

History and development of Pipe Organs in The Netherlands

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Introduction

The development of organs in The Netherlands does not stand alone in the area of Europe. Cultural borders were not as strict as people think nowadays. Important influences on the Northern part of The Netherlands "Holland" came from the Western and Northern part of Germany in the region between Cologne and Hamburg. There was a strong connection and the influence was mutual. German organ makers like Johann von Koblenz (also named: Jan van Covelens) worked in Holland and Dutch organ makers like Hendrik Niehoff in Germany. The technical and artistic development of the organ as a musical instrument is very special for this area. Many of the inventions and ideas concerning organ making originating from this region spread out over the whole world.

The last centuries of the Middle Ages: the "Gothic" era



Figure 1: Pieter G. Organ Utrecht/Middelburg 1497 (G.Schaap).

The oldest preserved organ that had come down to us is the very remarkable organ of the Nicolai Church in Utrecht. The organ case can be seen in Middelburg and all the inner organ parts still remain in storage at the Rijksmuseum. Around the year of 1479 this organ was installed by the Dutch master organ builder Peter-Gerritz. When Peter passed away in 1481 his work was succeeded by his son Gerrit-Petersz. It was in the so called "Gothic" time. The organ was erected in

only one flat front organ case and a wind chest without pipe rank closing possibilities. All the pipes (between 8 and 16 pipes per key) sounded together as the key was pressed. Such a wind chest was called a "blockwerk" ("Block work"). The pipes were tuned in octaves, fifths and thirds for achieving an impressive and brilliant sound. An important historical issue is, that this way of "building up" a sound illustrates that the acoustic principles of composing a sudden sound by using octaves fifths and thirds etc. were known in those days. In many occasions duplicate pipes were used to achieve a higher loudness of particular tones. The most important pipes were placed at the front of the organ case and the other ones on the wind chest. This pipe rank can be named as the organ stop "Diapason" (in The Netherlands called "Doeff" or "Praestant"). Probably at the same time, he manufactured a so called "Oberwerck" in the organ case above the pipes of the "Blockwerk". Herein it was possible to close some ranks of pipes for making colour differences for a contrast opposite the "Blockwerk". Therefore a very special "Spring chest" was employed to achieve the above mentioned goal. If a spring chest is installed in an organ it is of great historical importance and measures should be taken to preserve it.

Another historical acoustical fact is that changing the sound colour of an organ pipe by means of another shape, closing the pipe at the open end or changing its diameter was also known at the end of the 15th century.

The era after 1500: the "Renaissance"

We can start this very important era in organ making with the same organ we discussed above. The son of Gerrit Petersz: Cornelis Gerritsz, made tremendous efforts on this organ. In 1547 he modified this organ in the direction of the state of the art in those days. He changed the positions of the pipe work, he renewed the "Bovenwerck" and he constructed the pipe tower in the middle of the organ case. He supplied a "Rückpositive" ("Choir organ") in the style of the Renaissance. This choir organ has organ stops and therefore a "Slider chest" was constructed. Probably in 1602 the organ maker Van Lin added a Trumpet, which could be played by the pedal keyboard. The use of the Trumpet in the pedal was a typical Dutch habit by accompanying the singing of the hymns by the parish people in the protestant churches. At this very moment efforts are being made to reconstruct the organ so that we can hear it again. A lot of these types of organs were made in The Netherlands. Some still remain with their original pipe work and wind chests intact and are in very good condition. Such an organ was installed in 1511 by Jan van Covelens in the Laurens Church in Alkmaar. Later on some of these solitary organs were placed before the front of older organs in the function of Choir organ, like the Niehoff Organ in the Oude Kerk in Amsterdam, played by the famous organist and composer Jan Pietersz. Sweelinck.

The 17th Century: “The Golden Century”

One of the most successful eras concerning the trade activities of The Netherlands is the so called “Golden Century”. Traders erected their beautiful houses on the Amsterdam canals. The number of inhabitants of the cities increased of course and new churches was needed. Despite the enormous costs for installing great organs, many were provided as gifts for the new churches. Organ makers of that time like Hagerbeer installed a huge instrument in the Peter’s Church in Leiden in 1643-1687. They also installed a unique organ during 1639-1649 in the Laurens Church at Alkmaar. Its Organ Case was designed by Jacob van Campen, architect of the Royal Palace at The Dam in Amsterdam. These instruments are examples of the original (genuine) Dutch types of organs in Holland in those days. One of the aspects was the simple outlay of the Pedal pipe ranks. The Trumpet was the most important Pedal rank as mentioned above.

The 18th Century: the “Barock”

It’s obvious that Johann Sebastian Bach made a kind of revolution in music history, in this subject especially for organ music. His compositions like the “Trio Sonates” afforded that playing the pedal was equally as important as the manual keyboards. In those days in Germany another type of organ was in the mind of the organ builders. The way of “contra point” composing had influences on the needed rank specification of each keyboard. Every keyboard had its organ case with pipes for that special key board specification. Such a case was called a “werck” (“department” or “division”) and this set up was called in German: “Werkprinzip”. The main organ was called the “great organ”. Even so the “choir organ” was solitude with its own keyboard. Some organs became a small organ department just above the keyboards that was called “Brust werck” because it was situated opposite the chest of the organist. Also the pedal keyboard became its department as “pedal organ”.

By manner of this set up it became possible to play the organ on different loudnesses. It’s the result of a logical designing of the pipe ranks in their length and wideness. The reed pipes in the departments help produce a very special sound character. This system had the benefit of being capable of a providing a wide range of colour to the organ sound. The “building of a tower of sound” of the Barock organ may be seen as a revolution in that era.

The most important designer of this type of organ was the famous Arp Schnitger (1648-1719) in Neuenfelde near Hamburg. Due to the neighborhood of the Dutch town Groningen, he installed organs in this area. Therefore a need rose up to modify existing organs for reaching that “new sound”. Probably the first organ that became “Schnitgerized” was the organ in the Martini Church in the town Groningen. Two towers for the pedal organ were erected on both sides of the main organ and the specification of ranks of the other organ departments was changed. The fame of Arp Schnitger spread throughout Holland and his son Frans Caspar

Schnitger was commissioned to modify the Hagerbeer organ in the Laurens Church in Alkmaar. In contrary to the critics of the day: this particular organ became one of the prestige examples of the Schnitger organs, and it is one of the most recorded organs in the world. The German organist Helmut Walcha used this organ to make his Bach Recordings produced by DGG in Hannover. Arp Schnitger and his sons continued building organs in The Netherlands and his son Frans Caspar made his home in Zwolle.



Figure 2: Müller Organ Bavo Church Haarlem 1738 (G.Schaap).

The influence of the Schnitger on the organ makers in the North of Germany and in The Netherlands was tremendously important. This type of organ became a “standard” of the organ skill. Some German organ makers settled themselves in The Netherlands like Christian Müller in Amsterdam. He installed the great organ in the Bavo Church in Haarlem. It was played by G.F. Händel in 1740 and ’50, who travelled to Haarlem especially for this purpose and in 1766 the ten-year-old Mozart also played this organ.

Another German one Johann Heinrich Hartmann Bätz, settled in the centre of Holland; Utrecht (again!) and may be known as a “father” of organ makers who succeeded him in this skill like Witte and Maarschalkerweerd. Notwithstanding the obvious influence of the above mentioned German organ makers, the concept of sound of their organs remains typical Dutch.

The 19th century: The “Romantic” and the dawn of the “Expressionism”

It’s difficult to describe in short lines the change of feelings, views and approaches of the art in this era. It was a time of industrialization and steam power. The interest in the beauty of nature was rising. Poets made a lot of lyric poems and they were noted on music. Also the focus shifted from the typical “contra point” way of composing towards an interest in creating beautiful melodies and harmonies. There came a need for a more gradual expression of loudness of the music from “pianissimo” till “fortissimo”. All this undoubtedly influenced the practice of organ design. The general and brilliant sound of an organ gradually decreased through the use of less mixtures and increasing the sound of pipes at the

fundamental pitch. Also the "brute" and unrefined attack sound of the pipe was tempered and this important acoustic phenomenon has to be stressed. If the attack of the sound of an instrument is removed or modified, it has a remarkable effect on the ability of a listener to identify the instrument. Some experiments resulted in the conclusion, that when the attack of a trumpet was removed, no one could identify this "strange" instrument anymore. Similar results can be achieved by means of special measures at the mouth of the organ pipe to adjust the attack. This was done to produce a sound better suited for romantic music than the "old fashioned" organs. Together with the changes of the specification of the "modern" organs a total new style of organ sound was born. Due to the building of large concert halls symphony orchestras became more common. The sound of such orchestras and their "division" into strings, wind and brass sections soon motivated the musical requirements of an organ: to sound "like an orchestra".

In Germany Eberhard Friedrich Walcker was very inventive in developing this type of organ. He constructed huge organs with to the ability to control the loudness of the organ using special ranks of pipes and swell boxes. Aristide Cavallé-Coll in Paris had other ideas for the organ sound. He developed a new organ type with specially developed pipe ranks like the "Flute Harmonique" and "Trompette Harmonique", sound colours unknown before. Actually he is the founding father of this orchestral type of organ and had a lot of influence on organ making in Europe and the United States. Some German organ makers like Wilhelm Sauer regularly visits Paris to learn a lot at Cavallé-Coll. The Dutch organ maker Michael Maarschalkerweerd at Utrecht also regularly visits the workplace in Paris. Cavallé-Coll installed a Concert Organ in the Amsterdam "Paleis voor Volksvlijt". The organ was removed and installed in the Concert Hall of Haarlem where it remains. Maarschalkerweerd installed a Concert Organ in the Concertgebouw in Amsterdam, by use of the influences of Germany and France and "Barker machines", although a Dutch "view" of organ sound remains.



Figure 3: Maarschalkerweerd Organ Amsterdam 1875 (Flentrop).

Talking about "Barker Machines": due to the huge organs with tracker action and a high number of pipe ranks, playing these instruments in a virtuous way became physically demanding. The British Charles S. Barker developed a "pneumatic relay" for supporting the power for the tracker action, a system that may be compared with the servo-assisted steering in a car. Based on this technique German organ engineers developed a complete pneumatic action system. As a consequence of this type of action other wind chests were constructed. The key valve was replaced by other valve constructions like a cone form or a circular flap and resulted in further reduction of the attack sound of the whole organ. It's true that together with the above mentioned decreasing of the attack sound of the pipes, these organs became better suited for proper performing of symphonic organ music. However: in the acoustical field it has to be pointed that in these wind chests, the wind channels per note were changed into wind channels per rank and there was no wind coupling via the wind channel per note. This had consequences for the internal correction of the pitch of equal notes per key. Because the new practice of performing music became common, this all was not seen as a disadvantage. Organs of this type in The Netherlands were installed by Maarschalkerweerd and also by Adema Brothers, mainly in the Roman Catholic Church buildings.

Despite of all these modern advantages, some people got the feeling that "something was lost". The consoles of the huge organs had become very complex comprising a high number of stops and presets. The famous Albert Schweitzer compared such a console to a control room of a railway station. After the rediscovery of the music of Johan Sebastian Bach it became clear that such organs could not perform his music properly due to the lack of mixtures and also the sound colour of the ranks of the organs in use those days. A movement called the "Organ Reform" in the Elzas came into light. Schweitzer and Emile Rupp were seen as the founding fathers of that movement and their aim was to bring the organ back to the style before the "modern organ". Albert Schweitzer performs a lot of organ concerts in The Netherlands and he met important Dutch organ experts and it's obvious that he had influence on their way of thinking.

The 20th century: the "Modern age"

Based on all technical discoveries and developments of the preceding age this era became turmoil of electricity, electronics, Radio, Television and Computers. The common systems of composing music were left behind. This era also marked the upcoming of other forms of entertainment music like ballroom dancing and jazz. New action techniques based on electricity became common. This technique made it possible by means of relay matrixes to switch a pipe rank on different pitches, in octaves and fifths. Fewer pipes were needed in these so called "unit organs", making them inherently cheaper. Dutch organ makers like Standaart and Dekker practiced this way of organ making.

In the United States however, the ideas of the organ maker Robert Hope-Jones contrasted wildly with organ making on the continent. He developed a totally new schema of the organ, built in concrete swell boxes with special organ pipes

working at high pressures using electrical action. He became a director at the Rudolph Wurlitzer Company. He developed a special pipe organ for accompanying the silent motion pictures to replace expensive theatre orchestras in the Cinema. This typical style of the Cinema Organ became popular and came over to Europe from the US in the Twenties. Dutch organ makers like Dekker and Standaart manufactured this type of instruments and installed them in the "new market": the cinemas and in two broadcasting studios. When sound was added to the motion pictures the role of the cinema organ became obsolete. This type of organ is real history and needs special attention to preserve them for our descendants.

In the North of Germany after World War II the ideas of the Organ Reform became new possibilities and an "Organ Movement" came into light. Their activities concerned not only the specification of the organ ranks, but a total return to the old way of organ manufacturing with Arp Schnitger as starting point of view, like the principle of the departments, the slider chest and mechanical tracker action. The search for the authentic organ sound lead to the restoration of the old style organ pipe mouth with striking consequences. People who were totally unaware of the old organ sound were shocked and sometimes annoyed by the brutal sound of the attack of an organ pipe: that "chiffing" sound.

The Dutch organ maker Dirk Andries Flentrop in Zaandam is the founding father of practicing the Organ Movement in The Netherlands. He pleaded for reintroduction of the slider chest and all the above mentioned matters of the "Organ Movement". Flentrop presented a tracker organ according his new experiences at the 1939 World Exposition in New York. His first church organ based upon all these principles was installed in the Reformed Church in Wageningen during 1944-1945. Sadly this organ was totally destroyed during the war. Looking at his organ in the Great Church in Doetinchem, you'll see his visionary goal. Rudolf von Beckerath in Hamburg also follows these ideas and Flentrop and Von Beckerath were acquaintances in this "battle field" against the existing visions concerning organ building. It has to be noted that Marcussen in Denmark also made organs following the principles of the Organ Movement.

The flood disaster in the province of Zeeland resulted in the destruction of several churches and their organs. Making of new organs became necessary and a lot of Dutch organ makers did the job using the principles were Flentrop paved the way. Old organ makers left their old electric and pneumatic systems and made beautiful instruments. The inspiring example for all these new organs was the "Sweelinck organ" installed by the Danish organ maker Marcussen at a protestant broadcasting society that produced many organ music broadcastings.

The 21th century: the "digital" age

We are only at the beginning of this era and it seems impossible to say what will happen in the future concerning organs. There is a growing respect for organs from the "romantic" era, knowing that composers like Franck, Widor and Reger made music in the time of these instruments.



Figure 4: Verschuieren "Bach" Organ Dordrecht 2007 (G.Schaap).

In Amsterdam a disused protestant church was rebuild as a concert room especially for organ music from different arts. This "Orgelpark" is organized around a restored romantic Sauer Organ although they also have more organs in different styles at their disposal.

Conclusion

Concluding this concise overview of at least 500 years of organ history in The Netherlands it will become clear that there was always a narrow connection with organ makers from Germany, later on a period of influences from France and the US until the Organ Movement. The Dutch and German organs are an obvious "family". An artistic question is: is there a difference between Dutch organs and German organs? The answer is "yes", due to the "sound picture" in the heads of the organ makers. Although features like the pipe ranks were specified, the subjective skills of determining the principal dimensions of the pipes and their voicing were inherited from their predecessors. In a very short observation one may say that the North German organs produced more high frequencies: called "clear". In Dutch organs the basic lower frequencies are stressed: called "warm".