Sensory Integration of Auditory and Visual Cues in Diverse Contexts
Statistical Analysis Plan
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For each of measure of interest and for each environment (stars, subway), we will fit a linear mixed effects model. Each model will include main effects of group, visual condition, and auditory condition, as well as all two and three-way interactions. The models will also control for age. For aim 1, we will assess the significance of contrasts between no sounds / dynamic sounds for the different visual conditions and groups. For aim 2, the same will be done for contrasts between no sounds / static sounds. These models estimate the difference in visual weighting and reweighting between the groups, maximizing the information we can obtain from the data by accounting for the inherent multi-level study design (person, conditions, repetitions). Since each person completes various trials for each condition, the linear mixed effects model accounts for these sources of variability.[81] *P*-values for the fixed effects will be calculated using the Satterthwaite approximation for the degrees of freedom for the T-distribution[82].