The neural mechanisms of conformity: How much do we trust others?

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Introduction: We tend to adjust our opinions based on those around us. If a large group of people suggests something, we tend to follow their views, even if our initial thoughts are different (Franzen & Mader, 2023). This is known as conformity and relates to a variety of cognitive biases, such as the in-group, out-group bias, and the bystander effect. While the behavioral effects have been studied for decades, less is known about the brain mechanisms involved in conformity. Some work has investigated brain activity using electroencephalography (EEG) during conformity (Shestakova et al., 2013). It was shown that larger brain responses in the EEG relate to a bigger dissonance between your own opinion and that of the group.

Besides conforming to groups, we also tend to conform to so-called experts, even if their knowledge on the topic is limited (Wischnewski et al., 2024). Here, we found that people will generally overestimate advice from others. Also, in the presence of highly accurate expert advice, other helpful advice will be ignored. Larger brain responses were observed for trials in which participants deemed the advice to be more helpful.

Despite these initial results, the exact way in which brain activity <u>predicts</u> whether someone will conform, or not, is currently not well-understood. ***The goal of this project is to identify under which situations a person will conform to the opinion of a group/expert. We will investigate factors such as group size and how much dissonance there is between opinions.***

What to expect: In this internship, you will learn all aspects of human behavioral experiments. That involves setting up the experiment, collecting data, and analysis. Dr. Miles Wischnewski will provide guidance and supervision. The primary methodology, besides the behavioral experiment, will be EEG. As such, some basic interest in neuroscience/neurophysiology would be required. If the experiment is successful, the goal is to prepare a research article for publication. Note: there is no financial compensation for this internship.

What you will learn:
- Design an experiment
- Program a task in Matlab (Psychtoolbox) or Python (PsychoPy/OpenSesame) (prior knowledge is helpful, but not required).
- Perform EEG experiments
- Analyse EEG data using Matlab (FieldTrip) (prior knowledge is helpful, but not required).
- Write a scientific article

Location: The internship and the study will occur at the University of Groningen in the Netherlands. Groningen is a beautiful small city in the north of the Netherlands with a lot of history. There is a lot of rain, so be prepared for that. The experiments will take place at the Department of Experimental Psychology, which is part of the Faculty of Behavioral and Social Sciences. Note, in the Netherlands nobody speaks French, so a decent level of English is required!

References:
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Wischnewski, M., Hörberg, M. O. Y., & Schutter, D. J. L. G. (2024). Electrophysiological correlates of (mis)judging social information. Psychophysiology, 61(8), e14590. https://doi.org/10.1111/psyp.14590