**INCLUSION OF INDIVIDUALS ACROSS THE LIFESPAN**

Participants in the proposed study will span ages 13 to 20 years, representing adolescence and early adulthood. However, it must be noted that data from twenty-six adult participants (mean age = 24.7 yrs; range = 20 – 44) has been collected and collection of adult participants of any age will continue independent of the proposed project. Focusing our recruitment efforts on participants between the ages of 13 and 20 will mirror similar studies which examine social cognition and response to ambiguity among adolescents. Adolescence represents a unique period in social sensitivity, making it an ideal developmental stage at which to examine how individuals assess social ambiguity. Furthermore, because of the dramatic, rapid maturation in social cognition that characterizes adolescence, high resolution and sufficient power within this stage specifically are of the utmost importance.

Though resolving uncertainty may be a question of interest throughout the lifespan, participants younger than 13 years old may struggle to comprehend task objectives as they currently stand. If our study is successful, I would aim to capture ambiguity-related processing among younger participants using age-appropriate paradigms in future studies to fully illustrate the developmental trajectory of how individuals use and analyze information to generate certainty.

Later, during the post-doctoral portion of this grant, I hope to study self-regulation of ambiguity-related aversion at early ages to determine whether interventions could be more effective at earlier ages. The application of computational methods to understand mechanisms in social affective developmental neuroscience is still fairly nascent, but promising and growing rapidly. The results of the studies proposed in this grant may provide a scaffolding for future work, providing not only theoretical contributions to the questions of how individuals manage the aversive responses uncertainty provide them, but also tools for other researchers interested in applying naturalistic and computational approaches towards social affective developmental neuroscience.

Age will be used as a factor in all regression analyses. This will allow us to understand the behavioral and neural variance due to age, allowing us to make informed decisions when we include young children and older adults in future studies.

Staff in both the Social and Affective Neuroscience (SAN) and the Control & Adaptive Behavior (CAB) labs have extensive experience recruiting and conducting research with participants in these age ranges. All staff working on developmental neuroimaging projects undergo extensive training to develop the skills necessary to ethically conduct neuroimaging research with adolescents, with a strong focus towards consent, assent, and debriefing considerations. The study will pose no more than minimal risk to the participants. As is standard, both child and parent will need to assent and consent, respectively, to participate. If either party does not provide such, that potential participant will not be enrolled within the study.