

# How Body Movement Aids Expressivity and Accuracy in String Players

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Movement and musical performance are inextricably linked. Musicians use movement to create sound, and as a tool to express emotion to their audience. Previous research has indicated that differences in body movement affect both audience perception of performance, and objective differences in sound. However, few studies address performers' opinions on the utility of body movement when performing, as well as how the effect of movement can be seen in string players.

Here, we explore the effect of body movement on self-reported expression and note accuracy in collegiate string players.

## Method

**Participants:** 10 undergraduate students (18-22 yrs;  $M = 19.4$  yrs,  $SD = 1.3$  yrs; 9 females). Participants played either violin, viola, or cello.

### Procedure:

- Musical background questionnaire
- Participants played 2 etudes twice under 2 conditions:
  - "Please play this excerpt while staying as still as you can"
  - "Please play this excerpt while moving as expressively as you can"
- Exit interview

### Stimuli:

Cello Etude 1

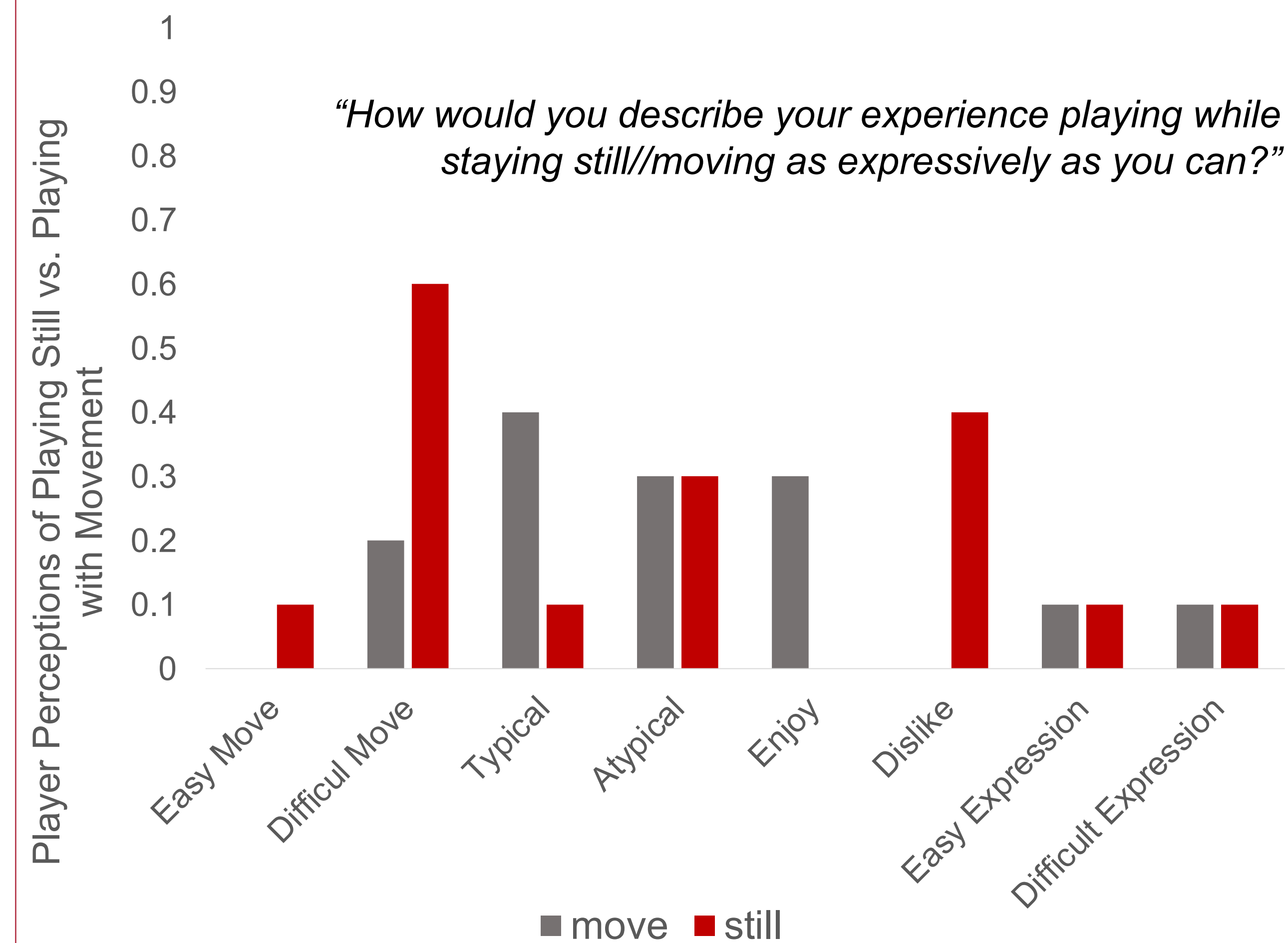


Cello Etude 2



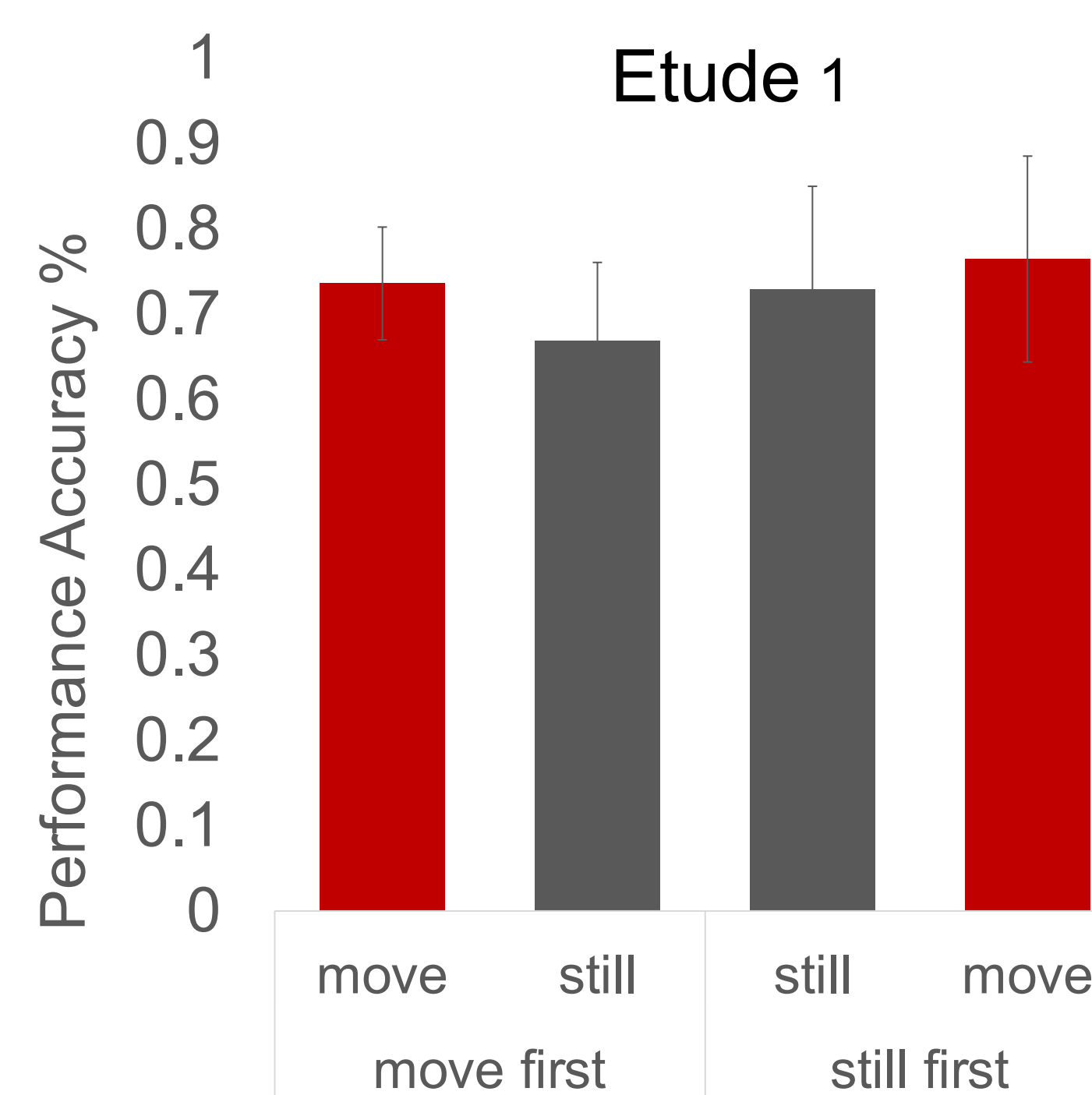
## Results

### How do players experience playing with movement vs. playing still?

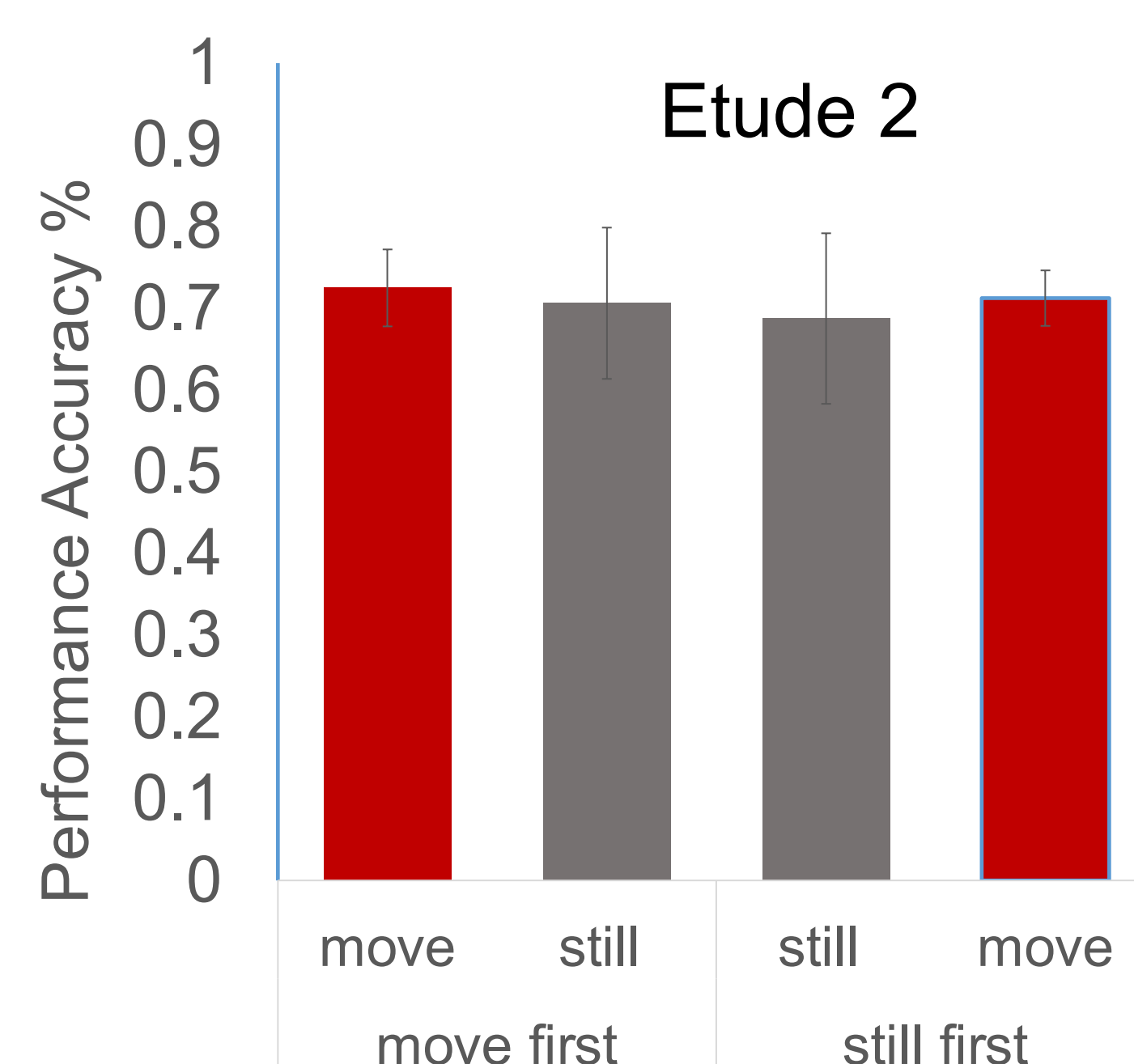


- 60% of participants reported that playing while still was difficult
- 40% of participants reported that they disliked playing without movement

### How does moving vs. playing still affect accuracy?

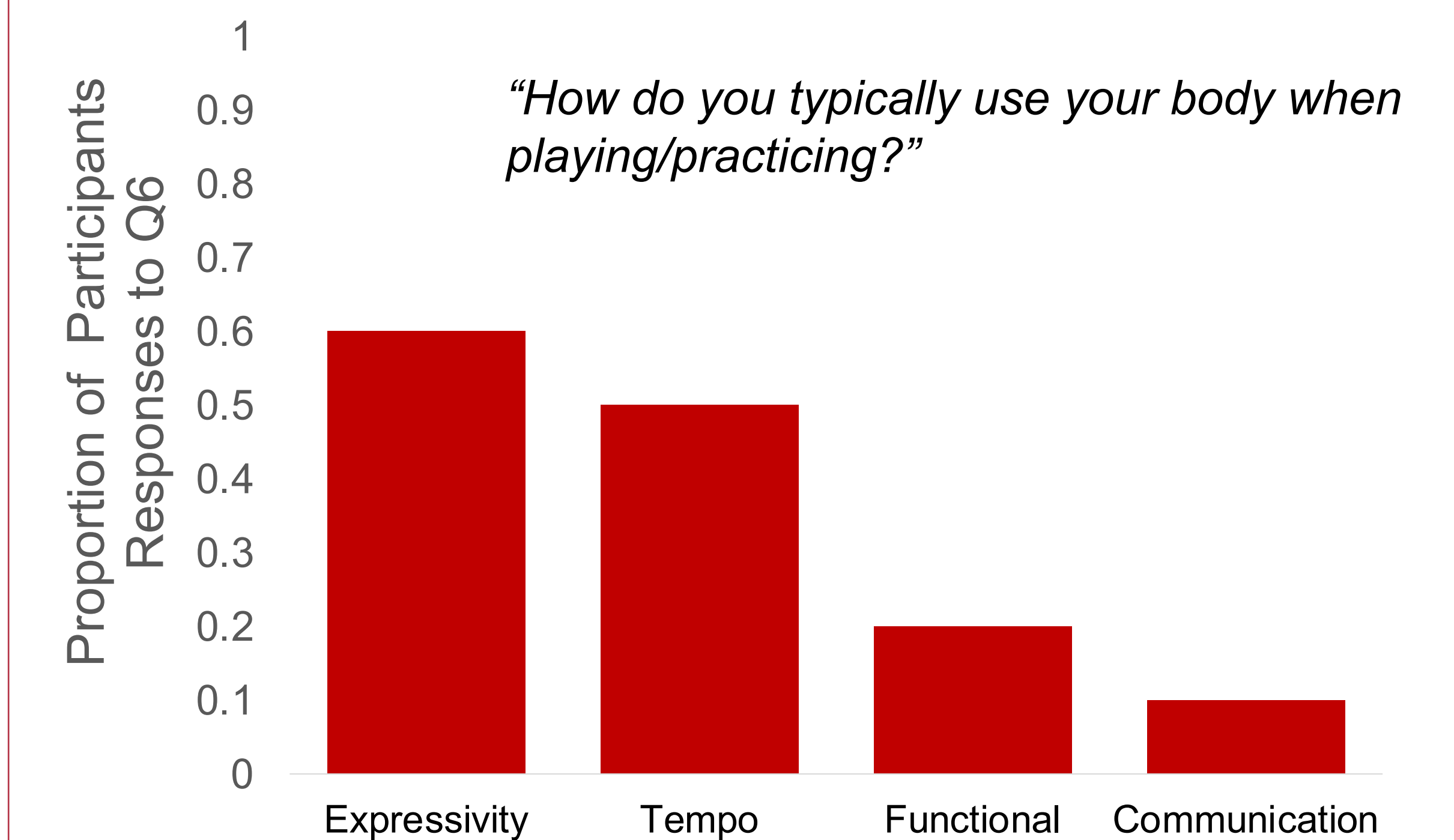


- Patterns suggest that players may be more accurate on Etude 1 if they are allowed to move during performance



- This pattern was not seen on Etude 2, although players showed less variability in the move condition

## Results (cont.)



- 60% of participants reported using body movement to aid in expressivity
- 50% of participants reported using body movement to aid in keeping tempo (accuracy)

## Summary

*Playing without movement is an overall negative experience*

- Participants overall found playing without movement to be more difficult and dislikable than playing with movement
- Participants report less about playing *with* movement because it is something they do naturally, with 40% of participants reporting playing with movement as "typical"

*Movement aids in accuracy for difficult music*

- Data suggest that movement has a greater impact on accuracy when a piece is more difficult
- Lack of practice effect: Participants played less accurately in the no movement condition after already playing Etude 1 in the movement condition
- In the exit interview, 50% players reported that they typically use movement to keep tempo, which could explain the difference between Etude 1 and 2

*Players instinctively use their bodies to aid in expression and accuracy*

- Playing using movement is natural for string players
- Participants self-report that movement aids in expression and communication, and aspects of accuracy like tempo and function.
- Players naturally use movement as a tool to play better

## References & Acknowledgements

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