EXPERIENCES OF A MUSICIAN OF THE OSLO OPERA.

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1 INTRODUCTION

For the musicians of The Norwegian Opera & Ballet (DNO&B)-Orchestra, moving into our splendid new opera house, can safely be said to have been a “one time of the life”- experience. That our new home functionally shows qualities that could match even the greatest among our reference opera houses internationally, like in our dreams, is the general feeling among the colleagues. We probably need some more time until we fully realise the impact of this fact! This brief paper will summarise events that has taken place in the initial period after the inaugural concert of12th of April 08. Some acoustical experiences of playing in a orchestra rehearsal room will be analysed, and comments will be given to sound environments of orchestra pits, as well as stage acoustics for concerts.

2 INITIAL PERIOD OF PERFORMANCES

The inaugural opening gala of the new National Oslo Opera was 12th of April 08.
Media, visitors as well as performing artists soon established a generally unanimous acclamation of the house’s acoustics. Apart from this extremely pleasant fact, the house’s personal faced a series of technical concerns, which partly could overshadow the pleasant sides of the opening of public activities. Among these must be mentioned unwanted sound from cooling fans of stage-light equipment, as well as time shortage for training of technical staff. The incomplete condition of the stage machinery, due to substantial delays of deliveries, led to the cancelling of the intended first new Norwegian opera production (“Around The World in 80 Days”), which was of course a major disappointment for our institution and for the opera lovers of Oslo.
As an improvised substitute of those performances, two series of opera concerts with orchestra, chorus and soloists were staged, making use of our new purchased Italian manufactured concert shell. These concerts showed to be quite popular, and they offered a fine opportunity for the public to make their first impression of what the new opera house could be like musically. In addition, the season between the opening gala and the summer holiday contained three major orchestra concert events (Berlin Philharmonic Orchestra, with Sir Simon Rattle, and DNO&B Orchestra with Lorin Maazel and Neeme Järvi). Further there was one major ballet premiere, two premieres of the Scene II (Small auditorium) and one opera for children in the opera rehearsal room seating 200 persons. Without exceptions, the performances were fully sold out, and every conductor involved expressed their satisfaction with the house’s acoustical conditions.
After the summer vacation, the Large Auditorium could for the first time host a regular opera performance. This was Gershwin’s “Porgy and Bess”, with guest singers of the Cape Town Opera. For our orchestra this was probably the most satisfactory moment so far, as the playing conditions proved excellent beyond expectations. Of course, for opera musicians, the opera configuration of the auditorium represents the essence of our musical concerns. Even if symphonic playing has its great attraction, nothing could compare to well functioning opera or ballet performances!

3 ORCHESTRA REHEARSAL ROOM*:*

The DNO&B Orchestra moved into its orchestra rehearsal room, as the first part of the new opera house to host musical activities, six months in advance of the house’s official opening.

This event represented a major boost of the orchestras working conditions, and as such, it attracted substantial public attention. The basic requirements of the orchestra rehearsal room were: (1) To find new ways to counter the well-known excessive loudness problem of rehearsal rooms for large ensembles, and (2) create best conditions of mutual hearing between musicians, and (3) achieve a high quality soundfield (including extreme background noise-level control) suitable for recording of CDs.

Figure 1: Orchestra rehearsal room.

During the time we have been working in this orchestra rehearsal room, there has been an almost unanimous view among its users, that the requirements were fulfilled to an astonishly high degree. In trying to analyse the reasons for this success, the following elements seem to have their part in the resulting conditions: The problem of excessive loudness can not be solved merely by adding absorption to a size order of a concert hall. In a smaller room, this should result in very steep reverberation decay curves, tending to give an anechoic, non musical feeling of the soundfield. In our rehearsal room, therefore the idea was to attenuate reflection density, rather than absorb reflections. The wall-structures of vertical battens, placed 40cm off the background, here seem to be the right answer to this challenge. These batten-structures actually give reflections back to the room, albeit highly attenuated and diffused. Additionally, in order to somehow mimic the conditions of a larger room, there was a need of granting the longest possible delays of the reflected sound paths. For this reason, the design implemented measures to discriminate direct reflection hits from walls in “ear height”. Horizontal surfaces creating cue ball reflections down to the orchestra were avoided, and ceiling height was set to the highest allowed in the context (13,5 metres).

The effect of this is a comfortable feeling of a “more free” acoustic space allowing heavy scores to be played as if the room had actually been bigger than what is the case with its V = 5.300 m3. Suspended “saucers” which at the same time serves as lighting sources of the room, help adequate mutual hearing. Adjustment of the height of the swarm of “saucers” has proved efficient in optimizing their effect. Hidden behind the vertical batten wall-structures, there are carefully calculated acoustical treatments that can be mechanically controlled from a panel. In a matter of seconds, we can select between pre-programmed settings. The use of the system for various acoustical demands is now growing into a helpful routine. However, the DNO&B Orchestra has used quite a long time to familiarize with the new environment, before experimenting with variable acoustics could have a sense.

4 ORCHESTRA PIT ACOUSTICS

Ideally, moving from a rehearsal room, to performance in the orchestra pit should be an experience enhancing musicians’ self-confidence, meaning that if musical deficiencies were not detectable in the rehearsal room, it would certainly not be heard in the more reverberant auditorium. In the case of our new opera house, there is in this respect a nice feel of ease and confidence when playing in the orchestra pit. To a further degree than in the orchestra rehearsal room, there is a comfortable feeling of acoustical space, which allows freedom of musical expression. Generally, in orchestra pits there are two limitations to be considered. Either the pit in itself set up a reverberant field that limits the musicians’ natural use of their instruments, in fear overpowering the sound. In the opposite extreme, the hall is either to large or too absorbent, so that the problem of not producing a sufficient amount of sound causes a forced way of playing. The acoustic conditions in our new orchestra pit seems to have a “robust” distance to either of the above mentioned extremes. There are measures incorporated of variable acoustical panels towards the stage as well as in the orchestra pit rail. However, the main impression of the soundfield seems only to a small degree dependent of the positioning of those. With the pit rail half sound transparent the playing conditions feels further improved for the musicians, and the mutual hearing between orchestra and singers is still sufficiently clear.

5 CONCERT CONFIGURATION OF THE MAIN STAGE

The purpose of an acoustic concert shell can be described as shaping the opera stage aesthetically and acoustically in the direction of a symphonic hall. The reverberance of the stage is to be enhanced, and the clarity decreased. As mentioned above, the initial season gave lots of opportunities of experiencing the practical and acoustical performance of our concert shell.
The requirements called for a flexible shell that should be possible to rig in the matter of hours, and which gave room for up to a 100-piece orhestra, plus soloists and chorus. The ceiling elements should close the sight of the flytower for the audience, and provide light for reading of music.
The concerts have so far been enthusiastically received, and our auditorium in concert shape was favourably compared to all existing concert-halls of Norway. We have experienced that in a reverberant environment, like our main auditorium, the effect of a concert shell could easily be overdone. This means that substantial gaps between wall and ceiling elements, allowing some sound dissipation to the surrounding stage, proved to be recommendable. For the initial Concert (Lorin Maazel, Wagner), there were limited time for systematic tuning of the shell. However, it showed that the initially calculated configuration worked perfectly as intended.

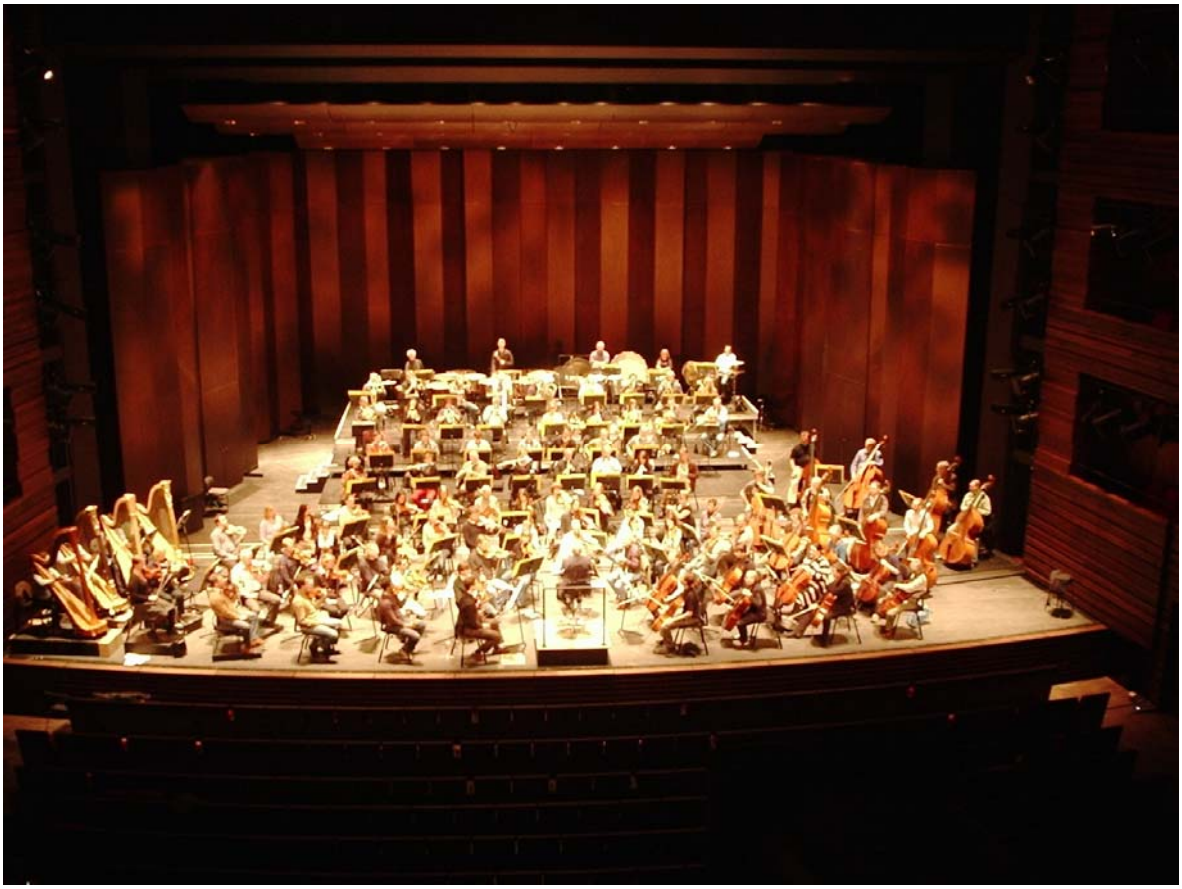

Figure 2: Main stage rigged with Orchestra shell.