



## DEBRIEFING FORM

Project Title: Action-Response Study

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Faculty Supervisors: Dr. Dana Hayward & Dr. Anthony Singhal

Thank you for participating in our study. Your time and commitment to psychological research at the University of Alberta is greatly appreciated. The goal of this study was to determine how “in-control” someone feels when performing an action. Usually, when someone feels as though their specific action (pressing a button) results in a response (i.e. tone or light), the amount of time between the action and response is underestimated. This is called the “intentional binding effect”. Most of the current research on this effect is conducted in a controlled setting such as a laboratory using a tone. We would like to determine if this can be done equally well with a visual stimulus (i.e. shape) on a computer at home.

In this study, we asked you to judge how long the time delay was with two different stimuli (visual and auditory). This was measured using three different time delays. We expect to find a stronger intentional binding effect (an underestimation) for shorter time delays. We also expect to find similar effects for both the visual and auditory stimuli. In addition, we asked you explicit questions regarding how “in-control” you felt using a “Sense of Agency” scale. This was to help us connect your implicit feeling of being in control with explicit feelings of control.

If you have any further questions about this research, please do not hesitate to contact the PI, Ruby Prinsen, at [ruby.prinsen@ualberta.ca](mailto:ruby.prinsen@ualberta.ca). If you would like to withdraw your data from the study after testing is completed, you may do so at any time up until 30 days after your testing session was completed. This can be done by contacting the PI. Note that if you choose to do this, you can keep any compensation you receive. If you have any questions about research participation, contact our Research Participation Coordinator at (780) 492-5689, or [rescred@ualberta.ca](mailto:rescred@ualberta.ca).

For further reading on similar experiments you may want to consult these article:

Haggard, P., Clark, S., & Kalogeras, J. (2002). Voluntary action and conscious awareness. *Nature*, 5(4), 382-385. DOI: 10.1038/nm827.

Ruess, M., Thomaschke, R., & Kiesel, A. (2018). Intentional binding of visual effects. *Attention, Perception, & Psychophysics*, 80:713-722. DOI: <https://doi.org/10.3758/s13414-017-1479-2>

Thank you very much for participating. Without the help of volunteers like you, we could not answer many important scientific questions in psychology. We have one last request: **Please don't tell other people about what we asked you to do in this study, as it is very imperative that they approach the study as you originally did, i.e., without expectations and without**



**full awareness of our objectives.** This is important because it is the only way for us to obtain objective and valid information.

Thank you,  
Ruby Prinsen  
Doctoral student