Harpsichord & fortepiano

Vol. 5, No. 1 October, 1994

Musical Instrument Research Catalog
(MIRCat)

The Hudiksvall Mietke

ANDREAS KILSTRÖM

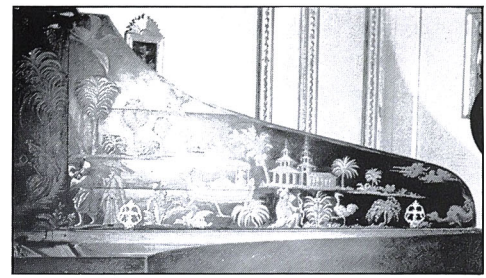
THE FACT that there is a harpsichord in the collection of Hälsinglands Museum, Hudiksvall, Sweden has been known for some time through the pioneering work of Eva Helenius-Öberg.[1] However, nobody had paid the instrument any closer attention until Ann-Christin Kilström and I went to examine it with the hope of finding a useful prototype for our own work and perhaps putting a name to a hitherto anonymous harpsichord. Both of these aspirations were fulfilled to an unexpected degree: to be the first persons in our time to read the signature, 'Michael Mietke Instrumentmacher in Berlin Anno 1710' was a breath-taking sensation. Finding a beautiful harpsichord in a well-preserved state in no way lessened the sensation.

The existence of this third Mietke harpsichord became public knowledge with the appearance of the article 'A Signed Mietke Harpsichord' in the *FoMRHI Quarterly*, July 1991.[2] Since then it has been a focal point of interest for a number of makers and researchers, but to my knowledge nothing further has been published on the subject. The aim of the present article is to give a broader view of the instrument, discuss things not mentioned and correct some errors in the FoMRHI article.

A brief description of the Hudiksvall Mietke

Dimensions (*in mm.*):		
Overall length		2160 at soundboard level
Outside width	at front	847
	at bentside	839
Length of cheek		548
Height of case		245 (250 incl. bottom frame)
String scale, longer 8'	*c'''*	138
	c''	275
	c'	525
	c	1050
	C	1691
	G'	1813

Bottom board and interior structure are made of pine, the case slides are made of walnut, approximately 9.5 mm thick for the cheek, 7 mm for the bentside and 8–9 mm for the spine. The case is glued to a pine frame 26 mm high. The inside of the case above soundboard level is veneered in walnut, 4 mm thick, and a moulding is glued on top, overhanging the inside case edge. The wrest plank is made of oak and seems to be dovetailed into the supports on which it sits—thus giving the impression when viewed head-on that the wrest



Side view of the Hudiksvall Mietke

plank is glued between the supports. The wrest plank is covered with a 4 mm veneer which seems to be cherry. The nut and bridge are made of similar wood. The bridge is bent to shape in the treble, and the extreme bass part (from *C*) is a separate part joined onto the main bridge with a lap joint. Bridge and nut taper in width but are the same height throughout. They have mouldings in which the pins sit. Double pinning on the bridge is taken up to *g* ♯, at which point the hitchpin rail is also divided. The soundboard is made of spruce with parallel to the spine. It has no decoration but is coated with varnish.

The jacks are of pearwood with holly (?) tongues. They are made in two sets with the damper slots on different sides, so that both registers will have their dampers on the same side of the jacks when viewed from the keyboard. The jacks taper slightly in both width and thickness. The jacks are guided in box slides with their respective wooden levers on either side of the nut. The key-levers are of lime with ivory-topped fruitwood for the accidentals and ebony covering for the naturals. The arcades are fruitwood, stained black. The key-heads are 35 mm long and the octave is approximately 156.5 mm wide. The keys are balanced at around three fifths of the way from the back. The keys are guided in a rack with thin wooden fins.

GERMAN-style harpsichords seem to be hermetically sealed and are very difficult to get inside. This particular harpsichord has suffered very few cracks and none large enough to offer a view inside. We took the liberty of extracting a knot from a bottom board in order to insert an optic fibre (260 mm from the lower belly rail, 160 mm from the spine). I do not know if it is true for all kinds of fibre-optics, but the one kindly lent to us by Musikmuseet, Stockholm, had a fish-

The Hudiksvall Mietke from the keyboard end

eye lens which of course distorted the view of what was actually there. Two thick planks traverse the bottom (the fish-eye makes them seem to taper towards the edges); knees are made of two pieces, one lying down, the other, with grain, standing up with a cut-out where the liner rests. Three of these along the bentside, two along the spine and one against the belly rail could be seen from our vantage point. On the underside of the soundboard there are three ribs perpendicular to the spine, two of which can be seen through a soundboard crack. They are high and narrow, about 7 mm at the base and tapering towards the outside. There is also a cut-off bar of the same section as the ribs although slightly larger. The wrest plank supports extend to the cheek–bentside joint and approximately the corresponding point on the spine. The rather thin spine liner (14 mm) is let into a cut-out in the support. The bentside liner is considerably thicker—about 25mm square.

There are no strings on the instrument, but there are remains of wire on most tuning pins. These are a mix of mostly iron wire with a few brass strings thrown in. Most of these seem not to be original. A few cases in point: *b''* longer has .37 brass, *b''* shorter has .28 iron. *G'* shorter has .52 iron. However there is a loose piece of wrest pin coil that is .23 brass. This was found on the wrest plank next to the cheek. *D* shorter has a spliced-on .42 brass wire. This might be an attempt to salvage an old string. A hypothesis might be that as the original brass strings broke they were replaced with whatever brass wire was at hand. As the brass continued to break—as the result of a higher pitch—they were replaced by iron. There is unfortunately nothing from which to determine the original gauges.

The harpsichord rests on a stand of eight turned legs between an upper and a lower frame. The lower frame has an elaborate front part, but a plain back part—following the outline of the harpsichord—which according to Mattias Griewisch is not original.

The whole harpsichord is finished in blue and gold. The outside has a matt finish where a lighter blue seems to overlay a darker one. For the inside of the lid, jack-rail and key-well the reverse is true: a dark blue overlays a lighter blue and it is varnished to give a lacquer effect. The lid is decorated with a bold exotic painting. I have described it as being *'à la Turca'*, but it certainly shows some Chinese features as well. One interesting point about it is that it is not made in gold leaf that has been tinted over, but built up with different shades of ochre oil (?) paint and highlighted with gold, some of which is still bright and seems genuine, whereas some parts might be bronze powder as they have tarnished and gone brown-black-green. Mouldings are gilded over the blue paint.

A comparison with the Charlottenburg instruments

THERE can hardly be any doubt any longer as to the maker of the Charlottenburg instruments. All previous theorizing[3] has been based on circumstantial evidence, Michael Mietke being the most likely candidate. The single manual—the white—harpsichord is in shape and size almost a twin. There are some things regarding its original state that can only be guessed, such as keyboard end-blocks—although the width can be determined from where moulding ends in the rail in front of the keyboard—and the shape of the nut. An interesting feature is that the piece for the top two notes has been grafted onto the replacement nut assuming it originally had one like the Hudiksvall Mietke—perhaps indicating two stages of compass extension: a soundboard layout which differs quite substantially from the Hudiksvall one.

The stand of the Hudiksvall harpsichord is closer to that of the double-manual Charlottenburg

instrument: the upper frame is virtually identical for both harpsichords, as is the front portion of the lower frame.

The interior structure seems to be the same for all three harpsichords: composite knees, two bottom braces, a heavy bentside liner, a thinner spine liner, wrest plank supports that extend to the bentside–cheek joint and an exterior frame below the bottom board.

On making a copy of the Mietke

There is so much on this harpsichord that could be—or even is—what Mietke put there in 1710: action, felt, dampers, perhaps even plectra. Even the length of the jacks may be original. The felt has been eaten by moths and is no longer musically serviceable, but it could give clues as to its original state. Eighteenth-century plectra are indeed rare. You can learn things about voicing from them, but you cannot make them pluck and if you take them out, how will another person know how to put them back in again? Even if you make a record of each and every one, how will he know how far they were pushed in? There are more of these questions and more decisions to make as you go along with a restoration job. In this case we have only *one* unaltered Mietke harpsichord: who are we in 1994 to say that we can do a good and safe restoration?

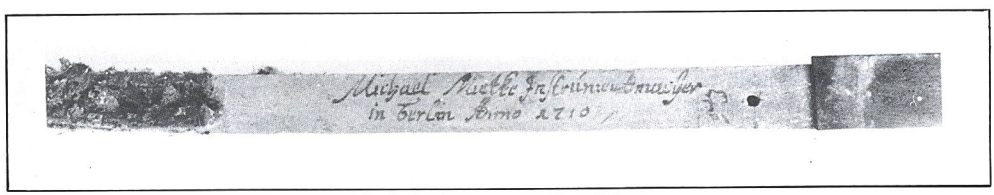
There is of course no such simple answer to the restoration question as, 'Make a copy of the thing and see what it sounds like.' The same is true for copies as for restoration: every maker of musical instruments is an individual. What a maker can do is try to get as close to an old harpsichord as possible in choice of materials, measurements, working methods, etc., if it is his intention to make a copy. Normally the maker has to build harpsichords to suit the customer and this is one deviation from the path of copying: many players want Ruckers harpsichords, but how many players would accept them with a short octave and an 8' and 4' disposition? The maker himself departs more and more from a true copy when he opts for other solutions or when circumstance forces him to make something differently from the original. We decided that we should try and make a copy of the Hudiksvall Mietke with the intention of getting as close to the original as we possibly could.

THE process was started by ordering the data that we had collected onto a drawing. This is probably the first deviation from Mietke's methods, but he copied and expanded on his own design, whereas I had to get that particular design into perspective.

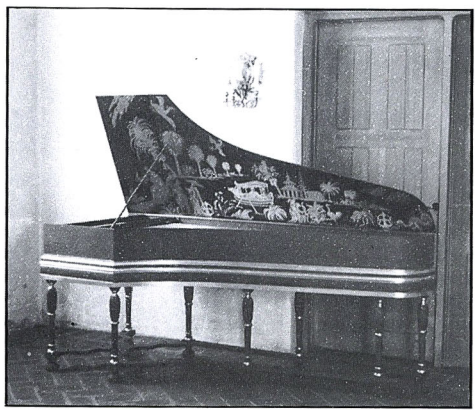
German designs—like Italian and unlike Flemish—start with the bottom board. Here it is made of quartered resinous pine (we found out when putting a strong light to the bottom of the Mietke that the aromatic vapours of turps made themselves felt in the room), with an oak plank crosswise along the front. Onto the bottom are glued the knees and *H*-shaped construction which is the belly rail and the support for the wrest plank. The wrest plank is dovetailed onto the support; the liners are glued onto the knees and they end in the back end of the *H*. Whilst the interior construction has been going on, the bentside has been submerged in water and then clamped to a form, then left there to dry out according to the method described in Sprengel: *Handwerk und Künste in Tabelen.*[4] The case sides are glued onto the interior structure. They are clamped onto liners and knees and nailed to the bottom—starting with the bentside. Later a moulding is glued over the nail heads along the bottom of the case. The spine and cheek are dovetailed onto the bentside.

Having thus completed the basic structure, the inside case veneer is glued in. The soundboard is joined together, planed to thickness, the bridge and ribs are glued on and the assembly glued to the liners and belly rail.

The jack guides are made from strips of pearwood with small blocks glued in between to make up the spaces between the jacks. With the soundboard installed two things are marked out from the guides: (1) the nut and consequently the wrest-pins, and (2) the rear of the key plank. The keyboard frame is made, the key plank is fitted onto the frame, marked out at the playing end and drilled for the balance pins. The assembly is pushed into the harpsichord and the rear of the keyboard is marked out by a dummy jack, dropped down and given a tap to indent the key plank through



Mietke's signature on the *c'''* key



Copy of the Mietke, Kilströms Klafvessinmakeri, 1993–94

each hole in one of the box registers. Now the keys can be sawn apart, given their respective furnishing and made to work.

At this point the instrument is decorated: the inside gets a shellac finish and the outside is painted blue. Here I must admit that we are working from our own experience rather than trying to copy Mietke. We have had no analyses made for either varnish, pigments or binders. We have tried to copy the visual impact of the original as it ought to have looked when new.

The harpsichord is strung and made to play. A string scale was calculated taking into account the very meagre evidence of the original wire. After having been left in a 'raw' state for a few months the harpsichord was given its final voicing and regulation. The lid-painting was completed and body and stand gilded.

The sound of the copy

ANTIQUE German harpsichords in playing condition are exceedingly uncommon and I must confess I have never heard one 'live', though I have tried to see the Zell in Hamburg on several occasions! Speaking of copies, they seem to fall into two categories: one with a very pronounced first partial, the other with quite a lot going on in the upper reaches of the spectrum. They all have a more acute pluck than their Flemish/French counterparts. Our Mietke copy falls into the second category. It has a sweet treble, can be quite majestic when played with both registers, but is never aggressive. One would have thought J S Bach to be the natural choice for this harpsichord, but I find as great a pleasure in playing 17th-century French music on it.

A final hypothesis

It seems that the basic harpsichord concept in 18th-century Germany was a 2 x 8' disposition.

> '[Harpsichords] are rarely single- or quadruple-choired, most often double- or triple-choired. The double-choired are at eight-foot pitch . . .' [5]

> 'The two registers are of pearwood. . . . They are at eight-foot pitch . . .' [6]

> 'It has already been pointed out . . . that the two registers fi and dh rest loosely on the wrest plank supports.' [7]

A number of harpsichords seem to confirm this: the two single Mietkes, the 1738 Christian Vater and the anonymous German harpsichord in Visby, Sweden. What is remarkable is that they are all short-scaled: $c'' = 270/280$ and will take brass wire in the treble, assuming a relatively low pitch. However, when a 4' register is added the string scale is increased to the region of $c'' = 320/340$. This to me suggests that brass stringing was the first choice and iron was considered only when a 4' was involved, for the simple reason that spanning the register-gap would be difficult with the very short brass strings that would result in the treble: 4' $c''' = 70$, $f''' = 50$. Thus there is a pronounced discrepancy in harpsichord disposition approach to the Flemish/French school where 8' + 4' in iron was the basic disposition and a second 8' was considered the addition.

Notes

1. Eva Helenius-Öberg: Svenskt instrumentmakeri 1720–1800. En preliminär översikt, *STM* (Swedish Journal of Musicology) vol. 59:1, 1977.
   ——. Cembalon i Sverige samt frågan om det svenska klavikordets uppkomst, *STM* vol. 61:1, 1979.
   ——. *Svenskt-Klavikordbygge 1720–1820*, Uppsala 1986.
2. Andreas Kilström: A Signed Mietke Harpsichord, *FoMRHI Quarterly* No. 64, July 1991.
3. Dieter Krickeberg and Horst Rase: Beiträge zur Kenntnis des mittel- und nord-deutschen Cembalobaus um 1700, *Festschrift John Henry van der Meer*, Tutzing ?n.d.
   Martin Kirnbauer and Dieter Krickeberg: Musikinstrumentbau im Umkreis von Sophie Charlotte, *Sophie Charlotte und die Musik in Lietzenburg*, Berlin 1987.
   Sheridan Germann: The Mietkes, the Margrave and Bach, *Bach Handel Scarlatti, Tercentenary Essays*, Cambridge 1985.
4. Peter N Sprengel: *Handwerk und Künste in Tabelen*, Berlin 1773, p. 257.
5. Jakob Adlung: *Anleitung zu der musikalischen Gelahrtheit*, Erfurt, 1758 (trans. Frank Hubbard: *Three Centuries of Harpsichord Making*, Cambridge, Mass. 1967, p. 265).
6. Johann Samuel Halle: *Werkstäte der heutigen Künste*, Brandenburg and Leipzig 1764 (trans. Hubbard, op. cit., p. 266).
7. Peter N Sprengel: op. cit. (trans. Hubbard, op. cit., p. 268).

Acknowledgements:
My thanks to Miles Hellon and Jan Kalsbeek for sharing information on the Charlottenburg harpsichords. Special thanks to Mattias Griewisch for comparing measurements and exchanging ideas.