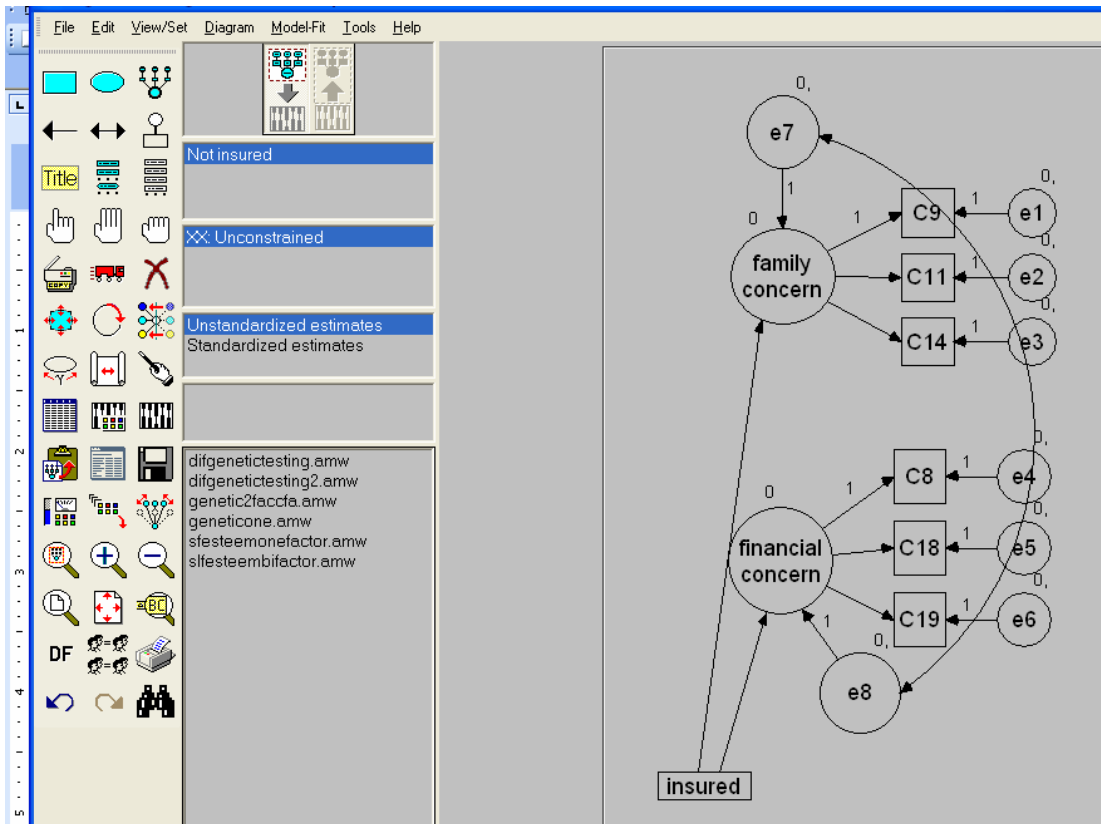


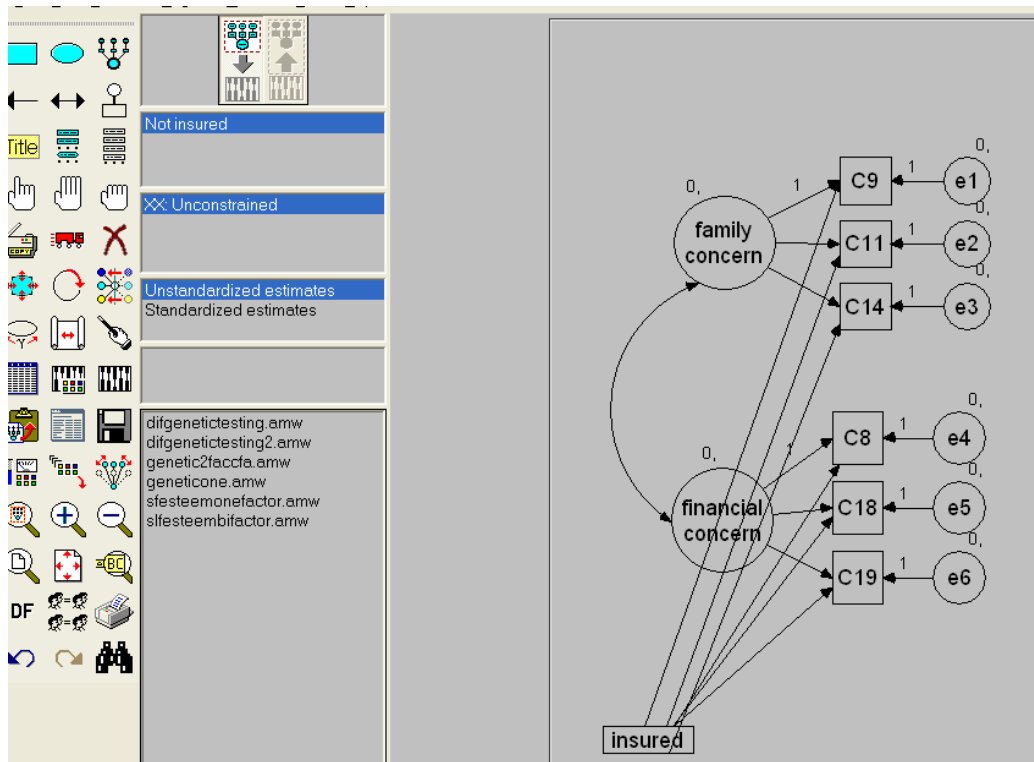
Using AMOS to examine how covariates relate to factors and how covariates may influence DIF.

To examine whether the variable “insured” is related to either of the latent factors, we can fit the following model



Notice that it was necessary to add error terms to the latent factors because now we are performing a type of regression of the latent variable on the observed covariate “insured”, i.e. $\text{family concern} = \beta_1 \cdot \text{insured} + \text{error}_7$, and $\text{financial concern} = \beta_2 \cdot \text{insured} + \text{error}_8$. Furthermore, we are including a covariance between the equation error terms e7 and e8 so that the residual correlation between family concern and financial concern is allowed to correlate after adjusting for insured status.

To test for whether there is DIF (i.e. whether any of the observed variables measure the latent variable differently in the two groups) we look at the direct path from insured to the observed variable, if it is significantly different from zero then there is DIF, if not then there is not DIF. You can do this by drawing the following model.



Note when you run this model it will say the following which is ok, just ask it to proceed. If you would try to draw a correlation between insured and then latent variables, it would let you but then it would not produce output because the model would be underidentified.

