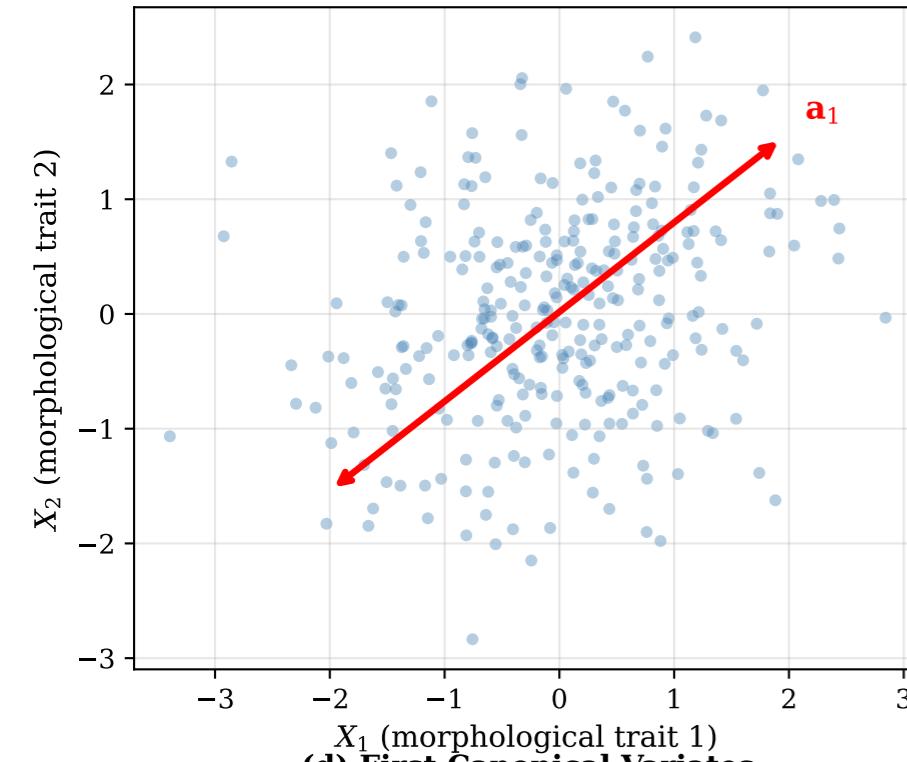


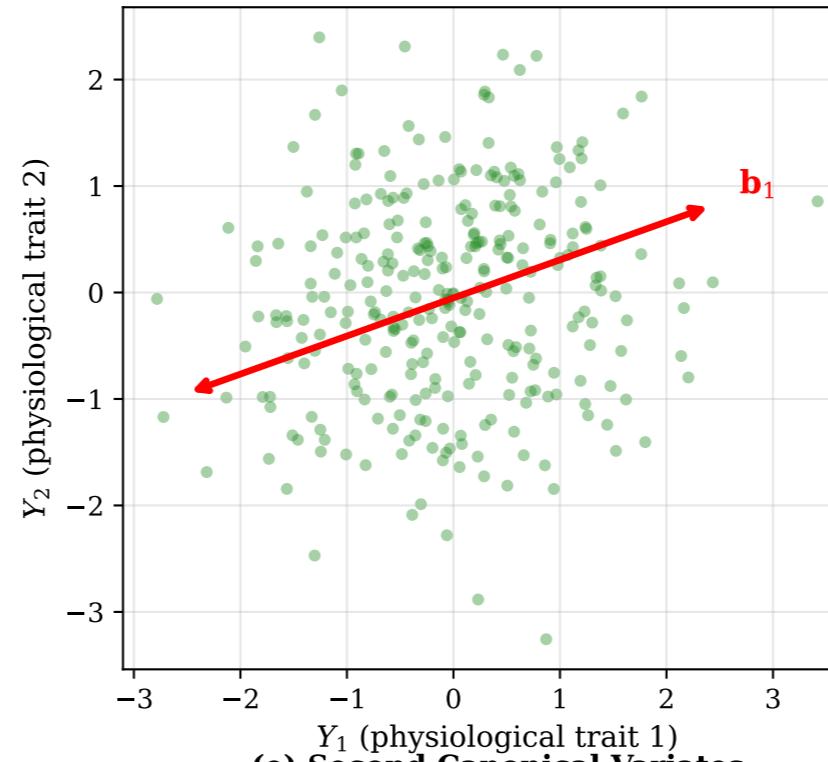
Canonical Correlation Analysis: Finding Maximally Correlated Linear Combinations

CCA finds directions \mathbf{a}_i in X-space and \mathbf{b}_i in Y-space such that their projections are maximally correlated.

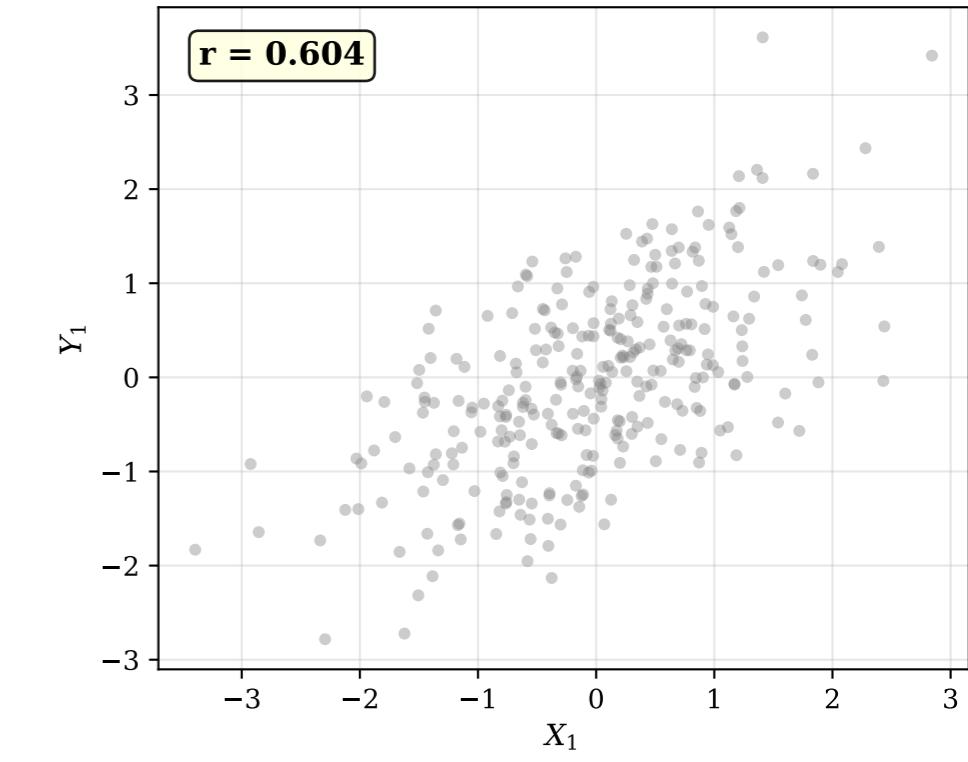
**(a) X Variables
with First Canonical Direction**



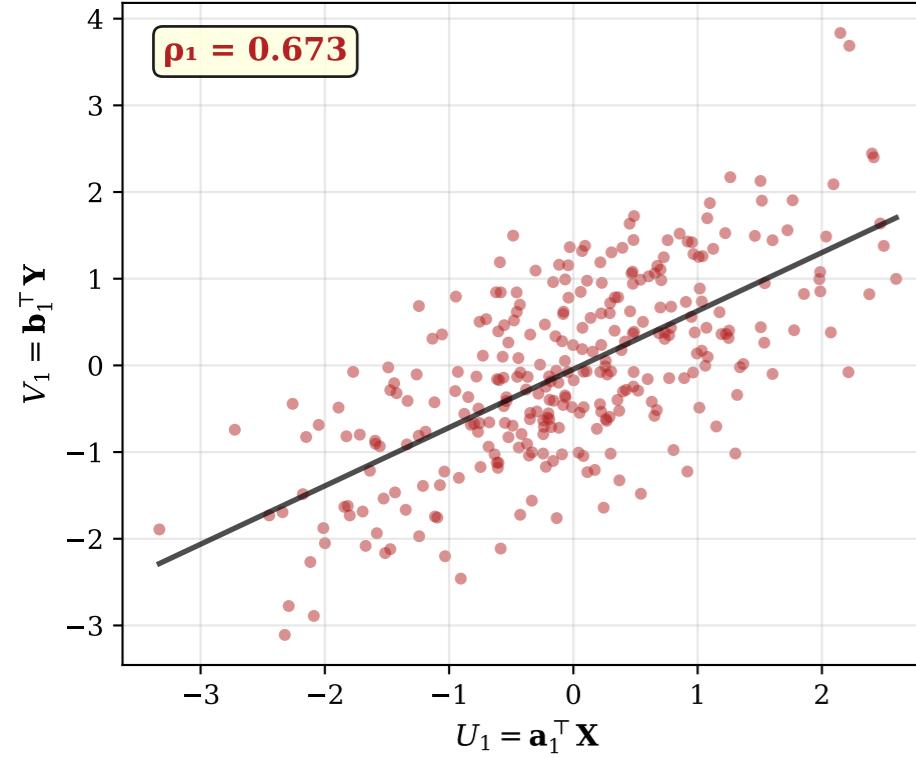
**(b) Y Variables
with First Canonical Direction**



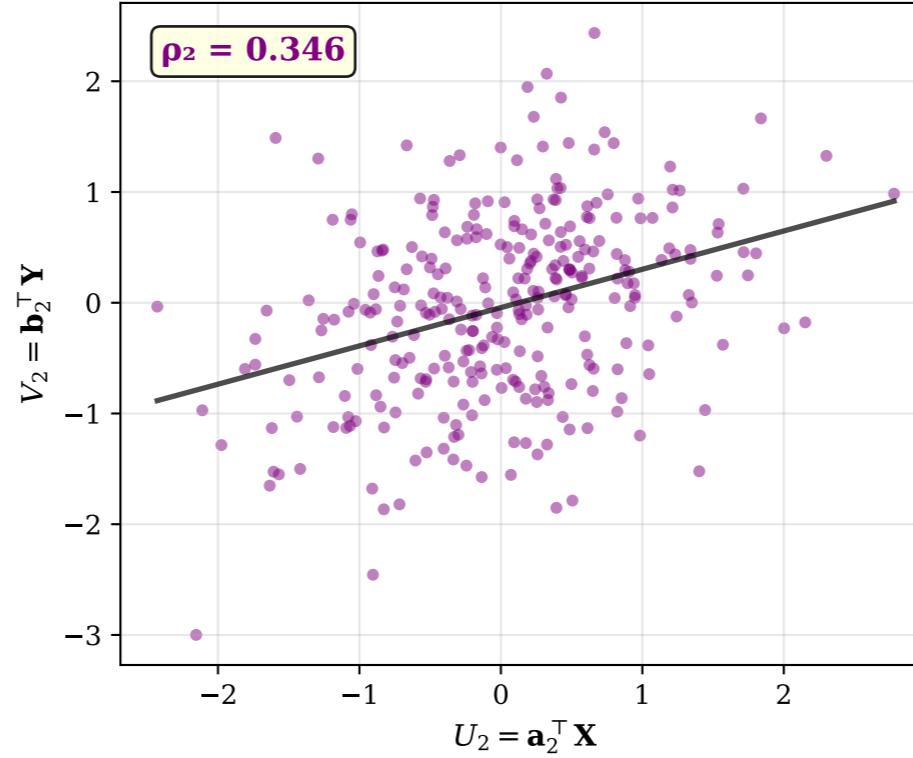
**(c) Original Variables
 X_1 vs Y_1 (arbitrary pairing)**



**(d) First Canonical Variates
Maximum Correlation Achieved**



**(e) Second Canonical Variates
Residual Correlation**



(f) CCA Schematic

