Zeitschrift: Publikationen der Schweizerischen Musikforschenden Gesellschaft. Serie 2 = Publications de la Société Suisse de Musicologie. Série 2

Herausgeber: Schweizerische Musikforschende Gesellschaft

Band: 44 (2004)

Artikel: Three round table discussions - summary

Autor: Latcham, Michael

DOI: https://doi.org/10.5169/seals-858774

Three round table discussions – summary

Michael Latcham

The publication of the proceedings of the meeting in Lausanne would not be complete without some account of the three round table talks. Two particularly thorny problems, those of obtaining appropriate hammer leather and appropriate wire for the strings, were the subjects of two of these while the third was an extempore exchange of views on Haydn and the instruments appropriate to his Clavier sonatas.

With regard to the leather problem Gerhard Moog chaired the discussion. He answered the questions put by various builders. He remarked that leather which has been in use for two hundred years will have oxidized but that nonetheless, old leather is still remarkably elastic, implying that originally the leather was even more elastic. No experiments have been done which can exactly indicate the results of the ageing process. Christopher Clarke and Derek Adlam asked where leather could be obtained which was suitably resilient and yet elastic. Moog replied that it should be no problem to produce such leather. He also pointed out that most leathers obtained by piano makers were originally intended for other purposes.This should not matter however because the actual chemistry involved in the tanning process was much the same for all leathers. Nonetheless, the hides used in the eighteenth and early nineteenth centuries would have differed from modern ones. The animals themselves were different, both in their breeding and in the feeding.

Moog's remarks made clear that the leather will certainly have degenerated and that a search for the original state of historical leather has hardly been the subject of serious study. The choice of the right leather is still largely guided by the tastes of modern makers and, to a lesser degree, their clients. Those tastes are inevitably guided by modern experiences and modern demands. This is not to say that present-day builders are using the wrong leather or have a sound ideal in their imaginations which is governed only by modern perspectives. Original instruments on themselves, and, in some respects, copies of them provide some of the parameters which determine the type of leather, the thickness and the number of layers of leather that are possible. Nevertheless, the elastic properties of the leather and its resilience remain at present questions only answered by subjective taste.

The round table discussion on historical wire showed that the study of early wire production processes and of the material of historical strings is in a much more advanced state than the study of leather for hammers. Probably because of its far

greater durability and because of the more exacting physical standards it had to meet, historical wire has lent itself to objective and fruitful study. This became clear in the round table discussion on wire led by Stephen Birkett. He announced an on-going project for the production of wire approaching historical music wire. Birkett began the discussion with a short introduction. This, together with the replies he and Paul Poletti gave to questions from other members of the round table and from the floor, are now summarized.

Birkett began by pointing out that it is not feasible to reproduce historical techniques for making music wire in their entirety. To do so we would have to reproduce a whole industry. However, no great changes were made in wire production techniques until about 1820, except in terms of the scale of the production. First, the ore was mined, then the iron was smelted out of it to produce so-called pig iron. In a specific process which produced the material used for music wire (and other purposes), very high temperatures were used. It was at this point that the carbon was excluded and phosphorus included. Unlike modern steel, the steel used then for music wire contained no carbon. Instead, the process of production added phosphorus. We can loosely speak of 'phosphor-steel'. The 'phosphor-steel' was ripped into slices and strained to rods about 10-15 mm thick. The rods were bundled up and sent to wire drawers. They drew the rods down by forcing them through holes of successively smaller diameters until the thickness of about 2 mm was reached. This thread was then annealed for the last time before being drawn down, without further annealing, perhaps fifteen or twenty times to the different sizes used by the instrument makers, the thinnest being something like 0.25 mm in diameter. The material was ductile enough to draw it down to thinner sizes at room temperature. This drawing process was done by hand, through a hole in a draw plate. Research is still required to investigate the final process of drawing down the wire. For instance, the sizes of the holes in the draw plates and the tolerances involved must be examined by investigating the samples of original wire that have survived. Obviously, some parameters can never be established with complete certainty. Nonetheless, certain facts, for instance, that old wire is often oval in cross section and that the diameter of a particular gauge varies even within the single batch used on one instrument, are informative.

The tone quality of 'old' wire is more mellow than that of modern wire. The presence of phosphor instead of carbon appears to be the main reason. The presence of phosphor means that the limit of elasticity is close to the breaking point. But the lack of annealing during the final drawing process is also important. Because the wire is not annealed, the thinner the wire is drawn, the greater its tensile strength. Not only does modern music wire contain carbon rather than phosphor but it is annealed after each diameter is drawn.

Although the raw material produced in the old way is not available today, the appropriate iron/phosphorus material can be made in a modern metallurgical

lab. The product can be taken to a rolling mill for processing or, and this may be easier, reduced to rods in the same laboratory in which it was produced. The rods have to be taken down, with annealing, to the thread size. This can also be done in the lab or in the mill. The final process of drawing the thread down to the various sizes used in instrument building, without annealing, must be done by hand. This whole process does not have to be expensive. A lab for production has already been found Funds to finance the initial project of making 100 kg. of iron with phosphorus are still needed. To obtain results would take about twelve months.

With regard to objective and subjective standards and the question of the originality of the strings used for comparison Poletti referred to Andreas Streicher's remark to the effect that although everyone has their preferences, we all agree on one thing, that the piano has to sound like the best wind instruments. This remark was reiterated and expanded by Schiedmayer and Dieudonné in their treatise on piano making as late as 1824. But to be more objective, Birkett and Poletti agreed that one of the essential things of the early music movement is to discover what was done and thought in the old days and to stop projecting our modern ideas onto them. This is particularly difficult with regard to old strings because there are not many which we know with some certainty to be contemporary with the instruments on which they are found. Nonetheless, samples of original wire have been investigated. The results published by Martha Goodway and Jay Scott Odell [in *The Historical Harpsichord*, 2, ed. Howard Schott, Stuyvesant, N. Y. 1987 – M.L.] go a long way to present an objective analysis of historical wire. It should not be forgotten, however, that there must have been considerable variation in quality in the old days. On the other hand, the processes used in 1560 were the same as those described in Pleyel's patent for wire manufacture in 1810 which suggests that we can expect some level of consistency. Birkett and Poletti intend to investigate the standards associated with that consistency by examining the properties of samples of old wire – both their alloy compositions and their physical properties, comparing them with each other and with modern wire to give us the standards towards which we can strive. Although samples of early eighteenth-century wire are extremely scarce, samples from the late eighteenth century and the first years of the nineteenth century are available.

The third round table, more directly for the performer than for the maker, was devoted to Haydn and the instruments used for his music. Derek Adlam was the chairman and opened the discussion with a short introduction. This introduction, together with important parts of the discussion, is summarized here.

Although clavichord lovers may have the feeling that Haydn wrote his sonatas almost exclusively for the clavichord until about 1780, we know that there were

numerous harpsichords in Esterhaza, suggesting that a great many of Haydn's sonatas were almost certainly played on the harpsichord. It should also be remembered that the harpsichord had not lost all its importance as early as we sometimes think. When Frau von Genzinger commanded a sonata from Haydn in 1790 she was still a harpsichordist.

So the harpsichord must have played an important part in the performance of Haydn's keyboard music. The type of harpsichord involved may have been one with which we are not so familiar, the Austrian harpsichord. Typically, the surviving examples of these instruments have the Viennese octave, a bizarre form of the short octave in which the key endblock and the lowest naturals are split into separate keys, front, middle and back, thus enabling them to be crammed into a small space [see *Das österreichische Cembalo*, ed. Alfons Huber, Tutzing 2001 – M.L.].

The idea behind the arguments relating to the various short octaves and the ranges of particular pieces of music is that if a piece can be conveniently played using such a short octave, it seems likely that the piece was written with an instrument in mind with such a short octave; a coupling is established between the music and the instrument. Some chords, for instance the D-d-f# chord in a particular sonata by Haydn, can only be played using a normal short octave. Such chords are only found in the first editions of Haydn's work. In later editions such places are rationalized for a chromatic keyboard. But one has to be careful making too much of the connection between the range of a particular piece of music and the range of particular keyboards and drawing conclusions about the intentions of the composers. If one thinks of the range of Mozart's little travelling companion, a clavichord by Stein with the range C to f3, one knows immediately that most of Mozart's keyboard pieces could not be played on it. It was however a travelling clavichord, not a performance instrument. Scarlatti's sonatas fall into groups according to the compass they require, some need a C to c3 four-octave compass, others a short-octave compass; there are some requiring the five-octave range GG–g3 and others FF–f3. There are whole groups which suggest or demand a particular range. And with high art music like Scarlatti's we have to look at high-art instruments, not a little *Reiseklavier*, a practical expedient. On the other hand, we must also be wary of limiting our understanding of the work of a particular composer by even posing the question as to the instrument for which he or she wrote. Perhaps composers wrote more in their heads than at their instruments.

In the letter of the 4th of July 1790 to Frau von Genzinger Haydn recommended a piano by Schanz because, Haydn wrote, the action was very light and the tone very good, suited to his sonatas. He mentioned that besides the instruments of Schanz, Walter's pianos were also good but that only one in ten was really good and that their touch was heavy. Perhaps the detail of this comparison (even though probably tainted by some commercial interest) demands that we take 1790 as the year in which we should look seriously towards the piano

as the vehicle for the interpretation of Haydn's music. But we should also not forget that Haydn, from at least the early 1770s, was writing with an expressive instrument in mind. The dynamic markings found sporadically even at that early date are not food for the imagination. They are for an instrument capable of producing dynamic effects. An expressive keyboard is thus required if the obvious intentions of the composer are to be realized fully.

Some of the expressive instruments certainly owned by Haydn can be named, even if none of them still exists. We know that Haydn bought a piano by Wenzel Schanz in 1788, but we do not know for certain if it was a grand or a square. The price, 31 Ducats, however, seems to indicate it was a square. A grand would have cost twice as much. Furthermore, the name given to the instrument – a *forte-piano* – was often used to indicate a square piano rather than a grand. Grands were often called *Fortepiano in Flügelform*. That the great composer Haydn would never have been content with a square piano is a modern misconception. The square piano was very popular in Paris and London in the late eighteenth century; the list of instruments confiscated from the nobility during the French Revolution includes 63 pianos, all but two of which were squares. In 1801 Haydn was given a grand piano, richly decorated (probably the first instrument given to a composer), by Sébastien Érard, and after his second London trip Haydn is said to have brought back a large English grand – by the firm Longman and Broderip – with him to Vienna. But how he valued these two is not known. It is however clear from the range of some of his last sonatas, and, according to recent study, on stylistic grounds, that they were written for English grand pianos like the Longman and Broderip.

It may please the imaginations of clavichord lovers to remember that even though Haydn was told at the end of his life by his doctor not to play anymore, Griesinger, his wonderful biographer, wrote that Haydn requested every day to be taken to his *Clavier* – almost certainly a clavichord? – so that he could play God save the Emperor.