## The development of intelligence, working memory and processing speed during childhood

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Previous research has identified relationships between Intelligence, Working Memory and Processing Speed in adults. Developmental researchers have suggested there may be similar correlations between Intelligence, Working Memory and Processing Speed in children. However, the nature of the relationships among these constructs during childhood development is not clear. The aim of the current project is to identify whether these abilities develop in tandem and whether they improve in a consistent or in an up/down pattern. Using a longitudinal sequential design, children's performance on Intelligence, Working Memory, and Processing Speed tasks is measured three times across one year. Measures of physical growth are also taken at each session. First session data from 161 children aged between 6 and 12 years will be presented, including the pattern of relationships among the focal constructs (Intelligence, Working Memory and Processing Speed) and their interaction with age and physical growth. Parent's ratings of children's extracurricular activities (e.g., participation in sport, private tutoring), obtained prior to the first testing session, show some interesting relationships with the focal constructs. For example, significant differences between children who attended daycare and those who did not were observed for measures of fluid intelligence. Possible reasons for these findings will be considered.

## Facial dysmorphism and perceived similarity between faces

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Certain genetic disorders are associated with characteristic facial dysmorphisms that can play a role in diagnosis. Three experiments investigated whether three-dimensional models of syndrome faces are naturally grouped together on the basis of perceived similarity, whether provision of a target archetype affects grouping, and whether perceived similarity can be linked to measured physical differences. Observers sorted three-dimensional facial scans of affected and unaffected individuals on the basis of perceived similarity. In Experiment 1 sorting was found to be a function of view, with three-quarter views most likely to be sorted according to syndrome. William's Syndrome (WS) and Achondroplasia (ACPL) were more likely to be grouped together than Sotos Syndrome (SS) or unaffected faces (UA). Experiment 2 presented animations of rotating faces and tested the effect of providing an archetype or average as a target for each group. Only adult male faces were used, limiting other possible sources of variation. Sorting performance increased overall and the provision of archetypes increased the probability of ACPL and WS faces being sorted together. A third experiment, equivalent to experiment 2 but with still faces, will also be reported and the relationship between perceived and physical similarity considered.

## "When I'm drunk, they ALL look the same to me": Does alcohol intoxication increase or decrease the magnitude of the own-race bias?

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The own-race bias (ORB) refers to the general tendency for people to be better at recognising same-race faces compared to different-race faces. The two leading theories of the ORB are the perceptual-expertise model, which argues the ORB is due to a deficit in people's processing of different-race faces and the social-categorisation model, which argues people are less motivated to accurately process different-race faces. To test which of these two models would be supported, this study investigated whether alcohol intoxication, shown to affect memory, attention, and stereotyping, would increase or decrease the magnitude of the ORB. Asian and European participants, who were randomly allocated to either the Alcohol condition (mean BAC = .051) or the Placebo condition (BAC = 0), were tested on their recognition accuracy for Asian and European faces. We then repeated this study, but this time testing Asian and European participants' memory for multiracial faces given either Asian or European names. The results and implications of these two experiments will be discussed.