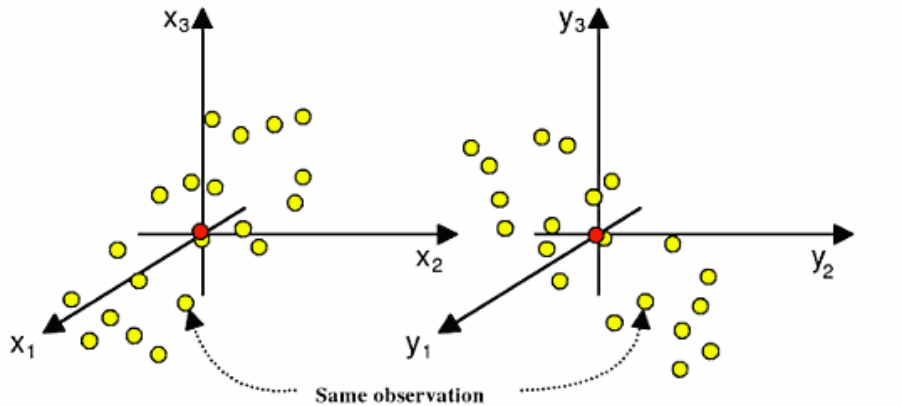
PLSR = partial least squares regression

OR projection to latent structures

Data has values in both X and Y spaces for each observation



Find PCs for both matrices (while emphasizing the parts of **X** that correlate with **Y**) – will use NIPALs algorithm to construct the principal components.

$$\mathbf{X} = \mathbf{T}\mathbf{P}^t + \mathbf{E}$$

$$\mathbf{Y} = \mathbf{U}\mathbf{Q}^t + \mathbf{F}$$

scores loadings residuals

Eriksson, et al. Multi- and Megavariate Data Analysis 2006