

Generalizability of Sight vs. Sound Effects: Evidence from Brass Ensemble Competition in Japan

Tomohiro Samma¹, Patrick E. Savage¹, Shinya Fujii¹

¹Faculty of Environment and Information Studies, Keio University, Kanagawa, Japan



INTRODUCTION

Backgrounds

- Anecdotal evidence suggests that visual appearance on a stage is as important as sound performance to get positive ratings from judges in Japanese brass band competitions.
- Although over 14,000 brass bands exist in Japan, there are little scientific studies on brass band performance.

Aims

- ✓ To examine if the “Sight-over-sound” exists in the judgement of brass ensemble competitions in Japan.
- ✓ To examine if the “Sight-over-sound” effect is dependent on the musical experience of participants.

PREVIOUS STUDIES

Most people consider auditory information to be more important than visual appearance in judging a music competition [1].

On the contrary, previous studies revealed that the visual information was more important than the auditory information [1,2].

This “Sight-over-sound” effect has been reported to be reproducible, however, the generalizability of the effect to other stimuli and genres is debated [3,4].

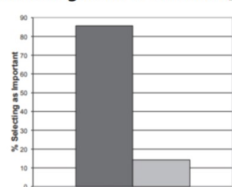


Figure 1 from [1]

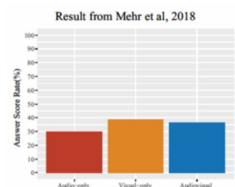


Figure we created based on data from [3]

References

- [1] C. J. Tsay, “Sight over sound in the judgment of music performance,” *Proc. Natl. Acad. Sci. U. S. A.*, vol. 110, no. 36, pp. 14580–14585, 2013, doi: 10.1073/pnas.1221454110.
- [2] C. J. Tsay, “The vision heuristic: Judging music ensembles by sight alone,” *Organ. Behav. Hum. Decis. Process.*, vol. 124, no. 1, pp. 24–33, 2014, doi: 10.1016/j.obhdp.2013.10.003.
- [3] S. A. Mehr, D. A. Scannell, and E. Winner, “Sight-over-sound judgments of music performances are replicable effects with limited interpretability,” *PLoS One*, vol. 13, no. 9, pp. 1–8, 2018, doi: 10.1371/journal.pone.0202075.
- [4] G. Chiba, S. Fujii, Patrick E. Savage, “Sight Vs. Sound in the Judgment of Music Performance: Evidence from Tsuguru Shamisen Competitions in Japan [stage 1 Registered Report].” *PsychXiv*, 9 Sept. 2021, doi: 10.31234/osf.io/kyky4

METHODS

Participants

- Brass-ensemble Musician (n = 154) : Subjects with experience playing in a brass band.
- Non Brass-ensemble Musician (n = 79) : Subjects with musical experience but with no experience playing in a brass band.
- Non Musician (n = 52) : Subjects with no previous musical experience.

Experimental Stimuli

We used the video recordings at the final qualifying round of a regional brass band competition for the high-school students in Japan.

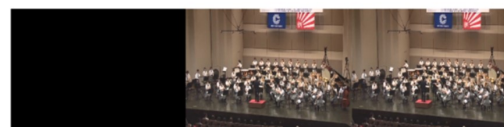
All of the songs used in this experiment were assigned pieces for the competition, and were selected and designated by the All Japan Band Association.

As in the previous studies, we excerpted a part of the song and made a short 6-second movie to use in the experiment.

Experimental Condition

Participants were assigned randomly either of the 1) Audio-only, 2) Visual-only, or 3) Audiovisual conditions.

All experiments were conducted using an online questionnaire platform (Qualtrics).



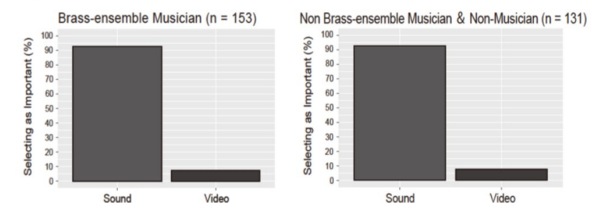
Audio-only Condition Visual-only Condition Audiovisual Condition

Experimental Procedure

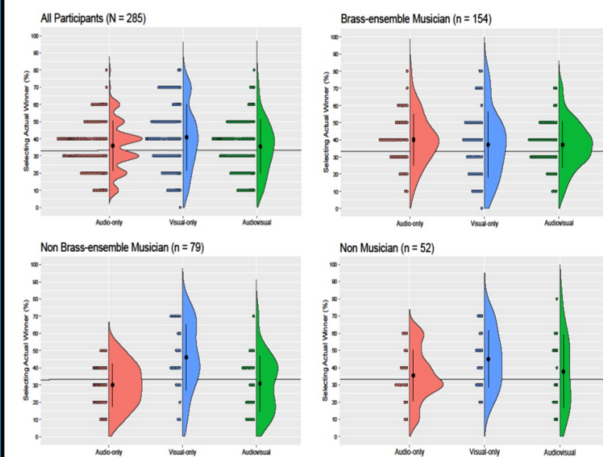
Participants were first asked to complete a questionnaire about their current musical experiences and a survey about their subjective impression of the importance of visual and auditory information in judging brass band competitions (Experiment 1). Participants then conducted 10-question experiment to predict the actual judging results (Experiment 2).

RESULTS

Experiment 1



Experiment 2



SUMMARY

- ✓ Participants self-reported that auditory information is more important than visual appearance in judging a brass band competition.
- ✓ Contrary to the self-report, our study found a significant “Sight-over-sound” effect in the judgement of brass ensemble competition in Japan.
- ✓ However, the “Sight-over-sound” effect was dependent on the musical experience of participants.