

INTERNATIONAL SYMPOSIUM ORGELPARK 2016

*Electrifying Baroque (III)***The New Baroque Organ at the Orgelpark**

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The fluid organ

«Rattacher l'orgue à la musique en général». Marcel Dupré's dictum and golden rule has been programmatic for organ culture until the present time. Organ is somehow different, organ culture seems to be an exotic niche. We organists are musicians - hopefully! - but play a distinct role. A proof for this is the place where we are: the Orgelpark. So far as I know, there is no Violin Park, no Brass Park, no Piano Park apart from museums or private collections. The fact that the organ in Western Culture has been adapted by the Church cannot be the reason for the situation that organ music is an alien in our culture. In Russia or Asia organ music is free from this historic, ecclesiastic heritage, but despite a growing interest also a special musical genre.

A phenomenological approach to organ culture is one important aim of the Orgelpark. Considering and analyzing aspects of organ playing in its diversity and reflecting their impact on the listener, the research programs of the Orgelpark are following the path of exploring organ music as a "specialist's garden" – located near to the public Vondel Park. Based on this music-philosophical, scientific claim, the Orgelpark tries to integrate organ music in modern urban culture as one of many possible and actual expressions of what we are, how we feel, how we could communicate and live together.

To share with you some dimensions of the innovative organ driving system which will become an essential part of the new Baroque organ, I would like to focus one point of the numerous aspects of the distinctive nature of the instrument organ:

- Compared to other music instruments the organ contains in its present *status quo* a long development of building traditions, some in relationship of continuity and improvement, others in a more contradictory order.

Meanwhile, we have to be aware of this dialectic tension, of the way how history and its cultural manifestations develop over centuries. As DNA code, the organ has an engineer's gene, a pipe makers gene and a voicers gene.

The creative spirit of Ktesebios from Alexandria, the Greek engineer and acclaimed inventor of the *organon hydraulikon*, is still vibrant. His medium was water, his physical laws were those of

pneumatic forces. Experiences of pipe making over centuries with different materials, pipe forms and measures in relation to rooms and their acoustics are collected and connected in the artwork of voicing. On this field of creative energies, of fertile inspirations and of balanced responsibilities, organ building is marked by a constant dialogue with organists and listeners. This underlines the observation of the organ as an instrument which obtains his singularity by its enormous and still active sources of development. As a result we can say: When we listen to organ music, whatever the style is, composed or improvised, the instrumental factor plays a more important role than it does when we listen to piano or violin music. In a typical “after concert talk” remarks on the instrument are more often made for organ than for any other instrument. How the organ sounds seems to be essential for how the music and its message could be absorbed and comprehended by the audience. So we can resume: in comparison to other instruments, the organ as a “sounding memory” of its historical heritage is valued in a higher degree when we listen to a musical interpretation. That means, that in organ music, the sound of the individual instrument has a strong hermeneutical impact.

Looking into the history of organ building, an important question for our topic is: How did organ builders deal with technical innovations in relation to new ideas of composers or organists?

Renaissance music with its chorus practice of instrumental families and later Baroque music with the dialogues of *ripieno* and *concertino* wouldn't have been possible without the change from the *Blockwerk* organ to the slide soundboard and slider chest. Couplers in Baroque instruments offer new possibilities or even unorthodox sound combinations on manuals, and a richer use of the pedal. At the same time, manual couplers, used with *organo pleno registrations*, produced a form of “speed limit” because of a more sluggish keyboard action. Couplers of the Positiv or the Swell to the Pedal were introduced quite late in the 19th century, but produced new options in composed or improvised music.

What we can observe is that as fixed pre-sets of pipework and tracker action were more and more opened, laced packages were unleashed. But the demand of organists and composers for more variety, more freedom and more flexibility has always been a challenge for organbuilders: how to realize a new step by balancing all parameters of a convincing instrument, including its sound and its comfort for the player? The rich sound of an harmonic flute, increasing in the soprano line, required a higher wind pressure. But what about the effects on the *touché*? The barker machine was one answer where we could consider a certain break: a new style of playing, closer to that on a modern pianoforte than to harpsichord or clavichord, was established.

More freedom in the use of pipework and stops and more possibilities in creating new colors by various combinations have both been a constantly increasing wish of organists. Why? One

reason is maybe the fact that more than any other instrumentalist, the organist feels limited in his influence on the immediate creation and dynamic of a sound. Sure, there is no *creatio ex nihilo* for any musician, but the way a cello player can modulate the sound of a single note is unattainable for an organist. Could we explain the organist's desire for flexibility and freedom, for new sounds and for a more intense, sensual relation to his instrument over centuries as a reflex on this limitation?

A dynamic network

The roots of the Ethernet based organ driving system developed by Benedikt Auferbeck and Thomas Stöckl are modest attempts to answer this desire for more expression. The prototype instrument in Ratingen, where the first ideas and steps took place, is a typical postwar Seifert organ, originally with 40 stops on three manuals, a pedal division with electro-pneumatic action, and cone valve chests. In 1953 the windchest of the Pedal was built with single tone action due to the lack of space. Thus the Pedal includes 10 stops as extensions, using four ranks. In 2005, Seifert added a Solo division with single tone action in a swell box with Tuba and Stentorphon – both as 16' and 8' – plus Chamade 8'-4' and Cornet V, both outside the box. These additional four ranks, usable in seven extensions, give a fantastic effect to the entire instrument. Based on a fine voicing in the aesthetic of the Seifert tradition, these new stops can be used as transmissions at all keyboards. The improvement by virtue of the free availability of 17 stops as extensions of 8 pipe ranks was an initial and energizing experience for the “dynamic network” of the Sinua system which finally was installed in the new four manual concert console in 2012, crowned by the restauration and re-voicing of the Gallery organ and a new Choir division with seven stops on a single tone action chest behind the altar in 2015. In Düsseldorf-Oberkassel Mühleisen Organbuilding actually realizes the project of a 70-stop organ, entirely on single tone chest, with 70% pipework of Seifert and Feith instruments of the mid-twentieth century.

Apart from the installation of magnets replacing the leather membranes there is no need for changes with the *Hardware* of the instrument. The Sinua *Software* could be seen as 3D network:

- In the first dimension the organ is totally unleashed: there is no fixed connection of any stop or even any pipe to a division or a special keyboard. The *Werkprinzip* as genuine static of the organ, a principle held sacred over decades by many reasons, still exists in the architecture of the sounds. For the organist at the console the sounds are totally free. A metamorphosis now has happened: the more or less iron rules of organbuilding are *fluid*. Another fluid energy can be used additionally within the so called *Register-Editor*: new colors can be created by deciding which pipe(s) of which stop(s) should sound. Using the same interval structures for all notes of the keyboard, a new stop is made and can be named and set. But a *Klangfarben Klaviatur* is also an

option, where every note produces a different sound or colour. Now the organist has the ability of a “sound designer” who easily can create his individual organ on top of the existing one.

- The *flux* also influences a second dimension: the electronic action replaces the simple electric or electro-pneumatic action. In contrast to a sensitive electronic action, where the magnets are adjustable and follow the movement of the fingers and the keys, the Sinua-System is uses optoelectronic contacts and MIDI to offer diverse sounds. Depending on the velocity the key is pressed with, other stops or couplers or sostenutos are activated. 127 MIDI positions are the basis for highly differentiated sensitivity of sound options.

- In a third level the organist can vary the parameter of time. The duration of a pipe sound can be fixed as a total in advance as well as the beginning of the sound, exactly at the moment of pressing the key or with x milliseconds delay. The musical effects are unlimited, including the change of the acoustics in the sense of more reverberation, a limitation of one or several sounds as a *staccato*, a delay of sounds as *ritenuto*, or waves created by sounds which start with a delay and disappear earlier. In free combination and in addition to these features, loops, echoes and pulsing tones are possible, as well as reductions of the pipe sound towards a noise. The result of using these time features is obviously the most effective in the sense of a slight change where the static sound of the organs gets more and more *fluid* and dynamic. On top of the basic sound profile of a registration you can add sounds which are near the overtone structure of percussions. In a certain manner the organist could change the voicing by adding for instance a short speaking attack of a Principal pipe to the sound a more romantic Flute. The third level of the electronic action opens new networks of orchestral sounds, pipe sounds near to synthetic sounds, rhythmical patterns far away from the classical organ sound. The result is a transformed answer on Glenn Gould’s italics: “There is no reason why a piano always has to sound like a piano”. Indeed, the fluid organ has, beside all qualities of the original instrument, which we could define as *archetype*, all heredities in its genes for being a totally new *organon*, a tool under the hands of organists - a form of *fluid image* of its archetype.

Prometheus & Dionysos

In his brilliant classification of modern identities, the French Philosopher Michel Serres creates the icon of *Petite poucette*. The so called digital native uses his thumb as the essential part of his body to communicate, to share information and images and to participate in social networks. The patron of *Petite poucette* is - following Michel Serres - Saint Denis, the first bishop of Paris, who walked after his decapitation with his head in his hands from the Montmartre to the place where later the Cathedral of Saint Denis was built. The Saint with his head in his hands represents, in the mode of iconography, the user of a smart phone, a tablet or other IT tools or toys who has

externalized his creative intelligence: the smartphone or the laptop in the organ is a prolongation of our body, something like a third hand or third part of our brain. Machines and new technical inventions have been seen as a form of alienation of human beings. Serres' interpretation invites us to value IT, tablet & Co as a democratization of knowledge. The use of new technologies for the organ shares the tension of benefit or curse, of enrichment or risk, of musical sense or nonsense. Is it just an addition in the long tradition of organ building and organ music which has appeared and will disappear? Anyway it could be an *organon*, a medium, a tool in our hands and in extension of our spirit to solve the bound Prometheus, the organ with its unlimited promises of new creativity and fire and with its danger of exaggeration which is always a part of its nature. For the moment and at the place where we are, we can only presume that building a New Baroque organ is a challenge and honorable for the Orgelpark not far away from the Museum Quarter of Amsterdam. Implementing the modern IT world into this old styled instrument is a strong link to urban culture and modern life which we share while walking in the Vondel Park. The fluid organ goes Baroque and opens a new garden of musical inventions: *Le jardin suspendu des orgues fluides...*