Introduction to Chapter 3:

To get a better understanding of how musicians within symphony orchestras experience and relate to the acoustic conditions on stage, the first subjective study involved distributing questionnaires to eight symphony orchestras – six English and two Norwegian. The six English orchestras were: BBC Philharmonic, Bournemouth Symphony Orchestra, City of Birmingham Symphony Orchestra, Hallé, London Philharmonic Orchestra and Royal Philharmonic Orchestra. The two Norwegian orchestras were Oslo Philharmonic Orchestra and Trondheim Symphony Orchestra. The results from this study are reported in this chapter, while the results from the second subjective investigation are presented in Chapter 8. Musicians’ impressions of stage acoustic conditions have previously been investigated by several authors. Gade investigated this through both laboratory experiments and interviews with musicians (Gade (1981) and Gade (1989b)). Which aspects of stage acoustics that appear most important for the musicians were investigated through questionnaires by Genta et al. (2007b). Laboratory investigations have also been carried out by Naylor & Craik (1988), Meyer (2009) and Ueno et al. (2004). A lot of findings came out of these studies – in brief the results consistently show that the most important aspects for the players appear to be hearing each other clearly, with hearing of others well balanced with their own sound. A suitable amount of acoustic response from the auditorium also appears crucial for them.

The chapter is organised into three major parts with discussion/conclusion sections at the end of each part. The first part covers the open questions in the questionnaire including their favourite halls, while the second part covers the preference questions. In the third part, the halls rated by the players are studied with reference to objective measures related to the halls. Go to thesis

3. Musicians’ impressions of acoustic conditions
4. Sound propagation within a symphony orchestra
5. The effect of reflected sound back towards a symphony orchestra
6. Computer modelling of stage enclosures including a full symphony orchestra
7. Acoustic measures for assessing acoustic conditions on stage
8. Impressions of eight performance spaces visited regularly
9. Overall discussion and conclusions