

Being in Concert: The effects of audience participation on engagement, kama muta, and connectedness

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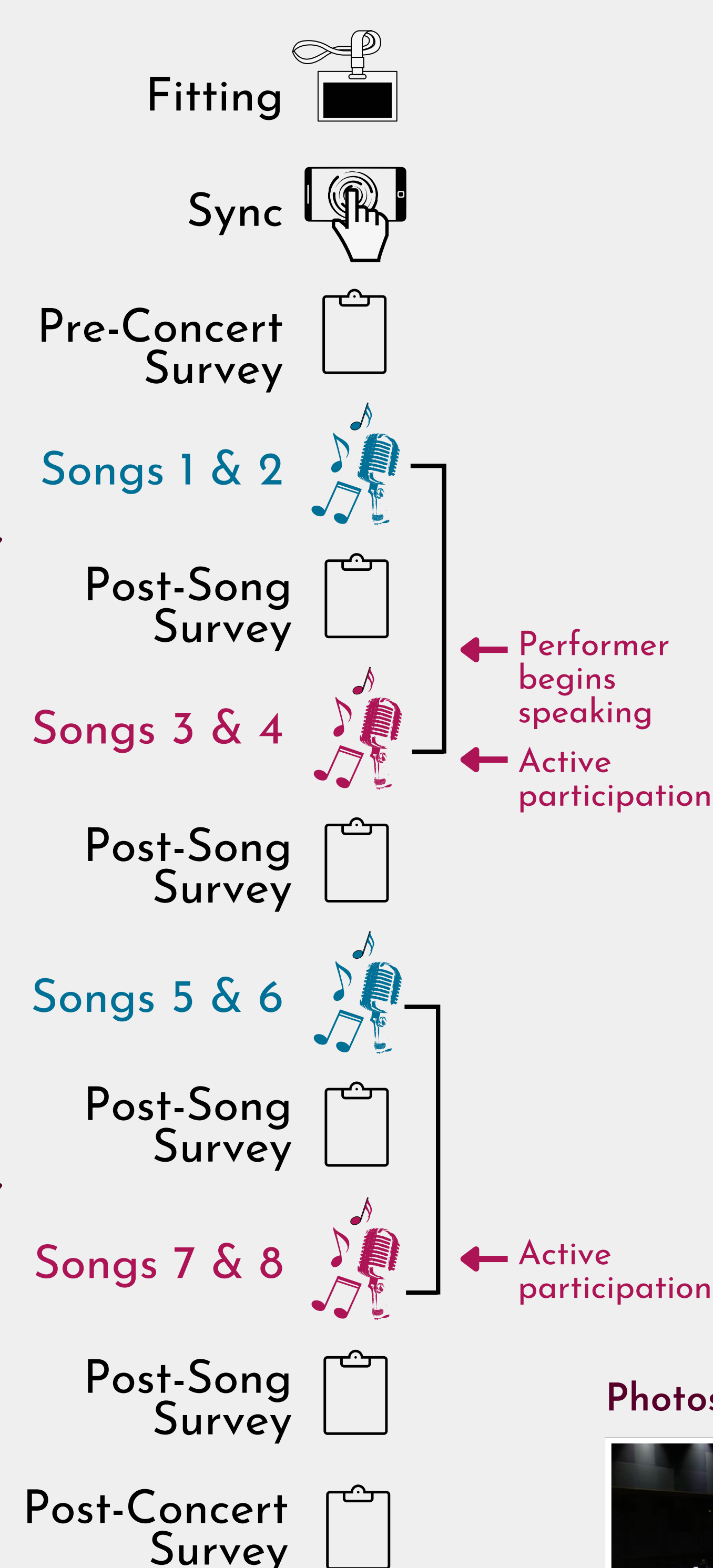
Background

- Music may have evolved as a way to facilitate social bonding (Savage et al., 2020). And, participatory musicking is theorized to facilitate more social bonding compared to less participatory musicking (Savage et al., 2020).
- Feelings of connectedness have previously been measured at concerts and are related to listening context and emotional experiences (Swarbrick & Vuoskoski, in progress).
- Kama muta* is the social emotion of feeling touched or moved, and it may result from intensifications of social closeness (Fiske, Seibt, & Schubert, 2019). Such changes in social closeness can be measured with the *kama muta* scale (Zickfeld et al., 2019).
- Social connectedness can be measured implicitly with the Inclusion of the other in the self scale and with explicit questions about connectedness (Aron, Aron, & Smollan, 1992; Swarbrick, Seibt, Grinspun, & Vuoskoski, 2021).

Research Questions:

How does **active participation** influence i) **motion**, ii) **emotion and pleasure**, and iii) **social bonding** at a concert?

Methods



To elucidate the effect of participation on motion, emotion, and social bonding, we aimed to manipulate audience participation in a live concert.

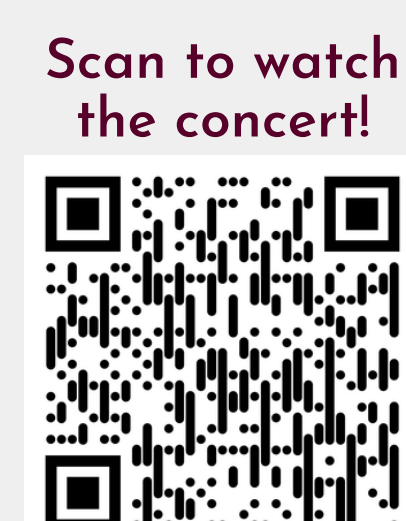
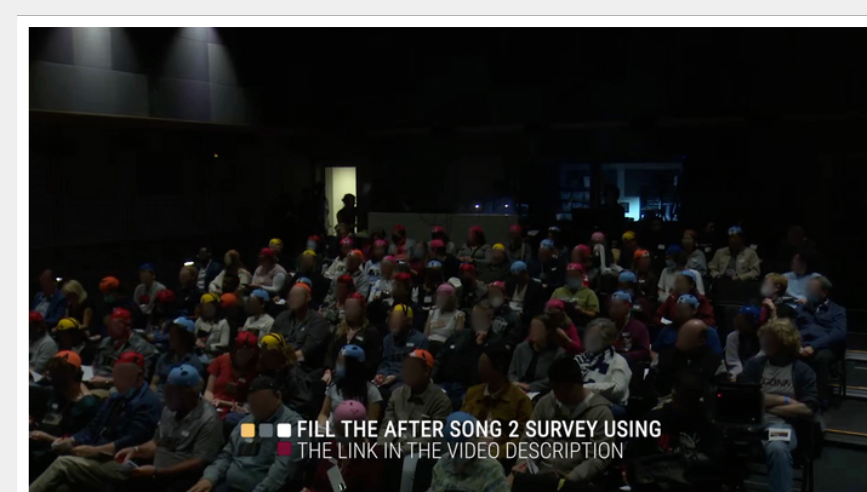
Participants were recruited via advertisements and SONA. We measured motion (using accelerometers on mobile phones and motion capture) and collected survey data from $n = 4$ performers and $n = 69$ of the audience.

Increased participation during songs 4 and 8 was successfully elicited by the performer asking the audience to sing and clap along. Songs 2 & 4 and 6 & 8 were matched in characteristics.

After the songs with participation and their matched controls (every second song), participants completed a survey to report their enjoyment, engagement, *kama muta*, and connectedness towards the audience and the performers.

Performers completed surveys that measured their performance evaluation, perceived audience engagement, and feelings of connectedness to the other performers and the audience.

Photos from the concert: Alex Whorms and Band at the LIVElab



Results

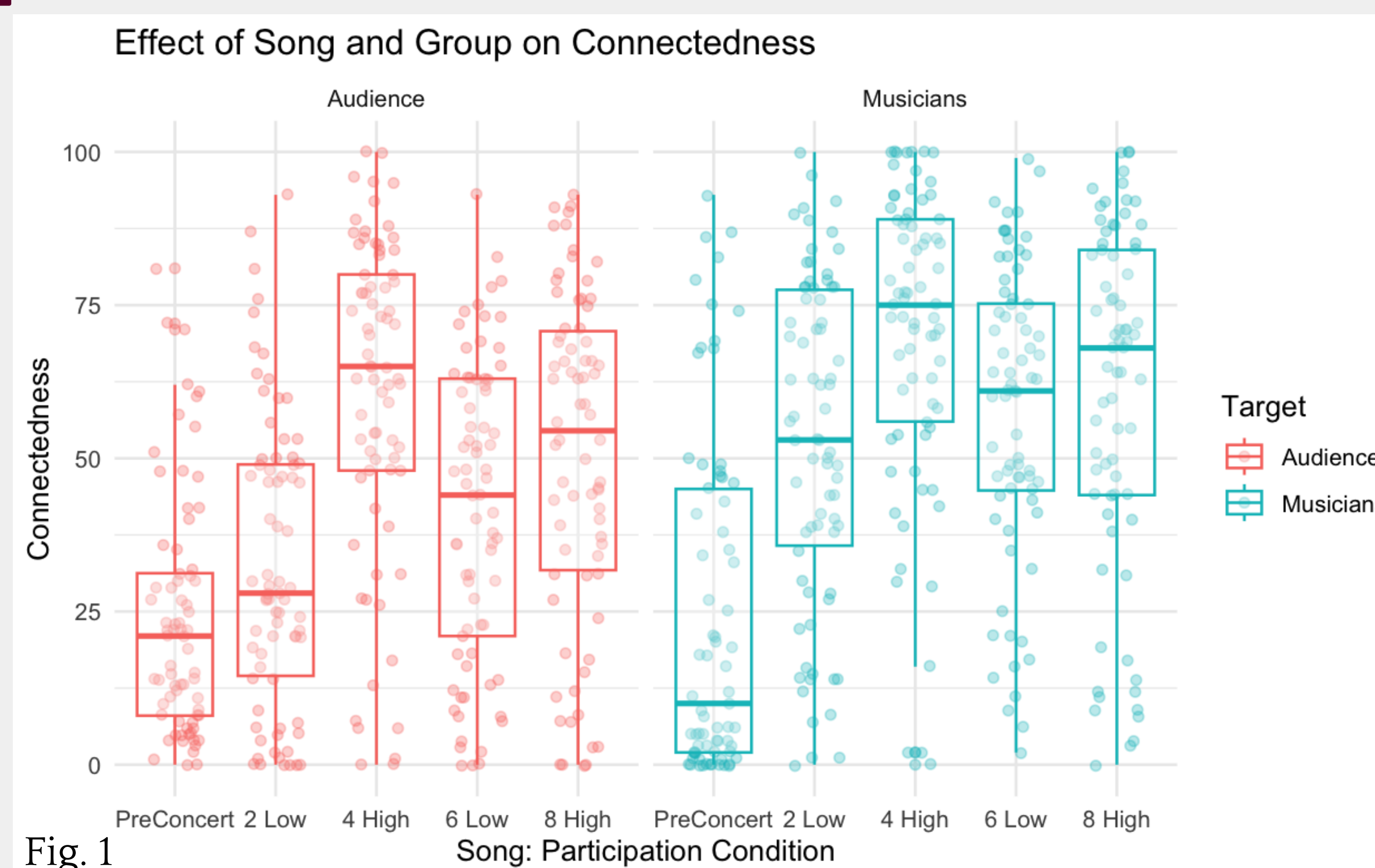


Fig. 1

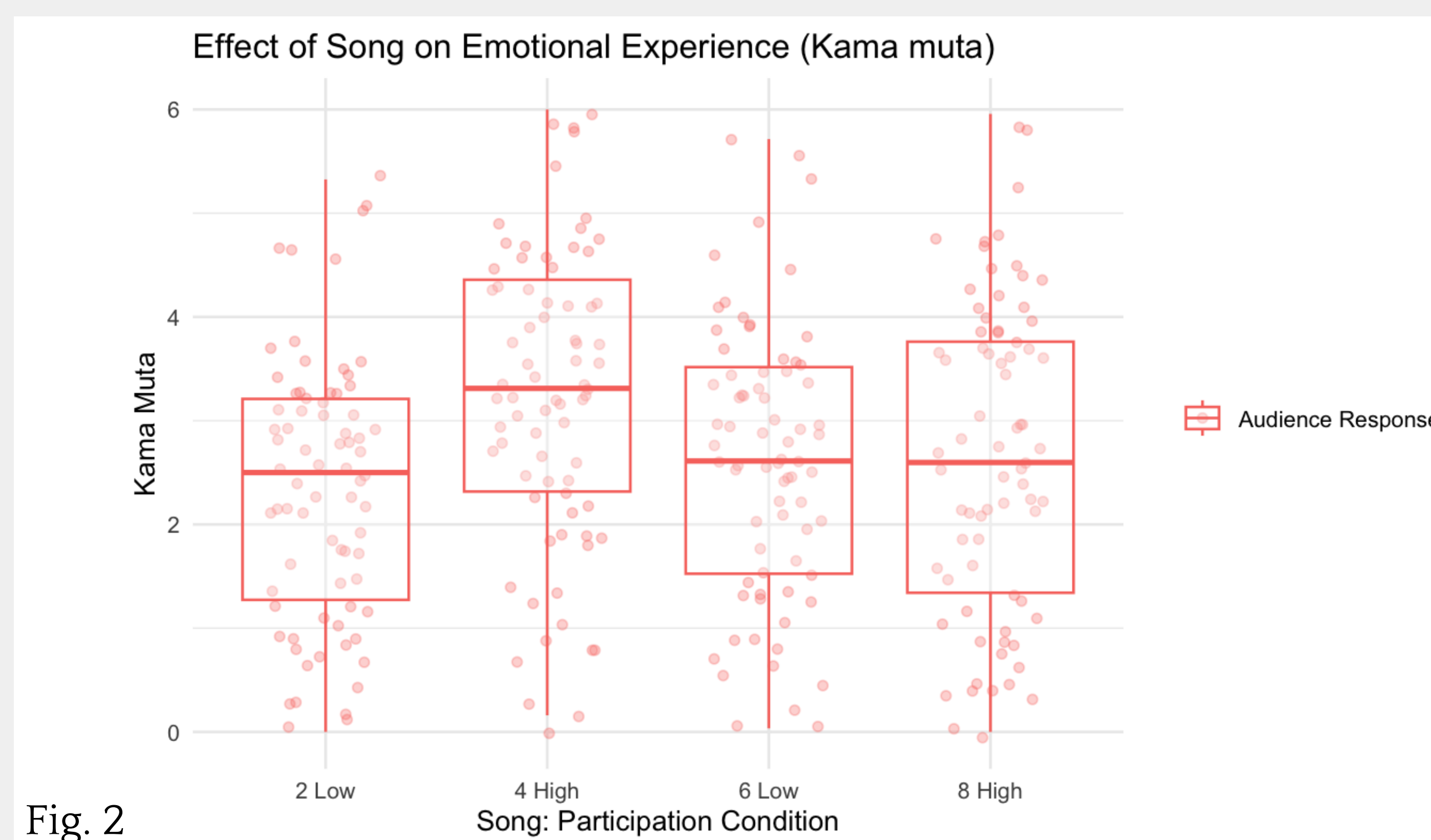


Fig. 2

Repeated Measures Correlation - Bonferroni Adjusted

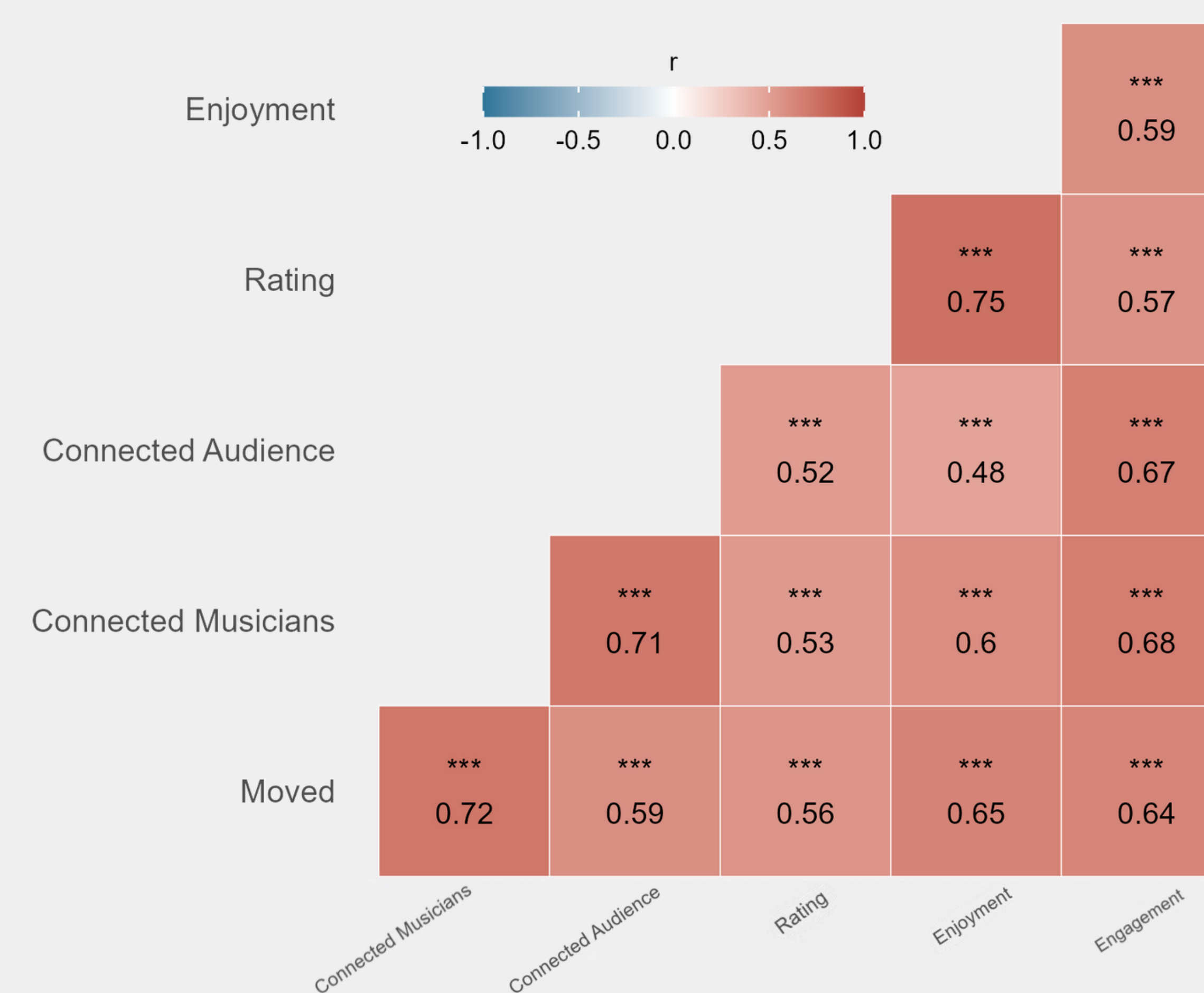


Fig. 3

Discussion

Data processing and analysis is ongoing; however, preliminary analyses of the survey data using mixed-effects modelling suggest that the manipulation of singing and clapping increased engagement.

We examined reported connectedness by song (fig. 1): songs 2 and 6 had lower connectedness to the audience than songs 4 and 8; song 2 elicited the lowest connectedness to the musicians while song 6 was not significantly different from song 8. This suggests that higher audience participation promoted connectedness within the audience, but the relation is less clear in connectedness to the musicians

As shown in figure 2, there is a significant difference in levels of *kama muta* experienced between songs 2 & 4 ($p = <0.001$) and songs 6 & 4 ($p = 0.005$). So, the audience members experienced significantly more intense feelings of being moved after the performer began speaking and actively engaging the audience. However, levels of *kama muta* experienced in songs 2 & 8, and 6 & 8 were not significantly different.

As shown in figure 3, there is a strong positive correlation between how connected audience members felt to the musicians and how moved they felt. Connectedness to musicians and other audience members, and feeling moved, showed a strong-moderate positive correlation with engagement.

Implications & Future Directions

- While data analysis is still ongoing, the results suggest that there is a relationship between engagement and feelings of connectedness and *kama muta*. However, given that there is little difference between the lower-participation songs and song 8 (a high participation song), these effects are likely mediated by other factors.
- Future research is needed to determine these factors and their effects. Ongoing analysis is also working towards elucidating the effects of these variables on motion in the audience and performers.

References

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