FOMRHI Quarterly

BULLETIN 51
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Membership List Supplement

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FELLOWSHIP OF MAKERS AND RESEARCHERS OF HISTORICAL INSTRUMENTS

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FELLOWSHIP of MAKERS and RESEARCHERS of HISTORICAL INSTRUMENTS

Bulletin 51

April, 1988

It is beginning to look as though 1988 isn't going to be our year. We're having one cock-up after another. First there was the late, late posting of Q 49. That was followed by a pretty late posting of Q 50. And then, only last Thursday (Maundy Thursday), after I got back from holiday and didn't find a great pile of renewals waiting for me, I rang Eph and asked when the reminders had gone out. He said "They're going today" - and that was the date that I'd set as the deadline for things for this Bulletin! It also looks suspiciously as though none of those who have sent their renewals since Q 50 went out have been sent that Q (Barbara is checking this with Eph; the trouble is that she hasn't been sent the stock so that she could do this and we rather doubt whether Eph has thought to do it; it's not normally part of the job that's done in Manchester). I've had to warn Eph that if these cock-ups go on too far, FoMRHI will need a new Hon. Sec. (there's a limit to what I can stand) and that it'll probably need a lot of new members, too, as there's likely to be a limit to what you can stand, also.

Apparently what has been happening is that Djilda has opted out of organising much of the donkey work (she used to tell the various part-time people who worked for NRI what to do for FoMRHI), and it's taking time for Eph to find out what should be done, what hasn't been done, and how to organise things so that it will be done.

So can you and I please be patient for a bit longer and give him a chance to sort it out?

LIST OF MEMBERS: One result of the failure to send out reminders is that we still have only just over half of the membership renewed. There seems little point in producing a List of Members at this stage; the next Supplement would be almost as long as the main List. So the main List is postponed until July. I hope this won't cause you too much inconvenience; you are up to date if you use the Supplements.

LOST MEMBER: Anybody know where Alessandra Fadel has moved to? And we've still not traced Clive Du'mont.

FURTHER TO: Bulletin Supplement in the last Q: I can do fully justified proportional spacing on this machine, too. It comes out the same size as normal 12 pitch (it only works in this one size), and it gives me three or four more letters per line, but I don't like it as much as the normal 12 pitch because it seems to squash things up a bit too much. I don't think that any computer's proportional spacing works as well as proper letter-press does. Still, if you prefer this paragraph, which is in proportional spacing, to those above and below, let me know, and I'll use it in future. I have used it in some Bate publications simply to get things into a limited space, but I normally avoid it.

Comm. 849: See a note from Michael Ransley elsewhere in this Q. Also one from David Leigh of the Conservation Unit, sorting out some of my misapprehensions; do write to him if you want to take advantage of any of his offers.

I have had letters from various people involved in conservation, some of whom are FoMRHI members, and some who have been members in the past. The uniform reaction in their letters is "what business is this of FoMRHI's?", and on reflection, I think they are probably right. I was asked to attend the meeting I told you about, probably because they didn't know whom else to ask (our original name, you'll remember, was F of M & Restorers of M I,
and they were not necessarily to know that it was at the request of the conservators that we changed it to Researchers. Whatever our name, we are more obviously a hands-on-the-instruments group than the various other organological societies, and therefore the likeliest to be interested. But the reactions I’ve had strongly suggest that even if we are interested, and I assume that some of us are, we should not get involved. We are too loosely organised and too informal a Fellowship for anything like this. So my apologies for having raised the matter and perhaps worrying some of you. However, if the Conservation Unit goes on keeping me in touch with what is happening, I will keep passing the news on, since some of you are likely to be interested, but I won’t involve FoMRHI in anything with them.

REVIEWS: You’ll have seen Comm. 854 in the last Q. Remember that once anything has been sent to us for review, anybody is welcome to comment on it. The more extensively books are reviewed, the more useful it is to all of us, for different views are always valuable.

AIDS & REEDS: When AIDS first became a problem, Basil Tschaiakow had a long note in the London leaflet of the Musicians’ Union monthly send-out. He had asked the Ministry of Health and all sorts of doctors, etc, what the risks were for reed-players (who are always swapping reeds to and fro). Most of the time he got no answer, and when he did get an answer, it was the bland assurance that there was no evidence that the virus was transmitted by saliva. Paul Hallperin tells me that he had the same response and that “I got the impression that they consider anything to be impossible which hasn’t yet been demonstrated. For me that’s too late; I don’t want to be the guinea pig. Dr. Elsasser of the Gesundheitsamt I’m not sure if I’ve read his handwriting correctly here) Freiburg told me that the casing of the HIV has been demonstrated to be safely destroyed by 10 minutes in 50% isopropanol. She assumed that 70% isopropanol, which is commonly sold by chemists here, would do it much faster, in no more than 5 minutes. I have been using the latter, and can only report that I have noticed no negative effects on the playing quality of the reeds. The stuff is not only poisonous (because it is highly volatile, my consultants felt it was not dangerous for us) but it has a persistent bad taste, so I find it nice to have a glass of rinse-water at hand.”

I have consulted local chemists in Oxford, and they are happy to sell isopropanol in whatever dilution I want, and have said that if it’s going to be rinsed off in water, there’s no need to worry about it being poisonous. Henceforth, there will be some available in the Bate for use on reeds, and on brass mouthpieces, too. Paul also says that “Bruce Haynes received information that any alcohol [isopropanol is one form of alcohol], e.g. your favorite brand of vodka, would disinfect for a large number of possible diseases that can be transmitted by reed.” So maybe it’s a matter of comparing prices of isopropanol and vodka! Personally, I’m more inclined to follow the first definite medical advice we’ve been given.

QUERIES: Michael Ransley writes: “The Mary Rose was brought up several years ago and with it probably the most important wind instruments to be found in Britain. What has happened to them and why have no detailed drawings (adequate enough for reconstruction attempts) been made and no photos taken? Surely the best way to conserve instruments and ensure their survival, at least in some form, is to make careful comprehensive drawings and photos and then publish them.”

JM adds that for many years a number of us have been very disturbed by this protracted silence, especially with regard to the shawm. We all remember Frances Palmer’s note on the instruments, with sketches of them, in Early
Music, January 1983, and Herbert Myers’s response in that same journal in July of that year, in which he identified the shawm as the mysterious douçaine, pointing out that if it were a normal shawm it would be the unique example in England, whereas if it really were a douçaine, it would be unique in the world and at last our answer to Tinctoris’s tantalizingly vague description. You may also remember my note after the 1983 Horticultural Hall Exhibition when I reported Charles Foster’s tentative reconstruction (p. 7 in the Bulletin of Q 34, January 1984). Anyway, when this Q appears, I’ll send a copy to the Mary Rose people in Portsmouth and we’ll see whether they can produce anything. They are not organologists and if they don’t listen to early music performances, they may not realize just how important these instruments are.

Robert Greenberg asks:

Recently arrived from France and into my shop is a single-manual French harpsichord. It is not in pristine condition, having been reworked many times. One confusing point is the original compass. The keyboard now in the instrument is old but not, like the case, from the late 17th or early 18th centuries. Its compass is Bb-d3. The top two notes have been fitted into the compass by thinning the c3 key and trimming the keyboard sideboards. The balance rail shows no repinning. My confusion starts with the arrangement of the tuning pins of the 2 X 8’ choirs. There is enough congruence with French practice to show that the builder of the instrument knew the staggering of tuning pins according to their being naturals or accidentals. But the pins do not end on the same top note, the top one of the first choir representing a “d” and the top note of the other representing a “c”. The alignment of the pins for each choir proceeds downward according to usual logic to the center of the compass. There it dissolves into alternation of natural and accidental notes rather than following their keyboard layout. In the bass, the typical French representation of the keyboard by the tuning pins is restored. The wrestplank itself seems of an age with the case sides (pine but for the longside, which is walnut). Has anyone seen other such occurrences of nearly-but-decidedly—“wrong” arrangement of tuning pins? I want to call the wrestplank a replacement. But it probably isn’t. Any opinions?
—Robert Greenberg

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REQUESTS: Two from Jan Hermans: Can anyone provide him with plans for Renaissance alto and tenor shawms, preferably at A=440 or 465; he could reciprocate with other drawings. And does anyone know of any museum with plans or drawings available?

And can anyone tell him how to make a clarinet mouthpiece for a 2 or 3-key instrument, or better still could they write a Comm. about it?

Dr. Martha Clinkscale is compiling “a comprehensive database of information on old pianos, 1720-1860.” She has information on “more than 1,650 instruments in major museums in Europe and the United States, as well as in private collections” and would be grateful to hear from anyone who knows of an uncatologued [sic] piano of these dates or who has information on instruments that have passed through salerooms. She will send database input forms to anyone who writes to her at Department of Music, University of California, Riverside, CA 92521, USA. I’m afraid that as far as we are concerned, I’ve not time to fill in her form, which is pretty detailed, even for the three instruments we have.

PLANS AND THEIR PRICES: Jan Hermans ordered some of the Leningrad plans from me and commented: “you won’t mind that I find drawings very expensive.
nowadays. Too expensive? Famous makers who sell instrument(s) every week, can afford." I'd be interested in your comments on this. As most of you know, I put up the prices of Bate plans a year or two ago, from about £2 to about £10. I was influenced by four main factors:

1) the original price was rather insulting to Ken's excellent work (he certainly felt that);
2) other museums were charging a lot more than we were (and we're still not at the top end of the price range);
3) most people who bought plans were selling the resulting instruments at prices in which the cost of the plan was a negligible item;
4) we have no purchase fund, and what we get from plans, guides, postcards, etc is all that we have to buy more instruments with.

Are our prices too high? And if so, what should they be (bearing in mind my reasons above and the fact that I can think of no way of achieving the obvious solution: having one price for amateurs/beginners and another for professionals)? I do think that it is our duty to disseminate information (one reason that I spend time on FoMRHI), but I do also want to build up the Collection, and I don't want to be taken for a ride by those who sell their instruments at high prices. I don't know the answer and I'd be grateful for any helpful comments.

PUBLICATIONS: The NEMA Register that I mentioned last time costs £3.00 and can be obtained from the address I gave: 8 Covent Garden, Cambridge CB1 2HR.

A welcome to a new French contemporary, Larigot, Bulletin de l'Association des Collectionneurs d'Instruments à Vent. The treasurer of the Association is Hugues Molet, 98 bis rue du Cheche-midi, 75006 Paris, France, and subscription costs 100 francs a year, plus 50 francs for airmail abroad. The first issue has an interesting article on early clarinets, with a measured drawing of a bell, and a very sketchy note on the history of brass instruments.

Antico Edition (71 Queen Street, Newton Abbot, Devon TQ12 2AU) have sent me their latest list (printed pale black on brown and thus difficult to read) of early music. So have London Pro Musica (address as for Bernard Thomas in our main List) (printed black on white and easy to read). I know how good the LPM editions are, but not how the Antico compare. However, they don't overlap, so if you don't know either one or both, write for their lists. Both are reasonably priced, but Antico don't seem to do the reduction for quantity which LPM do, enabling the use of a score by each player.

Research Publications, the parent body of Harvester Microform (in the Americas 12 Lunar Drive/Drawer AB, Woodbridge, CT 06525, USA; elsewhere POBox 45, Reading, RG1 8HF, UK) are about to publish microfilms of all our (mostly ex Morley-Pegge) and Philip Bate's own collection of instrumental tutors on microfilm. The whole collection covers ten reels, but I've persuaded them to arrange the reels sensibly so that anyone interested can buy flute tutors, oboe and clarinet tutors, bassoon tutors, horn tutors, and so on, without having to buy the whole lot; because of the economical size of a reel, there is bound to be some combination, so that recorder players will have to put up with having flute tutors as well as recorder, but we have kept such combination to the minimum practicable. I felt that this was important, for these are the prime sources for performance on original instruments in the 18th and 19th centuries, and that it was our duty to ensure that they would be available to players as well as to libraries. I should have a fully detailed list by the time the next Q appears. What is even more exciting is that we have started something with this project,
and that our tutors will be followed by those of other libraries, including the Brussels Conservatoire.

I've had a letter from something called Craftfinder (74 Birdhurst Road, South Croydon, CR2 7EB). This is a computer database, free to craftsmen who wish to be on it (amateurs or professionals), which anybody who is looking for a maker of cuckoo clocks or one-key ophicleides (my examples, not theirs) can consult, for a smallish fee, and they will then be sent a list of those who produce such things. If you want to be on their list, which is in effect free advertising, write and ask them for their registration form.

MEETINGS: The Galpin Society AGM will NEXT year (1989) be in Scotland, with a weekend of meetings in Edinburgh, Burntisland and Dundee. Dates are 16-19 June, and the weekend is not restricted to members of that Society. So if you want a chance to see the major Scottish collections, note the dates and, if you aren't a Galpin member (which you should be, its Journal is still the most important publication in our field) ask Arnold Myers (who is in charge of local arrangements and is in our List of Members) to send you more information nearer the time.

You have already been told of the NEMA Conference on Early Keyboard Music and Instruments. This will be at the Guildhall School of Music in the Barbican on 21-23 July this year, and all the top keyboard people will be talking and playing. The conference fee is £30.00 (£24.00 to NEMA members; if you join, your membership of £10 will cost you only £4 more as you'll be saving £6 of it, so this could be the moment to do so), or £12.50 for any one day (members £10). Book places at the address on the previous page in the first paragraph of PUBLICATIONS.

SUMMER SCHOOLS: The Bate Collection has three this year:

**Javanese Gamelan, 10-15 July**, a chance to get to grips with playing this music, which is not only very approachable but is probably the easiest of all exotic musics for Europeans to learn. The cost is £60 (non-residential), and since numbers are limited by the number of instruments in a gamelan, bookings should be made as soon as possible with a deposit of £30 (50% returnable until 1st June);

**Baroque Oboe & Bassoon, 22-27 July**, with Paul Goodwin, Dick Earle, Lorraine Wood, Andrew Watts and Paul White. A good chance to play on Bate instruments as well your own (at A=415, please). Tuition will, of course, include reed-making, instrument maintenance and performance practice, as well as playing, and doubtless if there were enough demand for some aspects of making, there'd be some response. The cost is £100 (non-residential), booking with deposit of £50 (also 50% returnable till 1st June);

**Renaissance Recorders, 12-15 August**, with Alan Davis and Lewis Jones, using our 11!11! basset, which is unfortunately our only original; other instruments will be by Bob Marvin (Lewis's and ours) and others. Tuition will include subjects much as the previous. Cost £60 (non-residential) (booking with deposit £30 as above).

I would be interested to hear of any demand for other subjects for future years (as well as, I hope, repetitions of these). The more the Bate Collection is used for such purposes, the better I'm pleased, even if it does limit my opportunity for a summer holiday.
dance. Costs are a bit complicated as they depend on whether you're Canadian or not, and whether you want accomodation or not, so if you're interested ask them.

The Corsi di Musica Antica a Magnano (Via Roma 48, I-13050 Magnano, Italy) are 13-21 August and are taught by Bernard Brauchli (clavichord & harpsichord), Esteban Elizondo (organ), and Georges Kiss (harpsichord). One course costs 125,000 Lire, two cost 175,000; whether a third is free or impossible is not stated! Camping or accomodation is available.

OTHER COURSES: Our next Bate Collection Weekend is on Tunings and Temperaments, May 28/29, with Lewis Jones and his archicembalo (played by Patrick Newsom) and Peter Bavington. It will consist of demonstration and coaching in Renaissance, Baroque and Classical temperaments. There will be at least two other instruments to maul about (a Denzil Wraight single-manual Italian and a copy of a Couchet muselaar which we had made for this purpose), as well as a 12-channel monochord (a Jaap Kunst dodecachord) which is useful for experimenting with. The antique keyboards can be set to a variety of temperaments, but they can't be changed to and fro too much. Cost is £20 (£15 for students); I have said £15 for either day as usual, but I'd discourage that if possible; more than most this will be something that should go right through.

Alec Loretto will be with us again in November (12/13) for another Recorder Weekend for Makers and Players (with Alan Davis), with emphasis on windways and tuning.

I'm also holding a weekend (November 19/20) for Lewis Jones on Passaggi etc but I've heard nothing definite yet. If you're interested make a pencil note of it in your diary.

Peter Holman was also talking about having a FoMRHI day conference here on later strings than the one we had with Chris Page and Mary Remnant, but I've heard nothing more from him either.

We haven't any further Weekends fixed yet. Any requests?

I've got the list of Huismuziek courses. If you fancy a day or a weekend in Holland working on pretty well any aspect of any instrument, playing or making, write to them (in our main List under Bouwerskontak) for a copy of the list. They're just as friendly and informal an organisation as we are, but they provide a vast amount more for their members.

EXHIBITIONS: I've had an interesting note from Ardal Powell:

I've just received the Festival of Flanders blurb for this year, and it has reminded me of something that came up at the exhibition in 1987, and which perhaps deserves a word in the Q.

Among the exhibitors in Bruges last summer there was a distinct feeling that not enough people were passing through the hall to justify such a long show. Things picked up as more and more people got knocked out of the competition (83% of our business came from competitors), and at the weekend, but the first three days were very slow indeed for most exhibitors, and the general feeling was that it would decrease the costs and increase the traffic flow to shorten the exhibition by those three days in future years. There may be arguments against this, but I didn't hear any expressed at the time. On the contrary, almost everyone signed a letter to the director asking him to consider the change.
Personally, I don't mind having the few extra days to hang out with other makers and players, go to good concerts and get reaccustomed to Belgian beer, though I think this could be accomplished just as well without having to sit around in an empty hall for most of the day. So I'd just like to suggest that those people who do want a change write to Mr. Dewitte round about now so that he can consider their views in good time for 1990. The address is: C. Mansionstraat 30, B-8000 Brugge.

The Guild of American Luthiers have asked me to say that their next convention/exhibition will be June 16-19 at the Shrine to Music Museum, University of South Dakota, Vermillion. Non-members are welcome; if you're interested to attend, either to hear the lectures etc or to exhibit, write to the Guild at 8222 South Park, Tacoma, WA 98408, USA. The Shrine is building up as a superb museum and well worth the visit.

FESTIVALS: As well as the Corsi above, there is a Festival at Magnano, with five candlelight concerts on August 13, 19, 27, September 3, 10. More information from the address above.

It's probably too late to tell you about the Festival of Medieval Music in Skara in Sweden as it's May 11-15, but there is also a Renaissance Music Week at Ekenäs Castle (25-31 July) and a Swedish Baroque Festival in Malmö (12-19 August, 1989), all organised by the same people. As this is the second festival in Skara, there may well be more and it sounds a pretty interesting affair, with instrument-making workshops as well as concerts and so on. If you'd like to be on their mailing list, write to Mr. Måns Tengnér, Svenska Rikskonsertser, Box 1225, S-111 82 Stockholm, Sweden.

MUSEUM NEWS: Al Rice has sent me a list of the Fiske Museum's accessions for 1986 and 1987, which you'll find here as a Comm. The Bate Collection has just published a complete Check List of the Collection (£2, including surface postage). The entries are single line for each instrument, but it does cover everything we had at the beginning of March so that it's reasonably up-to-date. All that we've acquired since are one of the earliest clarinets in this country (2-key by I.B. Willems, but clearly an earlier generation of Willems than that cited in Langwill), dating from 1720-40, an anonymous classical viola in original state, 2 plastic Kelischek crumhorns, and by next week or so an Ellis Harmonical on permanent loan from the Clarendon Laboratory.

CODA: That's it for now, but I'll hold this open till tomorrow while I do the Members List Supplement. I've done it, and nothing more has arrived. Let's hope that the rest of us do renew between now and July, otherwise we're going to have a somewhat smaller FoMRHI, and therefore a smaller Q — fewer people to write (very little has come in this quarter, and I've not had time to do a New Grove DOMI review) and fewer people to pay the costs. Anyway, thanks to all of you who have renewed by now. I'll see some of you next week in Berlin at the CIMCIM meeting, and I hope to see some more of you at our Summer Schools and in the Bate.

DEADLINE FOR NEXT Q: 1st July, please.

Jeremy Montagu
Hon. Sec. FoMRHI
Late Q  Again there is need for an apology for the lateness of sending out the last Q. My editing and the printing were in good time and the computer produced the labels with no problems. What needed doing was duplicating the renewal reminder notices, putting the labels on the appropriate envelopes (5 types), stuffing them (with receipts when necessary) and mailing them. What happened was an almighty administrative disaster with much confusion and agro. It started with Djilda assigning jobs to various people. She is very enthusiastic about the teacher-training course she is now taking and is rapidly shedding her responsibilities towards NRI (dropping out of the partnership) and other music-related activities, including getting FoMRHI out. It ended up with me taking over, correcting mistakes that had already been made, and doing the vast majority or work myself, including switching labels from reminders to 0's for late renewals as the lists came in from Jeremy. This has been a very unusually busy time for me, and I was not able to devote concentrated time to the job.

Again, I can confidently promise that this problem won't be repeated in the future. In fact, I find it hard to imagine another problem that can delay future O's. But if the members feel otherwise, I will acced to someone else taking over without protest.

Comment on the prices for museum drawings raised in the Bulletin above (p 51) This is a general human problem. All of us are generous under some circumstances and stingy in others. We usually excuse our stinginess by claiming that we can not afford to be generous. Nevertheless, we are most proud of ourselves when we are generous. When we are being generous, we hope that the people benefiting from it will respond by also being generous. When they are not, they are exploiting us. Being exploited hurts our pride and makes us wish that we had been as stingy as the response was. We are all aware that habitual exploiters justify it by saying that people who allow themselves to be exploited deserve it because they are fools. No-one likes to be considered a fool.

In many circumstances where we are dealing with individuals, we can choose between generosity and stinginess according to our assessment of the expected nature of the response. But under circumstances where we are generous as an open policy we do not have this choice. Expecting uniform generous response is unrealistic since there are always some people who will stingily exploit us. If our dedication to principle and the gratitude of the non-exploiting recipients of our generosity are not strong enough to offset the hurt of pride at being exploited by some, we stop our generous policy. This is a great pity. The least we can do about this is to try hard to overcome our inhibitions about showing gratitude when we have enjoyed the benefits of a generous policy.

Strong Early Iron Wire Remy Gug's Comm in this Q is a very welcome contribution to our knowledge about the history of the special ferrous wire that Jobst Meuler made. I do not share Gug's pessimism about Meuler's 'secret'. Of course we shall never know what Meuler's methods were in detail, but his product was most likely not very different from other iron wire of the period. Of particular significance here is that an iron of the same general composition as the antique wire prepared by R M Fischer for Martha Goodway had a tensile strength of over 1600 MPa, as she reported in her article in the 22 May 1987 issue of "Science". This was done with no optimization of the drawing procedures, and yet it is 36% stronger than measurements of the strongest genuine antique wire.

Let us compare this with what we expect the tensile strength of Meuler's wire to be. According to Comm 440, the working string velocity on Praetorius's orpharion, an instrument that presumably used Meuler's wire, was 445 m/sec. If we add 6% for the semitone difference between, working and breaking condition (as stated in 1768 by Adlung) and use the 7.7 Mg/m³ (=gm/cm³) figure for the density of drawn iron wire given by Goodway, this leads to a tensile strength of 1713 MPa. It is quite conceivable that the extra 7% of tensile strength required can be achieved by an optimization of procedures. What is more interesting is to discover the reason for the over 36%
difference in tensile strength between Fischer’s reproduction antique wire and the genuine stuff. Therein may be the essence of Meuler’s secret.

On Accreditation Conservation involves preserving an artifact for future study and appreciation. If the artifact is broken the criterion for future study can be in conflict with that for appreciation since it is often more valuable for study in its broken state but it is appreciated more if it is repaired. Private collectors and museums are much more interested in the appreciation factor than research, so they usually opt for repair if they can afford it. Some who understand the needs of research justify the repair option by claiming that the bits and pieces get lost or damaged if not put together. This displays at least laxity since good conservation practice should involve good storage systems and strict supervision during examination. The above illustrates how the judgement of many of our most respected conservators can be seriously questioned. There would be no question of their being accredited. They are often highly trained and skilled in the branch of repairing that is called ‘restoration’ and we can’t really expect them to exercise objective judgement when the choice is between whether or not they will exercise their special skills to do what they believe they were hired for.

Besides questions of judgement, accreditation in our field needs to include considerable knowledge about the history of the types of instruments involved (and how they were subsequently altered), construction practices, the technology of the materials involved (including how they change with time and how they interact with their playing and storage environments) as well as methods and skills of repair. All this knowledge and skill rarely resides in one person. Accreditation should be only in those aspects of this field that the person is really expert in. Perhaps just a Register that is quite specific about areas of expertise and experience is called for, with accreditation being too difficult to contemplate.
NEW ACQUISITIONS TO THE KENNETH G. FISKE MUSEUM OF MUSICAL INSTRUMENTS OF THE CLAREMONT COLLEGES FOR 1986 AND 1987

Pinculio, an end-blown flute of Bolivian origin. Gift of Albert R. Rice. 1986.1

Violin possibly of Mittenwald origin, late 19th century. Gift of Juanita Jones. 1986.2


Violin by Breton, Paris, 19th century. Gift of Paul Gregory. 1986.4


Hammered Dulcimer (called "Piano Harp") table model by James A. Mackenzie, Minneapolis, Minnesota, c. 1878. Gift of Donald Ambroson. 1986.7

Clarinet in B-flat (Simple System) by H. Farny & Cie, Paris, c. 1900. Gift of Emily Roeder. 1987.1

Clarinet in A (Boehm System) by H. Farny & Cie, Paris, c. 1900. Gift of Emily Roeder. 1987.2

Cornet probably by Hall & Quinby, Boston, c. 1870. Marked: "2 Ms. Inf. 1861". 1987.3

Serpent Forveille with three keys probably by Forveille, Paris, c. 1830. 1987.4


Soprano Trombone with three rotary valves by A. Lapini, Florence, 20th century. 1987.6

Trombone in the shape of an "L" with three perinet valves by H. van Engelen, Lierre, Belgium, 20th century. 1987.7

Trombone with three Vienna valves operated by three pistons by F. van Cauwelaert, Brussels, 19th century. 1987.8

French Horn with three Vienna valves of Austrian origin, c. 1895. 1987.9

Euphonium with four rotary valves of Austrian origin, c. 1870-1900. This instrument is made in the same shape as the "Wagner" tuba. 1987.10

Cornet in B-flat by Issac Fiske, Worcester, Massachusetts, c. 1870 with a tuning slide, 2 mouthpiece shanks, mouthpiece crook, and mouthpiece in the original case. Gift of Scott Brebner. 1987.11


Cornet in B-flat by H.N. White, Cleveland, c. 1950. Gift of Scott Brebner. 1987.15
Trumpet by Conn Ltd., Elkhart, c. 1948. Gift of Scott Brebner. 1987.17
Cornet by F.E. Olds and Son, Los Angeles, c. 1940. Gift of Scott Brebner. 1987.19
Cornet by F.E. Olds and Son, Fullerton, California, c. 1955. Gift of Scott Brebner. 1987.20
Cornet by Continentaal [Conn], c. 1940. Gift of Scott Brebner. 1987.21
Violin by Andrea Guarneri, Cremona, 1672. The scroll is not original but made by a contemporary Italian maker. Certificates by Erich Lachmann and Passauer Ferron. Anonymous Gift. 1987.27
Violin of Italian origin, c. 1900. Anonymous Gift. 1987.28
Metal Clarinet in B-flat by H. Bettony, Boston, 1928. Gift of Jack Fulton. 1987.35
Trumpet in B-flat with a small bore by The Vega Co., Boston, c. 1915. Gift of Alexander Billincoff. 1987.36
Rebec of Italian origin, 18th century. A copy of a 16th century instrument. Loaned by James Tyler. 1987.38
Mandolin of the Presbler School, c. 1785. Loaned by James Tyler. 1987.39
Clarinet in B-flat (Simple System) by G. Renne, Paris, c. 1930. Gift of Billie Pate in memory of her mother, Elaine Swanson Pate. 1987.42
Square Piano by Chickering & Sons, Boston, c. 1862-63. AAA-a'. Gift of Frances Walker. 1987.49
Trumpet by F. E. Olds, Los Angeles, 1953-54. This instrument was made for the well known recording artist, Mannie Klein. Gift of Mannie Klein. 1987.50
Portable Reed Organ of Chinese origin, c. 1900. C-c'. Loaned by Mr. and Mrs. Roy Mathison. 1987.51

Instruments on loan from Dr. Jack R. Coleman, Los Angeles, California:

Flute in C by Proser, London, c. 1777-95. 1 key.
Glass Flute in C by C. Laurent, Lyons, 1814. 5 keys.
Walking-Stick Clarinet byt L. Rousseau, le jeune, Paris, c. 1840. 5 wooden keys.
English Horn by J. B. Tabard, Lyons, 1820-48. 7 keys, angular form.
Clarinet in C by Naust, Paris, c. 1780. 5 keys.
Clarinet in C by Astor, London, c. 1785. 5 keys.
Oboe by J. C. Selboe, Copenhagen, c. 1850. 14 keys.
Oboe by G. A. Lenhold, Leipzig, 4th quarter of the 18th century. 2 keys.
English Horn by A. Grenser, Dresden, c. 1770. 2 keys, sickle-shaped form, brown leather covering octagonal body.
Natural Trumpet by J. Schmidt, Nuremberg, 1685.
Valve Bugle by E. G. Wright & Co., Boston, c. 1865.
Cornet by C. A. Mueller, Mainz, c. 1840.
Valve Trumpet by L. David, Paris, c. 1840.
Keyed Trumpet by A. Appurati, Modena, c. 1850. 5 keys.
Slide Trumpet of English origin, c. 1830. The bell is engraved "J. Distin."
Soprano Over-the-Shoulder Saxhorn by I. Fiske, Worcester, Massachusetts, c. 1870.
Handbassel by Anon

The entry claims that it was "probably the 'Viola da Spallo'". This is very unlikely. Leopold Mozart (Versuch, 1756) wrote "Some call (the Fagott-Geige) the Handbassel, which is, however, somewhat larger than the Fagott-Geige. It is customary, as I have already mentioned, to play bass on the latter, but only in company with violins, transverse flutes and other high-pitched parts, as otherwise the bass would encroach on the upper parts ..." Previously, he mentioned that the Fagott-Geige "differs slightly in size and stringing from the Viola". Thus apparently in Mozart's experience, the Handbassel was a somewhat larger version of the Fagott-Geige, which was an alto instrument used as an octave-up bass for treble instruments. On the other hand, the Viola da Spallo was a true bass instrument small enough to be held diagonally against the chest by a strap, with the tailpiece end help up against the right shoulder and the neck going down on the left, while the bowing was upwards across the other diagonal.

The cause for confusion is that Majer (Museum Musicum, 1732) mentioned that the Fagott-Geige was tuned an octave lower than the viola, thus being a true bass instrument. This inconsistency is confusing to us. There is no evidence in the writings of Majer and Mozart that either had any doubts of confusion. It is an atrocious error of scholarship to project our confusion onto the early authors. We must accept that the instrument called Fagott-Geige had different stringings (and tunings) in different circumstances (with much more constant musical function and technique). The Handbassel is an instrument which enters discussion only in the context of Leopold Mozart, so only his version of the Fagott-Geige is relevant.

Hardanger Fiddle by Anon

I missed the interesting point that the third string is traditionally open-wound, a practice abandoned late in the 18th century by mainstream European instruments.

Harmonica by I Beynon and G Romani

The use of this instrument in the American blues tradition is mentioned, but the special techniques, such as hand control of timbre, are not.

Harmonics by Anon

Amongst stringed instruments, harmonics are discussed on the violin family, Trumpet Marine and the harp. It is a pity that the classical guitar is not included.

Harp by A Griffiths, J Rimmer, S C de Vale

4. Europe. It is a pity that so often scholars refuse to re-examine their concepts when contradicting evidence appears, and they just ignore that evidence. In 1961 Steger presented unambiguous evidence from c 1100 for association of the name 'rotta' with a triangular psaltery played in harp position. There is no excuse for not being aware of this since it is cited in both of S Marcuse's books (the 'Dictionary' and 'Survey'). So what the authors of this entry consider in depictions as harps with "vestigial resonators" or "forepillars either imperfectly delineated or absent" could well have not been harps at all.

"David is often tuning his harp, preparing for the performance to come" is somewhat naive. If performance was the objective, tuning while playing is more likely. But the objective could be to demonstrate the realization of music theory in tuning practice, thus
showing David as a musician of the highest class.

"While most medieval and Renaissance harps were probably gut strung, it is likely that some were metal-strung. Irish harps ... had brass strings ..." is worded in such a way to justify modern use of metal strings on medieval non-Irish harps, for which there is no evidence.

The Nuremberg harp mentioned and illustrated has recently been subjected to physical dating methods of its wood, and its 16th century origin may be in doubt.

There is much earlier evidence for harps with double ranks of strings than given. For example there is the 1390 illustration reproduced as plate 6 in Mary Remnant's 1978 book.

The 'Gross Doppel-Harff-Harpa Doppia' of Praetorius was a direct descendant of the rote (or rott). The statement "Praetorius's illustration shows not the instrument referred to in the text but a mechanically unlikely hybrid; evidently the illustrator had never seen an 'Harpa Doppia' of any description" is wrong in every way.

Iconography of Music by H M Brown

It would have been useful to have mentioned the occasional medieval practice (confusing to us) of depicting each part in its most characteristic view rather than showing the whole instrument in one consistent view.

It is stated that "both the instruments and the playing technique are distorted" in the famous Grunewald Isenheim Altar painting. They are certainly untypical but are quite possible. If the instruments were inventions of the painter, he must have understood musical instruments reasonably well. We can't be sure whether this is the case or whether invention was by an instrument-maker, and if these instruments really existed, whether they were made specially for a particular dramatic occasion and then discarded, or whether they were taken seriously as musical instruments at some location for a period of time.

Figure two shows a psaltery and this is one of those rare valuable medieval illustrations that also provides the name for the instrument. But the author gives 'harp' as an alternative name for the instrument. This is wrong and illustrates the main problem in medieval iconography - the name to associate with the instrument depicted. The entry is written as if this is obvious, and it certainly is not in a good many cases.

Improvisation I Western Art Music by I Horsley (1), M Collins (2)

1. Up to 1600: "... the only book in this period giving examples of ensemble improvisation (for violone and harpsichord, Diago Ortiz's Trattado ..." does not, but Maffei (1562) does for a polyphonic piece of four parts. It is shameful that the 'ornamentation' section does not mention gracing. Gracing was distinguished from division by Agricola (1529), Ganassi (1535), Ortiz (1553), Bermudo (1555), Sancta Maria (1565), Zacconi (1592) and Diruta (1593), and probably other sources, and at least one grace was described in at least ten 16th century sources.

Heterophonic improvisation is only mentioned as the opposite to the contrapuntal improvisation on instruments in the 16th century being discussed. This can be excused because hard evidence for heterophony in this period is hard to come by. Nevertheless it is a likely practice, especially when improvisation occurred in vocal compositions with more than one voice to a part.

2. The Baroque Period: In this section, heterophony on the word 'Notte' in Monteverdi's 'Il Combattimento ...' is mentioned but not identified as such.
When discussing the development of the baroque, it is claimed that "the smoothly flowing notes of 16th century passaggi were alternatively dotted to form trochaic or iambic figures ...". But doing such dottings is just what Sancta Maria wrote was current fashion in the 1550s for elegant playing. And the dots under alternating letters in divisions that appear in a large number of 16th century tablatures surely denote differences of stress or time as well as a guide to fingering. The "smoothly flowing notes of 16th century passaggi" is a modern, not original practice.

When discussing England in the 17th century, it is stated that "Variation was a process inherited from the virginalists." It is a pity that some musicologists tend to be so keyboard-centred in their outlook. Doesn't the lute have an equal claim?
COMMENTS ON COMM. 731

In Comm. 731, Rémy Gug discusses the selection of wood for soundboards, as dictated by Swiss and Bavarian tradition, according to the direction of the fibres in the tree - only left handed twist (following the sun) being suitable.

I have come across another twist in wood fibres, relating to selection of timber for building, in "Der Blockbau" by Hermann Phelps, a beautiful and meticulous study of European log structures (available in English translation from Lee Valley Tools Ltd, Ottawa).

In his book, Mr Phelps states that there are two kinds of spiral twist, only one being acceptable for building purposes. According to Bavarian tradition, if the twist runs counter to the sun (right hand twist), then the wood retains its shape after felling and seasoning. If it runs with the sun (left hand twist), however, the bundles of fibres attempt to twist back during seasoning - a process that may go on for years and is so powerful as to force walls out of plumb or to force roof framing apart.

To test for twist prior to felling, the right hand is placed on the trunk of the tree. If the twist runs in the direction of the little finger it is said to be right hand and the wood is usable. If it runs towards the thumb, however, then it is left hand and unusable.

A further reference to twist is made concerning the manufacture of roof shingles (plates of wood split radially from the log - as for soundboards). Here it is stated that timber with straight or some right hand twist should be used.

If the tradition is correctly reported in each case, then the direction of fibre twist acceptable for instrument soundboards is the opposite to that acceptable for log structures. Presumably soundboards split from logs with left hand twist will untwist during seasoning becoming flat and free from internal stress - a condition necessary for superior performance of the finished soundboard? If this is the case, then degree of twist would be an important factor in timber selection as, from my observations, this ranges from very slight to extreme (i.e. a rope like twist). Obviously the latter would be useless for soundboards.
Following is a paper that I wrote a few months ago as a development of my Comm 753. I offered it to Early Music which turned it down, suggesting that I could submit a paper which is an expansion of the Tempo part with more evidence. I don't know whether there is more evidence. I presented three times the amount of evidence known before. Sachs published the Praetorius evidence decades ago and no-one took it seriously. I've added the evidence of Mace and the fastest speed of playing according to Mersenne and Quantz coupled to semiquaver statistics in Fitzwilliam and Dowland's Varietie. There is no evidence for faster speeds other than that modern players like to play the music that way.

Of particular interest to instrument makers is the sections on the viol and voice. These suggest that during the Renaissance and continuing into the French baroque, when the declamatory style of singing and playing instruments was paramount, the transient noise at the beginning of an instrumental note (which corresponds with the first consonant of each syllable) was prominent. Our customers want to suppress that transient, following the modern cantabile style (which derives from the Italian baroque messa di voce), so we make instruments on which it is easily suppressed. When some players take this research seriously, we may have to modify our instrument designs for them.

On English and French Performance Style in the Late Renaissance and Baroque

Through most of the history of Western music, contemporary music has been mixed with music of earlier times in programmes of performance, but not until the 20th century has there been any serious attempt to play the music in a style other than contemporary. The modern attempt to play music in "original" style is led by musicians rather than historians, so we would expect aesthetic considerations to compete successfully with historical ones, leading to a mixture of original and modern style components. Following are some aspects of style for which it appears that the early-music movement is following modern practices which differ markedly from that indicated by the surviving evidence on early practices.

Note Shaping on the Viol

As pointed out by Hsu (1978), Mersenne (1636) wrote that the viols "have a percussive and resonant sound like the spinet". Over a century later, Le Blanc (1740) wrote that viol "bow strokes are simple, with the bow striking the viol string as the jacks pluck the harpsichord strings, and not complex like those of the Italians, where the [violin] bow, by the use of smooth and well-connected up- and down-bows whose changes are imperceptible, produce endless chains of notes ...". This implies that the basic viol bow stroke remained unchanged in the French baroque. It was called "coup de poignet" or "blow of the wrist". By late in the 17th century, Loulié described this stroke, and by then, increased finger pressure on the hair helped the flick of the wrist in getting the starting "pluck". In Mersenne's time the leading viol players renowned throughout Europe were English. The only example of viol music Mersenne gave was English (1636). Mersenne (1636) described differences in tuning pitch and the number of sharps and flats marked in the music between English and French viol players, but not differences in sounding the instrument, so it is most likely that when he wrote that viols played percussively, he was referring to English as well as French viol playing.

Le Blanc also wrote "Using a smartly-drawn and plain bow stroke which resembles so much the plucking of the lute and guitar, the kind of sound that le Pere Marais had in mind for his pieces, he varied it into six different kinds of bow strokes". Those six were not specified, but (following Hsu), we can organize our guesses according to the statement by Loulié that "a bow stroke - especially a long one - may be considered to be..."
composed of three parts: the beginning, the middle, and the end. This is not to say that all bow strokes have all three parts. For one knows that there are some that have only the beginning. Strokes with only a beginning would have the middle and end either eliminated by damping (as in staccato playing) or unrelated to the bow because it was lifted after the "pluck". Another Marais bow stroke would be the "soutenu" in which according to Loulié "one sustains the amount of sound that is at the beginning throughout the middle and the end." Another could be bowing very near the bridge, which could be the meaning of Loulié's undescribed stroke he called "sec", which means "dry". The "enfle", which Marais notated with a "e" above the note or soon after it, seems to have been one of the six variants of the coup de poignet. So while Loulié wrote that it had no "pluck" at the beginning ("one must not scratch the string but must begin by making as little sound as possible and increase the sound while pushing or pulling the bow"), one could expect that the enfle of Marais would have had a weak "pluck" at the beginning. It is doubtful whether, as some modern scholars have assumed, the enfle was identical with the Italian "messa di voce" (which is a symmetric swelling of a note) since Loulié mentioned no descrescendo for the end of the note. It is important to note that all of these stroke variants were used for variety while the usual stroke was the coup de poignet.

Hsu writes that the French-baroque percussive basic bow stroke differed from the violin bow stroke (for which there is evidence with respect to the Italian style), the 16th century style described by Ganassi (who didn't mention how notes were started, but with instrument designs and strings used then, it is much harder to suppress the scratchy transient sound at the beginning of each bow stroke), and the "more lyrical way of playing English viol consort music" (evidence for which doesn't exist). He was speculating without ground here. The evidence we have points to the same basic bow stroke for English viols. That stroke, in imitation of the plucked instruments, would start with an impulse "pluck" followed by a slow descrescendo.

The Voice and the Viol

Mersenne (1636) wrote that the viol "imitates the voice in all its modulations." This most probably includes the note shaping. In vocal technique we would then expect that the sound would normally be strongest on the first consonant with a fall-off of intensity as the syllable progressed. This is probably why the syllable "ut" was dropped from fasola singing in England, probably from before the middle of the 16th century (see "Fasola" in the New Grove, as it was the syllable that did not start with a consonant. Voices and viols were quite interchangeable in England around 1600. Untexted part music was often apparently deliberately ambiguous as to whether it was performed on viols, sung fasola with voices, or mixed. About half of the published books of the English madrigalist school indicate on the title page that they are apt for voices and viols. So the stylistic equivalence between the sound of the viol and voice is well-supported in England as well as France.

Declamatory Style of Phrasing

Quartz (1752), when comparing French with Italian style, wrote that "The French manner of singing [has] ... a spoken rather than a singing quality. They require facility of the tongue, for pronouncing the words, more than dexterity of the throat". Many Renaissance and baroque writers compared the performing of music to the oratory of public speakers. They sometimes suggested writing the words of pieces of vocal origin into the music of instrumental versions. This is so that the instrumentalist can phrase the notes the way that he would verbally declaim the words within the given rhythm. This would involve no spaces between syllables of a word, a small space between words, a bigger space between verbal phrases and a bigger space yet between sentences. When these spaces were not written into the music, the musician would find ways of putting them in. This approach is in contrast with the modern style of performance which is much more consistent in the level of detachment with which the notes of a piece are treated.
Melisma is common in music, but not in declamation. Decoration can be considered as a musical alternative or complement to loudness in expressing emphasis. Non-decorative melisma can be considered as equivalent to an aside in drama, with the action suspended while an idea is expressed.

The strongest shaping in declamation would seem to be of the verbal phrase, the basic unit for expressing ideas. The musical equivalent to the verbal phrase was called the "point" in 17th century England; the modern name for it is the "motive".

In all music, the shapes of units of all time spans from the individual note to a whole programme of music are important. Yet most attention is given to a particular size of unit which one shapes most carefully. In the modern cantabile style of music performance that is the "musical phrase", which corresponds to a line of text or what can be performed in one breath. This concept of phrasing is quite recent since Engel (1866) wrote "A phrase extends over about two bars, and usually contains two or more motives, but sometimes only one". Only one motive usually corresponds with the verbal phrase, so this 19th century view is intermediate between the modern and Renaissance and French baroque view of phrasing.

Modern performances of early music usually omit the graces that were not notated but which treatises of the time indicated were added to all music, at least of certain types. Much of this reluctance results from the additional attention given to a note that is graced, which violates the smooth rise or fall of cantabile phrasing. With the more rapid rise and fall of proper declamatory phrasing, the graces integrate with the music naturally.

**Tempo**

Mersenne (1636) reported that 16 notes per second was the fastest speed that divisions or graces could be played by "those who are esteemed to have a very fast and light hand, when they use all the speed possible for them." Quantz (1752) reported that 10.7 notes per second was the fastest speed that articulated notes ("with double tonguing or bowing") could be expected to be played by competent musicians. These two figures are quite consistent since we would expect a musician renowned for speed to play faster than a typical competent musician. Also it is likely that playing that requires co-ordination between very different sets of muscles cannot be played as fast as playing that doesn't require this co-ordination. So we would expect that playing of keyboards and sequences of unarticulated notes on striged and wind instruments could go faster than the voice and sequences of articulated notes on striged and wind instruments. So if a piece of music is for voice or it is played not on a keyboard instrument, and it contains articulated demisemiquavers, one would expect Quantz's figure to apply and the tempo would be no faster than minim = 40 MM, while the fastest possible playing of demisemiquavers by a speed specialist would go at minim = 60 MM, using Mersenne's figure. The fastest demisemiquavers for keyboards and unarticulated notes on other instruments played by competent musicians not renowned for speed would be somewhere inbetween, say, at minim = 50 MM.

Morley (1597) indicated that the sequence of increasing tempo amongst English popular dances was pavin, almaine, galliard and coranto. The number of each of these dances with notated demisemiquavers in the Fitzwilliam Virginal Book is 35, 8, 4, 0, respectively. So we can expect that the demisemiquavers were about as fast as a competent harpsichordist could play them in the galliard. If dance tempi were constant this implies that the galliard tempo was minim = 50 MM. The number of each of these dances with notated demisemiquavers in Dowland's Varietie of Lute Lessons (1610) is 5, 3, 0, 0, respectively (ignoring one galliard and one coranto with demisemiquavers in the final cadential division which must have been slower). So we can expect that demisemiquavers were as fast as a lute player could pluck in the almaine, which would then have a tempo of minim = 40 MM. If the pavin had the expected sesquialtera
relationship with the galliard, its tempo would be minim = 33 MM.

That the above calculations are not grossly in error is indicated by tempo specifications
given by Praetorius (1619) and Mace (1676). Praetorius specified "a good moderate
speed" which calculates to minim = 42.5 MM. The music involved very rarely has note
values faster than quavers. Mace specified a good tempo for practicing by swinging a
pendulum from the ceiling to near the floor, and this calculates to minim = 30 MM if the
height of the room is 4 meters, up to minim = 36 MM if the height is 2.5 meters. The
fastest note values are semiquavers but they are not common. The above indicates that
the fastest note values are a poor indication of intended tempo, and that generally,
playing fast was not as universally cultivated in the 17th century as it is amongst most
players today.

The main point to be made here is that these tempi for the repertoires mentioned above
are much slower than it is normal to play (or dance) them today. We cannot play them at
these slow tempi and still be "musical" as we understand the term. If we included more
gracing it would be easier. Robinson (1603) observed that "the longer the time is of a
single stroke [(a plucked note on the lute)], that the more neede it hath of a relishe, ...
but in a quicke time a little touche or jerke [(probably an appoggiatura or mordent)] will
serve." A proper declamatory style of phrasing would also help. We must also accept
the possibility that our current concepts of what is a "musical" tempo do not include the
actual speed that the music was usually played at historically.

Conclusion

In a study of the geographical distribution of various singing styles in folk music, Alan
Lomax (1959) observed that while repertoire and instruments passed readily from
culture to neighbouring culture, performing style within each culture has been much more
constant. This conservatism in style is as true today when musicians try to play early
repertoire as it was with the musicians for whom that repertoire was written. In this
paper I have pointed to and tried to characterise an apparently consistent declamatory
style of note production and phrasing in the late Renaissance and baroque periods (that
changed to a more modern cantabile style in Italy during the 17th century). I have also
presented evidence that 17th century tempi were often much slower than we expect, but
consistent with that declamatory style of performance.

In their work, modern early-music performers as well as musicologists rely heavily on
mental images of how the music sounded like and was performed. These images have
been built up from historical information plus a large component of guesswork (with an
understandable bias towards the musically satisfying). Modern traditions of these
images have developed and are now almost universally accepted. When people are
convinced either that they "know" or that no-one will ever "know", they have little
interest in exploring information that might challenge that "knowledge". To take any
alternative seriously, they then require a much higher level of proof than is normally
required in scholarship, which is an objective evaluation of probabilities in interpreting
the surviving historical information. This paper does not present such undeniable proof,
but it does offer an exploration and challenge for the true music historian.
REFERENCES


Morley, T. (1597): A Plaine and Easie Introduction to Practicall Musick, last few pages.


Dear Jeremy

It was kind of you to send me a copy of your item in the last FoMRHI Quarterly containing your account of the Symposium on Accreditation which The Conservation Unit held in November. Would you allow me to respond to a few points which you raised in that account in order to allay any fears and remove doubts that your readers may have?

Firstly, a clear distinction needs to be made between The Conservation Unit's Register and any Accreditation scheme which may or may not come into being. The Register of Conservators in Private Practice is, as you say, meant to be a bigger, better and more authoritative version of the Crafts Council register of some years ago and will be actively promoted by The Unit. People will get onto it by completing a detailed application form and satisfying certain criteria about the quality and professionalism of their work, including questions on record keeping, security and insurance. They will also be asked to submit details of five projects or objects worked on, with the names of clients to whom we can refer. Beyond this, however, there will be no assessment of quality of work, and we shall not be recommending anybody.

Enquirers - we already receive many, and will soon be advertising the service widely - will be sent a list of five or six names of relevant local conservators, together with a limited amount of information about them (none of it confidential). They will also be sent advice on how to choose a conservator. On the basis of these it is then up to the potential client to make a selection. For the time being we do not propose to publish the Register.

Any of your readers who would like to be on this register is welcome to write to us and we will send them an application form as soon as the system begins operating.

Accreditation is, as you have made clear, a difficult and contentious issue. Our aim in calling people together was to encourage all the relevant organisations to exchange information and views. No more. We felt it important, for instance, that UKIC's proposals - which are quite likely to be put into action before long - should be made known to all interested parties, including FoMRHI. We were certainly not trying to wield a stick or make any threats.

If UKIC accreditation comes about, there is no reason why it should not embrace musical instrument conservators or restorers; indeed that category is listed among UKIC's specialities. Your point that this speciality would need to be further subdivided is very important and I suggest that it be made direct to UKIC. It would of course still be open to FoMRHI to run its own scheme if it so wished.
As I see it there are unlikely to be sanctions against musical instrument conservators just because there is no separate accreditation system for them. In so far as there might be sanctions - and we are still speculating about a future at least several years away - it would be against conservators for whom there is an accreditation scheme but who have failed to meet its criteria, for instance by being inadequately trained. If no such scheme develops for musical instrument conservators, they would have no cause for alarm. If such a scheme did develop, it could only be of benefit to the profession.

Could I stress that as far as this Unit is concerned there is no intention to impose draconian measures, no sense in which anything will be imposed from above. Recent moves towards accreditation came from conservators themselves, long before The Unit came into being. It is up to the conservators to decide how they wish to proceed. The Unit's Register will certainly mention whether a conservator is accredited by any organisation, but this will be one among many factors. We hope that the Register will be of benefit to conservators, by making their services better known and better understood; to individuals and organisations wishing to know how to locate a good conservator; and, not least, to the objects themselves, by helping to ensure that they receive attention from the most appropriate specialists.

You now have our record of the Symposium and we should be glad to send copies of it to any of your readers if they would care to write to us. We should also be happy to tell them more about the work of The Conservation Unit and to answer any queries they may have about our Register.

Yours sincerely

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31 March 1988
I was interested to read comment 849 about conservation and accreditation.

Is being a fellow of FoMRHI some sort of accreditation? What is a fellow anyway? (Does being a fellow have anything to do with the song, "for he's a jolly good fellow"?)

In the specific area of early woodwind instruments there are few opportunities for people wishing to train or do apprenticeships either as conservators or makers in Britain. This is because there are very few full-time makers who are in a position to be able to afford to offer apprenticeships, as in fact most makers have difficulty providing a living even for themselves. This situation is only likely to change if makers in this country can become more business-like, profitable and professional.

At the moment many makers rely heavily on part-time jobs, pensions, inherited wealth or subsidies to support themselves.

The London College of Furniture does offer about six places each year for early woodwind students, although these are rarely all taken. The course consists of two, two year courses. B TEC diploma and B TEC higher diploma in musical instrument technology. The training given on these courses is not comprehensive enough for a person to become an accredited maker or conservator but it is a beginning.

During the four years that I was there as a student I was helped enormously, but I also had severe criticisms of the inadequacies of much of the course. (Incidentally when I asked if we could have a lecture on the ethics of conservation my request was regarded as subversive.)

However the woodwind course does look set to improve in the near future and I would recommend anyone wishing to become a maker or conservator to seriously consider joining the course. The telephone number for application forms is 01- 247 1953.
Having just joined FoMRHI, I have been reading Charlie Wells' article on the restoration of a Miller clarinet (Comm. 803). I would like to make a few important comments which relate to that article and the Miller clarinet, but particularly to restoration in general. I hope that Charlie will not take offence to this, as it is in no way a criticism of his article, more an extension of it.

New wooden tenons. Full size new boxwood tenons are extremely dangerous, particularly on the top tenon. If the clarinet is played, sooner or later the new wood will expand and cause the original joint to split. This may well be what happened to the Miller clarinet on the top joint. Charlie mentions that the replacement wooden sleeve may have altered the outside dimensions, and also that this joint was split (was it split at this end?).

The problem is that boxwood is notorious for moving. New boxwood moves even more, especially a new tenon at the top end where the moisture enters the end grain very easily. The original wood on the outside of the top joint does not expand at the same rate when played, as it does not have the influence of moisture. As the new inside piece expands when being played, the outside remains the same, and therefore splits under the pressure. New tenons are often put in as shown in diagram 1, and this makes the outside original wood extremely weak.

A further point is how well does the replacement tenon seal. If there is any gap in the bore (where the new wood meets the old wood), then moisture will penetrate due to capillary action. This moisture cannot be removed by wiping out the instrument, as it is hidden. Furthermore, it has again gone into end grain wood and will soak in readily, again causing certain bore shrinkage and possible cracking.

A badly sealed joint can be caused in 2 ways. Firstly it could have been inserted badly in the first place, either not being a good fit or insufficient glue used to seal the join. Secondly, an unsealed joint can develop due to wood movements (again at different rates). I have seen many replacement tenons which are so loose that you can actually move them.

The answer is to replace the tenon in ebonite (vulcanised rubber). This may not seem in keeping with restoring an early clarinet, but it is by far the safest option when the instrument is going to be played. Ebonite is not affected by moisture and will therefore not expand when being played. Also it is fairly flexible and will allow the outside wood to shrink without it cracking.

When being glued in, plenty of glue should be used – especially on the end. When it is inserted, you should see the glue ooze into the bore and this should be left to set before removing it. This will ensure a good seal.

A new tenon should be made with a shoulder if possible (see diagram 2). This ensures that the original wood is thicker and therefore stronger. If boxwood is going to be used then this method must be used.

There are many times when a complete new tenon is not necessary and in these cases partial replacement is much more desirable. This may mean lining the bore or sleeving the old tenon or a sleeve with an extension.
(see diagram 3). I stress that only an experienced restorer can decide which is best in the situation. These alternatives can be in boxwood as they are not so drastic. Of course, in the case of the Miller clarinet, the top tenon had already been replaced and these alternatives were not available.

Counterboring with an endmill. In my opinion this is a dangerous tool to use for 2 reasons. Firstly it means removing a lot of material in one go. The joint must be held tightly and a lot of tension is caused. Secondly it tends to splinter the end-grain of the wood. Any tool worked directly on the end-grain will tend to splinter the inside edge and cause burring over of this edge.

It is much better to use a boring tool (see diagram 4). This has the advantage that small cuts can be taken and this reduces the pressure on the wood. Also the first cut can be taken from the inside edge in the direction shown. This does not cause any splintering and gives a crisp edge to this all important part.

Filling cracks. In my opinion epoxy resin is not the best glue for filling cracks. It reacts with the resins and oils in the wood, eventually becoming soft and rising above the surface. The makers of "Araldite" deny that this can happen and that I must be mixing it incorrectly! Well I have been mixing it incorrectly every time for 15 years! I am sure some members must have noticed this happening if they have cracks that have been filled with epoxy.

I believe cyanoacrylate glue is a better alternative. It does not move and is extremely strong. Also, being very runny, it runs into cracks (especially thin cracks) very thoroughly. If a crack is wide, it can be filled with this glue and stained boxwood dust pushed into it. The glue soaks into the dust and forms a good filler of the correct colour.
Diagram 2.

Diagram 3.

Diagram 4.
In the FoMRHI-Q n° 30 (January 1983, p.12-13) Cary Karp published an English version of a letter of Heinrich Schütz dated 1621 mentioning the name of Jobst Meuler, wire drawer in Nuremberg (1). Richard Shann (2) and Martha Goodway (3) referred recently to this article. It seems from Schütz's letter that Jobst Meuler was the only wire-drawer to make steel strings of a quality not available elsewhere at that time.

The techniques supposed to have been used by the Nuremberg craftsman are debated by the two previous authors together with Ephraim Segerman (FoMRHI-Q n° 30, p.15). Different possibilities are evoked. Nevertheless, in the present state of research, we can only conjecture about the process and the exact production in question and must be very careful not to transfer into Meuler's workshop the technical processes we would like to see him using. He could only use the means of his own time, enriched by his genius. Therefore caution, great caution must replace in our researches the impatience of taking pride in discovering the solution. Too many pieces of the puzzle are missing for the moment and the full historical image of what has "really" been cannot yet be reached.

Taken out of the historical context, the writing of Heinrich Schütz can be interpreted in different ways. The documents I publish in this communication will put the letter in question into a new light since they provide us with some keys to a better understanding of the reason which brought Schütz to write to the Town Council of Nuremberg in 1621. They will further show that a secret was damned at that time to remain a secret, not only for the future but also for contemporaries, especially in Nuremberg during the first decades of the 17th century. This "system" of craft protection centered on the "secret" which was respected -first of all by the members of the Town Council and also by the members of the craft's policy- and it worked very well! We shall probably never know -from a written source at least - what really was Meuler's method in this case.

**Wire drawing in Nuremberg 16th-17th centuries:**

The "human" side....

As I have often insisted about never trying to answer questions specific to early techniques without documents, I hope that the following excerpts from the "Rathsbücher" [the Nuremberg Council minutes referred to by C. Karp] will help, first to clarify to some extent the Meuler case and secondly, to replace Schütz's letter in the light of the events which occurred in Nuremberg wire drawing history during the first quarter of the 17th century.
The commercial history of Nuremberg wire drawing during the whole 17th century is a collection of crises due to the ambition of some members of an old Nuremberg family who made it their sole aim to lay hands on the entire Nuremberg wire production: the Hagelsheimer-Held family. [I referred to that family in my work on the Nuremberg gauge systems (4)]. During the long story of this ambition which began with Friedrich Held in the last decades of the 16th century, the name Meuler appears many times in the Council minutes.

To understand what happened during the quarter of a century which interests us here, some general points must be made.

Concerning wire drawing in Nuremberg before Held was in the foreground, we must know that the wire drawers called "Scheibenzieher" were those who made together the gold, silver, iron, brass and copper wire. This image was disturbed by the arrival in the well-known Franconian town in the year 1569 of French men who began to draw a special kind of wire for which they had bought 300 Zentner of "Kupferzaine" [copper bars] there. This case troubled the Scheibenzieher who went, as usual to the Council asking it to clarify the situation. An investigation was made at the Frauentor, the place before the town where these French men were working under the direction of "Anthoni Fournier" and without any authorization. The Scheibenzieher were then surprised to discover a process unknown to them: the drawing of gold- and silver-plated copper wire, made in such a perfect manner that no difference with their usual solid gold or silver wire could be seen. The second surprise was to see how thin the wire these French craftsmen made was, although these latter used the same tools as they themselves had for a long time.

A new imported technique.

Politically astute, the Council, always looking for new products, decided to invite these 8 to 9 French persons to come and stay in the town. After having explained that they ran away from Lyon and Paris for religious reasons, these latter became citizens of Nuremberg and had then to follow the rules of their town of adoption. Thus the Scheibenzieher were informed that they had to continue to work as before and that the French men would on their side make what was subsequently called the "Lionische Draht". This denomination was due to the fact that the French town Lyon was, together with Venice and Florence, the place in Europe where this gold- and silver-plated wire was first made.

The new production grew every year and the "Lionische Gold- und Silber Draht" was sold in the great German trade towns (Frankfurt and Leipzig). But it seems that Anthoni Fournier was not the best of businessmen: different huge debts forced him to flee from Nuremberg and the production of plated wire stopped until Friedrich Held began to re-organize that activity in the last decade of the 16th century.

Friedrich Held's Nuremberg privilege.

This Friedrich Held was a member of the above-mentioned old Nuremberg family and an assiduous tradesman, first trading in fish then, as we shall see, with gold, gilded, silver and silver plated wire. The 5th of August 1592 he obtained a privilege of the Town Council for a period of
15 years stating that he was allowed to set up and to control the production of the thinnest (solid) gold and silver wire, and in a second (only verbal) privilege he was also allowed to control the production of the newly discovered "Lionischen Draht". (Since the departure of Fournier, different wire drawer specialized in making "Lionischer Draht" had meanwhile come from Italy to Nuremberg).

This privilege is the origin of endless quarrels with the Scheibenzieher who were also drawing solid gold and silver wire, though in larger sizes, within living memory. But Held's aim was that of a zealous tradesman living in the traditions of the great mercantilism of the late Renaissance, i.e. to get rich and powerful very quickly - he succeeded in building opulent looking houses in Nuremberg - and tried, using sometimes dubious methods, to have the absolute monopoly on the whole gold and silver (solid and plated, thick and thin) wire trade.

Held's first imperial privilege (Vienna).

The Nuremberg privilege was over and we see Held, the 19th of March 1608, going to the other authority who was always interested in pulling the strings in the "free imperial town of Nuremberg": the "Kaiser" in Vienna. An imperial privilege was enacted now which gave Held an important position. Protected by the authority of Vienna, who stated in writing that he could also control the "Lionische Drahtzieher", he was now sure to reach his goal. But the Nuremberg Council was not impressed by these tricky methods. The disputes began and they are registered in the minutes of the Town Council. [For all these previous data see (5)].

Jobst Meuler.

We meet Jobst Meuler for the first time on the 3rd July 1609. Jobst Meuler complained to the Council about the privilege given to Held since this latter had forbidden him and others Scheibenzieher to make gold and silver wire: «... und anderen die Silberne und vergült. Tradarbeit abgeschafft worden (...) dieweil er und seine Voreltern über 120 Jahr die Arbeit getrieben (...)»

Figure 1. We see that Meuler, who could finally continue his job, belonged to an old wire drawer family. Figure 2 shows the epitaph of (probably) the parents of our Jobst (7) [first published in my previously mentioned work (4, p.72)]. We shall see later that he had a son, Michel, who probably also had descendants, since the description of the Nuremberg "St. John" cemetery published in 1682 by Christoph Friedrich Gugel (6) mentions a Hanns Georg Meuler, Scheibenzieher. This latter together with his wife bought a tomb there in the year 1671. It is clear that
the Meuler wire drawer dynasty stretches over two centuries. Jobst Meuler himself died in the year 1632 (1, p.266).

The master met with a number of difficulties. We hear that during the year 1610 the problem with the greedy Held was still not solved. The "Ratsbeschluss" [Council minutes] of the 9th of May 1610 is the most interesting for us (Figure 3). The Town Council had daily to settle the differences occurring between the citizens of whom the majority were craftsmen. When the questions debated became to be of too commercial or too technical a nature, then the Nuremberg magistrates usually sent the case to the Rugamt, the crafts department. Unfortunately for us, these (historical) human difficulties only very rarely give rise to precise data of great interest for the history of technology: the "patent system" did not yet exist and the "secret system" referred to above, although having the best effect in the society of that time, keeps valuable knowledge from us. So we must put forward the information taken from the minutes in question with great caution. Since an administrative document is not at all the most suitable source for technical knowledge, we shall not be too hasty in our conclusions.

The 9th of May 1610.

This paper describes the situation at that date between Meuler and Held, represented in this case by the brother-in-law of the latter, Decker. (We underline)
«Hansen decker Supplication, Jobst Meuler eyttlicher Injurien halb zustraffen, und weil er Friedrich Helden in sein Privilergicte Arbeit eingreiffe, solches bey lme abzuschaffen c. Sollen die Rugsherren zu sich nemen, und was der arbeit halben Ihnen anzueigen bedencken, ob auch diese Arbeit so der Meuler erfunden die auch ein grosse nachfrage hatt .... könne abgewiln werden, dieuelf des Helden Privilegium.... sich auff diese arbeit, die weder Er noch der decker machen kan, und doch eine Scheibenzieher arbeit ist, sich nitt erstrecket und man den Scheibenziehern nitt verwehren können von allerley Metall Trot zu ziehen und Ihre arbeit zu zieren und zuzurichten so güt sie können»

In the first part of this excerpt, we see Hans Decker trying to obtain from the Rugamt a ban on wire drawing for Jobst Meuler. The reason given is that Meuler's work runs counter to the Held's privilege, at least so Held says via Decker. What is true here?

A clarification can be found in the part we underlined. Here we learn that Jobst Meuler had invented a special kind of wire "which can be made neither by Held nor by Decker". This product is not included in the specifications of the privilege, since "It is a typical "Scheibenzieher" work"- "Lionische Drahtzieher" did not work with iron or steel.

What is more, the Council renewed with a certain pleasure to counter the imperial privilege and to show who was the master of the town, the permission for the Scheibenzieher to draw wire from all kinds of metal ["allerley Metall Trot zu ziehen"] whatever Held might think. Meuler was free to do his job again, namely to use iron/steel/copper/brass/gold and silver...
What is sure for us now is:

- that Meuler invented a "personal" process to make a special kind of wire.
- that the demand of this special Meuler wire was great in 1610 ["auch eine grosse nachfrage hatt"].
- that seen from a technical point of view, Meuler's process did not fall into the specifications of the "Lionische Drahtzieher" technique as defined in Held's privilege.
- and that Jobst Meuler was alone in mastering the production, having kept his secret very well, "neither Held nor Decker were able to do so".

Other quarrels.

The disputes with Held were not finished and in January 1613 we again hear from Meuler. On the pretext that Meuler owed money, Held played a trick on him; all the tools belonging to our Scheibenzieher are confiscated. Here the Town Council reacted vigorously and Friedrich Held the Younger was put under arrest. Not for a long time however, since he had the imperial protection...

The second imperial privilege: Vienna 1621.

The Held family used the coming years to work out a better privilege from Vienna. Barthelme, Friedrich, Paulus and Heinrich Hagelsheimer-Held reached their long desired aim in 1621. This imperial privilege I referred to in (4, p.39) could be a piece of our puzzle which was written during the same year as the letter of Heinrich Schütz, which indirectly gives us a proof that Meuler still encountered difficulties. With whom? Was Held again the origin? Maybe, as we could conclude in the light of what happened during the previous 20 years. Or did Meuler also have difficulties with some other people? This is not impossible, as we can read in the letter the Court Secretary wrote seven days after that of Schütz and also published by R. Göehler (1, p.265) [Cary Karp did not translate this excerpt]. «Darneben aber verhuten, das bei seinen Mitmeistern oder andern Leuten er [J. Meuler] deßwegen nicht in Straf oder andere Ungelegenheiten gebracht wird». What kind of problems did have Meuler with his "fellow masters or other people"? Held was no fellow master. Does the expression "other people" mean the Held family?

What to do with these two documents (1610-1621)?

The text dated from 1610 must be studied with care, since it is tempting to parallel it with what we learn from the letter of Heinrich Schütz written in 1621. We could effectively have here, it seems to me, two pieces of a same puzzle together with a plausible third piece: the second imperial privilege for Held also dated 1621.

From the point of view of the methodology to be used in research into the history of science and technology, is it permissable to complete the first document with the data of the two other ones?
Was the invention of Jobst Meuler referred to by the Council minutes in 1610, precisely that method of drawing steel music wire "the like of which cannot be obtained anywhere else", as Schütz wrote in 1621?

Caution, interpretation of what happened 360 years ago...

The aim of this communication has been to replace the document of Schütz in the Nuremberg context. Schütz's paper can be seen differently now.

It is clear in some comments published more or less recently on this question that the specific situation concerning the "crafts organisation" of Nuremberg had not been taken into account (2) & (8). Guilds did not exist in Nuremberg (they had been forbidden after 1349, the year of the great revolt of the craftsmen). All questions and quarrels went through the two authorities known to us: the Council (legislator) and the Rugamt (control of more technical nature).

The historical documents published above and these latest facts allow us to say that no conclusion on a purely technical level can be drawn from this data: the Meuler "secret" remains intact.

Furthermore, no commercial conclusions can be drawn from the step of Heinrich Schütz, as Cary Karp concludes: "Since Meuler could not fill even a royal order for this material without legal intervention, however, it seems highly unlikely that his product was in widespread use, nor was any equivalent available." Meuler did not need the authorization of the legislator to make his strings - a kind of technical permission which would testify for the great rarity of this product only available on special request. In fact, he needed this authority to be protected in his daily work and business against the greedy Held and/or "other people".

If we consider that the invention mentioned in the Council minutes of May 1610 concerns production of special music wire, i.e. if we accept the connection between the two documents, we must then conclude, quoting the terms of the minutes ("gross nachfrag hatt") that the demand was great, thus "in widespread use". The fact that a legal authority had to intervene here does not originate in the product itself but in the special situation created firstly by the Held family, secondly by the problems Meuler seems to have had with his fellow masters and some "other people" and finally in the specific form of administration of Nuremberg. Human, not technical factors were acting in that case and without these quarrels we would never have heard of Jobst Meuler and of his "invention". Schütz would never have had to write to Nuremberg and thus, without his letter, we would never have been informed of the special steel music wire made by Meuler.

In the light of what we have learnt from the different documents, we can guess that Schütz was not a rare customer of Meuler, (how many letters did Meuler receive?) but, rather, only one of those whose letter had reached us. The fact that Schütz's letter dates from the same year as the Held second and strongest imperial privilege is probably not a matter of chance.

Finally, we are still missing a reliable document which would allow us to complete the puzzle and assert with certainty that what
Jobst Meuler did invent in the first decade of the 17th century were undoubtedly his well known steel strings.

The two documents (Meuler 1610-Schütz 1621) do agree on the point that no "equivalent (of such special strings?) were available" elsewhere at that time. Is this fact weighty enough to make us finally admit that they speak of the same historical reality, namely Meuler's art of making highly prized steel music wire? If we accept this, then the letter of the Kappelmeister does not "suggest the date at which such wire first became available", nor "the date at which its use terminated". This letter is then simply a step in the apparently agitated life of Meuler, "inventor" and drawer of a rare and famous wire.

It would be of further interest for us to hear one day about the destiny of Meuler's art: did he transmit the "secret" to his son? What happened to the manufacture and trade of these "stålina Instrumentsaiten" after the death of master Jobst Meuler, during one of the darkest periods of history, the 30 Years War?

1. This letter was firstly published in its original German version by Reinhard Göhler, in: Neues Archiv für Sächsische Geschichte, vol.51, II, (1930).


6. Gugel, Christoph, Friedrich, Norischer Christen Freyhöfe Gedachtnis..., Nürnberg, 1602, p.132: «Der Ersam Hanns Georg MEULER / Scheibenzieher und Verleger / und Barbara seine Ehewüthtin / und der beyden Leibs Erben Begräbnis - An. 1671» This member of the Meuler family was not only a craftsman but also a tradesman who sold wire produced by other Scheibenzieher ("Verleger").

7. Gerlach, Martin, Die Bronzeepitaphien der Friedhöfe zur Nürnberg, Nürnberg, 1896. In this same work we see under item 75/2 the epigraph of our Friedrich Held who died in 1616.


Acknowledgements:
I express my thanks to the Service of the Staatsarchiv Nürnberg for providing me with the different documents. Figure 1: Ratsverlässe Nr. 1831, fol.45^r & 45^v. - Figure 3: Ratsverlässe Nr. 1842, fol. 75^r & 75^v.
There are multiple references in late 16th and early 17th century English sources to treble, mean and bass lutes and one reference to a Great Bass lute. We presume that the most popular was the mean lute, and if no size specification was given, the mean lute was usually expected. In support of this presumption we have Besardus’s statement published in translation by John Dowland “First and foremost chuse a Lute neither great nor small, but a midling one ...” From the lute song repertoire it is clear that the nominal pitch of the first course was usually considered to be g’.

There are some songs which are accompanied by two lutes a fourth apart and there are numerous duets for such pairs of lutes. Lute size names were not given in these repertoires, so there is no direct evidence indicating which pair of sizes was involved.

There is no English evidence to resolve this question, but we have evidence on the nominal pitches associated with lute-size names in that period from Italy and Germany. Import documents imply that a large fraction of the lutes played in England came from these countries. There was also a large international traffic of lute players. Thus similarities between practices in different countries is more expected than differences.

Piccinini (1623) mentioned three sizes of lutes: the ‘piccilo’ (small) with first course nominal pitch at a’, the ‘mezano’ (meane) at g’ and the ‘grande’ (large) at d’. Praetorius was trying to be comprehensive and covered rarely found sizes as well as common ones. He listed seven sizes: 1. Kleinen Octavlaut at c” or d”, 2. Klein Discant laut at b’, 3. Discant Laut at a’, 4. Rechte Chorist- oder Alt Laute at g’, 5. Tenor Laut at e’, 6. Der Bass genant at d’, and 7. Die Gross Octav Bass Laut at g. The German linguistic equivalents to the English treble and bass are sizes 3. and 6. respectively, and we expect these to have been more common than lute sizes with names with qualifiers added to these names (2. and 7.) or names involving ‘octav’ (1. and 7.). What remains is deciding whether 4. or 5. is equivalent to the English mean lute. It is clear that the most usual-size was 4. since that was the only one he illustrated, and its tuning with first course at g’ is the only one given in his general tuning tables.

It is then apparent that the Italian and German equivalents of the English treble mean and bass lutes had identical nominal tunings at a’, g’ and d’. This obviously was the order of increasing size, and if all sizes conformed to the oft-quoted instruction to tune the highest string as high as it can go without breaking, then the laws of physics say that the treble would be two frets shorter than the mean lute and the bass five frets longer. Then if Praetorius’s depicted mean lute with a string stop of 62 cm was typical, string stops for the treble and bass lutes would be 55 cm and 83 cm respectively. But if one expected the tone quality on the lowest string of the bass lute to be no better than that on the mean lute, the string stop can be one fret shorter (see Comm 632, Q 40, p 51) or 78 cm.

We would expect the English lute sizes to be the same, and so the repertoire involving two lutes a fourth apart were played on mean and bass lutes. But there are two anomalies involving the treble lute. One is that the only music that unambiguously calls for it, the Consort Lesson publications of Morley and Rosseter, expects it to be tuned with the first course nominally at g’, the same as the mean lute. The second is that while duets of two lutes tuned a tone apart exist on the continent, there are none of these in the extensive English lute duet repertoire. It seems that when playing with other lutes or other soft instruments such as viols and flute, the English treble lute was tuned identically with the mean lute.

This makes sense if we look at the music the lute plays in the consort lessons and in the
treble parts of the extensive treble-and-ground repertoire for two equally-tuned lutes. This music stays consistently high in the range of the instrument, very rarely asking for the acoustic balance between high and low notes that the instrument is designed for (when tuned at its highest safe pitch). The treble lute is more responsive at high frequencies than the mean lute, so it gives a fuller sound in this music even when tuned to the same string pitches at approximately the same string tensions. At this pitch level, the lowest strings would be at a response disadvantage, so only six courses are generally called for in this music.

Pitch standards have not yet been mentioned. This is because there were no differences. Our sizes were derived from Praetorius's illustration of what he called Chorist Laute. According to his own criteria on highest safe pitch derived in Comm 632 (Q 40) and discussed in Appendix 3 of Comm 712 (Q 43), about a tone below modern would be usual, but a tone higher is possible with special care and much shorter top-string life. The 'Chorist' probably referred to Praetorius's preferred Chorthon, which was a standard about a tone below modern. This is essentially the same pitch standard that was called 'corista' and used throughout Italy, and English 'Consort pitch' used by meane lutes and ensembles of viols when tuned as high as they could safely go.

There was another pitch standard a tone higher (close to modern) current in England then. Praetorius mentioned that English wind instruments, especially cornets and shawms, conformed to it. It is likely that other instruments involved in playing 'light' music, such as fiddles, used it (evidence on this only exists from later when Playford stated that the violin first string was tuned as high as it could safely go). Ensembles of different sizes of these instruments often played with a number of lutes providing continuo accompaniment. There is evidence from Tobias Hume suggesting that at least some English lute players were skilled at providing continuo from a bass line to viol ensembles using a nominal g' first-string tuning. Such players could provide continuo for 'light' music ensembles by using treble lutes. If the treble lutes used kept the same strings used to balance with Consort-pitch instruments and just tuned them up a tone, the resulting high tension would allow the players to play them hard and make a lot of noise. This is just what is needed when playing continuo for an ensemble of loud instruments.

In summary, it is here suggested that of English lutes, only the mean size normally tuned its highest string as high as will safely go. It was the usual lute size used, its string stop was something like 62 cm, and the highest string was tuned to g' at a pitch standard approximately a tone lower than modern. The typical bass lute was tuned to d' at the same pitch standard and its string stop was something like four frets longer or 78 cm. The typical treble lute was normally tuned to the same string pitches as the mean lute with string tensions appropriate for balancing with other lutes. Its string stop was typically something like two frets shorter or 55 cm, and it could tune the same strings up a tone to balance with and conform to the pitch standard of light-music instruments.
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<td>USA</td>
<td>George Riordan, FL, Peter O'Donnell, IA</td>
</tr>
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