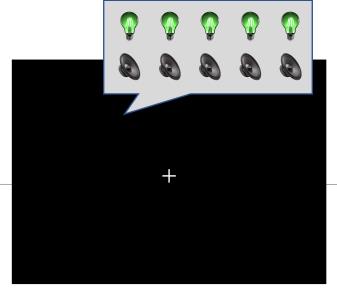
Interoception: Method of Constant Stimuli (MCS) Task

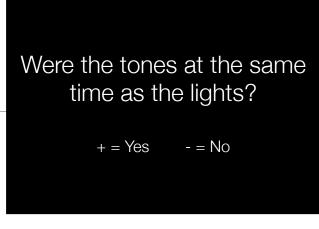
Brener, Liu, & Ring (1993)

- Determine whether 2 stimuli are simultaneous
- 5 stimuli pairs per trial to form judgement on simultaneity
 - Stimuli pairs presented simultaneously (0 ms delay) or at 1 of 5 delays:
 100 ms, 200 ms, 300 ms, 400 ms, 500 ms
- Allows for individual differences in the delay that participants perceive as simultaneous with their perception of their heartbeat

Light-Tone Trials



5 light flashes, each followed by a tone at same delay from light



5 s for response

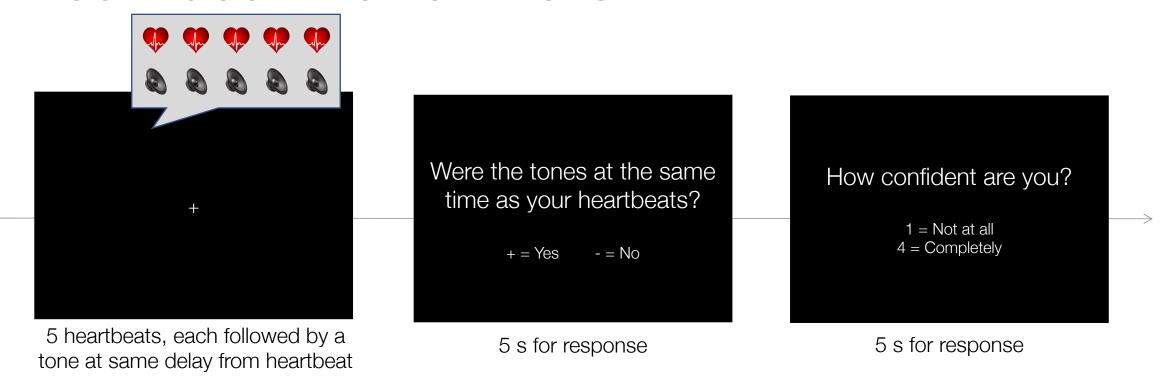


5 s for response

30 trials
Orient participants to task

Metacognitive Awareness = Confidence-Accuracy correspondence (*r*)

Heartbeat-Tone Trials

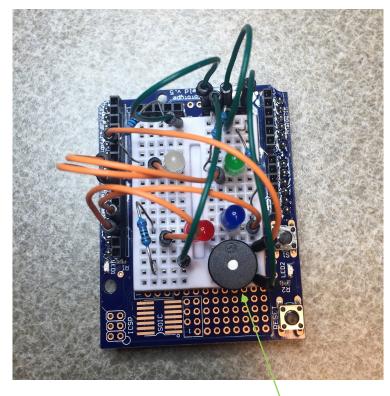


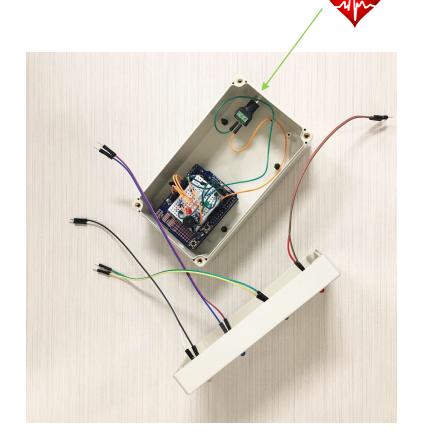
60 trials

Interoceptive Accuracy = Degree to which the same heartbeat-to-tone delay is identified as simultaneous with heartbeats (IQR)

Hardware

https://arduino.cc

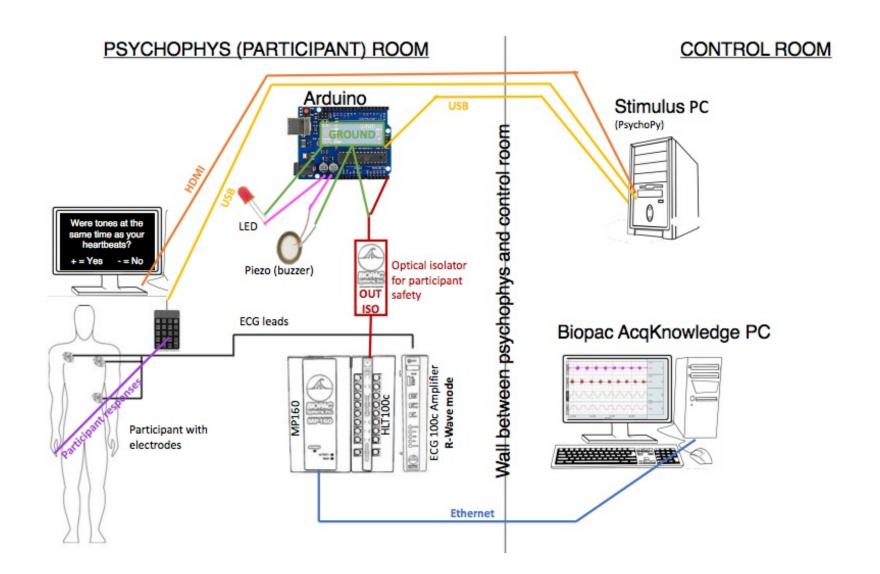








Hardware wiring



Measures

For more detail see Sommerfeldt, S. L. (2023). Subjective Experience-Physiology Coherence (Order No. 30248019). Available from Dissertations & Theses @ CIC Institutions: Dissertations & Theses @ University of Wisconsin at Madison; ProQuest Dissertations & Theses Global. (2771052475).





• Interoceptive Accuracy: Consistency of same delay identified as simultaneous





- Interoceptive Insight: Confidence-Accuracy correspondence
 - Requires high enough accuracy to compute (no universal accurate for heartbeat-tone trials)





Metacognitive Insight: Confidence-Accuracy correspondence on lighttone trials