

## PARTICIPANT DEBRIEFING FORM

**STUDY TITLE:** The effects of physical and observational learning on sequence recall

**PURPOSE AND BACKGROUND:** Thank you for taking part in this study. Your participation will allow us to take a closer look at the neural regions that are involved with observational and physical learning.

Our previous work has demonstrated that when people learn by physical practice compared to observation, there is considerable overlap in the neural regions that are activated in response to both kinds of learning (e.g., Cross et al., 2009). However, we suspect that there are distinct patterns in neural activation in related brain areas that distinguish observationally and physically learned movements, and we aim to look into these in more detail using sophisticated brain imaging approaches (see Oosterhof, Wiggett and Cross, 2014). The training procedures you have completed will enable us to refine our experimental procedures to more closely compare and contrast how our brains and behavior are impacted by these different kinds of learning.

**FURTHER INFORMATION:** Should you wish to be sent a summary of the research results when data analyses are complete, please tell the experiment.

If you have questions about how or why this research was conducted or would like more information about the neuroscience of physical and observational learning in general, please contact Dilini Sumanapala ([psp2b7@bangor.ac.uk](mailto:psp2b7@bangor.ac.uk)).

### REFERENCES:

Cross, E. S., Kraemer, D. J. M., Hamilton, A. F. D. C., Kelley, W. M., & Grafton, S. T. (2009). Sensitivity of the action observation network to physical and observational learning. *Cerebral Cortex*, 19(2), 315-326.

Oosterhof, N. N., Wiggett, A. J. & Cross, E. S. (2014). Testing key predictions of the associative account of mirror neurons in humans using multivariate pattern analysis. *Behavioural & Brain Sciences*, 37(2), 213-15.

**THANK YOU FOR PARTICIPATING!**