

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.

PCA

PC rotation of scaled stratum-level multi locus allele frequencies, stratifying stratum.

