



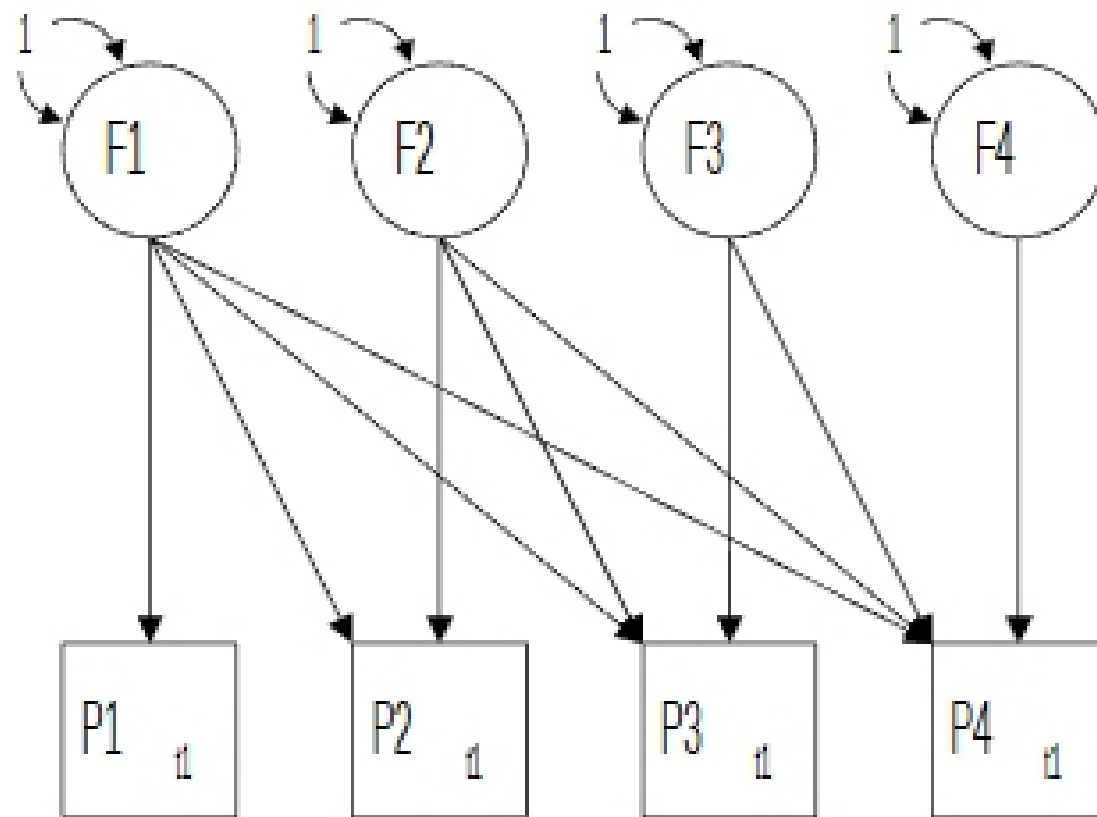
# Longitudinal Analysis

HGEN619 class 2006

# Longitudinal Questions

- **Multivariate Analysis:** What are the contributions of genetic and environmental factors to the covariance between more than two traits?
- **Longitudinal Analysis:** What are the contributions of genetic and environmental factors to the covariance between a trait measured on several occasions?

# Phenotypic Cholesky



$$\begin{array}{c} \text{P1} \\ \text{P2} \\ \text{P3} \\ \text{P4} \end{array} \begin{bmatrix} \text{F1} & \text{F2} & \text{F3} & \text{F4} \\ f_{11} & 0 & 0 & 0 \\ f_{21} & f_{22} & 0 & 0 \\ f_{31} & f_{32} & f_{33} & 0 \\ f_{41} & f_{42} & f_{43} & f_{44} \end{bmatrix}$$