Visualizing Scholarly Influence Over Time

This visualization tool shows the influence a researcher has had both within his or her own field and across other fields, illustrating a local view of a scholar's network of influence and telling the story of how this influence has developed over time. The author of interest is represented as the central node in a network, and other papers that have cited papers written by this author are shown as circular nodes surrounding the central one. The animation starts early in the researcher's career, and progresses forward in time. As new papers appear, they send out links representing citations, both to the central node and to other nodes that appear in this network.

A note on comparing authors: Scales are relative to each author, so the size of the nodes and the y-axes on the timelines are not consistent between authors. For this reason, direct comparison between different authors is not recommended. However, comparing the relative densities of the graphs can reveal information about the types of communities represented:

Future directions:
- Explore new ways of comparing and adding context. One method is comparing the Pew scholars to the alternates, those who were considered but ultimately not selected (see figure for a preliminary analysis).
- Integrate audio interviews to add richness to the narrative.
- Automating annotation and narration by detecting changes in the network.

How can we assess the impact of research?

The Pew Scholars Program in the Biomedical Sciences provides four years of early-career funding to young researchers in health-related fields. This subset of scholars provides a useful case study for exploring narrative visualizations of scholarly influence, although the methods are generalizable to all scholars. The program is highly selective, and its scholars tend to have a great deal of impact in the biomedical sciences. Using this subset of scholars also gives us the opportunity to explore the overall impact of the Pew program, developing visual and quantitative techniques that will address the larger question of how to define and assess scholarly impact.