

## ABSTRACT

Cognitive and Affective Control Deficits in Adults with Autism Spectrum Disorder

by

Melissa-Ann Mackie, M.S., M.Phil.

Advisor: Jin Fan, Ph.D.

Cognitive control constrains mental operations to prioritize information that reaches conscious awareness and is essential to flexible, adaptive behavior under conditions of uncertainty. However, cognitive control can be compromised by neurodevelopmental disorders such as autism spectrum disorder (ASD), which is characterized by the presence of social and communicative deficits, and restricted interests/repetitive behaviors. Although prior investigations have attempted to elucidate the nature of cognitive control deficits in ASD, whether there is an underlying cognitive control deficit associated with the symptom domains of ASD remains unclear. The present series of eight experiments presents an information theoretic framework for the study of cognitive control in high-functioning adults with ASD, and aims to investigate deficits in control of information processing under conditions of uncertainty for cognitive and affective information, and the relation of these deficits to ASD symptoms, to better understand the nature of symptoms and cognitive deficits in ASD.