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A study on processes of constructing musical expression in musical performances

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Abstract

The objective of this research is to allow any performers who play musical pieces with musical instruments based on scores to freely express their internal impressions on the performance. For this purpose, in this dissertation, I study a method for analyzing musical performance, a musical performance support system, and a classification method of instrument plays that are included in dialogues for discussing musical interpretation.

In the conventional research of music education, they have discussed effectiveness of instructions based on subjective results of questionnaires and interviews with teachers and pupils referring to classification of utterances and time of performance in lessons. However, we should objectively analyze the pupils' performance data and compare the results to the subjective results to reveal the effectiveness of instruction more directly. Therefore, in section 2, I conduct case studies of piano lessons and analyze two pupils' performance data by comparing to their teacher's performance data in the third chapter of this paper. As a preliminary, in section 3, I made basic analyses of key-release action that has been disregarded so far, and considered it as an important musical component of performance analysis.

In section 4, I propose a musical performance that allows people who are not good at playing musical instruments to construct performance data with rich musical expression based on the results of the previous chapters. Recently, there are many musical performance support systems for entertainment use. However, controllable musical components are excessively limited. Hence, the support systems do not allow a user to fully show his/her internal expression.

In section 5, I propose an ensemble support system named "Family Ensemble" for an inexperienced parent and his/her child who is a beginner of learning to play a musical instrument. In experiments, I confirm that Family Ensemble facilitates the playing of piano duo by novices. Furthermore, I show that subjects can discuss musical ideas, which cannot be achieved by using a conventional piano.

In joint practice session of an ensemble, e.g., a piano duo play, an "instrument play" is weaved in dialogue as one of the modalities for communication. Accordingly, in section 6, I apply the Clark-Schaefer contribution model to analyze six dialogues that are obtained in joint practice session of a piano duo play, and I propose a classification method of the instrument plays.

Key Words: musical performance, expression, piano lesson, piano duo, MIDI, support system, grounding