

**Lecture given at the ISO Symposium  
“How to win new friends for the pipe organ”  
Amsterdam 2007**

**by Professor Bernhard Hirche**

***Architecture and Organ Design*  
[Numbers in parentheses refer to the illustrations  
in the accompanying downloadable pdf document]**

I consider it an honour to be able to talk to organ builders about my experience in co-designing organs. I also hope to provide a few ideas on how we can win over new friends for the organ. **[1]**

I will use two examples, the design of an organ at the Stiftskirche in Stuttgart and the planned new organ for the cathedral in Lübeck, to demonstrate why and how an architect can play a role in designing organs.

Due to the extreme individualism of spaces created by architects, I consider increased input by architects to be of utmost importance. Organ builders are understandably struggling to meet the needs of modern architecture and are therefore not in a position to integrate new organs in existing or planned spaces without denying the value of their own work. **[2]** All too often good organs are planned without taking the spatial requirements into account. For this reason everyone involved - the organist, the organ expert, the organ builder and, to an extent, the curator and architect - should work together without prejudice and uphold respect for each person's special skills.

One of the main goals of the Stiftskirche's **[3]** architectural plan was to improve the acoustics and install a new organ. For this reason the wooden barrel roof from the 1950s was replaced with a new folded and reflective roof with hung-in glass sails. The sails serve to increase the room's volume and reverberation time while optimising all frequency ranges, particularly that of the organ.

In contrast to the church of the 1950s, **[4]** the acoustic spatial impression now matches the visual aesthetics. The church's new acoustics, **[5]** as a basis for vocal communication and music, combine with the architecture, art and organ to form a major component of the church's overall perception as a work of art. The organ was included as part of the overall architectural concept of the reconstruction plan. As a result, a large part of the organ was inconsistent with the architectural aims, the light leak through the stained glass window, the longitudinal axis emphasis, and the stretching and verticalisation of the space.

Due to the above reasons it made sense to allow the architect to work together with the company Mühleisen to design the layout of the works, the set-up of the organ, the casing and the façade. Architectural reasons meant that the organ works had to be designed in a different way to that of the original plan, which led to the introduction of a Rückpositiv in the spandrel panel of the gallery and a trisection in the middle Hauptwerk (great division) with the pipes dropping down to the central axis and lateral pedal towers.

As well as making the works legible, this layout supports the cited three naves in the roof construction, the Western wall and the room. The swells and pedal parts were placed in the organ room to relieve the central nave. As the existing gallery didn't provide enough space for the Hauptwerk (great division) and pedal, a new, lower gallery was worked in and replaced by an interstice on the West wall. Due to the interstice in the Hauptwerk (great division), [6] the organ as a three-dimensional sound sculpture was provided with a rear wall designed with an open mechanism that can be seen from the atrium.

The removal of the Hauptwerk (great division) from the rear wall is also of huge benefit to the acoustics. Due to their spacing and positioning, the gallery pillars relate to the Rückpositiv, [7] thus creating a formal unit. In order to support the sculptural effect, the front edges of the façade were set vibrating, the organ pipes were placed above the casing behind and the whole thing was left unveiled. The lack of a visible upper housing edge leads to a light, dissipated, vertically accentuated and translucent silhouette, which also includes the tracery window. The unobtrusive silver metallic colour aims to support the link to the new architectural elements. Without this organ, the Stiftskirche would only be a shadow of itself in theological, liturgical, musical, architectural and artistic terms.

The starting point when it came to designing a new organ for the cathedral in Lübeck [8] was the aim of reconciling the controversial situations, ie reconstruct the Schnitger organ on the one hand and reject the reconstruction and full preservation of the spatial concept reconstruction on the other hand. In doing so we created hope for the third way. At the heart of the reconstruction was the recreation of the Schnitger sound in exactly the same place it was heard until the Schnitger organ was destroyed. A full reconstruction of the organ in its original location would however disturb the delicate, listed space and light concept of the reconstruction plan drafted by the architects Grundmann and Sandmann. As a horizontal, closed cross-bracket, the organ would split the tower room from the remaining spatial structure and thus completely obstruct the view of the three Western windows by Lothar Quinte.

If a Schnitger disposition and Schnitger sound can only be achieved by reconstructing the organ technology, and if it also makes sense for Lübeck's organ landscape, then the organ can and should only be positioned in its true historic position, despite spatial concept opposition. All other positions would disturb the spatial concept even more and would lead to competition with the Marcussen organ in the Northern aisle.

The basis of this new design is the Baroque disposition, the arrangement of the organ works with Rückpositiv, the lateral pedal towers and central Hauptwerk (great division), the materials, and the Schnitger organ technology similar to that of the Gothenburg organ. This is the only way that the desired sound can be achieved. Not only the Schnitger sound is of importance here, the external organ design and legibility of the inner organisation in the façade are also imperative in order to forge the acoustic sound and visual perception with the cathedral's magnificent space and Western windows to form one big work of art.

A formal analysis of the Gothenburg organ **[9]** has shown that an abstraction and reduction to the basics without any decorative trimmings, which would have been the case during the Baroque period, would allow us to transport the Schnitger organ to the modern day with a modern casing and dissipated façade with a view of the Western windows.

The layout of the works and the Trakthurführung **[10]** enable the pedal towers to be uncoupled so that the vertical lines are emphasised further, thus providing a view of the windows, the spatial interactions and a silhouette. The light that is filtered by the window from the West can pass through the organ to the central nave, which underlines the structure and three-dimensionality of the organ. The frontal and lateral views of the casings and the veils in front of the pipe heads and feet are made of gold-plated metal or wood, perforated with a modern ornament, which both guide and reflect the light and contribute towards the whole Schnitger fascination.

To the rear **[11]** the organ will have a gallery with access from the South-western tower and, as a formal counterpart to the Rückpositiv on the Eastern side, the visible mechanical bellows and electric wind system. Transfer of the organ's load is performed by means of a freely placed frame structure **[12]** with an interstice in front of the columns of the transverse arches. This does not require any intervention of the historic architectural fabric and the materials and detail are a reflection of the modern day while combining with the organ and the new gallery to create a formal unit. The frame structure selected means that you still have a view of the Western windows below the organ.

Refurbishment of the existing choir and orchestra podiums together with the organ's new supporting structure, height development and planned proportions all form an integral part of the new organ. If necessary, the adjustable podiums can be pulled out to accommodate larger orchestras, choirs and an increased number of visitors.

The design we presented has unfortunately not allowed us to reconcile the polarised perceptions, i.e. reconstruction on the one hand and modern interpretation and spatial integration on the other. Money and emotions both play a role when it comes to reconstruction, just as it does in all other areas of society. Architects, curators, a number of musicians and a section of the general public consider the solution to be a highly valid one. **[13]** The majority of musicians and organ builders probably dream of more of the past in the future. At the Stiftskirche in Stuttgart, **[14]** the concerted effort and solidarity of everyone involved, and the excellent media relations, speeches and concerts, have all combined and succeeded in gaining interest in the organ, both as sponsors and fans of the instrument.

At the cathedral in Lübeck it is still a question of superior strength, both internally and externally. If this cannot be overcome, we cannot win over any new friends for the organ. **[15]** I hope that musicians and organ builders can pluck up more courage to experiment, and I hope for new working methods, more research and more input from people coming from different fields, the best architects and the best artists. That way you too can win over new friends for the organ.