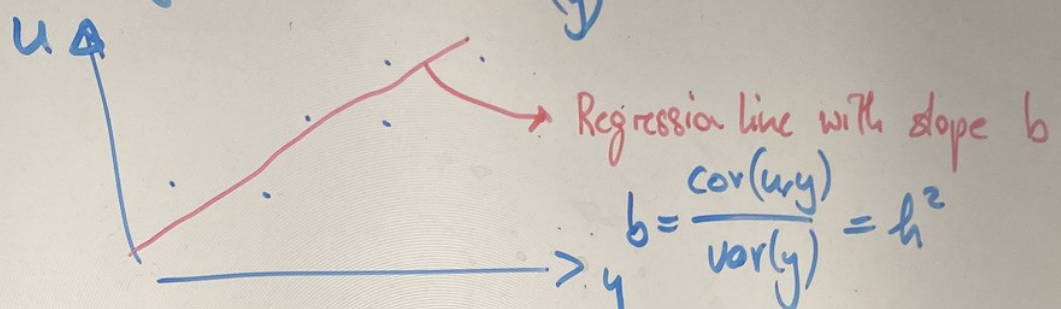# Prediction based on different sources of information

□ Own performance: Predicted breeding values based on Regression of true breeding values on phenotypic observation (y)

→ Regression line with slope b

$$b = \frac{cov(u,y)}{var(y)} = h^2$$

For animal i, $\hat{u}_i = h^2(y_i - \bar{y})$

□ Repeated observations of the same trait
  Regression of u on $\tilde{y}$

□ Offspring performance: Prediction of breeding value for animal i based on performance of offsprings of i

□ All available information used in prediction of breeding values ⇒ BLUP → sire model
                                                                    → animal model