**tourr; visualizing higher dimensions vs alternatives**

Visualizing in higher (greater than p=3 numeric dimensions) can be messy and unintuitive. Here we explain the methodology and explore the functionality of tourr. We offer a vignette for use and contrast with other higher dimensional visualization methods.

The R package, tourr (2011, Wickham, H., D. Cook), gives us the means to animate the projection as we rotate though p-dimensions. This is achieved by varying the contributions from each dimension, via random walk, predefined path, or optimizing an index.

Wickham, H., D. Cook, and H. Hofmann (2015). Visualising statistical models: Removing the blindfold (withdiscussion). Statistical Analysis and Data Mining 8(4), 203–225.

Wickham, H., D. Cook, H. Hofmann, and A. Buja (2011). tourr: An r package for exploring multivariate data withprojections. Journal of Statistical Software 40(2), http://www.jstatsoft.org/v40.

Asimov D (1985). “The Grand Tour: A Tool for Viewing Multidimensional Data.” SIAM

Journal of Scientific and Statistical Computing, 6(1), 128–143.