

ISE 599 paper review
Title: Performance of Music
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Reviewer: Jie Liu

I read two parts of this paper: performance measurement and evaluation. In the first part, measurement, the author gave a very detailed description of how people record, measure and analyze the data of performances. From my first impression, this could be done by using computers or other electrical or mechanical devices, for instrumental data. For example, it makes sense to record the depression and the release of the keys because that can reveal the tempo and articulation. However, I was surprised to see that people even record the movement of the performer, using camera, for example, the movement of the head. However, it makes sense too. People tend to move the body emotionally when singing, playing, or humming. However, I doubt how much we can use from the movement of the body to analyze the expressiveness of the performance.

I have always considered that the musical expression is the modulation of tempo, loudness and articulation, but in this paper, the author also discussed other issues, like intonation, vibrato, and the effects of the conductor. I am not sure that the performer would change the pitches of some notes when playing piano or violin, but I can understand that intonation affects the expressiveness of the performance. The author clearly did a lot of literature review, and showed a large number of references. What he presented in the paper is a lot of examples and conclusions, but I could only understand some of them. The tempo and dynamics parts are easy to understand but others, like music structure and intonation, are not. I could not understand why and how they come sometimes, such as the vibrato and the retards, but I totally understand that the expression is a perceptual effect, and it is created to express the musician's intention, which can sometimes coincide with listeners' expectations.

Two models of music performance are given in the paper: models based on measurements and models based on intuitions. I am more convinced by the model based on the measurements than the model based on intuitions. However, performance is so subjective that nobody can use one single model to cover and represent all the properties and features of musical performance. So, I think both models are limited. However, we can still use the second model to represent some rules, which are accepted by many people. When I saw the name "Sundberg", I remembered the article that I have read in the ISE599 course two years ago, which talked about the rules to make expressive performances. I think that paper presented an extended work of the model mentioned in this paper. I have the impression that those rules are quite specific and the performance output from this rule-based model is plausible but not perfect. I always have the question of whether it is a good idea to model performance, which is so individual and creative. Performance is not like playing chess, which could be modeled using a computer, I doubt whether we can find a model to create many comfortable and widely acceptable performances, without human interaction.

For the performance evaluation, I think it should be a task for musicians than for non-musicians. For musicians, they might analyze the performance using music theory or performance rules, for example, they could consider qualities such as tone quality,

tempo, rhythm, dynamics, articulation, phrasing and so on. But for non-musicians, they might be more careful about whether the performance meets their expectations.