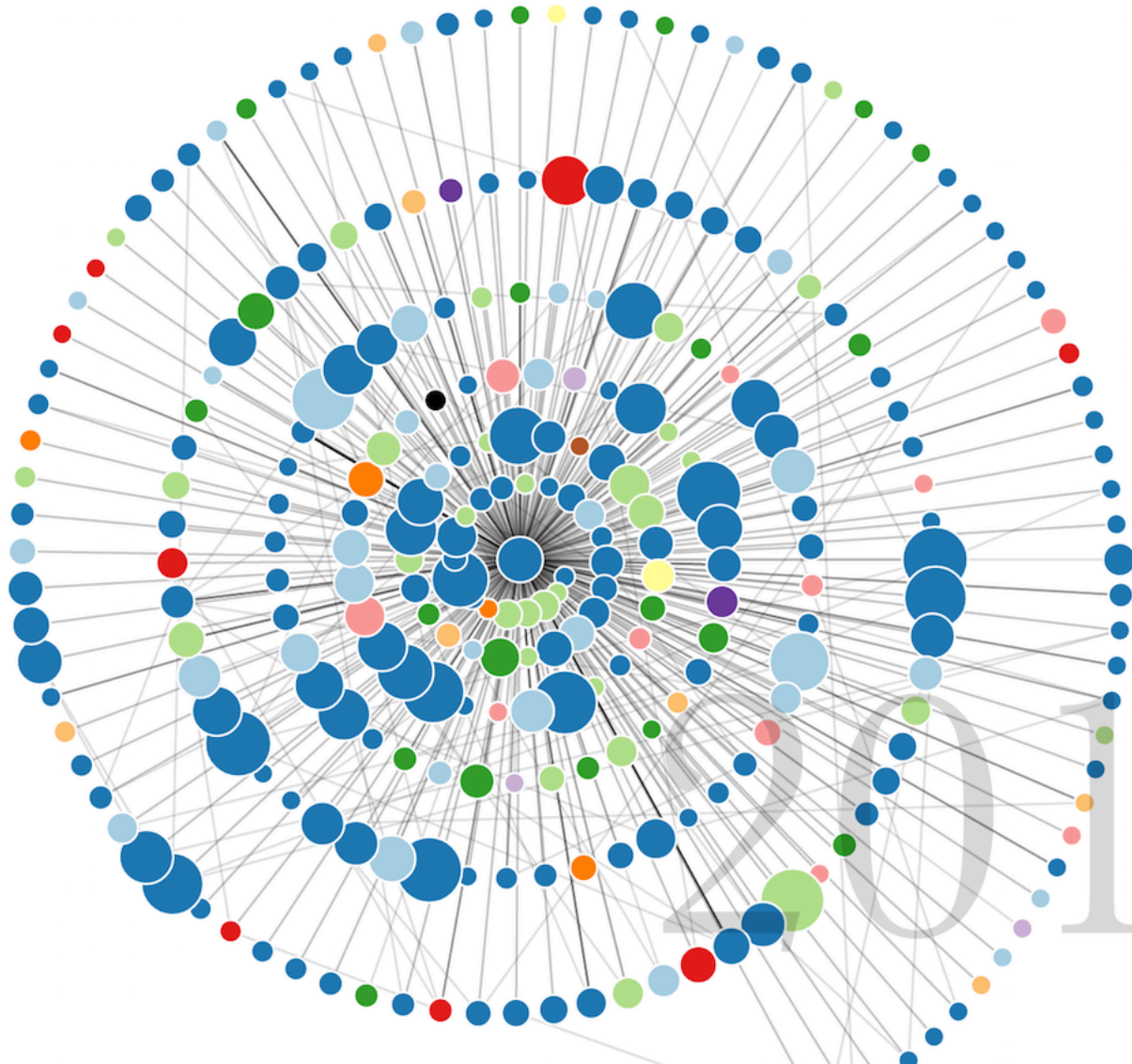


# Visualizing Scholarly Influence

Jason Portenoy & Jevin West, iSchool, University of Washington



**[scholar.eigenfactor.org/fields](https://scholar.eigenfactor.org/fields)**

Jevin West, [jevinw@uw.edu](mailto:jevinw@uw.edu)

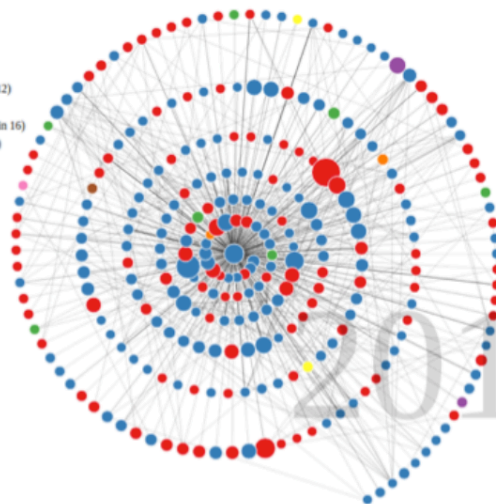
How do you *visualize* scholarly influence?

# Visualizing Interdisciplinarity



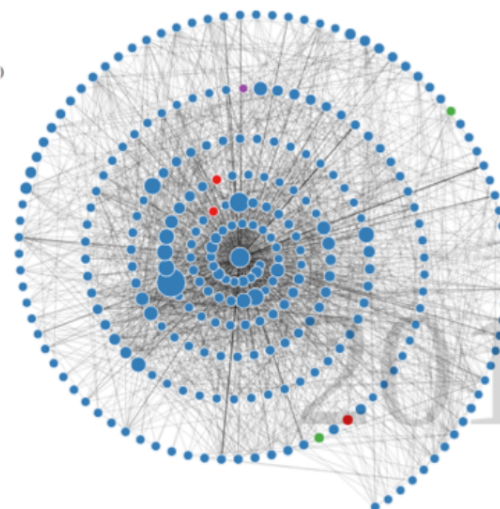
Jason Portenoy

- Papers in category "Medicine" (domain 6)
- Papers in category "Biology" (domain 4)
- Papers in category "Chemistry" (domain 5)
- Papers in category "Engineering" (domain 8)
- Papers in category "Material Science" (domain 12)
- Papers in category "Physics" (domain 19)
- Papers in category "Agriculture Science" (domain 16)
- Papers in category "Social Science" (domain 22)



A denser network means that the papers that cite the central author also tend to cite each other.

- Papers in category "Biology" (domain 4)
- Papers in category "Medicine" (domain 6)
- Papers in category "Chemistry" (domain 5)
- Papers in category "Social Science" (domain 22)



A more sparse network indicates fewer citations between papers shown in the network. This could be a result of the central scholar having impact across a wider set of academic communities.

# Visualizing Scholarly Influence Over Time

*Influence of Pew Scholars*

Roberta A. Gottlieb

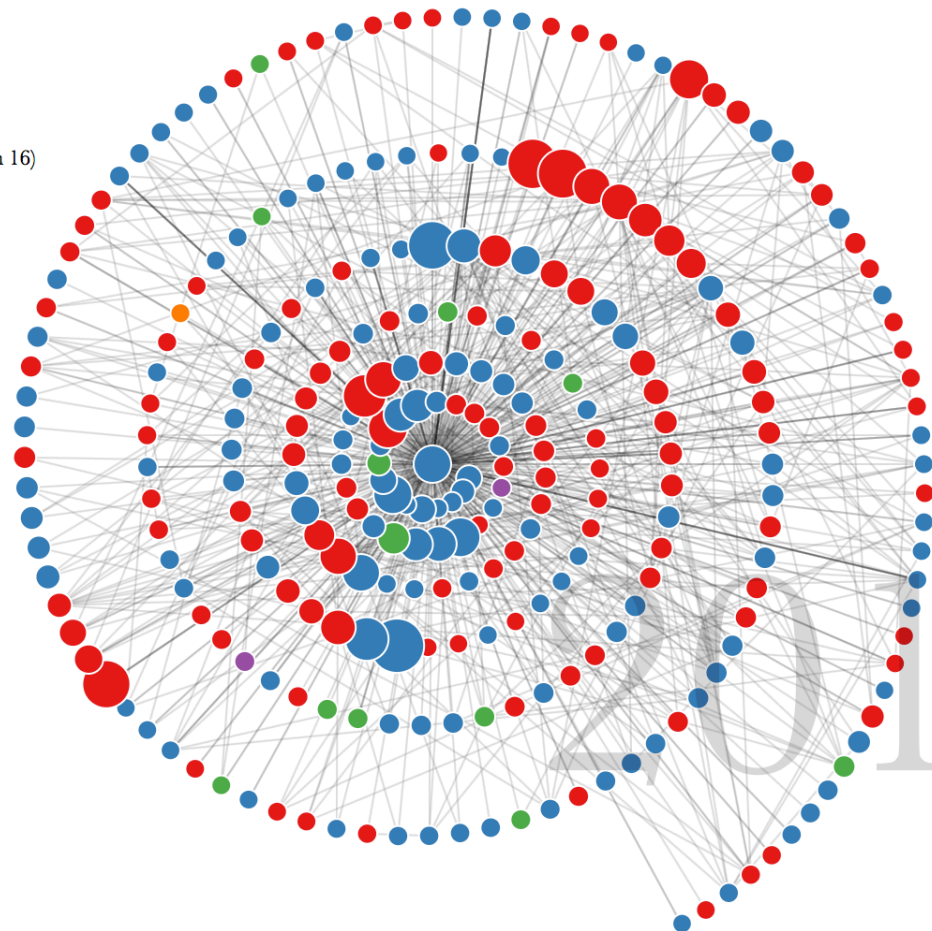
[Learn More](#)

- Papers in category "Medicine" (domain 6)
- Papers in category "Biology" (domain 4)
- Papers in category "Chemistry" (domain 5)
- Papers in category "Unknown" (domain 0)
- Papers in category "Agriculture Science" (domain 16)

Roberta A.  
Gottlieb



Pew Scholar  
1997



# Visualizing Scholarly Influence Over Time

*Influence of Pew Scholars*

Mark W. Grinstaff

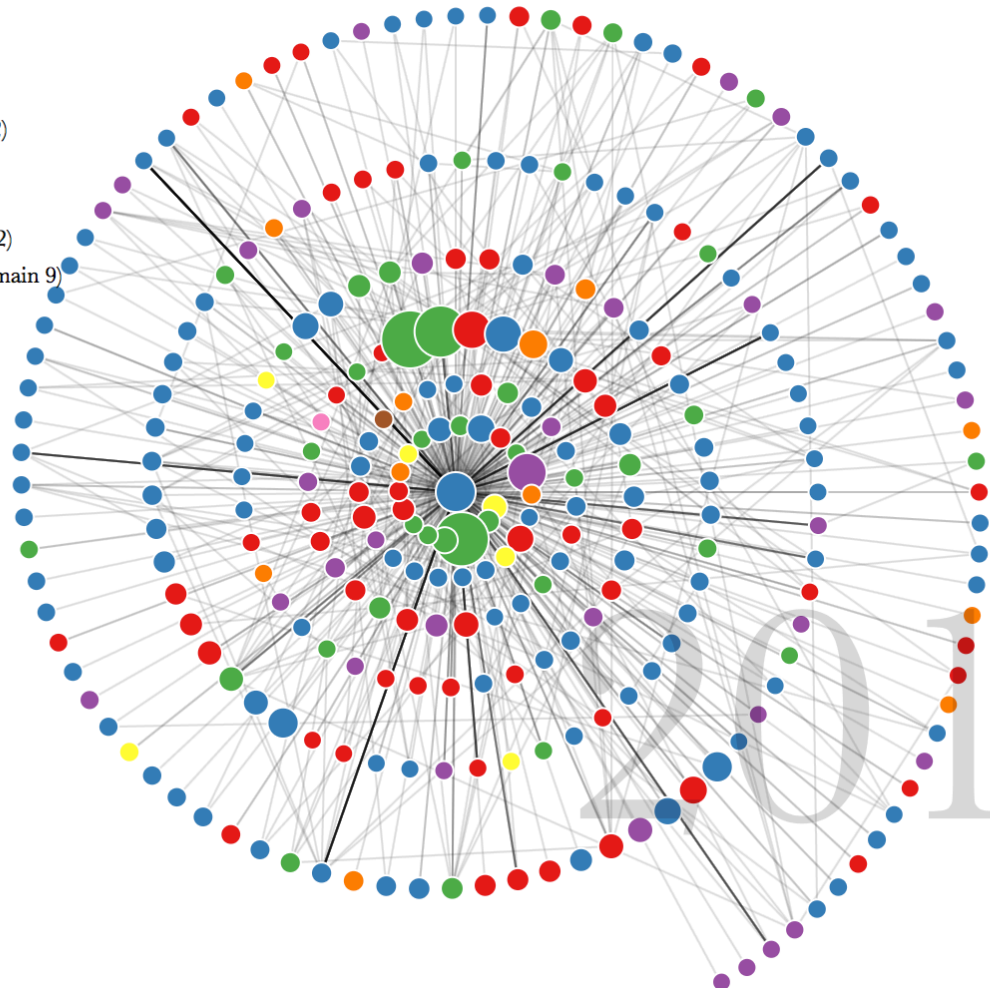
[Learn More](#)

- Papers in category "Chemistry" (domain 5)
- Papers in category "Medicine" (domain 6)
- Papers in category "Biology" (domain 4)
- Papers in category "Material Science" (domain 12)
- Papers in category "Engineering" (domain 8)
- Papers in category "Physics" (domain 19)
- Papers in category "Computer Science" (domain 2)
- Papers in category "Environmental Sciences" (domain 9)

Mark W.  
Grinstaff



Pew Scholar  
1999

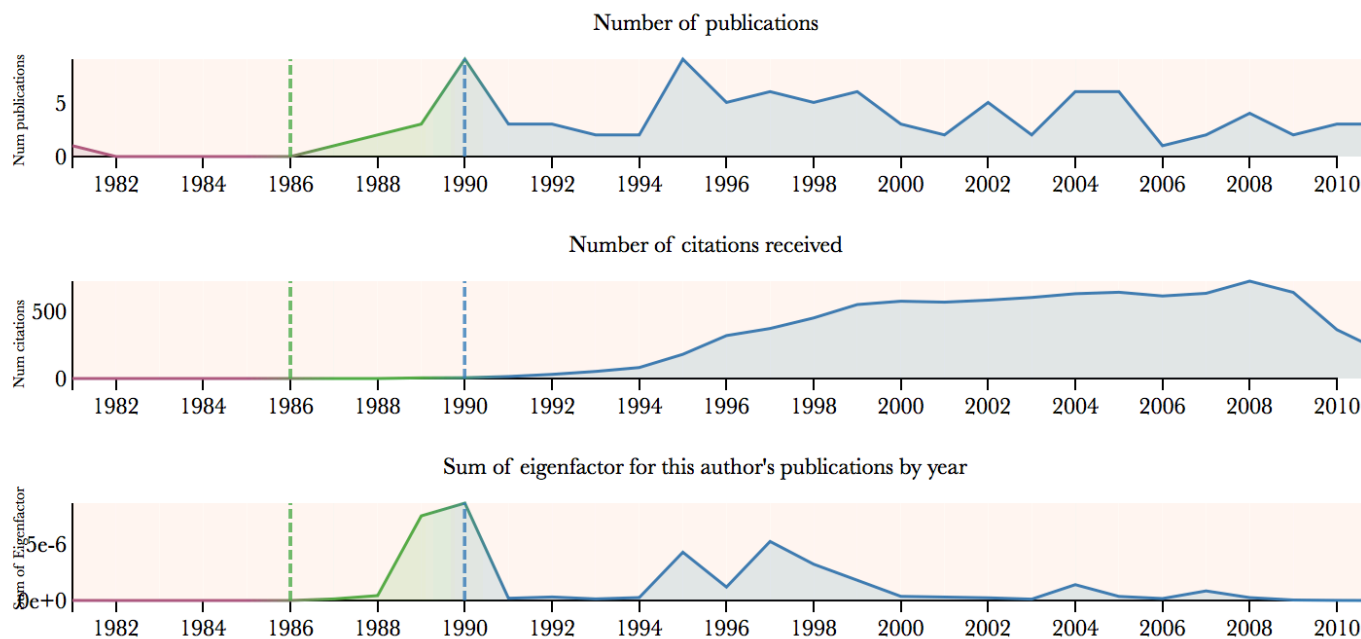
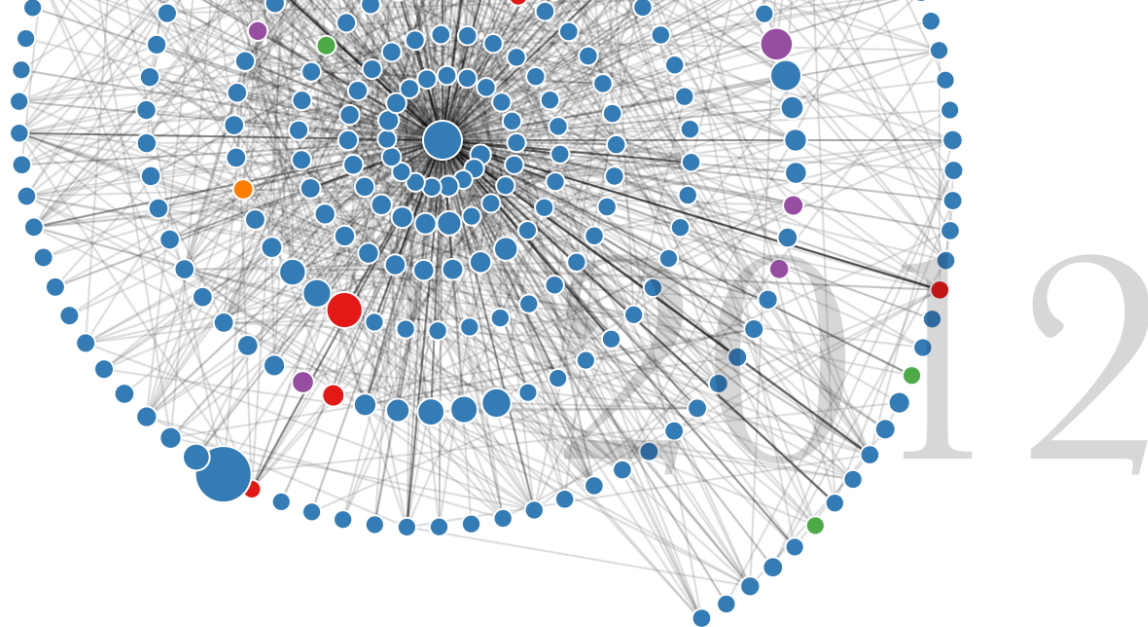




Philip A.  
Hieter

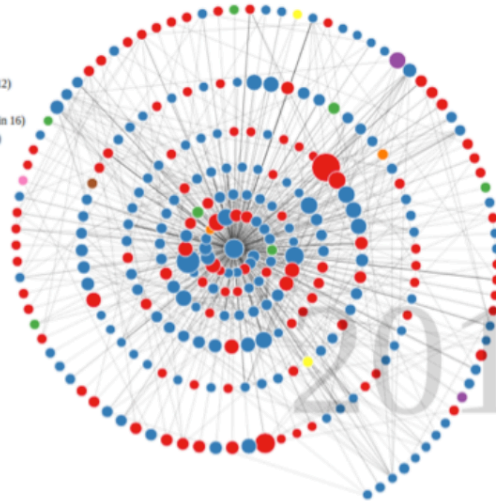


Pew Scholar  
1986



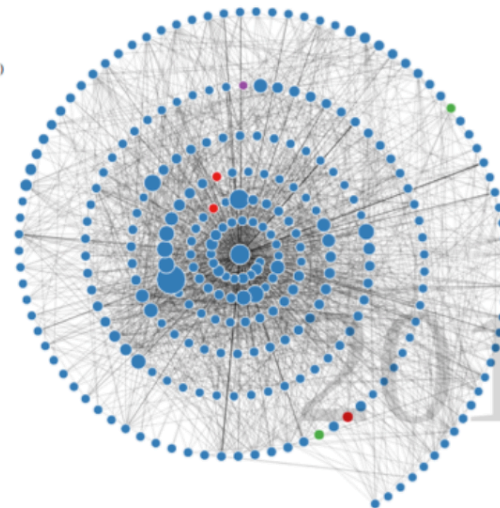
# Comparing Authors

- Papers in category "Medicine" (domain 6)
- Papers in category "Biology" (domain 4)
- Papers in category "Chemistry" (domain 5)
- Papers in category "Engineering" (domain 8)
- Papers in category "Material Science" (domain 12)
- Papers in category "Physics" (domain 19)
- Papers in category "Agriculture Science" (domain 16)
- Papers in category "Social Science" (domain 22)



A denser network means that the papers that cite the central author also tend to cite each other.

- Papers in category "Biology" (domain 4)
- Papers in category "Medicine" (domain 6)
- Papers in category "Chemistry" (domain 5)
- Papers in category "Social Science" (domain 22)

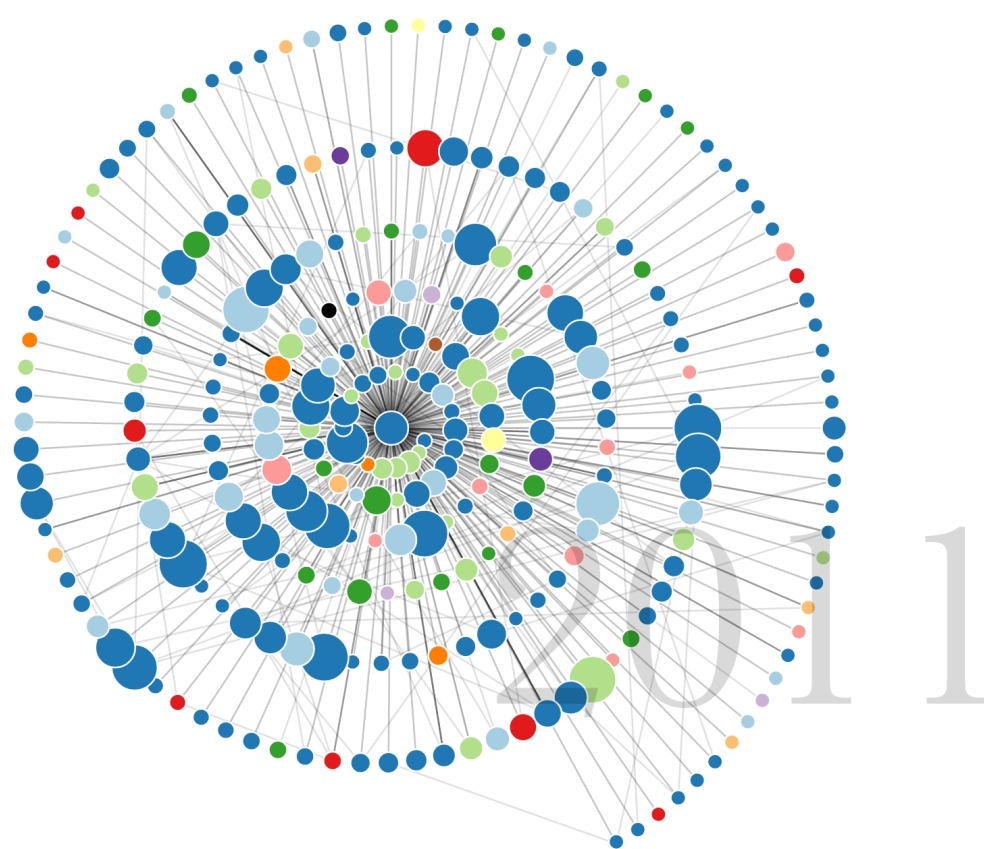


A more sparse network indicates fewer citations between papers shown in the network. This could be a result of the central scholar having impact across a wider set of academic communities.

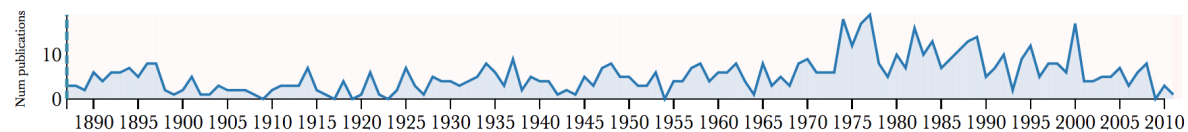


- Papers in field "Economics"
- Papers in field "Sociology"
- Papers in field "Law"
- Papers in field "Political science-US domestic"
- Papers in field "Anthropology"
- Papers in field "Organizational and marketing"
- Papers in field "Political science - international"
- Papers in field "Demography"
- Papers in field "Ecology and evolution"
- Papers in field "Education"
- Papers in field "Physical anthropology"
- Papers in field "Molecular & Cell biology"
- Papers in field "Classical studies"

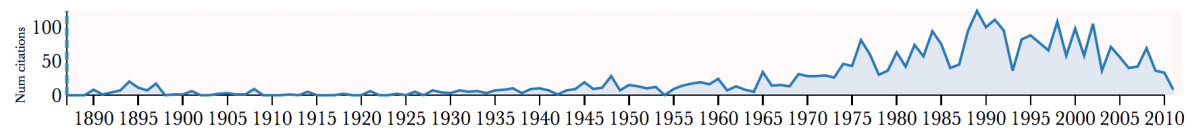
History:  
Progressive era  
American  
populism



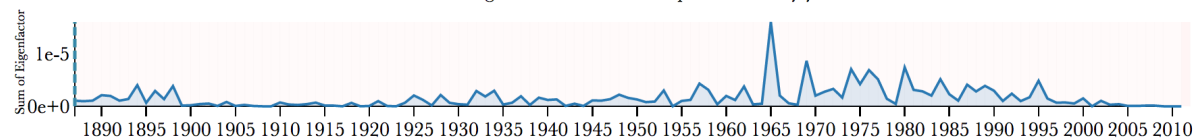
Number of publications



Number of citations received



Sum of eigenfactor for this field's publications by year

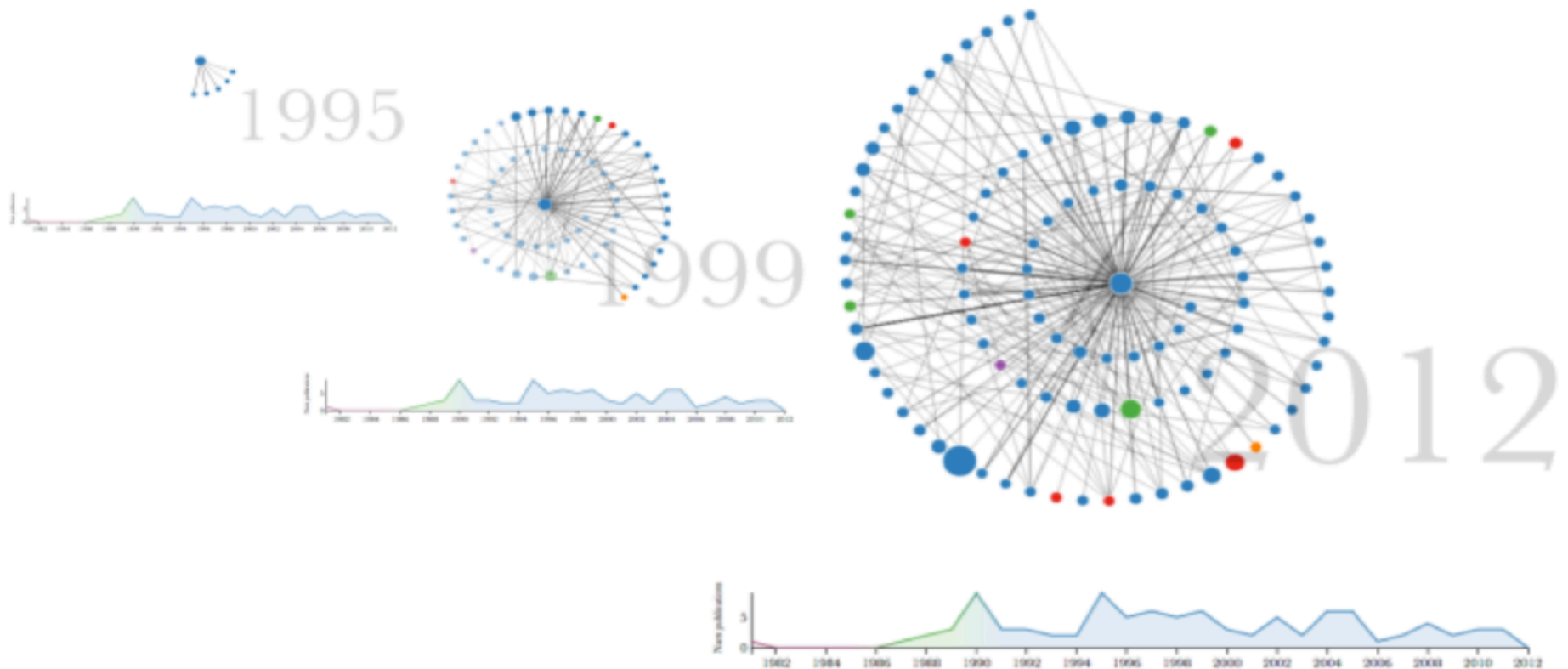


# Future Directions

- Expand to all fields within JSTOR
- Annotate reviews and method papers
- Automatic plug-in to any dataset
- Integrate interviews from Chemical Heritage Foundation
- Automated narration of visualization
- Author disambiguation and further data cleaning
- User studies for improved hypothesis generation

# Explore the data

## ***[scholar.eigenfactor.org/fields](http://scholar.eigenfactor.org/fields)***



\* Please use Chrome web browser for best results

# Acknowledgements

Jason Portenoy, Information School, University of Washington

Anita Pepper, Pew Charitable Trust

Jody Roberts , Chemical Heritage Foundation

Martin Rosvall, Department of Physics, Umea University

Carl Bergstrom, Department of Biology, University of Washington