020910 Churches and Organs

Shortly after returning to Copenhagen, I began work as a volunteer assistant at a acoustic conference held at DTU. The conference was entitled the Joint Baltic-Nordic Acoustical Meeting and it took place from the 26th to the 28th of August. Although their number was small, there were people in attendance from Estonia, Latvia and Lithuania. There were also attendees from all over Europe as well as the US, but most were from the Nordic countries.

As if speaking a Scandinavia language were not difficult enough, I had a terrible time at trying to figure out peoples names when they checked in for the conference. I had a list of names in front of me, but especially for Icelandic or Finnish names, I often had no clue as to even the first letter of the persons last name when they spoke it. Fortunately, I was working beside a Danish woman who could often figure the names out.

The conference began with a pre-conference tour of five interesting churches and organs in the Copenhagen area. Jens Holger Rindel, one of my professors from DTU arranged the conference and tour. So that the organ in each church could be heard, he had invited along an organist from a music conservatory in Copenhagen.

Most of the state churches in rural Denmark often take a similar form. There is a three to four story, square tower at the front of the building to house the bells. The rest of the church is rectangular in shape and extends from the tower. The churches are always brick and often painted white or red. There are variations on the design such as churches on the island of Bornholm which abandon the rectangular shape in lieu of round sanctuaries. There are also variations on the church design in Copenhagen and it was to these churches that the tour led us.

The first church was designed by Jørn Utzon, a Danish architect who gained fame by designing the Sydney Opera House. The church was modern on the outside, but even more so on the inside. The ceiling of the sanctuary was shaped in waves as it curved up to one side of the room. The sanctuary itself was small despite the height of the ceiling. The organ pipes were incased in three sets of rectangular boxes which were mounted on the wall. You can see more about the church at: www.veluxfondene.dk/381.asp

The second church was designed by the J.O. von Spreckelsen, the famous architect of the Arc-de-Triomphe in Paris. What made this design unique was the floor layout was based on squares. The altar was located at the center of the room with the organ and pipes on the wall opposite the entrance. Pews were arranged around the altar on four sides. The room could be expanded or reduced in size by the lowering of a partition between the main room and a second space which was also a square. Therefore, two separate rooms could be created by lowering the wall. A square shaped room is a terrible idea from an acoustic standpoint, so the architect broke up the flat surfaces of the wall by angling the walls upwards for the first three meters from the floor or by zigzagging the bottom portion of the wall. www.vangedekirke.dk

The third church was Grundtvigs Kirke which houses the largest organ in Scandinavia. The largest pipe is 32 feet and produces a tone at 16 Hz which is at the

threshold of human hearing. Such an organ required a large church and so the architects took the basic rural church design and blew it up to a massive scale. The church is huge at 25000 cubic meters and has a reverberation time of up to 13 seconds at low frequencies. What this means is that if you clapped your hands, the sound from the clap would hang in the air for thirteen seconds before you could no longer hear the sound reflecting from the walls. The organist explained that playing in such a church is intimidating because the sound of the music never stops. However, she did like that the high frequency pipes were not located right next to the organ console as is too often the case. The close proximity of the high frequency pipes to the organist means that the organist is constantly exposed to loud, high frequency sound which has caused deafness in many an organist.

The fourth church was Sct Marie Kirke, built in Helsingør in 1430. What made this organ interesting was that it was used at the time of Diderich Buxtehude. Buxtehude would later move to Germany where he would be a music instructor for Bach and therefore it is felt that he had a large influence on Bach's music. www.sctmariae.dk

Last on the list and the most spectacular was Frederiksborg Slotskirke in Hillerød. The sanctuary is the church for the Dutch Renaissance castle of Frederiksborg, home to the royal family until 1859. During that year, the castle was ravaged by fire and the royal family gave up the property. Carlsberg beer baron, JC Jacobsen spearheaded a campaign to restore the castle as a national museum which it still remains to this day.

The church is simply beautiful. It is a small, rectangular room with balconies ringing the second floor and vaulted ceilings. The lines of the room are of gold which reflects the light from the ample windows on both sides. The walls of the balconies are lined with coats of arms and Biblical paintings. The church is still used by the community and those who grow up the parish are entitled to be married in the castle.

There are organs at both ends of the balcony, but the remarkable one is at the front. The organ was built during the Renaissance and all of the pipes are made of wood. The organ is not very large, but it is intricate with ivory, silk and jeweled keys and stops. It actually took several minutes for the organ to be unlocked and opened. Behind the organ are the bellows which must be filled for the organ to work. A person must pull down on each of four ropes in succession to fill the bellows. The task is demanding in that the bellows are constantly emptying and so the bellow worker must be constantly pulling on the ropes. The organ is not the oldest organ in existence, but the claim is that it is the oldest organ in the world in its original condition. Only the bellows have been rebuilt over time. Otherwise, all of the parts are still the original ones from 1610.
http://www.musikhistoriskmuseum.dk/reg/frederiksborg_compenius_oid_rammex.htm

Now that I have bored you with churches and organs, I will not bore you with too many details of the conference which followed. As I mentioned, the conference was attended by acoustic engineers from the Baltic states. The Nordic countries have been helping their Baltic counterparts in the building fields to overcome noise issues in buildings such as residences and workplaces. The Baltic states are still struggling with the legacy of the old Soviet sound requirements which allowed for a lot of noise to be transmitted between one dwelling and another in an apartment block. In order to

gain a bid to join the European Community, the Baltic states are struggling to increase their standards to those of the Nordic states and to do it in a very short time. Furthermore, they must contend with other problems such as in Estonia where rail shipments of oil from Russian travel through the country 24 hours a day on their way to the sea.

One speaker was showing a chart of the different building standards currently used in Norway. Dwellings that have an A rating allow only 35 dB of sound to be transmitted between dwellings. The scale goes down to a D rating which allows for 60 dB of sound to be transmitted. The reason why I bring this up is that the Estonian speaker who showed the chart paused to point out that the strictest standard in the United States is currently 70 dB for a dwelling. Therefore, the best building standards in the US are worse than the worst standards in Norway. The speaker commented that the US must be a very noisy country in which to live.

The conference ended with a wonderful dinner at a restaurant on one of the many lakes in Lyngby. I sat with several people from Norway and Sweden as well as a chap from England. Graeme had gone to Cambridge where he met his fiancé and they moved to Copenhagen after they received their degrees. He has been to more formal dinners that I and so he could explain a few Danish traditions that I was not aware of. Our meal was venison which surprised me a bit since it is is something that I don't think would ever be served at a conference dinner in the US and was a nice treat. The waitress came around to collect plates and she asked if I was finished yet. I replied that I was not and so I was surprised when she took my plate. Is my Danish that bad? But then I was even more surprised when she brought it back with another serving. Graeme explained that in Denmark it is considered bad form if you do not offer your guests a second helping of food. Therefore, some of the nicer restaurants will offer seconds for formal dinners.

Another thing that I learned was the proper procedure for a toast at a Scandinavian dinner. In all of the Scandinavian countries, you raise you glass and say "skål" (in English pronounced skoal, which rhymes with coal.) The proper procedure is then to make eye contact with each person at the table before you drink. However, once you drink, you should make eye contact with each person again. Nothing more than just a glance, but although I had not known this later part, each of my companions at the dinner certainly followed this procedure.

That's all for now. It has been a busy two weeks with the start of classes and guests arriving for visits. Coming up next: Power Tourists, the intrigue of Poseidon and Dinners at my office.

Skål!

Jeff

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