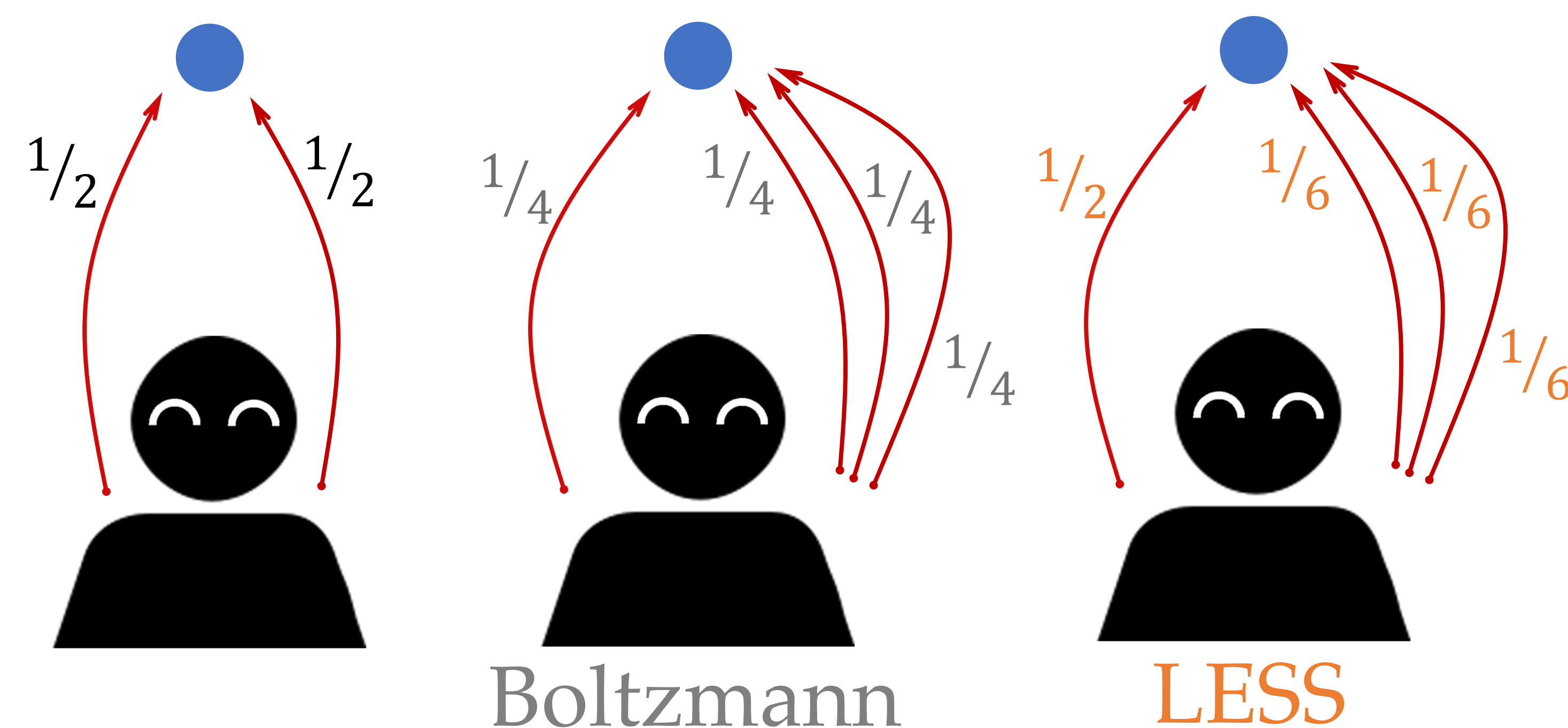
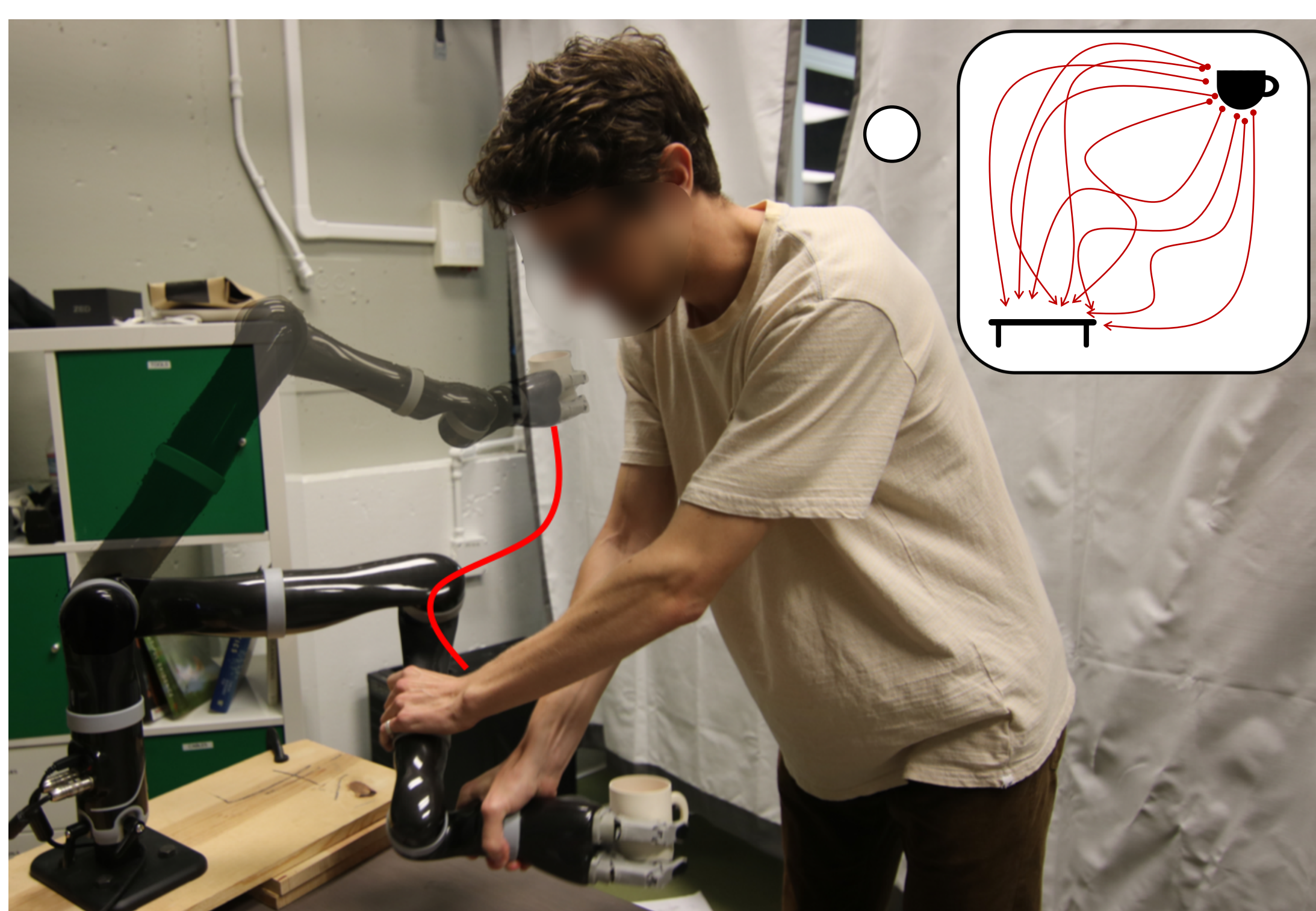
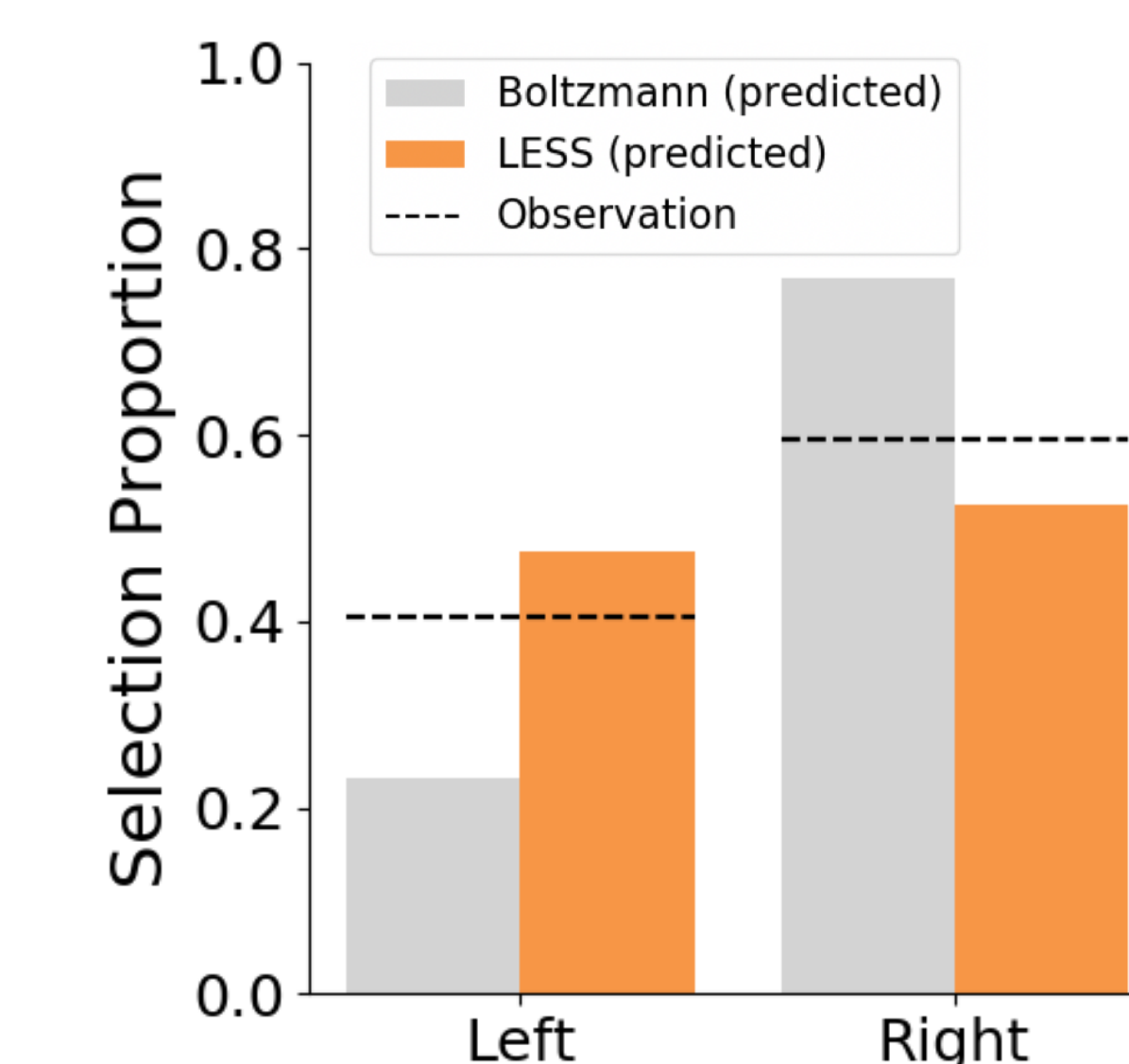
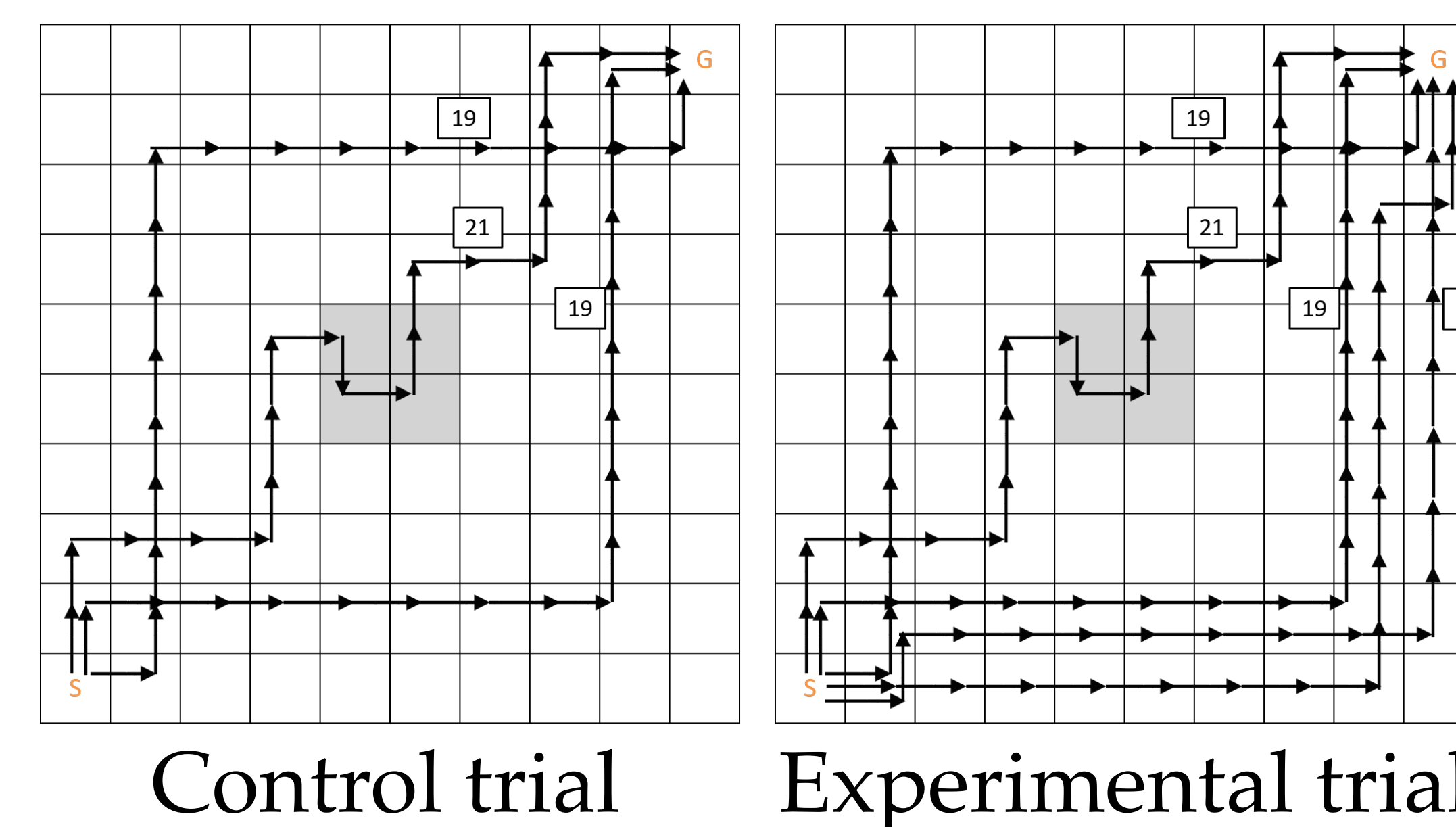


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Problem Statement: How can robots model human decision-making in the continuous trajectory spaces encountered in robotics?



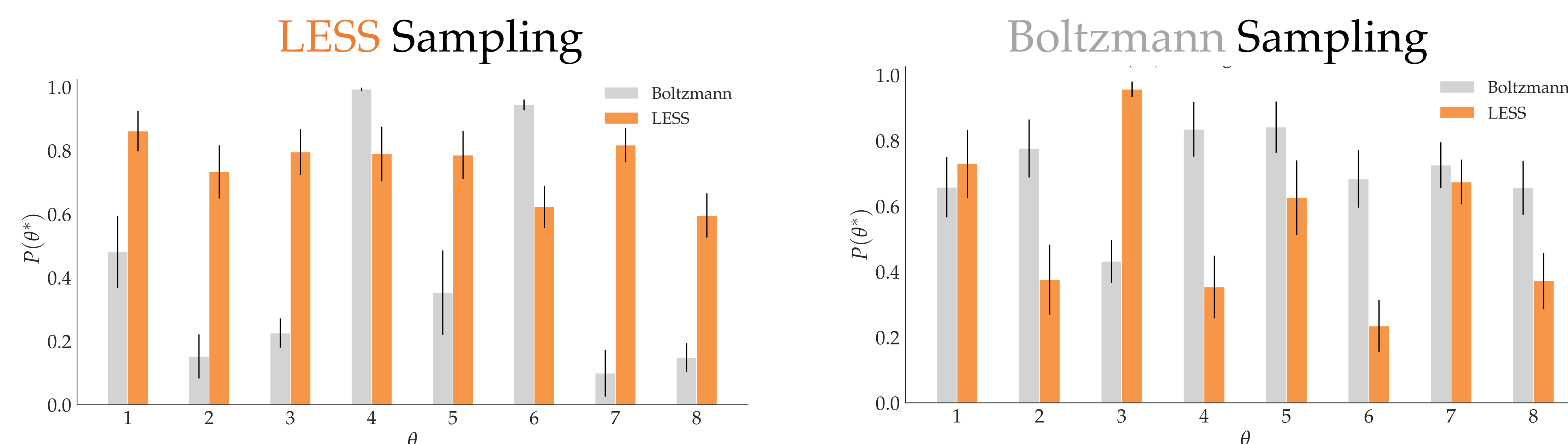
LESS as a Human Decision Model



LESS predictions are closer to the observed proportions than Boltzmann predictions.

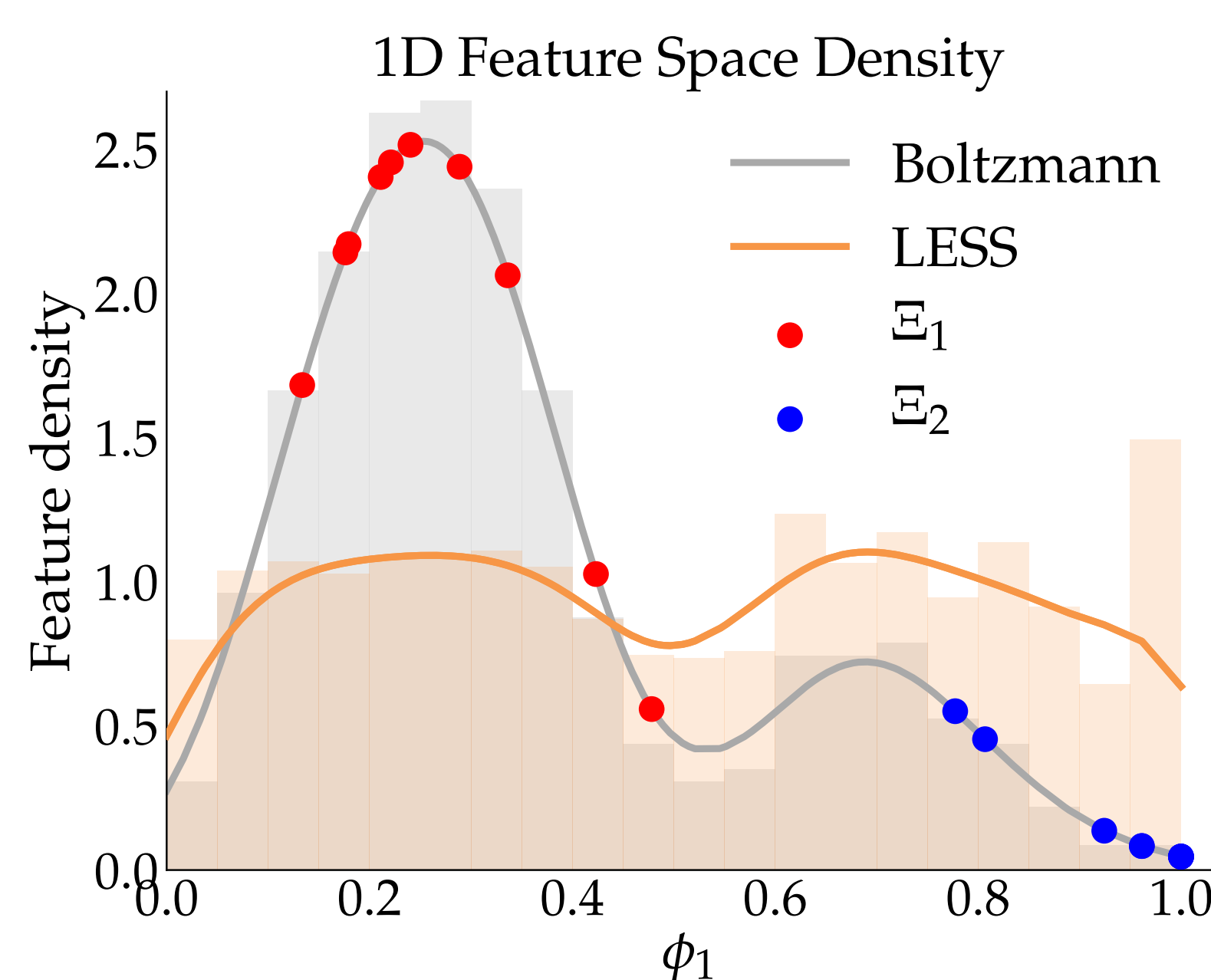
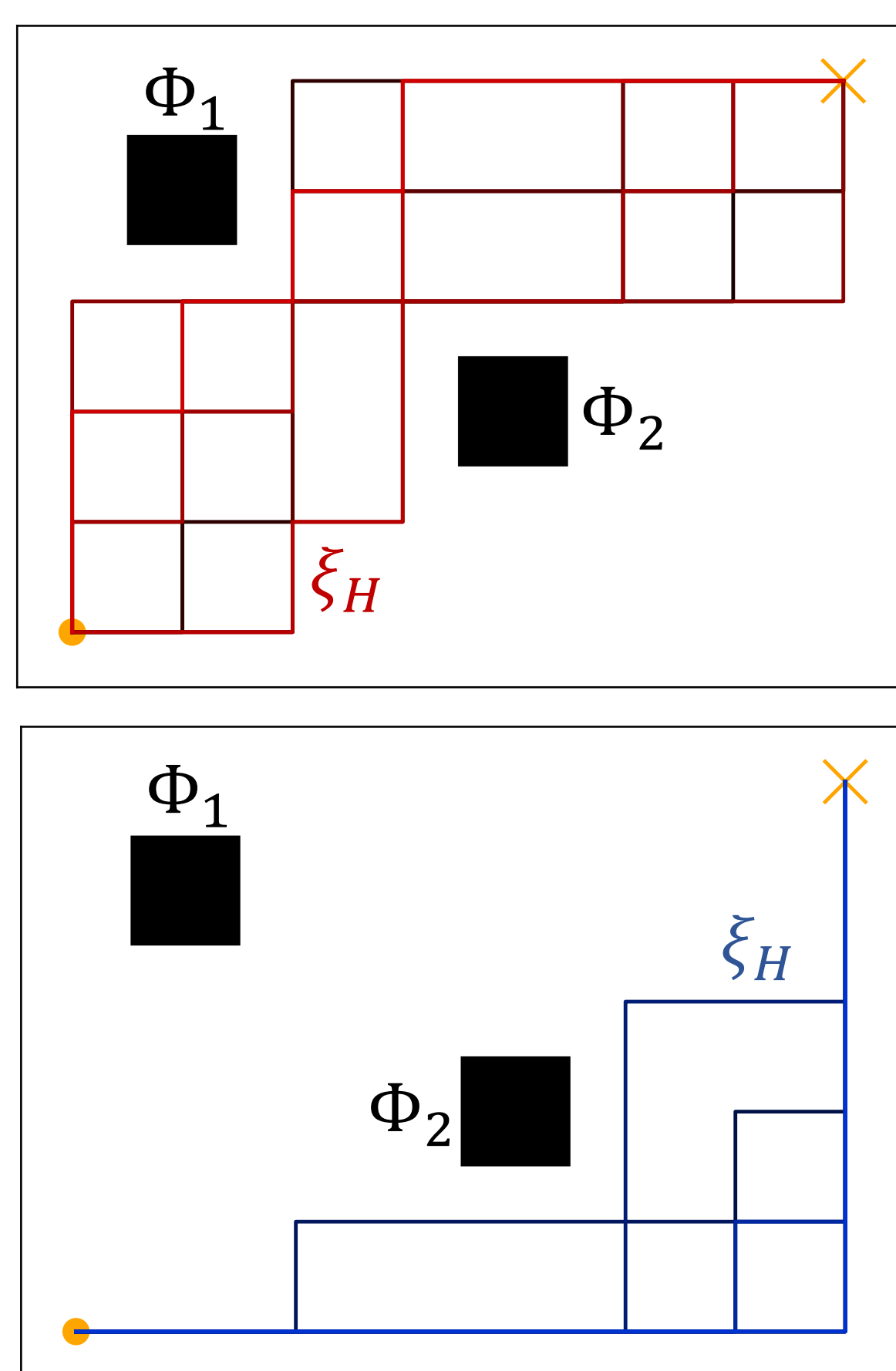
Key Insight: We need to rethink the Boltzmann model and account for how **similarity** in trajectories should influence their probability.

LESS for Robot Inference



When human input is generated using LESS, inference quality is significantly higher with LESS than with Boltzmann, and vice versa.

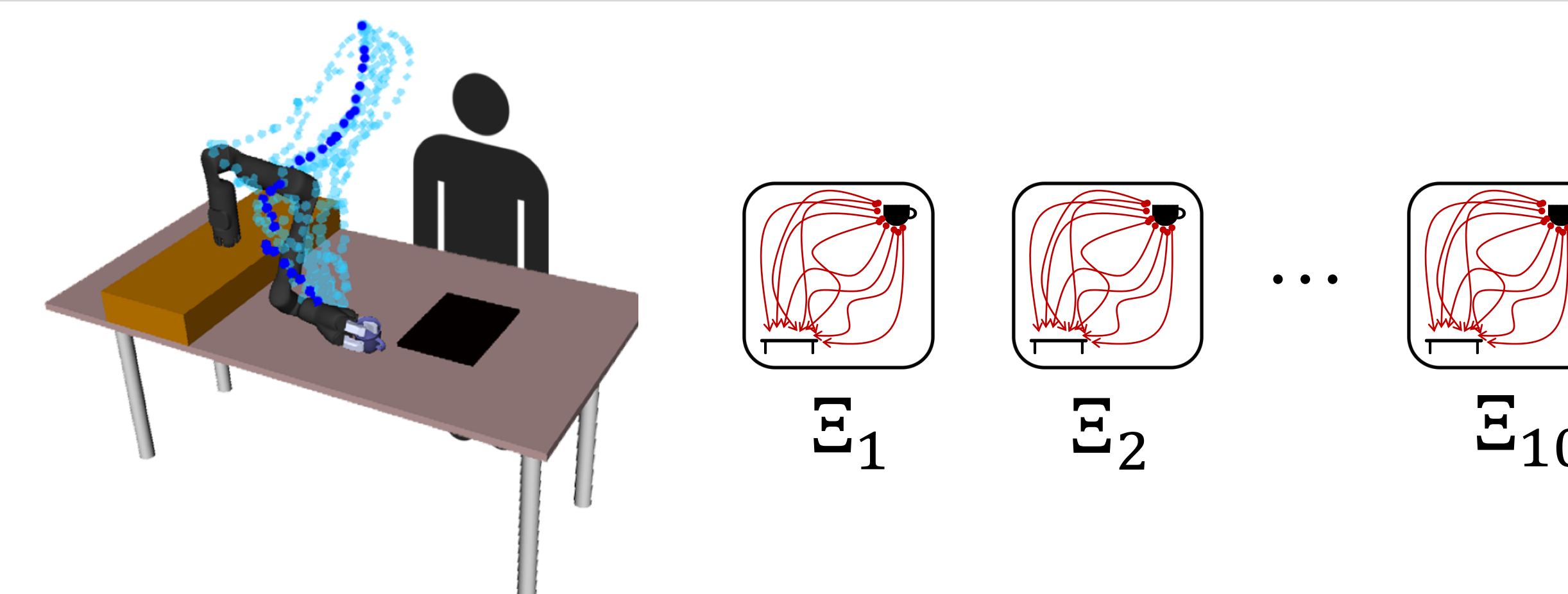
LESS: Limiting Errors due to Similar Selections



$$\text{Boltzmann: } P(\xi) \propto e^{R(\phi(\xi))}$$

$$\text{LESS: } P(\xi) \propto \frac{e^{R(\phi(\xi))}}{\int_{\Xi} s(\phi(\xi), \phi(\bar{\xi})) d\bar{\xi}}$$

Similarity Metric



Performing inference with LESS results in higher robustness than inference with Boltzmann.

