The Galpin Society

For the study of musical instruments

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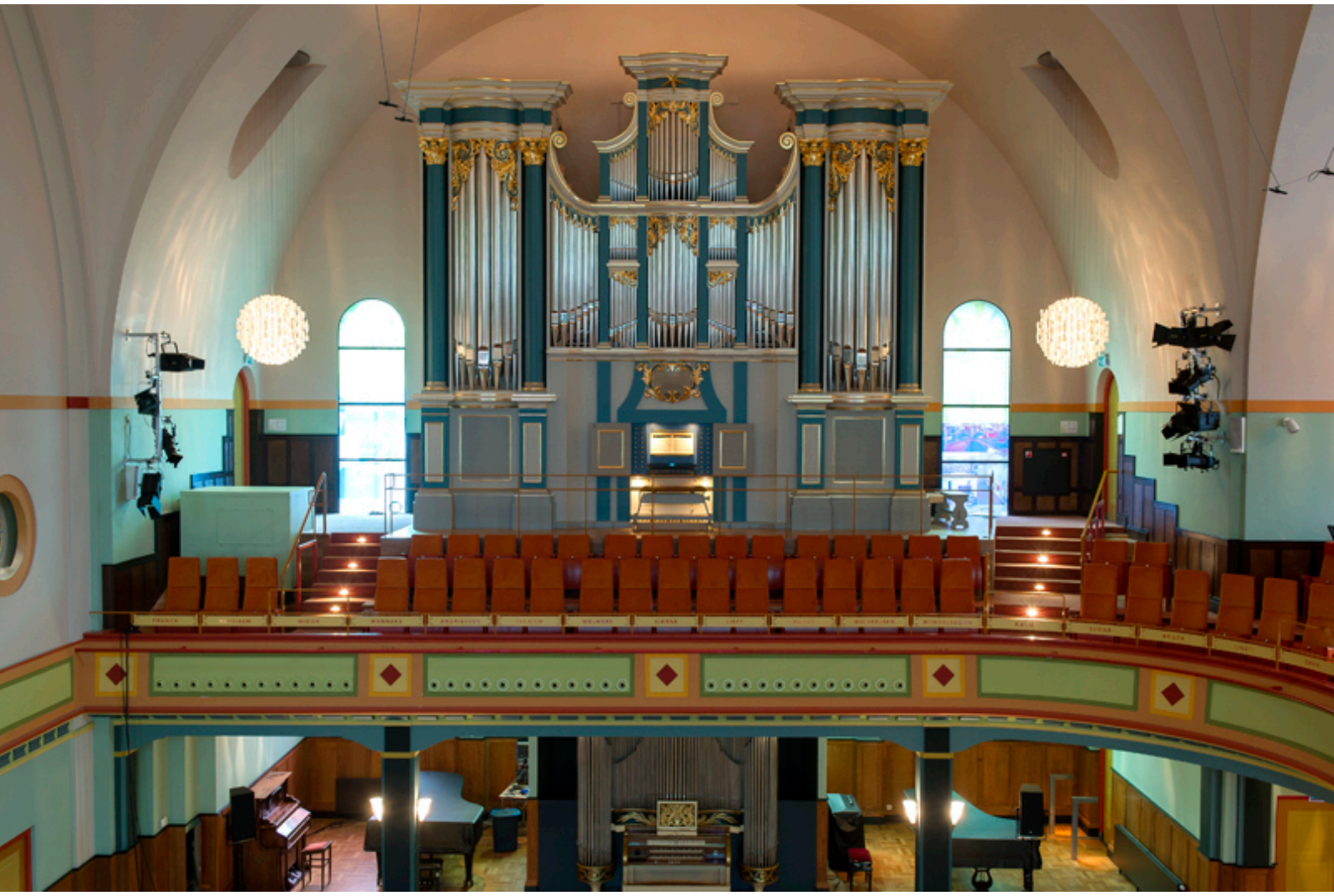

The Utopa Baroque Organ (see p. 4)

In this issue:

Cover: *The Orgelpark concert venue showing various keyboard instruments. Photo: O. Woods.*

Image found on the internet and sent to the editor by a GS member!

Editorial

Firstly, I would like to thank those who responded to the Questionnaire concerning Open Access. The responses have been collated and once the Committee has had a chance to discuss these, details will be shared via the Newsletter.

In addition to a report by Alice Little on last summer's Bate Collection/Galpin Society joint conference at Oxford, I am pleased to include a highly informative essay by Owen Woods on the Utopa Baroque Organ (UBO) in the Orgelpark in Amsterdam. I would also like to draw your attention to a very interesting research report by the luthier Brian Applegate, who is studying for a PhD at the University of Edinburgh. Brian's project involves the use of scientific methods to investigate the stiffness and frequency components of various wood types used in the manufacture of guitars. I plan to continue featuring research reports such as this, and would like to encourage other students to get in touch if they would like to share their work.

There will be another Newsletter before the AGM, but do make sure you have the date and venue in your diary: it will take place on Saturday 18 July 2020 at the Royal Birmingham Conservatoire at the time that the RBC is hosting the International Biennial Baroque Conference. During the Conference, instruments from the Conservatoire's collection will be on display, and it is hoped that Galpin Society members attending the AGM will be given special viewing opportunities.

Other upcoming significant organological events include the 2020 American Musical Instrument Society's Meeting, which will be held at the National Music Centre (NMC) at Studio Bell, in Calgary, Alberta, from 15 to 18 July. The Call for Papers has now closed, but for further information see: www.amis.org/2020-meeting and the Studio Bell website: www.studiobell.ca/. The next CIMCIM (ICOM, International Committee of Museums and Collections of Instruments and Music) Conference – *Beyond the Object and Back, the Role of Collections in Music Museums* – takes place in London, jointly hosted by the Royal College of Music and the Horniman Museum and Gardens, from 6 to 10 September 2020. For further information see: network.icom.museum/cimcim/what-we-do/meeting-2020/. Preliminary discussions have also started concerning the 2021 biennial Galpin Society Conference, which we anticipate will be held in Edinburgh.

I am now accepting submissions for the 2021 edition of *The Galpin Society Journal*, with a closing date of 1 June 2020. Due to the large number of articles I receive, it is not possible to publish everything I am sent, and articles that do not follow the guidelines will not be processed.

Lance Whitehead
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The Utopa Baroque Organ

Background

The Orgelpark in Amsterdam is a concert venue and research centre devoted to the organ, putting on hundreds of concerts each year. It is financed by the charitable foundation Stichting Utopa, from the proceeds of the shares of the Topa Group (a group of companies specialising in industrial packaging). The building was once a church, and its main performance space is a roughly square hall with a domed ceiling, with seating on two levels. On one side at gallery level is situated the church's original 1922 Sauer organ, on the opposite a modern-day Cavaillé-Coll built by Verschueren in 2009. The other two sides are taken up by the Van Straten organ, a 2012 copy of the Utrecht organ from 1479, and the new Utopa Baroque Organ, the subject of this article (see front cover of this newsletter).

The Utopa Baroque Organ

The Utopa Baroque Organ (UBO) is not a 'Bach Organ'. It is an instrument suitable for playing the music of Bach. It may seem like a semantic difference, but it is an important one. We do not know the exact nature of the instruments that Bach played, nor do we know for sure his preferences or even what he wished an organ to do. The UBO is also not a replica. Existing historical organs were built for specific buildings; it would be inappropriate to reconstruct an instrument only to place it in a building with different acoustics. The UBO then is a 'process reconstruction', taking inspiration from several instruments.

This instrument was also designed as a 'Hyperorgan': it is an instrument which aims to transcend conventional instruments and open doors to new sonic possibilities. To that end it is not only playable from the mechanical console (Figure 1), but from a digital console on the floor of the concert hall. This console decouples the pipes from the keyboards and from each individual stop, and allows full control of the winding.

Figure 1. *Mechanical console of the Utopa Baroque Organ. Photo: O. Woods*

The UBO is in some ways a paradox. It is two instruments in one, firstly a mechanical action organ, intended to inform players on what playing and registering an instrument of Bach's era would be like and by extension, the intention that the composers may have had towards the performance of their works. Secondly it is an ultra-modern organ with a detached console and with full control over individual pipes. For the organ to be successful each side of the instrument needs to have integrity, with every artistic decision being justified in and of itself.

Inspiration and Concept

When in 2012 the Orgelpark decided to build an organ suitable for Baroque music they considered various sources of inspiration. They decided to build a Hildebrandt-inspired organ after the team fell in love with the sound of the organ at St Wenzel's Church in Naumburg.

Although Silbermann would perhaps be a more obvious choice for Bach, his organs are louder and more forceful and were felt less appropriate for the more intimate acoustic of the Orgelpark. Hildebrandt was a contemporary of Bach, indeed Bach approved the Naumburg organ in 1746.

The design and concept of the organ was developed by the Orgelpark under Hans Fidom, the head of the research programme. Tonal matters were in the hands of Munetaka Yokota and the instrument was built by Elbertse Orgelmakers of Soest. The first decision to be made was the design of the soundboards for the instrument. Slider soundboards, as built by Hildebrandt, are 'tone channel' chests. Each pipe representing a note of the organ opens onto a single channel, fed with the same wind. Lateral sliders select which stops sound at any one time. However, slider soundboards are not well suited towards the demands of the digital console, as each pipe is 'trapped' to a single note on a keyboard.

The answer was in an early form of soundboard: the spring chest. These differ from a conventional slider chest in that instead of slides, each pipe has an individual pallet, operated by a sticker which projects above the top of the chest. A lateral bar then clamps down on every pallet associated with any one rank simultaneously when a drawstop is drawn. A spring chest of this type can be easily combined with digital technology. A small electromagnetic device can be fitted to each stop pallet, which can be operated by a digital console. When the digital console is turned on, every tone pallet is opened, and the entire organ then acts as a unit chest, with pipes able to be combined in any order. At the mechanical console, the stops are controlled by bars and the action is mechanical to the tone pallets. Two organs in one!

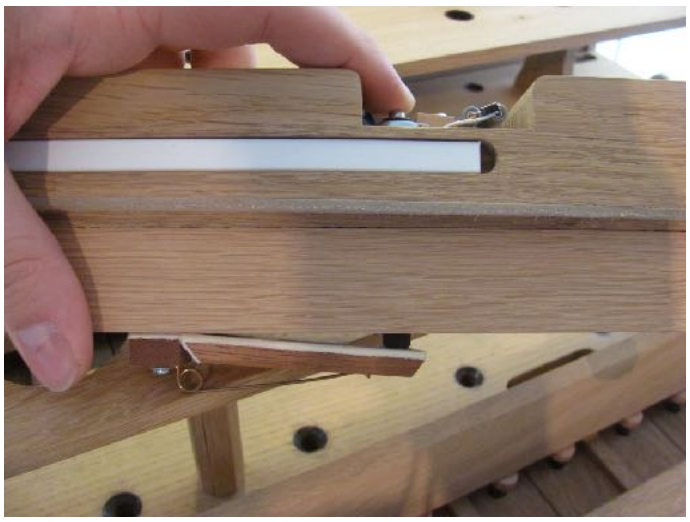

Figure 2. *Tone channel drawer showing the 'sticker' style electromagnet. Photo: O. Woods*

The magnet units are a superb piece of engineering by Sinua GmbH of Düsseldorf in Germany. A small metal sticker passes through the magnet and can move freely. When the current is activated this sticker opens the pallet, which returns via a spring when the current is removed. These units are small enough to fit into the tone drawers, meaning that they present no obstruction to the wind flow. The compact design of the magnets allowed the cross-sectional area of the channels could be matched to those that Hildebrandt used in his slider soundboards, making it more authentic to his construction.

It may come as a surprise to some, as it did to me, that the stop action on the mechanical console is electric rather than mechanical. The drawstops on the console activate solenoids which press the bar down onto the stickers of the electromagnet, opening the pallets for that stop. This means that even with manual blowing, the organ still requires electricity to function. The principal reason for having an electric stop action was the provision of a sequencer. The Orgelpark is a concert venue and the organisers felt that having to practice with registrants would limit its appeal.

The organ is very pleasant to play. The drawstops are easily accessible and satisfying to use; the action, whilst being slightly noisy at the console, is responsive and immediate. The

blower (housed in a separate cabinet to the left of the organ) feeds four large diagonal bellows inside the casework. The size of these bellows means that there is a surprising lack of 'bounce' and 'flutter' within the wind system and the pressure, whilst not being completely constant regardless of demand, is at least stable. There is the option of blowing by foot, four huge pine foot levers protrude from the right-hand side of the case and two calcants can stand on them, supporting themselves on the rail provided. A music desk for the calcants is a nice touch.

Specification

The initial starting point of the specification was that of the Hildebrandt organ in Hettstedt (1749). Various changes were made to this specification to better suit the instrument to the building. Firstly a 16' Fagott was added to the Hauptwerk, as was present at the 1757 Hildebrandt organ at Dresden's Dreikönigskirche. From the same source came a Clarin 4' on the Pedal in place of the Nachthorn 2'. The Hettstedt specification included a 32' Subbaß on the pedal, for which there was regrettably no room in the Orgelpark. Instead a Quint 12' was added to create a (very effective) resultant 32', a technique which was known at the time, although I do not know if this was known to Hildebrandt. The Pedal Violon 16' was also omitted. The final change was to add an Unda Maris on the Oberwerk. This stop is based on the Trost rank described by Adlung and is a double mouthed stop of wooden construction, with one mouth slightly higher than the other and the pipe partitioned down the middle. This creates a (captivating) celeste in a very efficient footprint. The complete specification including couplers and accessories is below.

Hauptwerk (manual I)
Principal 8'
Burdun 16'
Rohrflött 8'
Quintathen 8'
Octav 4'
Gemshorn 4'
Weit Pfeiffe 2'
Sexquint altra II
Mixtur V
Cymbel III
Cornett IV
Fagott 16'
Trompet 8'
Tremulant

Oberwerk (manual II)
Principal 4'
Gedackt 8'
Violdigamba 8'
Unda maris 8'
Rohrflött 4'
Nassat 3'
Octav 2'
Waldflött 2'
Tertia 1 3/5'
Quinta 1 1/2'
Süfflött 1'
Scharff IV
Vox humana 8'
Schwebung

Pedal
Principal 16'
Subbass 16'
Quint bass 12'
Octav 8'
Posaune 16'
Posaune 8'
Clarin 4'

Couplers
Manual coupler
Pedal coupler

Nachtigall
Cymbelstern

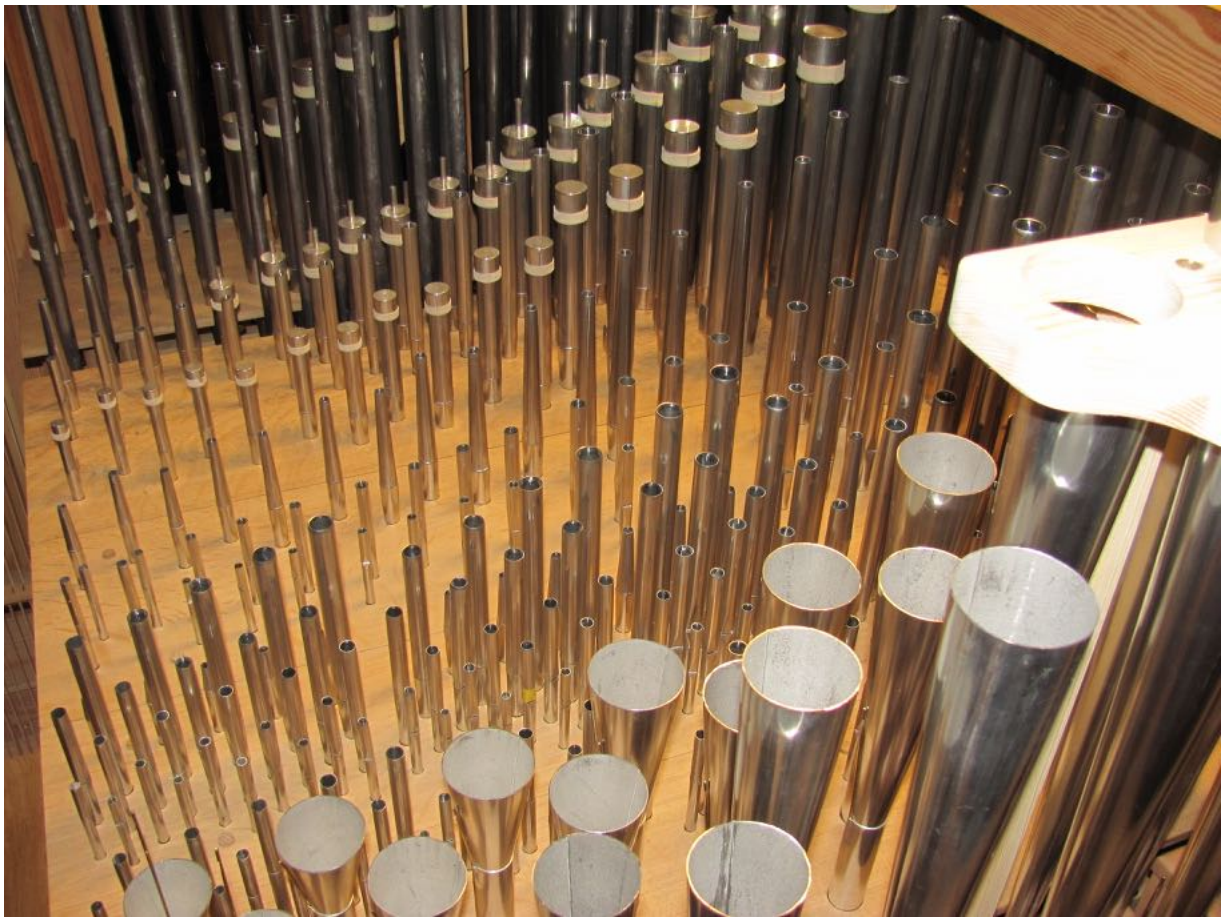

Figure 3. *Pipework in the Hauptwerk. Photo: O. Woods*

Voicing and Sound

The instrument is on a pressure of only 63mmwg. This is significantly lower than known pressures of Hildebrandt and was adopted at the suggestion of the voicer, Munetaka Yokota. Much effort has been made to ensure that the pipework is as authentic as possible, to the extent of choosing a particular type of linen on which to cast the pipe metal! Details of scaling and voicing were taken from Naumburg by Helmut Werner and Munetaka Yokota. The high languid and overbite to the upper lip combined with the low pressure gives rise to the transient features so characteristic of this instrument. Yokota identified five types of speech in the pipework: 'Chiff', 'Cough', 'Hiss', 'Hiccup' and 'Kiss'. I can't pretend to have identified each one in the finished organ.

The starting transients of each pipe in fact are the thing that one first notes about the sound of this instrument, especially if one is brought up in the English cathedral organ tradition as I am. Although it can take a little while to get used to, it undoubtedly does provide enormous clarity to polyphonic music. There are downsides: for example the 8' Gedackt on the Oberwerk does not act hugely well as a thickener with the Vox Humana, as its transient is too noticeable against that of the reed. Additionally, there are some stops for which the transient is so long that it interferes with the clarity of the melodic line, as the next note sounds whilst the first is still developing. This was not a problem for the more experienced interpreters of this instrument, showing that such stops do have their place in the tonal scheme. The blending of the choruses was extremely good – somewhat remarkable given the style of voicing. The choruses are powerful yet sweet and although full organ is appropriately overwhelming there is no unpleasantness to the sound. The reeds on this organ are beautifully controlled, being powerful without being unduly harsh.

The Cymbelstern is a stock item from Laukhuff, but it has been re-tuned to $b^1 – a^1 – c^1 – h^1 – g\sharp^1 – c\sharp^2 – g^1 – d^2$, incorporating the B-A-C-H motif.

This is a hugely effective cimbelstern, sufficiently atonal that it can be used in multiple keys but not so atonal that it jars with everything. The composition of the Cymbelstern was designed by Ibo Ortgies, who also designed the organ's temperament: 'Ortgies II'. It comprises the fifths C–G–D–A–E tempered by 1/5 of a Pythagorean comma, B♭–F and B–F♯ tempered by 1/10 comma and the remaining fifths are pure. It is a versatile temperament which allows for harmonic flexibility whilst retaining improved consonance in some keys. The pitch is A=415.3Hz, which is exactly a semitone flat, making it easy to play with modern instruments at so-called 'Baroque pitch'. Overall this instrument exhibits huge varieties of colour, mood and sound. It proved itself more than capable of addressing the repertoire and blended effectively with the vocal and instrumental ensembles.

Construction

The instrument was built by Elbertse Orgelmakers of Soest in the Netherlands to an extremely high standard. The case is a beautiful work of art and has been meticulously designed. The more you look at it the more detail you see in the way that lines of flats and mouths converge and the way in which it is situated within the building.

The inspiration for the design was taken from the extant Hildebrandt cases of Sangerhausen (1728, dimensions and proportions), Hettstedt (1749, details) and Langhennersdorf (1721, colours and shades). The painting and gilding are of high quality and the colour scheme manages to be simultaneously historically authentic, beautiful to look at and in keeping with the rest of the building.

I do have three slight criticisms. Firstly, from some angles on the gallery, some structure and pipework is visible. Secondly, when playing the digital console, again from some angles, LEDs are visible behind the front pipes. A cloth could be hung across these lights if desired. Lastly the top of the innermost pipe on each side of the curved flats is not covered by the shade. I can't find any historical justification for this and it is a shame because it does mar the front somewhat. The pipe could easily have been made over-length and cut away at the back as on the rest of the instrument.

The Digital Instrument

The other side to this instrument is of course the digital console (see Figure 4). The console itself is sleek and modern. Originally built for the Sauer instrument, from which it is still playable, it has been upgraded to incorporate the UBO.

Figure 4. *Digital console of the Utopa Baroque Organ. Photo: O. Woods*

The digital instrument is controlled by 'registration layers', different registrations which are built up on top of each other. The player can therefore create an echo on a different stop, or have one stop pulsing whilst another is constant, or have a chord play with a single key press, or any of many and varied effects. The registration layers can be assigned to any or all manuals and are protected by an RFID (Radio-frequency Identification) tag so that there is no possibility of organists wiping the settings of others (a particular concern with a console of this complexity). There is a loop station and provision through patch bays in the console and in the organ to connect microphones, speakers, computers and devices to take sound production and generation outside the organ if desired. The four balanced pedals are individually assignable but can control a general crescendo for one or both organs, the swell box of the Sauer instrument, volume of any amplified sound and the speed of the blower for the Utopa Baroque Organ.

The wind control was one of the most interesting aspects of the digital sound. Some performers used the wind control pedal exactly as one would use a swell pedal and the effect was often quite magical. With an instrument of this type you can control exactly when each pipe sounds and the nature of the transient, meaning that every pipe makes very different sounds at different pressures. The sounds generated by the organs using the digital console were extraordinary to say the least, although not every performer was equally successful. I heard sounds which were more than reminiscent of timpani, glockenspiel, gongs, cymbals and the vibraphone, purely from acoustic pipes.

Conclusions

The objective of the Utopa Baroque Organ was ambitious, to create an instrument which was historically informed for the playing of the Baroque masters, whilst also being on the cutting edge of technology with the potential, through a purely acoustic instrument, to create soundscapes that have never been heard before. It is an extraordinary and beautiful organ despite the compromises in its construction. This is not a Bach organ, however in my opinion, it is an instrument which is eminently suitable for the playing of Bach, and much else besides.

The project has taken five years, the involvement of many dedicated people and cost 2.3 million euros. At first this seems a lot for a two-manual organ, but when one considers the research and development that had to take place, the quality of the workmanship, the intricate nature of the electronics and the dual interface system it doesn't seem so unreasonable. And after all, as Loek Dijkman, the chair of the Utopa Foundation said: 'What is the price of Love'?

As for the designation 'Hyperorgan'? Well, if any instrument is to have that somewhat hyperbolic title it is this one. The digital console provides so many new possibilities musically and I cannot wait to see what composers and performers come up with in the years to come.

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With grateful thanks to the International Society of Organbuilders, Klaus Rensch, Hans Fidom, Het Orgelpark & Andrew Scott. This article is a reduced form of that which appeared in ISO Journal 59. More information on this instrument can be found in ISO Journals 50 & 54, together with the two Utopa Baroque Organ reports, found on the Orgelpark website:
www.orgelpark.nl

PhD Project: Technology Aided Material Selection for the Art of Lutherie

Since time immemorial instrument makers have engaged in the evolution of material selection with which to engage their craft. Initially dependent on the materials on-hand, such as swan bones for flutes and turtle carapaces for early stringed instruments, today's artisans have easy access to materials from all over the globe, often procured from a couple of clicks on a laptop computer. Over the last few centuries, the materials with which instruments are constructed have become standardized. This standardization is the result of initial trial and error and subsequent relegation into becoming a 'traditional' material. For luthiers, for instance, material selection for serious instruments had been established for centuries prior to the dawn of the modern classical guitar of the mid-nineteenth century. In fact, luthier guilds often dictated which materials could be used in producing instruments at least as far back as the sixteenth century; and still today, tradition dictates concert quality guitars be constructed as follows:

- Spruce or Western Red Cedar Top
- Rosewood Back and Sides
- Mahogany or Spanish Cedar Neck
- Ebony or Rosewood Fretboard and Bridge

In adhering to traditional material selections, there is a reasonable assumption of outcome, all other design and craftsmanship variables being equal. However, within species physical and vibrational characteristics can be disparate by a factor of two or more. To mitigate the potential use of inferior wood components, luthiers employ manual testing methods to assess wood a sample's suitability. Primarily these include:

- Flexing the wood along and across the grain to determine stiffness
- Holding the wood at a 'node' and listening to the tone after initiating a tap to judge the musicality of the sample and the decay of the resulting wood vibration.

While these methods are useful, especially in eliminating unsuitable samples, they are highly subjective, not quantifiable, and require years of experience to discern meaningful data. The luthier community has been slow to embrace scientific methods to aid in material selection. Historically this is understandable, as the science up until the latter twentieth century relied heavily on an extensive understanding of physics and mathematics. Currently, with the advent of relatively inexpensive computer technology, even individual luthiers have access to scientific testing methods. The only issue is they are either not aware or don't know yet how to implement the science into material selection.

There has already been a plethora of peer-reviewed research on wood testing. While some of the research goes far beyond the scope of the needs of a practicing luthier, there are concepts and methods within this breadth of work that could effectively replace the subjective material testing methods commonly practiced. The key to extrapolating meaningful scientific concepts and methods is to first understand the physical and vibrational characteristics that are relevant to what the luthier is attempting to discern from traditional means. Flexing the wood is just a manual means of trying to determine stiffness or, in scientific terms, modulus of elasticity (sometimes referred to as the Young's Modulus). The tapping and listening process aims to identify the frequency and musicality of the resulting tone and its decay rate. With two simple apparatuses, computer, soundcard, microphone or accelerometer, and sound analysis software (freeware is available from many publishers) quantifiable, repeatable, and recordable data can be easily procured.

The first apparatus is a Static Bending Testing Rig that imparts a load at the centre of a wood sample while the sample is supported at a fixed distance from the centre (see Figure 1).


Figure 1 (left and right). *Static rig used to measure material deflection under a fixed load. Photos: B. Applegate*

This apparatus is based on the standards set out by ASTM D 143-09. It consists of:

- An extruded aluminum frame
- Round aluminum end supports spaced at 450mm for longitudinal testing and 180mm for tangential testing
- Aluminum centre slide located equidistant from the end supports
- 1kg weight to induce deflection when placed on centre slide
- Micrometer to measure deflection under load to 0.0001mm

The measured deflection can be used not only to qualify a wood sample to be used or discarded, but also how thin the sample can be made while still satisfying the structural requirements of the instrument under string tension. This allows the luthier to safely remove mass from critical vibration components to optimize their response to string energy. Additionally, the measured deflection can be used to:

- Calculate the Young's Modulus so materials of differing dimensions can be compared
- Determine final top and back plate thickness based on a target final deflection

While this method generates concrete data in the longitudinal and tangential directions, the next approach also allows measurement of diagonal material stiffness – and also provides the means to evaluate vibrational characteristics.

A second piece of apparatus will be used to fixture the testing material so that as much human error can be removed from the testing process. While the traditional method relies on the tester pinching the wood with their fingers, the following fixture uses alligator clips located at specific nodal points to hold the test sample in order to allow it to approximate a free vibration with no outside damping influences (see Figure 2).

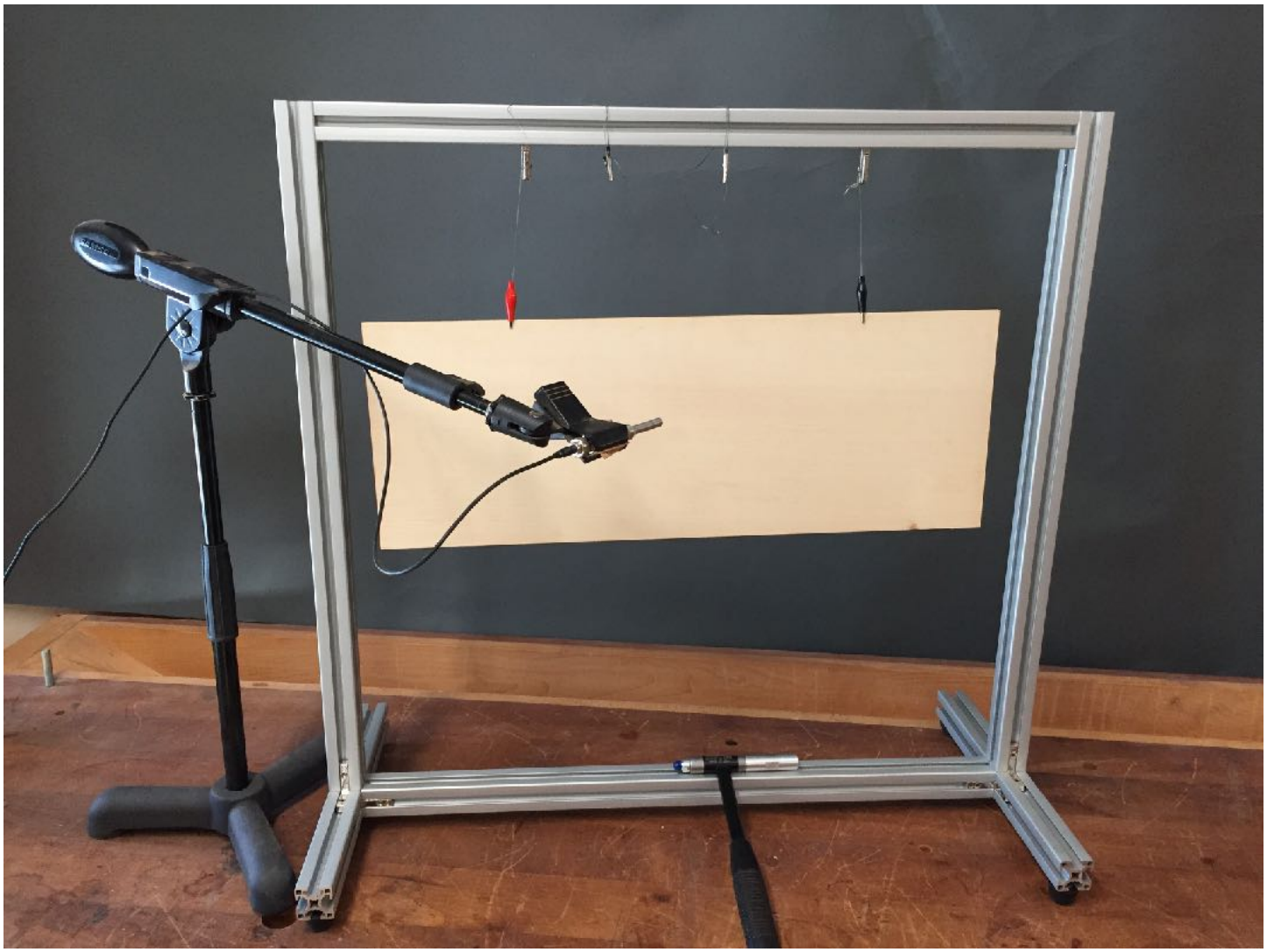

Figure 2. *Dynamic rig designed to hold wood samples at node points with alligator clips. Sample is being held in the longitudinal mode. Photo: B. Applegate*

Vibration acquisition hardware and software are used to read, record and analyse the vibrations of wood samples after being tapped by an impulse device. The impulse device can be as simple as a small plastic tipped hammer or even the eraser on the end of a pencil. When the sample is held at the node points of a vibration mode and struck, the wood will vibrate most readily at the fundamental frequency of that mode. The recorded sound sample can be analysed to provide two important characteristics of interest to the luthier.

1. The frequency of the mode can be used to determine the dynamic modulus of elasticity using the formula:

   Longitudinal Modulus=$E_L = \frac{\rho L_L^4 f_L^2}{1.05h^2}$

   Tangential Modulus= $E_T = \frac{\rho L_T^4 f_T^2}{1.05h^2}$

   Diagonal Modulus= $E_D = \frac{2.43\rho L_T^2 f_D^2}{h^2}$

   Where ρ=density, h=sample thickness, L=longitudinal length, T=tangential length, f=fundamental frequency of that (L,T,D) mode.

2. The sound sample can be run through a fast Fourier transform algorithm that will clearly demonstrate the frequency components of the sample and their relative strengths as seen in Figure 3 below.

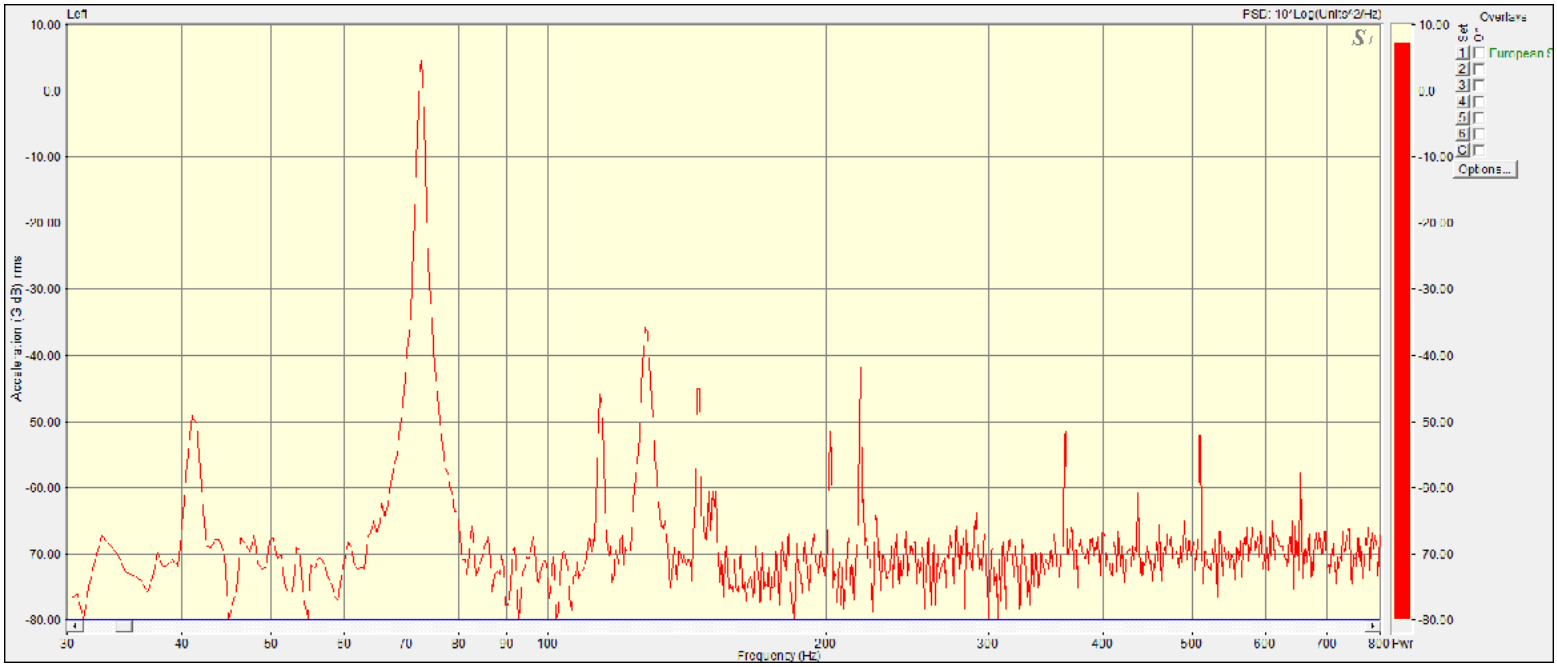

Figure 3. *Spectrum analysis of a spruce sample in the longitudinal mode indicating a fundamental frequency of 72.754Hz at the tallest peak. The figure also demonstrates overtone content indicated by the shorter peaks.*

The shape and frequency of the peak is a visual demonstration of what the luthier is hearing during the manual 'tap-and-listen' process. A narrow sharp peak represents what would be heard as a clear, sustaining tap-tone while a wide peak would be heard as a short duration thud. This peak representation can be quantified using the half-band width method of determining the quality factor, Q.

$$Q = \frac{f_p}{f_u - f_l}$$

Where f_p=the frequency of the peak and f_u-f_l=the width of the frequency band at 3dB below the peak. While this calculation can be done manually, it is usually a provided function in many audio analysis software programs. In this case, the peak frequency is 72.754Hz, the bandwidth at -3dB is 0.9Hz which gives a Q factor of 80.84.

The methods above replace subjective intuition with concrete numbers to more accurately compare wood samples both within and between species. The ability to compare physical and vibrational characteristics between species is becoming ever more critical as traditional woods become ever threatened with over-exploitation. Brazilian rosewood, generally considered the holy grail of guitar back and side wood, is currently protected from any harvest. Mahogany, Spanish Cedar, Ebony and other rosewoods have uncertain fates as their populations dwindle towards threatened status. At some point it may become imperative to find alternate tonewoods to replace those of tradition should they become no longer available.

By creating a properties database of traditional woods, potential alternative species can be compared to determine whether they could be viable substitutes without compromising the sound quality of the guitar. Luthiers and guitar players alike hold traditional materials to an almost sacred level demonstrated by their relatively unwavering use over the previous centuries. Verifiable data would be instrumental in overcoming this bias.

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Brian Applegate has been a professional luthier since 2002 focusing primarily in making steel-string guitars at his shop in Chanhassen, Minnesota. Additionally, Brian is pursuing a PhD at the University of Edinburgh, with a focus on wood properties.

Bate Collection/Galpin Society joint conference: Musical Instrument Collectors and Collections

Oxford, 23-25 August 2019

Now that it is winter, it seems a long time ago that we convened in Oxford for our summer conference, sitting outside at lunchtimes, and rounding off the event with Pimm's on the lawn. But perhaps now we have each had time to digest the papers and the conversations, this is a good time to reflect on the themes and content of the event.

We received around 40 proposals for papers, of which around half were presented at the conference – alongside seven poster presentations, a panel with eight speakers chaired by Christina Linsenmeyer, a lecture-concert from lutenist Taro Takeuchi, and a keynote presentation from Jenny Nex, Curator of the Musical Instrument Collection at the University of Edinburgh.

Jenny Nex's keynote paper ably brought together our conference themes of musical instrument collectors and collections in the context of the history of collecting. Jenny began by questioning how we, as organologists and musicologists, might conceive of collectors in general – for example, should we consider Noah to have been the first collector, creating a comprehensive collection of the world's animals, ranged neatly two by two? How would tax collectors, debt collectors, data collectors and refuse collectors fit our definition of what it means to collect?

Regarding musical instrument collections, Jenny asked, what are organologists to do about collecting the voice, arguably the most fundamental of musical instruments? Or the atmosphere of a performance? If an unused instrument is 'dead' or 'trapped', would taking instruments out of the display cases and playing them bring them 'back to life', or 'kill' them faster? These were themes that would be raised again over the course of the weekend, particularly on Sunday afternoon (see below).

Jenny also considered the nature of the collection that results from different approaches. If, as for Noah, accumulation and comprehensiveness were all-important, what is to be gained by refining a collection, editing and selecting? Is a full set better than collecting only the ones with meaning? Or is it all about the collector themselves, and the joy of the act of collecting? These questions were answered, in part, for a selection of collectors as detailed in the panel discussion on Saturday afternoon.

The panel presentation and discussion, chaired by Christina Linsenmeyer, covered the contents of the forthcoming book *Through the Eyes and Ears of Musical Instrument Collectors c.1860–1940*. The speakers on this panel told delegates about the personnel covered in each of their chapters for this volume, considering the instruments they chose to collect, how they acquired them, and modes of display. I was particularly interested to hear from Jeanine Head Miller of The Henry Ford museum (Dearborn, Michigan), who described how Henry Ford had wanted to have 'one of everything' in a row, and to compare this to the collecting aim of Carl Claudius (1855–1931), as described by Madeleine Modin of Stockholm University, who began with a very broad collection, prioritising quantity over quality, and refining his selection later. Refining a collection seems also to have been a priority for Drayton C. Miller (a paper by Carol Lynn Ward-Bamford of the Library of Congress, Washington DC, which was presented in Carol's absence by Christina Linsenmeyer). Miller didn't want his collection dispersed, because then 'nothing will come of it', indicating that he considered his collection greater than the sum of its parts.

This particular example resulted in a discussion relating to the definition of a collection (or indeed a collector), a topic that was to become relevant in many papers over the weekend. Christina Linsenmeyer concluded that a collector of musical instruments has to have more than they could play, but earlier in the day we had heard from Francis Knights on the question of whether the instruments recorded to have been owned by J.S. Bach should be considered a collection. It's almost universally the case that musicians, who perform and teach, own many more instruments than they ever use, but few would call themselves collectors. The discussion concluded that to define collectors restrictively would also lead us to exclude a range of people relevant to collecting, including the makers and players of such instruments, who might not consider themselves collectors, but whose collections might later be considered as such.

A discussion on the Sunday grew out of this debate, and also recalled themes raised by Jenny Nex in her keynote paper on Friday. In his paper 'Entanglements with Instruments', Simon Waters defined musical instruments in terms of their use within a community of practice. Delegates raised various points regarding the common understanding of musical instruments: for example, as we all know, the Hornbostel-Sachs categorisation of musical instruments focuses on the creation of sound, not cultural significance and use – but the Museums Association has a use-led approach (one which often results in curators policing access to collections). Is either one of these approaches correct? Should collectors and curators be focusing more on the use of instruments (many museums do also collect and display dance costumes alongside their musical holdings, for example) than the internal sound-making abilities of the objects? In this vein, Michael Fleming asked to what extent a performance space (that is, muffling furniture, or the proximity and surface of a room's walls) should be included in our definition of an instrument? Owen Woods questioned whether, if use is what makes an instrument musical, an un-played instrument in its case is still an instrument? Of course, these are questions that could not be answered in the time available at the conference, but provided plenty of food for thought.

Other papers I found particularly interesting included Kate Hawnt's discussion of the need to consider biography and networks in her work on the Russell Collection. She described how it makes sense that Russell should have chosen to collect harpsichords, and that he should have bought them as he did, when one considers his network of university acquaintances and roommates – those who opened doors for him – as well as his economic status, sexuality, social standing and location. In any museum, therefore, we encounter the collector as much as their collection. This point was no better demonstrated than by Jeremy Montagu's paper, in which he detailed his own history as a collector: why he collects, what he chooses, and how he uses it – a version of his paper was included in the Autumn 2019 issue of this newsletter.

As part of the conference, we included three pre-recorded papers from delegates who were unable to attend in person, with Q&A via Skype. While many were impressed that this worked (technology usually adhering to the rule of working perfectly until the very moment you most need it), it would obviously have been preferable to have these delegates in the room in person, both to make the Q&A easier, but also to allow everyone to chat during the coffee breaks.

Logistically, I had nothing but positive feedback about the three days, especially regarding the catering (one delegate joked that I had clearly decided to keep delegates happy by – to paraphrase E.M. Forster – ensuring they were fed at least every two hours). The Friday night dinner in the Old Library at Wadham College was a particular success, and was followed by drinks in the Wadham Room at the Kings Arms – an event we repeated on Saturday night with the addition of musical instruments for an English/Scottish/Irish music session, with the

additional occasional baroque suite and Swedish tune.

I would like to extend my thanks once again to the chairs for managing their sessions, and particularly for keeping things to time; and also to all our presenters, including the poster presenters, Taro Takeuchi for his lunchtime lecture-concert, and Jenny Nex for her keynote paper. I was incredibly grateful to my reception team, which consisted of two doctoral students, Steffi Arend and Carol Jones, and our Bate intern Marnie Parker, who received a standing ovation at the end of the conference. Finally, I would like to thank Andy Lamb of the Bate, and Michael Fleming of the Galpin Society, for their help in organising the event.

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Travel grants to attend the 2020 CIMCIM conference: Beyond the Object and Back, the Role of Collections in Music Museums

6–10 September 2020, London

Closing date for applications: 28 February 2020.

Applications are invited to apply for CIMCIM travel grants to join the 2020 CIMCIM conference. All applicants meeting the eligibility requirements will be considered, and applicants from ICOM country categories 3 & 4 and 'young members' members (under 40 years of age considered) are especially encouraged to apply.

CIMCIM travel grants usually cover 20–80% of the costs related to attending the conference, and particularly those related to transport to and from the venue of the conference, conference fee, accommodation and subsistence in London for participation in the conference, with a view to offering opportunities for enriching the on-going research of candidates through global interaction with CIMCIM members from different parts of the world. Candidates are expected to remain active in CIMCIM.

- The applicant must be a member of ICOM–CIMCIM (must have paid dues for 2020)
- The applicant must be a museum professional, or aspiring museum professional, active in a field related to museums and collections of instruments and music.
- The applicant has to provide part of the costs.
- The applicant must submit a proposal for a paper, poster, or panel session (or other applicable contribution to the conference programme). However, the award of the travel grant is not dependent on the proposal being accepted.
- The application must be received by the CIMCIM Secretary by the deadline published in the call for applications. Applications received after the deadline cannot be considered.

For more information on the conditions for payment of a grant and processing of grant payments, see http://network.icom.museum/cimcim/what-we-do/travel-grant-guidelines/

For further information please contact CIMCIM at:
Marie.Martens@natmus.dk

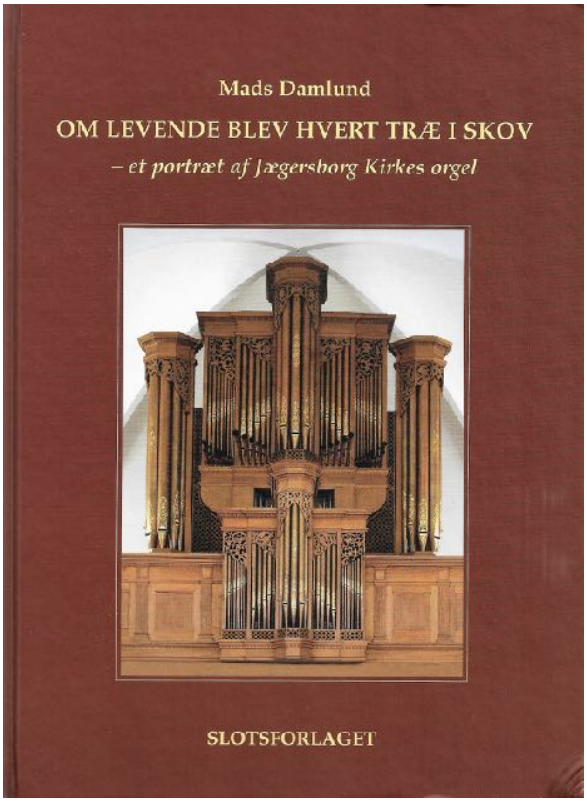
Recent Publications

I brevetti italiani sugli strumenti musicali. Elenco sintetico dal 1855 al 2018 con il testo integrale dei brevetti sugli strumenti a fiato

Francesco Carreras

A comprehensive survey detailing 3,600 patents for Italian musical instruments (1855–2018). Italian patents are only available online for those registered since 2008, while all patent application files up to 1972 are kept in the State Archive in Rome, as well as the patent check-lists published on special volumes. For reasons of space, this publication is partly paper-based (292 pp.), and partially online. This volume contains an introduction, with an explanation of the Italian patent system and guidelines for using the patent check lists. Text in Italian, with some explanation of how to consult the patent lists in English.

pp. XXXI + 292; available from Libreria Musicale Italiana www.lim.it; ISBN 9788855430005; € 35.00.



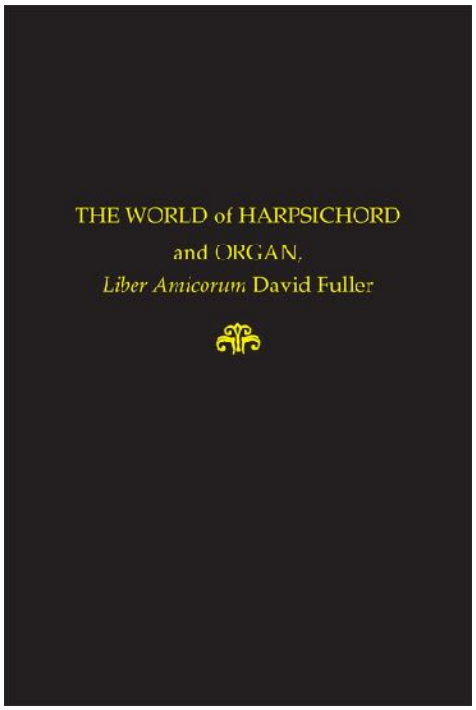
OM LEVENDE BLEV HVERT TRÆ I SKOV – et portræt af Jægersborg Kirkes orgel / IF ALL THE TREES IN THE WOOD COULD SING – a portrait of the organ in Jaegersborg Church

Mads Damlund

Published to mark the instrument's 75th anniversary, this book is devoted to the Marcussen organ in the parish of Jaegersborg, one of the highlights of the Danish Organ Reform Movement. The titular organist Mads Damlund, along with co-writers, has made a portrait of this organ, the people who designed and built it, as well as the impact it has made in Denmark and abroad. The volume includes articles about the recordings made on this instrument by Karl Richter and Finn Viderø, and how the instrument was being built during World War II. Text in Danish, with extensive summaries in English.

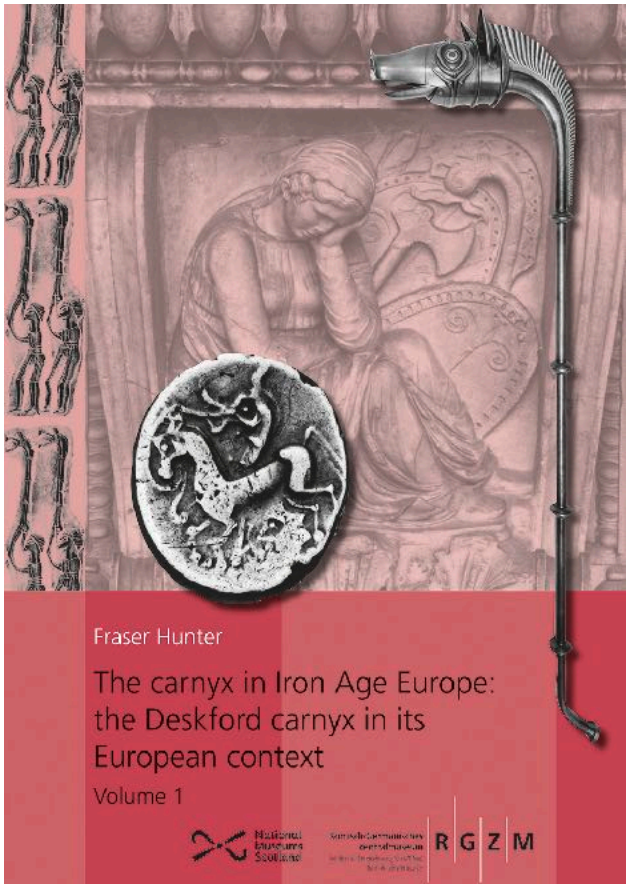
pp. 207, richly illustrated (including multiple colour photos) with CD; published by Slotsforlaget www.slotsforlaget.dk. ISBN 9788797004418; Hardback 200 Danish kr.

THE WORLD of HARPSICHORD and ORGAN
Liber Amicorum David Fuller
Edited by Bruce Gustafson



Essays by an international roster of musicologists present new research about the music, theory, and organology of the harpsichord and the organ. Chronologically, the subjects range from the 17th to 20th centuries. A closing section presents a survey of the career and writings of David Fuller with tributes from distinguished colleagues.

pp. 255; Festschrift Series, No.28; Pendragon Press;
ISBN 9781576472378; hardback £61.50 / €69.00



The carnyx in Iron Age Europe: the Deskford carnyx in its European context
Fraser Hunter

The carnyx, an animal-headed bronze horn, once echoed across Iron Age Europe. Fragments survive, including those of the Deskford carnyx discovered in north-east Scotland and now one of the key pieces of Celtic art on display in the National Museum of Scotland in Edinburgh. The book presents a full picture of this dramatic instrument for the first time. But this is a living instrument ... a now iconic reconstruction was made of the Deskford carnyx in 1992 by musicologist Dr John Purser and metal-smith John Creed. Musician John Kenny has shown what could have been played on such an instrument, and the possibilities are greater than anyone could have believed. For further information see: www.nms.ac.uk/explore-our-collections/stories/scottish-history-and-archaeology/deskford-carnyx/

pp. 684 (in two volumes), 366 b/w illustrations. Co-published by Romisch Germanisches Zentralmuseum & NMS Enterprises Ltd – Publishing.
ISBN 9783884673096; hardback £79.99.

For UK orders only: contact NMS Enterprises Ltd, National Museum of Scotland, Chambers Street, Edinburgh, EH1 1JF 0131 247 4083 k.blackadder@nms.ac.uk

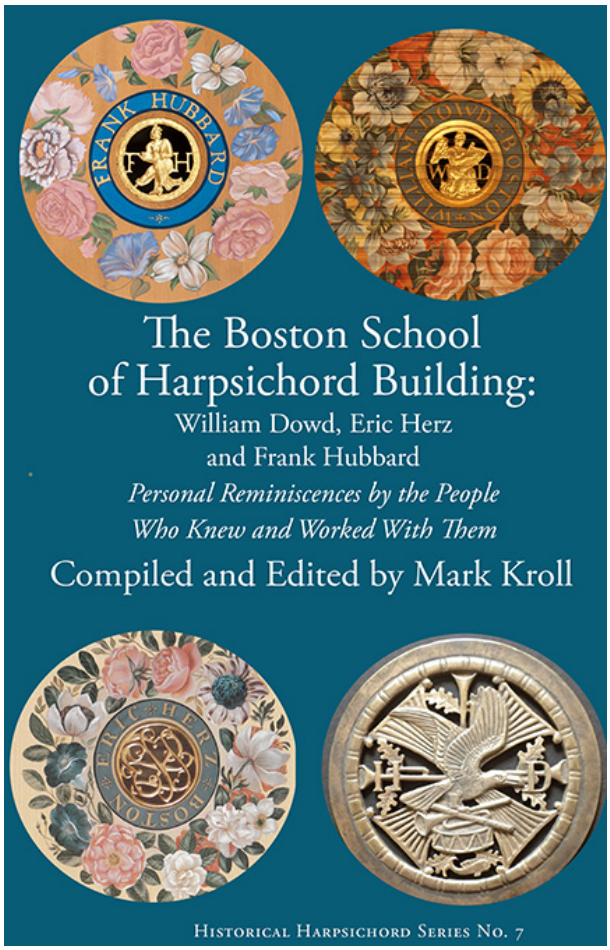
The Boston School of Harpsichord Building:

William Dowd, Eric Herz and Frank Hubbard – Personal Reminiscences by the People Who Knew and Worked with Them

Compiled & edited by Mark Kroll

Dowd, Hubbard and Herz set out to build harpsichords in the styles of the great makers of the 17th and 18th centuries. This book tells the story of these pioneers.

Historical Harpsichord Series, No.7
Pendragon Press
pp. 165, 9 illustrations
ISBN 9781576473122; paperback £36.95 / €42.00



Os Antunes: Mestres Portugueses de Fazer Cravos, Pianofortes e Pianos (Séculos XVIII e XIX)

Ana Paula Tudela

Text in Portuguese.

pp. 33, Museu Nacional da Música and Imprensa Nacional.
ISBN 9789722726603; €30.00.