

**Leverhulme Trust**

Research Grant: Learning to perceive and act under uncertainty

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**Abstract**

How do we learn to perceive and act in noisy, uncertain natural environments? Recent research suggests key computational principles used by the human brain to overcome uncertainty. However, we do not yet understand how it learns to implement these. This project will be the first to study learning itself, (i) training adults and children to perceive and act in novel environments, and (ii) comparing behaviour with the predictions of newly-developed mathematical models. The work will provide a new understanding of the organisation of human learning and behaviour, and has vital future applications, ranging from disorders (e.g. autism) to artificial intelligence.