introduction also makes clear the great debt that the Edinburgh Collection owes to the Glen family and in particular to their successors the Rosses. The two Andrew Ross, father and son, preserved a great deal (I know; I bought some things from both, but never would they sell any of the antiques or the good old ethno instruments) and Margaret Ross, young Andrew's (if I may so refer to him, as we all did up there) wife, kept the instruments together and has lent them to the University. Old Andrew resented, very vocally, the fact that the Glasgow Museum managed to persuade the last of the Glen's to sell them a number of the instruments but did not then display them (this was back in the 1960s when I knew him) and one of the most encouraging features of this Catalogue is the number of instruments in the Reid which were once in the Glen Collection and which have been lent to Edinburgh by the Glasgow Museums & Art Gallery.

This is a very comprehensive catalogue of bagpipes of all sorts, by no means only of Scottish instruments. It has not the scholarly detail of Anthony Baines's catalogue for the Pitt Rivers, but that will doubtless follow when they can do a proper catalogue as distinct from check-lists. When it does, and when the Newcastle Black Gate Museum does so as well, we shall have in the three a complete corpus of all possible bagpipes. Meanwhile, this check-list is full of information and a worthy conclusion to the Check-Lists of the Edinburgh University Collection.


Brief descriptions and good pictures of every instrument in the museum from these areas. Like the first volume (keyed brass; see Comm. 365 in Q 24), it's a limited edition of 1,000 copies and if, as you should do, you collect all available catalogues, you'd better order quick before they run out. I apologise for losing the initial announcement that gave the price. The address is in the list of members under Margaret Downie.

This is obviously not the most strongly represented part of the world in the Vermillion Museum, but what there is is good and all is well and clearly described and well illustrated. The bibliography is a bit over-selective, but since everything in it has a bibliography of its own, this is little handicap. When I reviewed the first volume I expressed the hope that more information would be provided next time. My hope was fulfilled. Within the limitations of space, there is a good deal more here and I look forward to future volumes.
I'm afraid that this book is a disappointment. There are a number of instruments surviving from antiquity, many of them very beautiful, but on the whole the author has ignored these and has instead taken wall-paintings, reliefs, coins, etc, and drawn a colour picture of what he thinks the instrument may have looked like. I say 'thinks' and 'may have' because he has in a few cases drawn surviving instruments, but he hasn't sat down and looked at the instrument, nor even looked at colour transparencies of the things from the museums where they are, but has looked at small photographs in published books and then used his imagination. Unfortunately, he has been wholly uncritical when looking at coins and other depictions and has not considered whether an instrument could ever have looked like the illustration. The result is that there are many beautiful pictures of instruments that could never have worked if they had looked like that.

The one thing that one must say is that for every one of his pictures he has provided the source. Above the imaginative colour picture, many of them very highly coloured in every sense of the phrase, he has printed a small black and white photo of the original. Thus one can judge whether and how much the colour picture is imaginative. Also, of course, the black and white photos give a very useful corpus of musical instruments of antiquity, but this is not the main purpose of the book, nor is such a corpus worth DM 240.

It's not usual to review a sale catalogue, but Tony has got so much background information into this catalogue, that it is worth having as a small book on brass instruments. Every instrument is illustrated, a few of them more than once, and as a frontispiece there is a plate showing every type of valve in the collection.

There are a few debatable points. For example, I think that the horn hunting horns with pewter figures of archers and stags on them are German, not English, and I'm pretty sure that no.11, catalogued as a small horn with an A flat tuning slide crook is actually a cornet simple (what Mozart scored for as a Posthorn) rather than a horn. There is confusion, too, in terminology between bits, shanks and crooks. A tuning bit is a short piece of tube which can be used instead of a tuning slide; a shank is a straight length of tubing which alters the pitch by a definite note name (i.e. a B flat or an A cornet shank); there isn't such a thing as a tuning shank. This is the conventional terminology that most of us have been using for many years (was it perhaps Eric Halfpenny that established it?). Thus a straight tube stamped Sb is the B flat shank; one stamped La is the A shank, and an unstamped shorter one must be a tuning bit (these specific examples are from the Higham cornet, no.28, which must surely be anonymous French, imported and stamped by Higham).

As I said, there is a good deal of information here about the instruments and their makers, more than in many museum catalogues, and if you are into brass at all, it's well worth having.
FoMRHI Comm. 482

Jeremy Montagu


I'm not sure whether I'm meant to review this or not. A copy came to me and another to the Bate as an exchange from one museum to another, and so I don't know whether you can just write and order one or not, nor what the price would be if you could. (Just in case you can, the address is 24-12, 4-chome, Higashi-Ueno, Taito-ku, Tokyo). The catalogue was produced to celebrate the College's 75th anniversary. The reason that I think it worth describing here is that it's quite a good collection, with some interesting instruments in it, which is hardly likely to be known to most FoMRHI members (I hope that our Japanese members know of it). So, rather than a normal review, I will describe briefly what there is in the Collection, starting at the back of the book. Incidentally, everything in the Collection is photographed, several instruments in some detail, and two, the Grenser flute and the Haka recorder in X-radiograph shown both from the front and from the side so that one can see the undercutting of the holes.

There is a fairly random collection of bows, 18 of them, all transitional or modern type except one which is violin length but has an early type stick and frog (1st half 18th c at a guess) with a rounded double-bass like point. Several are stamped Dodd, one Norris & Burnes (sic) and one Xavier Tourte; the rest anon. There are two clarinets (one anon, one Golde), an earlyish Triebert oboe, 3 one key flutes (anon German, anon Dresden, and an Adler of Bamberg F flute), the Heinrich Grenser flute mentioned above (only joint 3 survives of the set and with that it is said to blow at 440, which seems very high for the no.3) which is ebony with ivory mounts (the others are box). The Haka recorder is also ebony and ivory and sounds C at 415; as the Catalogue suggests, it is probably a voice flute at 392 or so. The voicing edge is slightly damaged, but presumably it still works or they couldn't have given a pitch.

There are two keyboards only, a Tangentenflügel by Franz Münzenberger and a Shudi double manual which appears identical with the description given by Dale and Boalch of his first harpsichord; it was given by Handel to Anna Strada in 1731 according to the back of the name-board.

The main interest is clearly string instruments. There are a number of harps, a couple of chromatics (one anon, one Pleyel Lyon model), a John George Morley triple, an Erard double action and an early single-action, other single actions by Broderip & Wilkinson, Cousineau père & fils, Renault & Chatelain (rather pretty; decorated in Chinese taste), and Storck, an anon fully hooked harp (many hooked harps have hooks for only some of the notes) and a gothic harp which I'm pretty sure is modern.

There is one chitarra battente, anon, and an Aubert guitar, three so-called citterns (two English guitar types, one looks Irish and the other is labelled Serednicki, of the Ukraine; the third is a Renault & Chatelain arciestre. A couple of 18th c mandolins (pegged, not geared) and three of the narrow-bodied mandore/mandolin/what you will things, one of them anon, one by Smorsone, 1722, and one by Vinaccia, 1768. A 2-string colascione, anon. Two chitarrone (I use their names), one by Mathias Albani, 1696 and the other by Magnus Steger, both with triple roses, the former 2100mm overall, the latter 1925mm. A theorbo by Mateuz Kwiatkowski, 1739. A double head lute, anon, very similar to that in Comm.156 in Q 13, though with 6 double open courses instead of 4 and with a much narrower
body than the Linköping instrument (which is uncommonly round). They are not sure that the heads are original, so that it may well be a conversion job from a lute, but the final result is, except for the body shape and the extra bass course, identical, even to the strut from the bass head. I'm wrong: another difference is that there are only 6 + 1 courses on the finger board. String length is 625mm (the nut appears to go right across, acting for both heads). There is a Magno Duiffoprugecar lute of 1609 (13 strings; from the top, 1, 4x2, 1x2 in 8ve, 2x1 is the present disposition), and another by Anton Bachmann, 1784, which seems to have 10 single strings.

There is one hurdy-gurdy, an anon French vielle en luth, a kit by Henry Jaye (violin shape) and a pochette. The only cello is anon, school of Maggini. There are six violins: a G.B.Gabrielli, 1753 which looks as though it started life as a viola d'amore; a very festooned anon with four sympathetic strings; a J.G.Staufer, only four strings and violin size but otherwise resembling an arpeggione; a François Chanot with sinuous holes but otherwise normal Chanot pattern; an anon in normal shape but with wavy edges all round, which has been put into short neck etc state in Tokyo; and a G.B. Rogerl, 1703. There is a baryton by Samuel Hüniger, and an English violet by Matthias Klotz, and seven viole d'amore: Maximilian Zacher, 1732; J.U.Eberle, 1755; J.J.Stadlmann, 1751; J.P.Schorn, 1701; and three anons. There is a quinton by Simon Gilbert, 1752, a bass viol by Tielke, 1695 (very plain for Tielke), another anon which they think may be by Marcus Stainer (It has a Jacobus label), and another by Thomas Edlinger, 1673. There is a treble by Rodolph Höss and another by J.S.Maldoner, 1702. The latter looks very odd, with a body small for its length though unusually deep from front to back and with the neck canted well back, rather steeper in angle than a modern cello.

And that's the lot. It would be interesting to know what they have from other parts of the world (if anything, but the title suggests that this Catalogue covers only part of what they have). Certainly it is a collection that we should be aware of, and I am grateful to them for circulating the Catalogue in this way. To turn, finally, to a conventional assessment, the information is fairly summary, but all the more important dimensions are given. No provenances are stated, but otherwise descriptions are reasonably comprehensive. They obviously know more about string instruments than about woodwind (for example, what I presume to be horn mounts in some of the latter are described as resin, and keys in rings or blocks are said to be screwed in, instead of held on pin axles as is normal).

If you want a copy, you can try writing to them (especially if you can offer anything about your own collection in exchange if you have one), or perhaps some of the obvious dealers such as Brian Jordan and Tony Bingham may be able to get stocks.

Introductory remarks: A) Jeremy suggested I do a detailed page-by-page review, pointing out all the mistakes. It quickly became apparent that that would be completely impracticable — the review would be at least as long as the work itself! It also seemed a pointless task to undertake. Instead, I have confined myself to pointing out a selection of general weaknesses and specific mistakes, in the hope that the nature of the book will then be clear to potential readers. B) Footnotes are intended to be read as they appear. C) I have quoted Overton in translation unless it seemed necessary to give the original German in a footnote. D) Material inside square brackets has been added to quotations by the reviewer.

Has there ever been a worse book on a musical instrument than this ludicrous publication? If we believe Mr Overton's repeated assertions, the baroque violin was actually a "viola"¹ and the normal instruments in use at St Mark's were cornett, trombone and "vielle" (sic)². The "Sonata" from Monteverdi's Vespers is scored for cornetto, violin and two (sic) voices,³ while the underworld aria from L'Orfeo is for voice, one (sic) cornett and orchestra.⁴ The Lamento di Tristano is polyphonic and the date of Gluck's L'Orfeo (sic) is given several times as 1742.⁵ We are told on p. 95 that Legrenzi's sonata "la Busche" is "one of the last virtuoso pieces" for the cornett and on the next page that it "makes no particular technical demand".⁶ We learn that a lip-vibrated aerophone is one "with lip-vibrato"⁷ and that the word "minstrelsy" is a verb.⁸ Many cornetts were not glued together⁹ and some had a cylindrical bore, thus:

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[     ]
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The sixth fingerhole was for the little finger.¹² The presence today of a cornett in a Stockholm museum founded in 1899 proves by implication the use of cornetts in "northern Europe" in the sixteenth century¹³, a period when German Stadtpfeifer played "chromatic melodies"¹⁴ although the cornett was also "an ideal instrument to accompany singing because it could play a glissando."¹⁵

Sic, sic and again sick!!

One could continue like this for pages, for the above are just some of the most delicious plums from the great sloppy pudding of howlers, misunderstandings, mistakes and incompetent pseudo-scholarship which Mr Overton has concocted from a lot of undigested secondary sources. Amazingly enough, he was awarded a doctorate from a real university on the strength of it,¹⁶ although neither he nor, more alarmingly, his supervisor seems to have checked any statement or "fact" it contains. This isn't a work to be taken seriously, so why pay it the compliment of a review? The point is that it is unfortunately one of only two full-length books so far published on an important and still neglected instrument¹⁷ about which few people know much more than that it is "difficult". Even such a disaster as this is in danger of being accepted as authoritative. The unwary must be warned, since the problem is not just one of misinformation in the form of gross misquotes and wrong facts, but also of bizarre theories based on the misinformation. Such misguided theorizing could
whom this is now "the book on the cornett". The present reviewer 
has already had it recommended to him by Mr Overton and doesn't even 
include all the terms used by Praetorius or Mersenne, Chorzik, 
cornetto diritto, etc are omitted. The "violino" is defined as 
"small viola (Viola is the generic name for a family of 
'instruments which was developed from the Lyra da braccio during the 
Renaissance); the Violino was the soprano of the family and was 
often used together with the cornett as a solo instrument in the 
early baroque. Its tone-quality is more similar to that of the 
present-day viola than that of its successor the violin." (sic)

The backbore of a mouthpiece is defined as "sharp edge in the mouth­ 
piece cup, where the cup ends and the mouthpiece tube begins." 
Later on, however, we are told that the backbore "varies between 
3-4mm .... and 6-7mm" while, on p.120, we are also told that "the 
backbore of the Vienna mute cornett nr.4067 has been enlarged .... 
so that the instrument can best be played with the side of the 
mouth." (He obviously doesn't know the difference between "throat 
or shoulder", "backbore", and "cup diameter"). Mr Overton laments 
the fact that the term "Zink" is "hardly used today outside German-

There follows a long chapter on the history of the cornett, 
organised according to the hotch-potch conclusion-jumping principle 
often favoured by writers of organological monographs, which devotes 
a lot of space to irrelevant Roman brass instruments but never 
mentions folk cornetts such as the tuohitorvi or rozhok, whose 
construction, proportions and playing-technique are directly relevant. 
Any object in early pictorial sources placed in or near the mouth is 
taken to be a cornett and miniatures of musical lions are cited as 
evidence of playing technique. (Just how many fingers do lions 
have, anyway?) Mr Overton does not know what a pipe and tabor is — 
several perfectly clear examples supposedly provide evidence here 
of a tradition of "playing the cornett and a second instrument simul­
taneously." Indeed one wonders whether he is familiar with any 
early instruments at all — the large two-manual Flemish harpsichord 
in Jan Brueghel's Hearing is called a "spinett" and there are 
continual references to "Trompete" when the illustrations referred 
to clearly show slide-trumpets or even trombones. Much, much 
worse in the context of this book is the fact that he can't tell the 
difference between straight and mute cornetts either, for he says 
three times that the diritto in the Hearing picture, with its 
beautifully clear separable mouthpiece, is a muto. A great theory 
of the medieval cornett is built up purely on the basis of a wind 
instrument — here defined as a cornett — on the "Bernward Pillar" 
of circa 1015 in Hildesheim Cathedral. Overton believes implicitly 
that this shows the classic form of the cornett at least as early 
as 1015. In fact the relief, as his own illustration shows, could be 
of just about any wind instrument, held in a very peculiar manner — 
certainly not the real playing position...
it showed "nett, curved to the left" with six fingerholes. Apart from the lack of realism, detail and natural perspective in the relief, it's hard to see how anything depicted other than vertically on a pillar of 58cm diameter could be anything other than curved. We very much need to know more about the medieval precursors of the cornett, but such groundless speculation doesn't help.

A French print of 1493 is stated on p.24 to show a solo performance. By p.92 this has become a duet. The illustration, his nr.33, is tiny and unclear. The instrument is not held like a cornett. The supposed "further spectators arriving [at the theatre]" are in fact prospective customers at a clearly signposted brothel ("Fornices") being chatted up by its employees. Perhaps this does have something to do with duets?

Three conflicting versions are given of the normal range of the cornett. Mr Overton informs us that "all the 8-sided cornetts shown [by Praetorius] have a thumb-hole and six finger-holes" but then reproduces Praetorius's cut of a tenor with a thumb-hole and eight finger-holes. He claims that early theorists don't deal with the alto, ignoring Praetorius's auto in 46 and showing that he hasn't read Mersenne, to whom he devotes only about ten lines in his whole book. The wishful-thinking school of iconology is at its worst when the racket in the Mielich miniature of the Munich Hofkapelle under Lassus turns into a cow-horn. (Has Mr Overton ever actually heard a cow-horn, or stopped to think whether it would sound well in the Busspsalmen or could even play the notes?)

Spellings and dates of composers and their works vary wildly and unaccountably from page to page, nearly and modern authors are misquoted, quoted out of context, sometimes deliberately twisted to suit the argument, and far more is taken from Karstadb's AMF article of 1937 (!) than is ever acknowledged, with many of his errors perpetuated and more misunderstandings added. A roll of honour can be made of leading players who are not in the list of present-day performers — Dickey (!), Canihac, Eichorn, all the English players — but then the book never mentions Dalla Casa, Bassano or Bismantova either. (Flautists or violinists might like to imagine histories of their instruments which didn't mention Quantz, Boehm, Geminiani, Paganini ...) The only sources mentioned for historical articulations are Agricola and Ganassi, as part of an extremely vague and tendentious discussion of playing technique. Indeed the history and use of the cornett in its heartland, Italy, is very thinly covered. The book deals almost solely with Germany.

Modern cornett-making is disposed of in a confused description of German factory methods — steam-bending, impregnation with resin, cork-lined mouthpiece sockets and so on. (We are told that slices are sawn off the end of the finished instrument — salami-wise? — until the correct pitch is reached!) Why not discuss historical methods of construction? Mr Overton seems unclear as to whether the halves of curved instruments were bent or sawn to the curved shape: "The normal method of manufacture for the curved cornett was to bring two pieces of wood into a curved form and then to carve out the bore." (In fact it is important for the stability of the glued joint that one use a single piece of wood, which is halved, gouged out, and then re-glued, rather than two separate pieces.) We are told that "the sort of wood was chosen according to personal taste instead of for its characteristic sound," (What is this supposed to mean?) A bit later we are told that "a similar process is used in the modern manufacture of cornets as in earlier times, except that today they are built in mass production." This is just not true! Here is his description of the modern process: "For the soprano cornett, a piece of wood first receives the required curve. The tenor cornett and the serpent are made out of several pieces glued together. The piece of wood is then hollowed out and impregnated with resin. In doing so, larger pieces are usually prepared..."
The hollowed-out halves of the instrument are then glued together, after which the glue must dry for a time. Then the wood is given either the eight-sided form of the soprano cornett or the round form of the serpent. Etc, etc.

The choice of museums in the survey of surviving instruments is bizarre: Paris, Munich, Nuremberg, Vienna, Brussels, Copenhagen, and The Hague. Why waste time on Copenhagen and The Hague while omitting Berlin, Leipzig, Hamburg (!), and all Italian collections? In spite of being incomplete, his listings are entitled "On the stock of instruments in European museums" without qualification and he draws statistical conclusions on the basis of this incomplete survey — for example "Paris has the only two alto cornetts."

The list of instruments in Brussels is also incomplete — it omits numerous instruments, including two mute cornetts which are among the gems of the collection.

Although he has examined well over a hundred cornetts, he seems never to have looked inside one at all, for he says that the bore expands regularly from top to bottom, forgetting the constriction at the throat and showing again that he hasn't read Mersenne, who reports that the bore consists of two different cones. We are told on p. 125 that the Brussels instrument nr. 1208 is round, but given a photo (p. 248, nr. 14) showing it to be a normal 8-sided cornett. Similarly, we are told on p. 115 that the Hetsch straight cornett in Nuremberg (MIR 34) has no key but given a photo (p. 244, nr. 13) in which a key is clearly visible.

The table correlating lengths with pitches might have been illuminating, but it is utterly unreliable for several reasons. 19th and 20th century "copies" have been included and the pitches were arrived at using whatever mouthpieces happened to be lying around the museums, for all 115 mouthpieces are assumed to be original — like reeds and strings, perhaps? (Vague generalizations about mouthpiece designs are made on the basis of this assumption.) The dimensions given are often wildly at variance with those in museum catalogues or in the files of leading modern makers, but there seems little point in comparing them with those of other researchers — they are in themselves so inconsistent as to be useless.

Ridiculously, we are given external diameters at the top and bottom of each instrument, but not internal. Instead we are given the "thickness of the wood... (wood and leather)" and are presumably expected to double it and subtract it from the external diameter to arrive at the internal diameter. Of course this fails to take into account that most cornetts are not round! Similar chances of cumulative error are greatly increased when, against all sensible precedent, he specifies finger-hole positions by measuring from one hole to the other, not from the end of the instrument to each individually.

On p. 75 we are told that the length of an instrument is arrived at by subtracting the inside curve from the outside curve to get the medium length. This would make a normal curved cornett about one (sic) centimetre long! Presumably he means that one should take the average of the two curves, except that on p. 105 he defines length as "the distance in a direct line from the mouthpiece end to the foot." What is one to make, then, of the following sets of measurements?

<table>
<thead>
<tr>
<th>Instr.</th>
<th>BNM Mu98</th>
<th>BNM Mu104</th>
<th>Paris E2203</th>
<th>Paris E138</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length:</td>
<td>38.5</td>
<td>54.4</td>
<td>56.1</td>
<td>56.2</td>
</tr>
<tr>
<td>Inside curve:</td>
<td>40.8 (sic)</td>
<td>54.0</td>
<td>56.2</td>
<td>56.2</td>
</tr>
<tr>
<td>Outside curve:</td>
<td>38.8 (sic)</td>
<td>55.4</td>
<td>57.9</td>
<td>57.8</td>
</tr>
</tbody>
</table>

(Measurements in centimetres. These are all curved cornetts. BNM = Bayerisches Nationalmuseum, Munich.)
and pitches jumbles up these various "lengths", together with inside and outside curves of cornetti curvi and tube-lengths of straight instruments. Not surprisingly, the pitches thereby arrived at are frequently very different to those produced by expert players and many are acoustically impossible. Instruments of identical length are assigned greatly differing pitches and vice versa, and we are told that five instruments in Vienna "belong together as regards pitch"— the pitches are namely: B, B, A, e flat. A very suspicious number of original instruments are claimed to be pitched at exactly a=440 Hz.

Himself a horn-player, Mr Overton would (therefore?) have us believe that the cornett mouthpiece was normally placed centrally on the lips. As evidence he adduces a number of pictures having nothing in common beyond minuteness or vagueness, which don't prove anything either way. Eighth-century depictions of oliphants are dragged into the discussion of early-Baroque embouchures, although clear and detailed paintings by various followers of Caravaggio (1597-1610, not 1565-1608 as here) are ignored. (Such oliphants are 800 years away from Gabrieli and Monteverdi.) Early written sources are said to be "almost completely silent on this topic." This is just not true. Mersenne, Speer and Bismantova, in three different countries and periods, all state clearly that the mouthpiece was normally placed at the side, although they make allowances for individual peculiarities and preferences. Mr Overton either doesn't know these sources, can't read them, or pretends they don't exist. (It is worth mentioning that Bismantova was himself a player and that Mersenne and Speer got their information directly from players.)

Absurdity reaches a truly sublime level when we hear that instruments and embouchures were left or right-handed depending on which side of the music-stand or church the player usually stood. (This supposedly explains the "unusually high proportion of left-handed instruments in the museums," a statement which carries no statistical weight because Mr Overton has examined only some of the surviving originals.) Someone seems to have been pulling his leg— this is a well-known cornett-player's joke, like the one about "They're curved so they won't roll off the bar." (Whether an instrument was curved to right or left was not determined by which hand the player had uppermost either, as numerous iconographical sources prove—it was a matter of personal preference. The present reviewer plays left-handed instruments exclusively and finds them much more comfortable than what is anachronistically supposed to be "normal").

The extremely inaccurate repertoire-list is a scissors-and-paste job seemingly based on publishers' catalogues, especially of Musica Rara, and is full of gross mistakes in titles, dates and instrumentations. Some of the editions quoted are very much out of date and have been superseded, while others are more suited to army bands than to people concerned with authenticity and scholarship. Composers' dates are frequently vague—often just "late 16th century" or the like, when they are in fact known even to the day and could have been got from standard reference works. Overton seems to have made no use at all of RISM, Sartori or Brown.

For those who like colourful instrumentation there is a piece supposedly for the bizarre combination of "cornett, viols and triangle", but such resourcefulness doesn't stop Overton misdating Bach cantatas by up to 16 years. The titles of Gabrieli's 1597 and 1615 collections are both misquoted and the violins specified in the original instrumentation are ignored. Marini's Affetti Musicali and various other chamber works, e.g. solo or trio sonatas, are stated to be scored for "violino o cornetto e orchestra" (sic). The instrumentation given for the Lassus Ausspsalmen forgets the voices. We read that J.C. Horn lived —— from 1660 to 1676 — actually the dates of his Parergon
Luigi Rossi (here 1597 to 1598 or 1599, depending on the page 47) was already producing "trio sonatas" in 1607, but appears to have been trumped as a boy prodigy by Salamone Rossi (here 1587—circa 1630), whose first publication is given in RISM as 1589. (Luigi actually wrote no trio-sonatas and died in 1653. Salamone was probably born in 1570 and did publish trio-sonatas from 1607 onwards — and of course Mr Overton hasn’t heard of RISM.) Among the relevant composers omitted from the list of repertoire are Banchieri, Kemps, Kindermann, Riccio, Scheidt, Virgilliano, Walter, Balsa Casa, Bassano, Rognioni, Rognoni etc.

The list of players omits all the important Venetians, but includes such splendidly informative entries as "Michel, (?-?); cornett-player. Demonstrably in Nuremberg about 1575" and "Cellini, Benvenuto (1500-1577), cornett-player. He was considered to be a first-rate artist." and "Johann Martin Caesar (?-?"

The book closes with photos of about 60 iconographical sources and about 130 surviving instruments. With the exception of a few shots of details, these reproductions are all very small. For example, normal treble cornets are reproduced about 6 or 7 centimetres long, at which scale they all look alike. Significant detail, such as the tooling which is so important for determining provenance, is completely invisible and it isn’t really possible to see more than that a given instrument is right or left-handed and has a certain number of fingerholes. (Even the latter is not always clear.) The instruments could just as well be plastic ones for all one can see. What is the point of such photos, which serve no useful practical or scholarly purpose?

Similarly, the photos of iconographical sources are very often too small for one to be able to say more than "unidentifiable wind instrument" or at most "well yes, it could be a cornett." For example, the Mielich miniature of the Hofkapelle Munich under Lassus and Jan Brueghel’s Hearing are here both reproduced 7½x5½ cm — it’s only just possible to make out that the various smudges are musical instruments. (In one or two illustrations one can only just make out human figures, let alone instruments.) The fingering-chart from Majer’s Museum Musicum is illegible as given here.

As mentioned already, numerous instruments identified as such by Overton are definitely not cornetti. The information provided about these iconographical sources is completely inadequate. Most importantly, we are not told from which publications he has taken them — several are in fact from Karstädt — so that it is often only by chance that one can check up on him. However, most of those he actually reproduces are well-known and there are no exciting new discoveries. The really significant detailed close-ups of cornett players in Italian paintings of the early 17th century, which recent research has turned up, are unknown to him — he seems not to have worked in photo-archives at all.

Although he was still collecting information in 1979, Mr Overton is totally out of touch with recent work in his field. Among the relevant authors whose works he has made no use of are Gouse (thesis 1974), Dickey/Leonards/Tarr (Bismantova translation 1978), Baines (Woodwind Instruments, Brass Instruments), the GSJ, Denis Arnold (various works on Venetian music), Selfridge-Field (Venetian Instrumental Music, 1975), H.M.Brown (Embellishing 16th-Century Music, 1975), Instrumental Music, 1967, Sixteenth-Century Instrumentation, 1974) Christopher Monk (articles on playing technique in Early Music, 1975, which stress that very few
mouthpieces in museums are genuine), Horsley (articles on articulation, 1951 and 1960), etc, etc, etc. Overton’s preface doesn’t acknowledge contact with any other researchers or with players, and the only maker with whom he seems to have been in touch is Moeck. For this he pays the penalty — any halfway serious player or researcher could have picked him up on the howlers if he had bothered to consult with them before publication.

It is quite an achievement to pack so much misinformation into just one book --- a disgraceful shambles, a travesty of what real scholarship should be, casting serious doubt on academic standards at the University of Cologne and on Schott’s discrimination in publishing it. The threatened English edition should be quietly abandoned.

**FOOTNOTES**

1) **p.12.** See also p.35: “Violine — gemeint ist nicht die heute gebräuchliche Violine, sondern ein der Viola ähnelndes Instrument.”

2) **p.92/93:** “im Markusdom zu Venedig .... für die gebräuchlichen kirchlichen Instrumente gedacht: Zink, Posaune und Vielle.”

3) **p.142.** “in den polyphonen Tanzsätzen” — his footnote then refers to ANC 59 a and 59b, respectively the Lamento di Tristano and a Saltarello from BM add.29987.

4) **p.140.** In fact Orfeo ed Euridice was first performed on 5th Oct. 1762.


6) **p.251 (index):** “Aerophone mit Lippen­vibrato (engl.: lip vibrated, lip reed)”

7) **p.91:** “Das Wort 'menstralsy' ist hier wichtig, da es das Verb ist, das sich aus dem Wort 'menstral' herleitet ....” Overton gives the relevant quotation from Octavian Imperator on p.21: “Ther myghte men here menstralsye/ Trumpys, taborns, and cornetty crye.”

8) **p.74.** Can he be thinking of the half-finished instruments in Brussels? These drawings are reproduced directly from p.72 of Overton’s text.

9) **p.55, note 36:** “... ein neues Kleinfingerloch ... die zwei Kleinfingerlöcher...” His own measurements (p.243, nr.5) make clear that this is a normal cornett. On p.75 he seems to suggest thumb-hole venting on the cornett on the recorder: “...ein abgenutztes Daumenloch.”

10) **p.25/26:** “... der Zink... wurde ... alsbald in West- und Nordeuropa verbreitet ....... Aus dem späten 16. Jahrhundert datiert gleichfalls ein verzierter eifernahem Zink, der sich jetzt im Musikhistoriska Museet zu Stockholm befindet.”

11) **Speaking of a performance by the Nuremberg Stadtpfeifer in 1577, he says:** “Auf den beiden Altpommern und auf dem Zinken lissen sich chromatische Melodien spielen, während der Basspommer und die Trompete die Begleitung übernahmen.”

12) **p.80:** “Ein guter Zinkenspieler konnte ...... ein Glissando blasen, das jeden Ton einer Tonreihe einschloss. Die Möglichkeit zu einem Glissando war in der damaligen Zeit nur bei wenigen anderen Instrumenten gegeben, nämlich bei der Violine und bei der Posaune. Der Zink erwies sich aus diesem Grunde als ein ideales Begleit­instrument für den Gesang.”

13) **When one thinks how many excellent books in this field were originally doctoral theses!!**

14) **The other is the Basler Jahrbuch für Historische Musikpraxis, V, 1981, which appeared during 1982.**

15) **p.10:** “...eine Trompete mit Ventilen”. As Jeremy Montagu has reminded me, the modern trumpet is in fact a
cornet (modern sense) with valves! [19] The term cornetto (modern sense) with valves! [20] and cornetto bianco are also omitted. [20] p.12: "Violino: kleine Viola (Viola ist der Gattungsname für eine Instrumentenfamilie, die während der Renaissance aus der Lira da braccio entwickelt wurde); das Violino war der Supran der Familie und wurde im Frühbarock gemeinsam mit dem Zink häufig als Solinstrument verwendet. Seine Tonqualität ähneln der der heutigen Bratsche mehr als der seiner Nachfolgerin, der Geige." [21] p.12 [22] p.76 [23] p.120: "...die 'Backbore' des Mundstücks erweitert ... bessert konnte das Instrument am besten mit der Seite des Mundes gespielt werden." [24] p.10. [25] p.11: "Cornette, Cornetty, Cornet (im 20. Jahrhundert Cornett)." [26] p.11, p.20. This is because he can't understand the middle English he quotes on p.21. (See my footnote 9.) (27) p.12, and we are also told without explanation, that the word "serpent" is the 16th-century designation. [28] p.12 et al. (29) Including the following non-sequitur: "Wenn man Vegetius folgt, benutze die römische Armee ebenfalls Tierhörner[sic] als Signalinstrumente: "A tubicines omnes vigiliae committuntur et finitis horis a cornicines revocantur." (p.13) (30) Also omitted are the alphorn and the midwinterhorne, --- their construction and proportions make them far more relevant than the oliphant --- and the Swedish cow-horn, which might have told him something about the possibilities, positive and negative, of the medieval finger-hole horn. Numerous instruments are treated whose only relevance to the cornett is that they are also lip-vibrated aerophones. [31] p.19 (32) For example, his illustration nr.39 and his comments on it on p.24. An easily accessible reproduction of this is to be found on p.24 of Munrow's Instruments of the Middle Ages and Renaissance. Overton identifies the instruments depicted as "eine Cornemuse oder einen Dudelsack, Chalemelles oder Schalmeien und einen Zink." How many clearer depictions are there of a pipe and tabor? See also his illustration nr.34 and the comments on pp.20, 23, 56, 57 and 89. [33] p.20 et al. (34) p.34 e.g.: pp.23, 55, 56, 57 and illustrations 34, 43, 44, 45, 46, 47. On p.24, note 18, we are told without qualification that 'Oboen' were in use in 1565. [36] p.34, 202, 234. Page 34 also states that the tenor cornett in this picture is on the same stool as the supposed mute is under. The various interesting small horns on one of the tables are not noticed. (37) p.222: "Christus-Säule von Bischof Bernward"; p.90; "Bernwardsäule". (38) p.90 could be taken to mean that Bishop Bernward constructed the pillar himself; "als Bernward einen Zinksänger ... zeigt." (39) p.18; p.196 (40) The "nachthorn", "taghorn" and "kolshorn" pieces by Hermann of Salzburg (cf p.20 of Munrow's Instruments....) are not discussed. (41) cf. also my footnote 50 (re pp.24-5) p.37, 90, 92. p.48 (42) Illustration 60, p.235. (43) p.68-69. He forgets that he has himself mentioned this instrument on p.48, 47 pp.48-49. (44) p.32. The bowed instruments in the miniature are also miscounted. (45) For example: "Pertotini ... aus Venedig" (p.52) becomes "Perottini ... aus Verona" (p.169). "Ascano" (p.52) becomes "Ascanio" on p.169. Hans Rausch enters the employ of the Munich Hofkapelle in 1530 (p.27) --- he is "Hans Rauch" and the date 1503 on p.171. Giovanni Gabrieli is born circa 1554 (p.35) or 1557 (p.140). Marini is born circa 1590 (p.35) or 1595 (p.142). Legrenzi born 1625 (p.37), or 1625 (p.147). Stradella born 1641 (p.37) or 1642 (p.144). Praetorius born 1575 (p.47) or 1575 (p.143). Gabrieli's "Sacrae Symphoniae" (sic, p.35) are spelled "Sacrae Symphonie" (sic) on p.140. (46) The following are some examples: p.21: Various quotations from middle-English sources are taken without acknowledgement from Karstädt and mis-spelled. pp.25, 35-56, 89, 90, 92 (footn.45): quotations from Praetorius, with numerous omission, misreadings and mis-spellings. He cannot tell "n" from "y" in the old German type.
p.36: He quotes Grout's History of Western Music on Marini's violin sonatas (Grout pp.300ff). Grout's "rubric" becomes "Titelblatt" and his "two of the earliest sonatas for violin and continuo" becomes "das erste Stück für eine Solovioline."

p.47: The title of Artusi's L'Artusi overo delle imperfettioni della moderna musica is given as "Delle imperfessione della musica." (This mistake copies Karstadt p.417.)

p.47: Coryat's famous description of Venetian music-making in his Crudities (here:Gudities) of 1611 contains numerous mis-spellings here and a long omission alters the sense, making it appear as if instrumentalists other than the two theorists sang to their own accompaniment.

p.74: Karstadt is quoted as saying that the leather covering on cornetts was to protect them against the influence of the weather ("Witterungseinflüssen"). Karstadt actually says "Temperature and knocks" ("Temperatur und Stoss", Karstadt p.403.)

p.87: A quotation from Praetorius — full of mis-readings — on the subject of "falset" notes below the normal range of the instrument is used to substantiate the statement that Praetorius thought the second octave and the high register were the best-sounding range.

p.88: The quotation from Praetorius does not say that cornetts doubled the top voice of the choir at the octave(!).

p.89: The quotation from Praetorius is not only inaccurate but is also taken out of context. Praetorius is not here talking about learning to play but about the necessity of warming up before a performance.

p.90: The quotation from Praetorius is taken to mean the exact opposite of what it actually means. Praetorius (Vol.III, p.149) is here quoting Aggazari, whose opinion he wants to contradict! (Aggazari is against the use of the cornett in "stillen, guten und lieblichen ... Music", while Praetorius contends that it can be used if the player is good enough.)

pp.24-25: Selective quotation from Halliday's Shakespeare Companion is used to suggest a noisy, almost riotous, audience in the Elizabethan playhouse — the quotation from Busino's (here: Busino) account of his visit to a London theatre in 1617 omits the words "listening as silently and soberly as possible." (Halliday, p.44) Overton also omits Halliday's statement: "...but recent research discovers an audience made up for the most part of eager and attentive listeners..." (Halliday, p.43) What Overton is here trying to prove is that the wind instrument in his illustration nr.33 can only be a cornett because a recorder would not have been loud enough: "Ein Zink, nicht aber eine Blockflöte, wäre durchdringend und kräftig genug gewesen, den Lärm zu übertönen..." (p.25) He thus ignores the numerous stage directions and other sources which prove the use of the recorder in the Elizabethan theatre and seems to have forgotten his own footnote on the previous page which quotes one! (under Bödecker): Quotations from Sittard's Zur Geschichte der Musik und des Theaters am Württembergischen Hof (1890) are given in such a way as to make them appear to be direct quotations from 17th-century sources.

For example: p.20, footnote 2 (Karstadt p.395)

p.21 5
p.22 10
p.51 11+12

p.32: "grosses Krummhorn" repeats Karstadt's misinterpretation of "Cornetto grosso storto" (Karstadt, p.418). Karstadt is also the source for various unacknowledged entries in the list of iconographical sources.
The list is a musical generation out of date. Although, without realizing it, he gives Dalla Casa in his list of players as "Hieronymus von Udine" (p. 177).

Why confine one's observations to the Moeck factory? While Overton was writing, two of the very best contemporary cornett-makers had their workshops only a bus-ride away from the University of Cologne. The two photographs illustrating modern cornett-making are very strangely chosen — the instrument shown has an atypical curve and number of diamonds and a huge, metal mouthpiece; we see only the enlarging of a finger-hole and someone playing into a tuning-machine. Why not illustrate processes peculiar to the cornett, such as the way in which the halves are carved out? (56) p. 79: "Durch Abschneiden kleiner Teile am Mundstücksende wird der Zink schließlich auf die geeignete Länge für die gewünschte Tonhöhe gebracht." (57) p. 72: "...zwei Holzstücke in eine gekrümme Form zu bringen ...


p. 192 and Nr. 190. (64) p. 72: "Gewöhnlich kam das Rohr des Sopranzinken einem sich gleichmassig erweiternden Konus von 1cm [sic] bis zu ungefähr 2,5cm gleich." (65) Mersenne p. 274.

Wrongly numbered 1268. (67) The abbreviations used, incidentally, are English although the rest of the book is in German. The abbreviations for mouthpiece dimensions are never actually explained. (68) Instruments (in his numbering): Bx2, Bx3, Bx4, Bx15, Bx33, N10, N12, N17, N3, N4. (69) p. 83. Some of the mouthpieces shown in his illustrations are positively bizarre. He disputes the authenticity of the mouthpiece of the Vienna instrument B20 (=A241 =4076), which is generally accepted as being an original (p. 121). He tells us that the mouthpiece with an instrument in the Stadtmuseum, Munich is made of ivory although it is black in his own photo (p. 121; photo p. 242). (72) The measurements are on p. 111, those from Paris on p. 107. (74) For example: p. 115: Nuremberg M139 is said to be in A' with a length of 43,00 cm, while on p. 121 he tells us that Vienna 219 (=A230 =4062) is "in b" with a length of 43,2 cm. Similarly, we are told on p. 128 and on p. 120 that Brussels 473 and Vienna 224 (=235 =4067) are "in b" with lengths of 41,00 cm and 69,2 cm (should be 59,2) respectively. For further examples, see his table on p. 78. (75) pp. 120-121. The instruments are those he numbers Nr. 15, 16, 17, 19, 20. (77) pp. 82-83. (78) p. 33. (79) pp. 81, 82. (80) pp. 84-85, 206. "Der seitliche Ansatz ... der sich aus der Position des Zinken in Verhältnis zum Notenbuch erklärt." (p. 206). (81) p. 85 (82) p. 137. Similarly unfortunate is his suggestion on p. 97 that Kalenda Maya is a suitable piece for the cornett. This is one of the few medieval pieces whose instrumentation we know in detail — it wasn't for cornett! Overton also suggests Estampies
and Not: some organs are suitable for the cornett. One wonders if he's tried them. (63) p.138. One should compare the dates given here with those in The New Grove, for example, (84) p.140, (85) pp.142-143, entries under Marini, Merula and Pietragura should be 'Pietragura'. (86) p.156. (87) p.141 (88) p.36, p.143. (89) p.143 (90) p.167. "Michel, ? (?-?) Zinkenist. Um 1757 in Nürnberg nachweisbar." (91) p.154. "Cellini, Benvenuto (2500-1571), Zinkenist. Er galt als Künstler ersten Ranges." (92) p.154. (93) p.153. (94) p.159. (95) For example, the last entry on p.203 is in fact plate 3 of the Hennings! Zeugnisse Alter Musik! Photo nr.62 on p.236 is Plate 17 of the larousse Encyclopedia of Music. If the 129 entries in his list of iconographical sources, only five have a reference to his source. How are we to look them up? (96) This is clear from p.160 and from the list of cornett makers on p.71, which is taken without acknowledgement from the present reviewers Cornett and Sackbut, 1, Feb.1979.

Bibliography of works referred to.

- Baines, Anthony: Brass Instruments, London 1976


**Contents of Bouwbrief Nr 29, May 1983**

3.1.: "Between hairs and strings" by Fried Manders. What actually happens when the bow sets a string in motion?

3.2: Construction drawing of a tuning-monochord available from Muziekcentrum "Het Duintje", Bennebroekerdreef 20, 2121 CN Bennebroek. Cost: Hfl 26.60. Also: booklet explaining the use of the above monochord (Hfl 5.50) and fret-placement drawing following the system of Juan Bermudo (Hfl 20.00).

8.1.: Glueing the belly of a gamba, by Fried Manders. A method of preventing the body of the instrument losing its shape between the removal of the mould and the gluing on of the belly.

8.2: Making keyboards for harpsichords. Jan van der Meer.

9.1.: Making wooden planes for violins. Fried Manders. (With drawing)

9.3: Another original French piano-mechanism. Wim Krijger. (cf Bouwbrief 25)

10.1.: Aeolian organs. Harry Zwetsloot. (cf Bouwbrief 25)

For further info, write to the Hon. Sec.