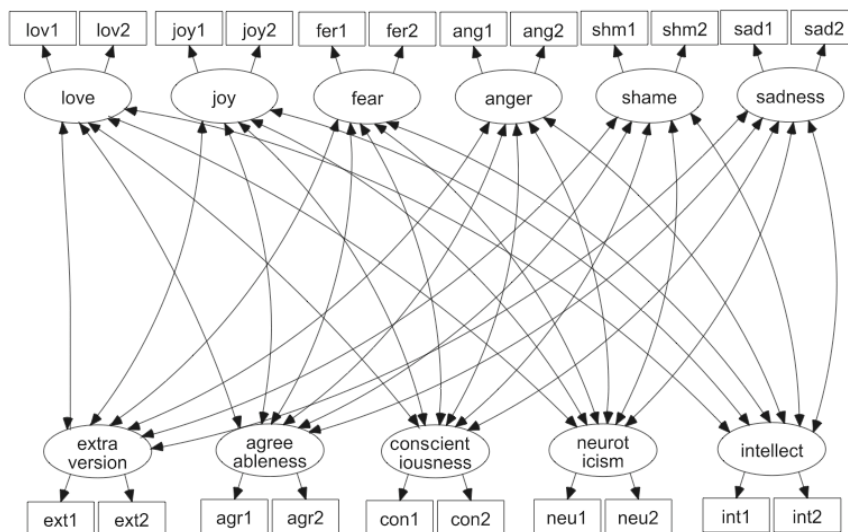


# An Open Source Structural Equation Modeling Path Diagram to Syntax Application

## Project Description

Structural equation modeling (SEM) is a statistical technique that is becoming increasingly popular in the educational and behavioral sciences. SEM allows researchers to test the validity of hypothesized models involving complex relationships among multiple variables. These models are often conceptualized visually using 'path diagrams' (variables are represented by nodes, regression parameters by edges), but many popular software applications require that the model be specified using syntax. The project involves continued development of an application that will allow users to 'draw' path diagrams and will output appropriate syntax.



To date a functional application has been developed in JAVA in a previous 4080 project. The existing software allows the user to draw a path diagram and outputs code suitable for the R package *sem*, though there remain some outstanding issues. There are a number of corrections to be made, improvements to be added to the GUI, and finally the application needs to be extended to create syntax appropriate for additional statistical software packages.

## Required Skills

NO knowledge of statistics/structural equation modeling is required! Input/output requirements will be specified for you.

JAVA and GUI development will be required.