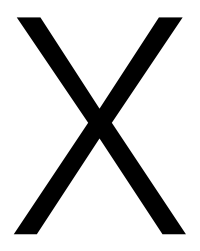
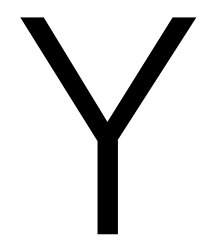
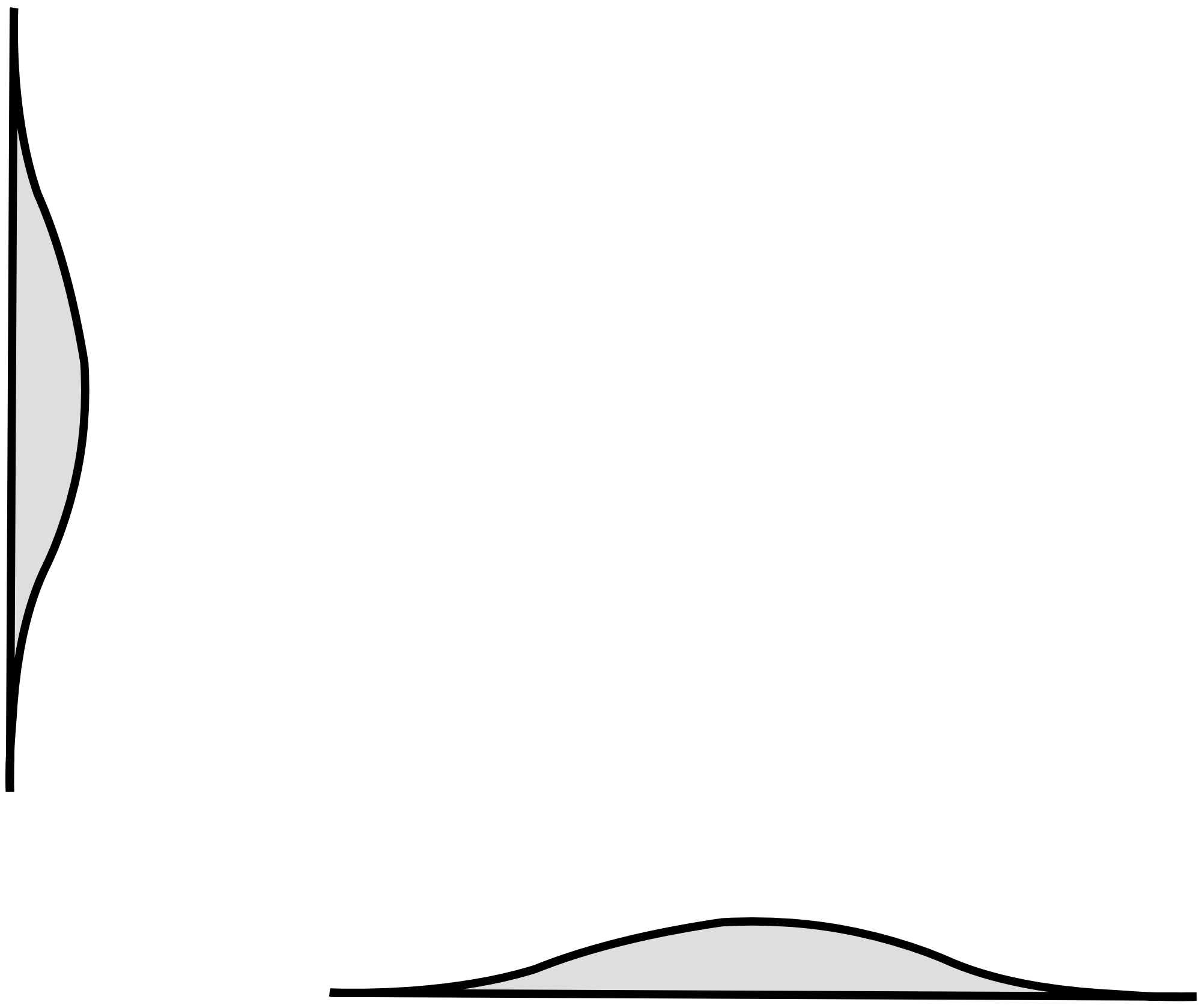
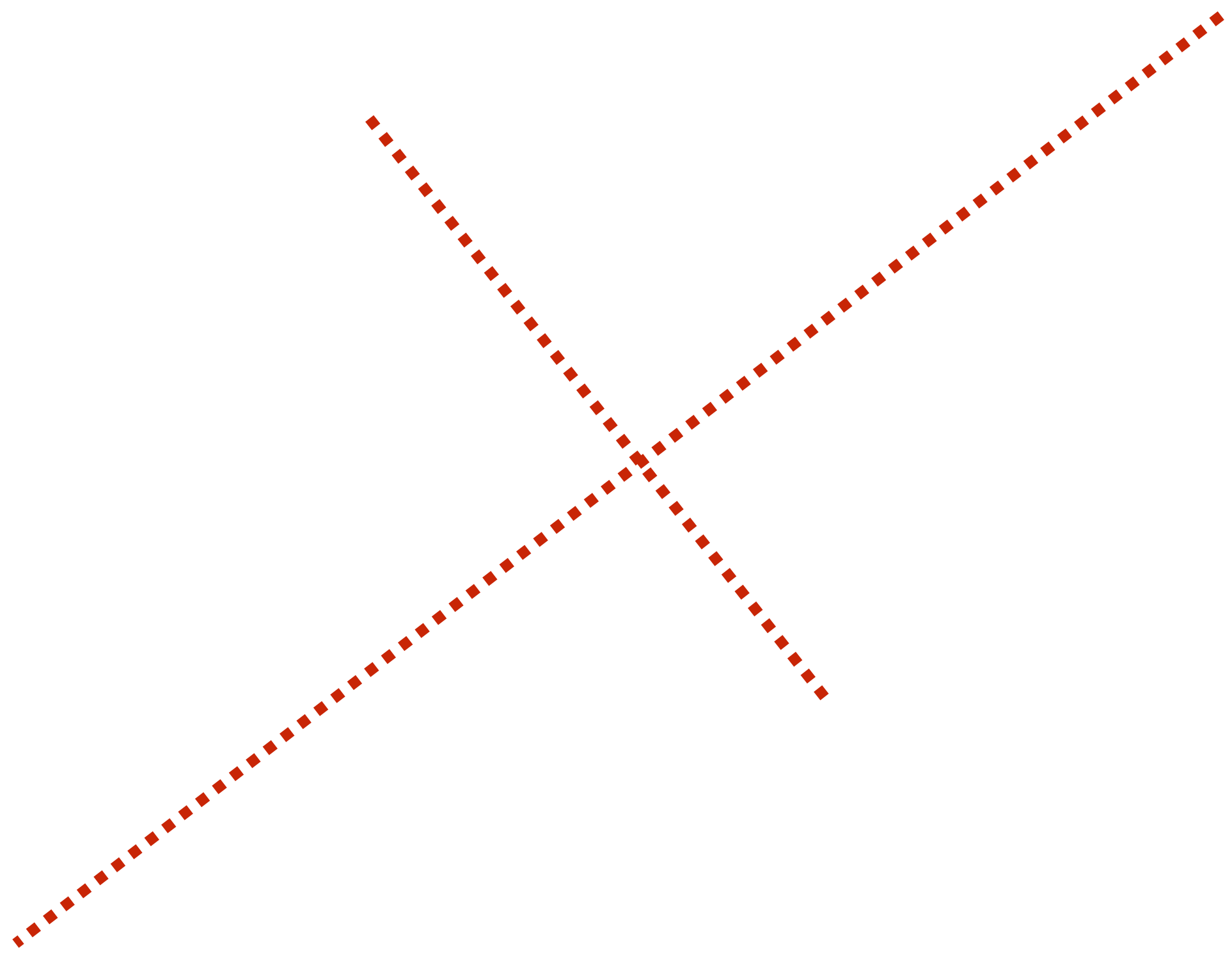
PCA & PCoA

Principal components (and coordinates) analyses.







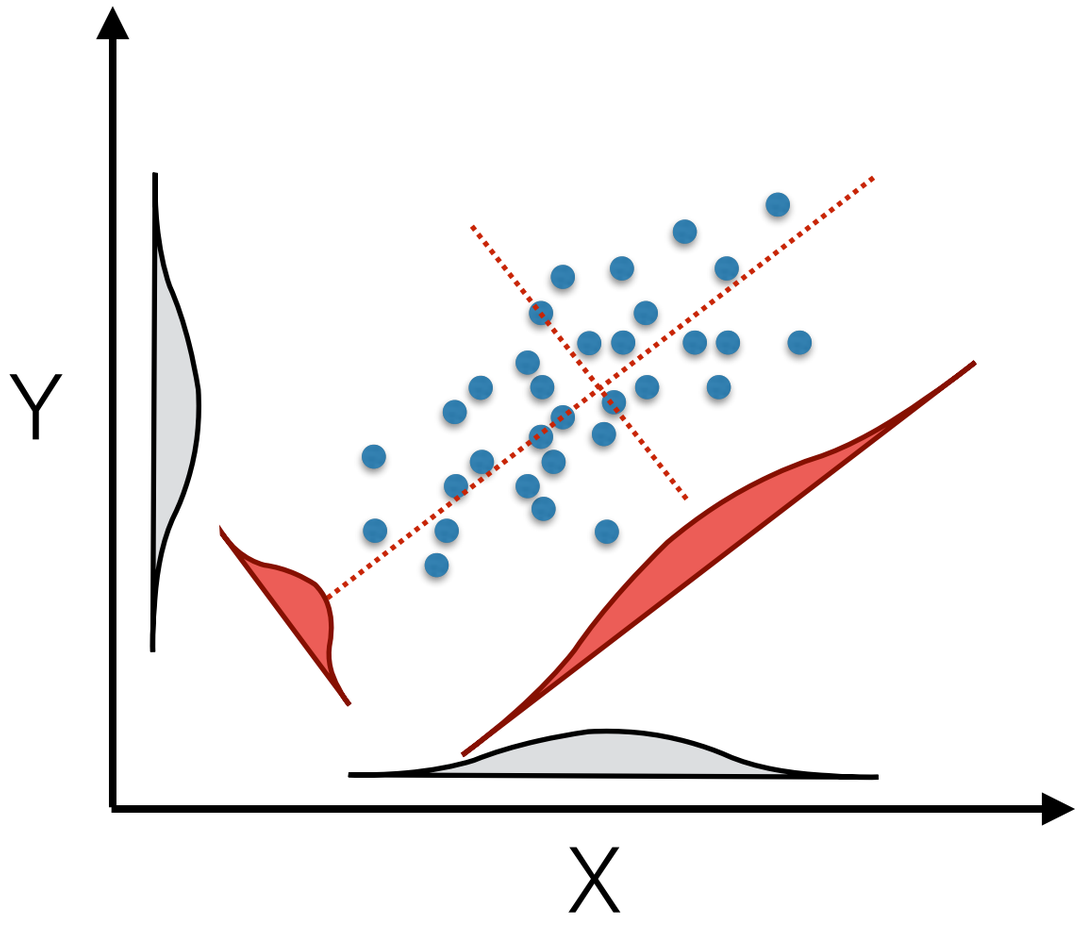


- *PCA:* Raw Data

- *PCoA:* Genetic Distance Data

PCA & PCoA

Principal components (and coordinates) analyses.



- *PCA:* Raw Data
- *PCoA:* Genetic Distance Data

Creating Orthogonal Data

- The frequencies of alleles at a particular locus are not independent, in that they must sum to 1.0.

- The genetic distances between groups, while maybe not a ‘metric’ (*sensu stricto*) are not independent due to the triangle inequality.

- Eigen transforms of the data (raw or pairwise distances) produce linear combinations of the original data (with no loss of information) by projecting onto new axes.