Visualizing Employment By Law School, Part IV

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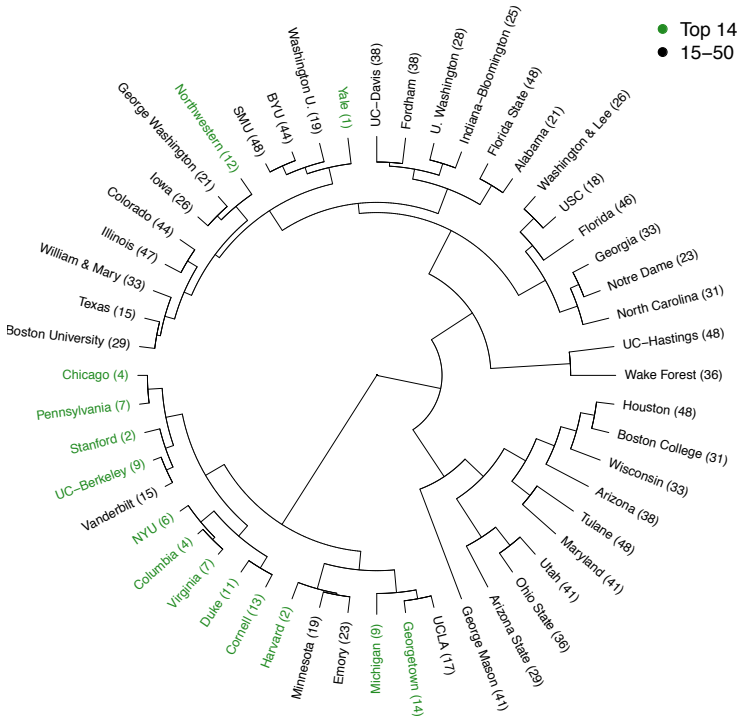
In a series of previous posts, we discussed ways of visualizing law school employment outcomes. While the focus of those posts was on schools' employment fractions in seven ABA-defined categories, it can also be useful to combine the information in those categories to compare schools directly.

One way to do that is to consider the *similarity* of schools' employment profiles. One straightforward way to do this is to calculate a *distance metric* for all pairs of schools, where distance is defined according to the differences in the proportions of schools' graduates employed in each of the seven categories. For example, we can calculate the *Euclidean distance* between school X and school Y as:

$$D_{XY} = \left[\sum_{i=1}^{7}(X_i - Y_i)^2\right]^{1/2}$$

On this metric, two schools whose employment profiles were identical would have a distance between them of zero. The more different two schools' profiles are, the greater the distance between them.

For N schools, there are $\frac{N(N-1)}{2}$ unique distances. A common way of visualizing such distances is to *cluster* the observations by distance, grouping the ones closest to each other into pairs, then trios, etc. A common way of visualizing such clustering is a cladogram, which places similar observations close to each other, and connects the resulting "clusters" with lines.



The figure above is a circular cladogram of the "top 50" schools in the U.S. News rankings, clustered by the similarity of their employment outcomes. Schools in green are the "Top 14," while those in black are ranked #15-50; labels indicate the school's ranking. Schools which are "connected" near the outer ring of the circle (such as Columbia and Virginia, or BYU and SMU) are "close" to one another; that is, they have employment profiles that look very similar.

The plot reveals a number of interesting patterns. At the very broadest level, we observe two "super clusters," one (on the lower left of the plot, from the University of Chicago to UCLA) that encompasses 12 of the historical "Top 14" schools, along with four schools (Vanderbilt, Minnesota, Emory ad UCLA) from the next tier, and the other comprised of several relatively large sub-clusters of schools. In terms of its overall employment profile, we find Yale most similar to Washington University, BYU, and SMU, while Northwestern clusters with GWU and Iowa.

George Mason is a notable "singleton," in that it is quite dissimilar to any other school in the top 50; a quick peek at the data suggests that this is due to its large proportion of graduates in "JD advantaged" jobs (34.1 percent, more than six percentage points higher than the next-highest school in that category, Arizona State). The pair of UC-Hastings and Wake Forest are also notably unique; these two schools had the highest percentage of graduates unemployed and seeking employment among the top 50 schools.

A similar plot for all 195 schools in the 2014 U.S. News rankings is here, with labels color-coded by tier. Because of the way the clustering algorithm works, that plot is somewhat different from the one seen here, but many of the insights it reveals are similar.