Digital Humanities and the Philosophy of Science

What is the nature of science and how has it changed over the past two centuries?

What drives scientific change, and what accounts for when and why scientists give up cherished views to adopt new ones?

How does science (fairly) reliably produce truths about the world?

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Traditional approaches from:

- ★ Philosophy of science
- ★ The social sciences
- ★ History

Digital
Humanities

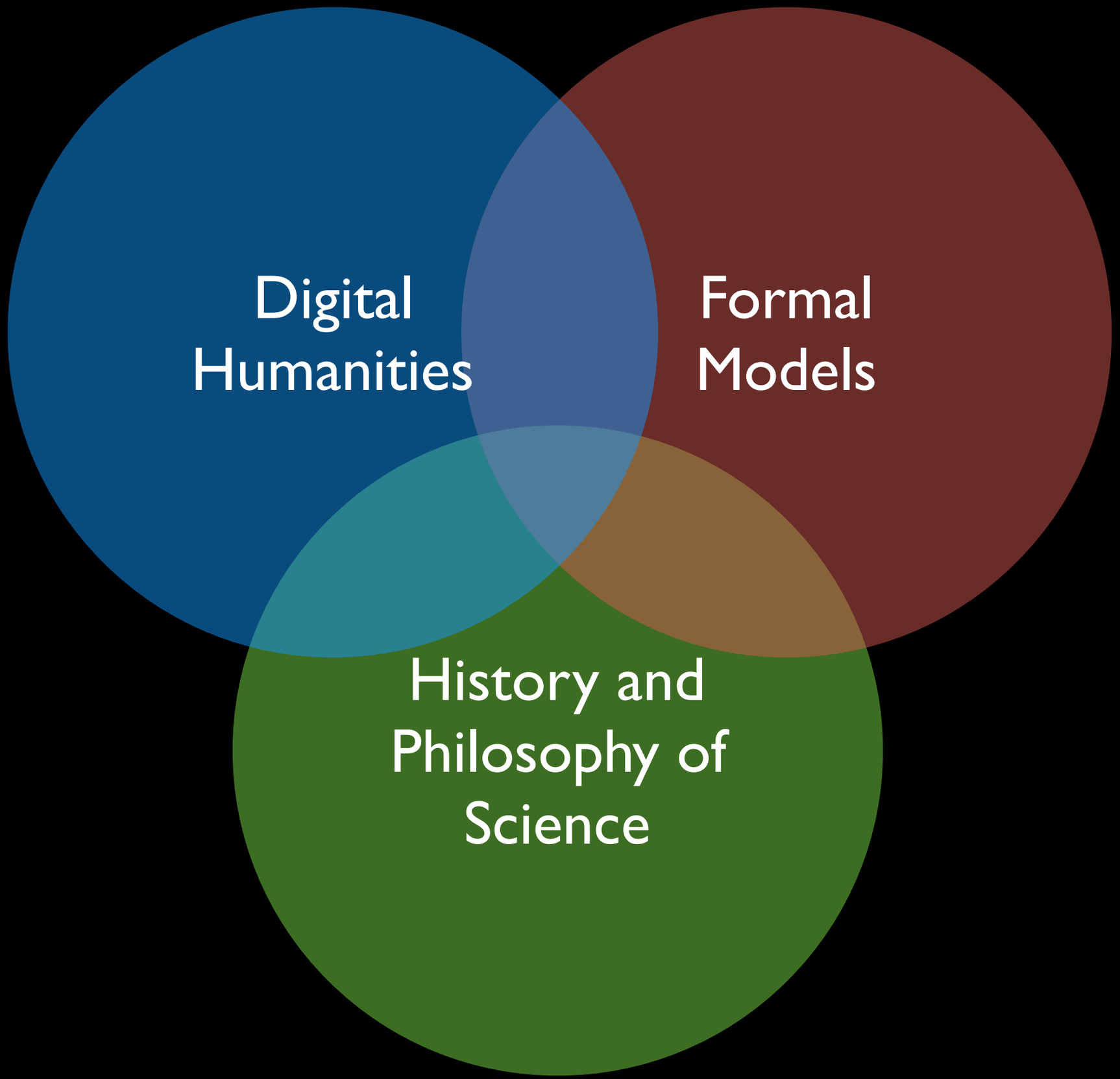
Digital
Humanities

Formal
Models

Digital Humanities

Formal Models

History and Philosophy of Science


Digital
Humanities
Formal
Models
History and
Philosophy of
Science

evoText and Philosophy of Science

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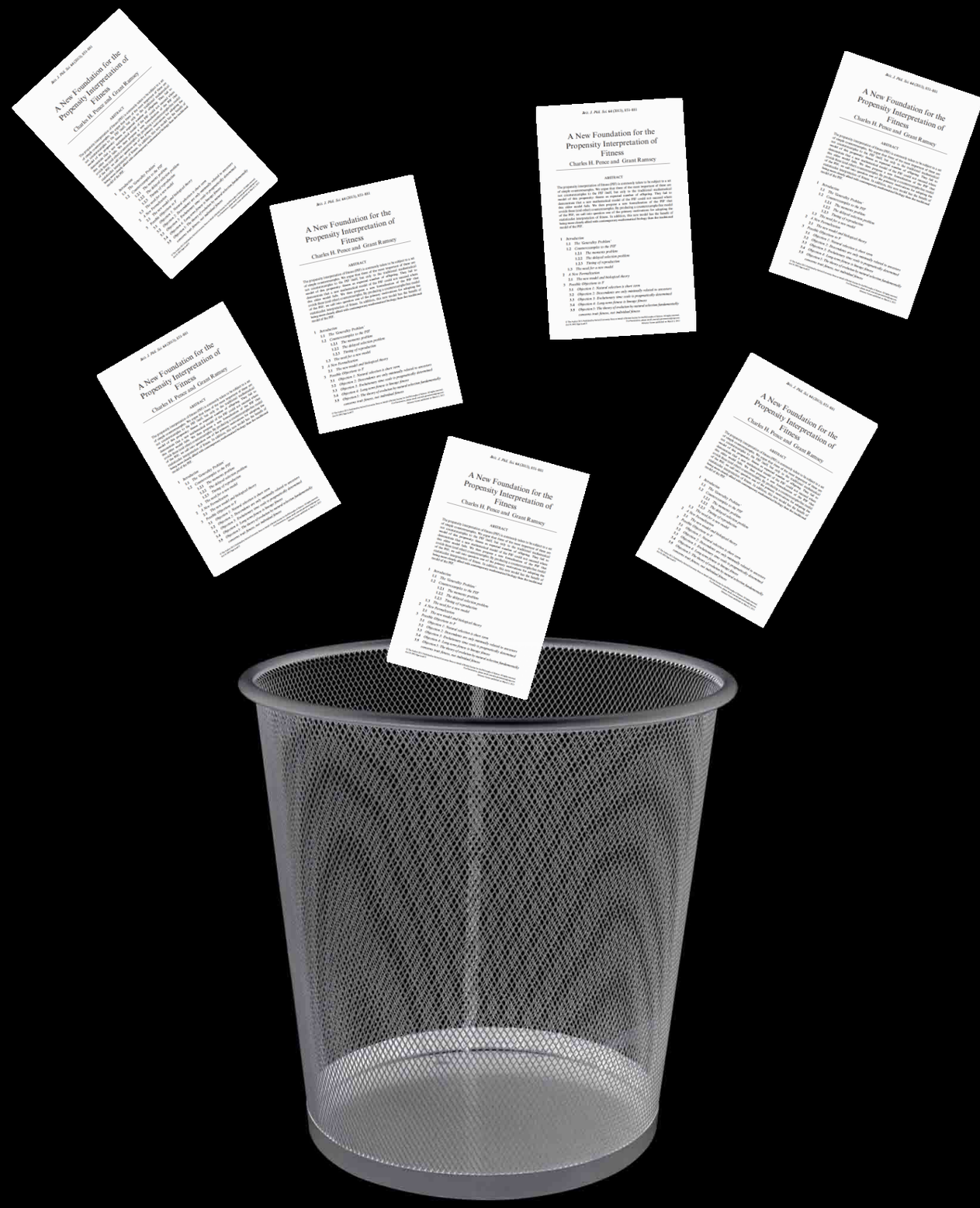
1. What is evoText?
2. How to use evoText
3. Preliminary results of evoText

1. What is evoText?



What question do you want to answer?

e.g.: How has the frequency of a term changed over time?

What data do you want to use?

e.g.: Articles in *Nature* from the 1990s

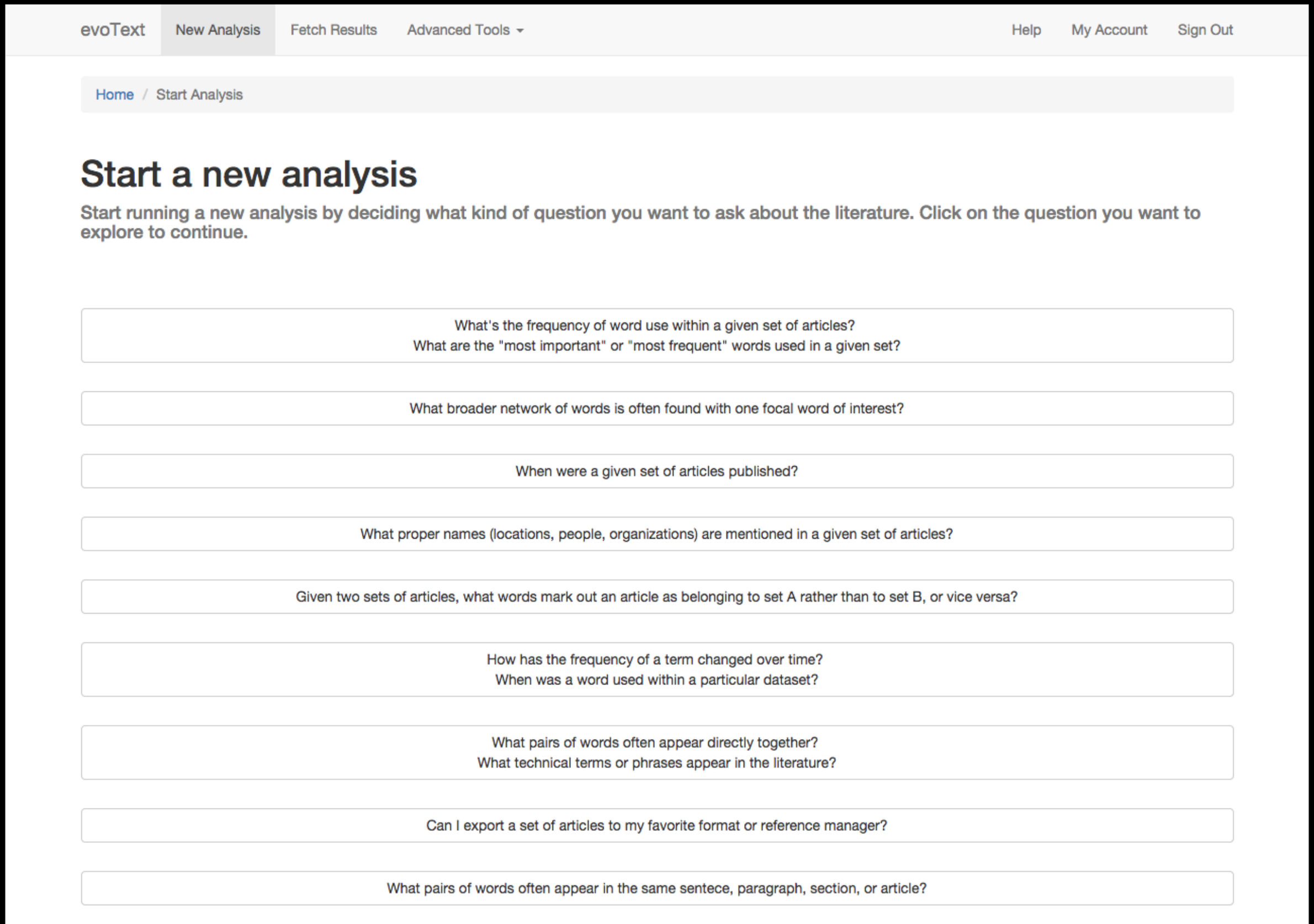
Provide a few more parameters

e.g.: Look for the term “evolution”

(wait for a while)

Get your results!

2. How to use evoText



Plot the use of a term by date

This analysis job takes a single dataset and plots the occurrences of a term within it by date.

This job results in a graph of the occurrences of the given term within your dataset, plotted by date, as well as those occurrences downloadable as a CSV file. This allows us to answer a wide variety of questions:

How has the frequency of use of a term changed over time? *(Input: a dataset of interest, plotting for the use of a given term)*

When was a term first introduced into the literature? *(Input: a dataset of interest, looking for the place when the term is first introduced)*

How has a term moved through the literature? *(Input: comparing these graphs for the same term across different journals and time periods)*

Back Start

Collect data

You now need to determine which datasets this analysis job will run on.

In order to run, this analysis job requires that you provide 1 dataset. Datasets are created by performing searches, then saving a set of search results.

1 dataset still needs to be added

Datasets for this job:

Dataset Name
No datasets specified

Create another dataset | Link an already created dataset

Search for articles... Sort Save Results

449846 articles in database No filters active

« 1 2 3 4 ... 44984 44985 »

The Circadian Neuropeptide PDF Signals Preferentially through a Specific Adenylate Cyclase Isoform AC3 in M Pacemakers of Drosophila More

Laura B. Duvall, Paul H. Taghert | *PLoS Biology,* Vol. 10, No. 6 (2012), pp. e1001337

Brian: The Typographical Error that Brought Early Career Neuroscientists and Artists Together More

Megan J. Dowie, Erin Forsyth, Leah Forsyth | *PLoS Biology,* Vol. 10, No. 6 (2012), pp. e1001340

The Origin of Glucocorticoid Hormone Oscillations More

Jamie J. Walker, Francesca Spiga, Eleanor Waite, Zidong Zhao, Yvonne Kershaw, John R. Terry, Stafford L. Lightman | *PLoS Biology,* Vol. 10, No. 6 (2012), pp. e1001341

The DEAD-Box Protein Dhh1 Promotes Decapping by Slowing Ribosome Movement More

Thomas Sweet, Carrie Kovalak, Jeff Coller | *PLoS Biology,* Vol. 10, No. 6 (2012), pp. e1001342

The Limits to Sustainability Science: Ecological Constraints or Endless Innovation? More

Georgina M. Mace | *PLoS Biology,* Vol. 10, No. 6 (2012), pp. e1001343

The Shifting Boundaries of Sustainability Science: Are We Doomed Yet? More

John H. Matthews, Frederick Boltz | *PLoS Biology,* Vol. 10, No. 6 (2012), pp. e1001344

The Macroecology of Sustainability More

Joseph R. Burger, Craig D. Allen, James H. Brown, William R. Burnside, Ana D. Davidson, Trevor S. Fristoe, Marcus J. Hamilton, Norman Mercado-Silva, Jeffrey C. Nekola, Jordan G. Okie, Wenyun Zuo | *PLoS Biology,* Vol. 10, No. 6 (2012), pp. e1001345

Filter search

Authors

Jr. 1841

R. L. 405

W. F. DENNING 252

G. A. J. C. 177

E. RAY LANKESTER 169

Journal

Nature 363783

Ecology 13754

American Naturalist 11731

Journal of Mammalogy 9222

Evolution 7927

Publication Date

1960–1969 58869

2000–2009 51397

1980–1989 46518

1970–1979 45582

Search for articles... Sort Save Results

32473 articles found Remove All Journal: Nature Year: 1990–1999

You looking at me? More

| *Nature,* Vol. 397, No. 6717 (1999), pp. 313-313

News in Brief More

| *Nature,* Vol. 399, No. 6738 (1999), pp. 724-725

Discovery of the acoustic Faraday effect in superfluid ³He-B More

Y. Lee, T. M. Haard, W. P. Halperin, J. A. Sauls | *Nature,* Vol. 400, No. 6743 (1999), pp. 431-433

Angiogenesis inhibited by drinking tea More

Yihai Cao, Renhai Cao | *Nature,* Vol. 398, No. 6726 (1999), pp. 381-381

Cracking anaerobic bacteria More

| *Nature,* Vol. 401, No. 6750 (1999), pp. 217-218

Measurement of gravitational acceleration by dropping atoms More

Achim Peters, Keng Yeow Chung, Steven Chu | *Nature,* Vol. 400, No. 6747 (1999), pp. 849-852

Science in culture More

| *Nature,* Vol. 401, No. 6755 (1999), pp. 744-744

Arima ascendant More

Filter search

Authors

Alison Abbott 58

David Swinbanks 54

Colin Macilwain 44

Declan Butler 41

David Dickson 35

Advanced search

Search for articles...

32473 articles found Remove All

Create a new dataset

Give these search results a name, and they will be preserved as a new dataset.

Name

Nature '90s

Create Dataset

You looking at me?

| *Nature,* Vol. 397, No. 6717 (1999), pp. 313-313

More

News in Brief

| *Nature,* Vol. 399, No. 6738 (1999), pp. 724-725

More

Discovery of the acoustic Faraday effect in superfluid ³He-B

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More

Angiogenesis inhibited by drinking tea

More

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Declan Butler 41

David Dickson 35

Advanced search

Collect data

All data has now been collected. Click the button to start the analysis!

Set Job Options

Datasets for this job:

Dataset Name	
Nature '90s	Remove

Job options

This job has some more options that you can configure before you get started.

Term frequency date analysis options

*** Focal word**

evolution

Start analysis job Cancel

Fetch analysis results

From here, you can retrieve the data produced by your analyses. Make sure to save it soon, because it is only preserved for 14 days.

Pending analysis tasks

Analysis Task	Dataset	Task Progress
Plot word occurrences by date	Nature '90s	14%: Querying term frequency counts...

Are these tasks taking too long to finish? We can try to terminate all pending jobs, though that might not work. If it fails, e-mail the site administrators.

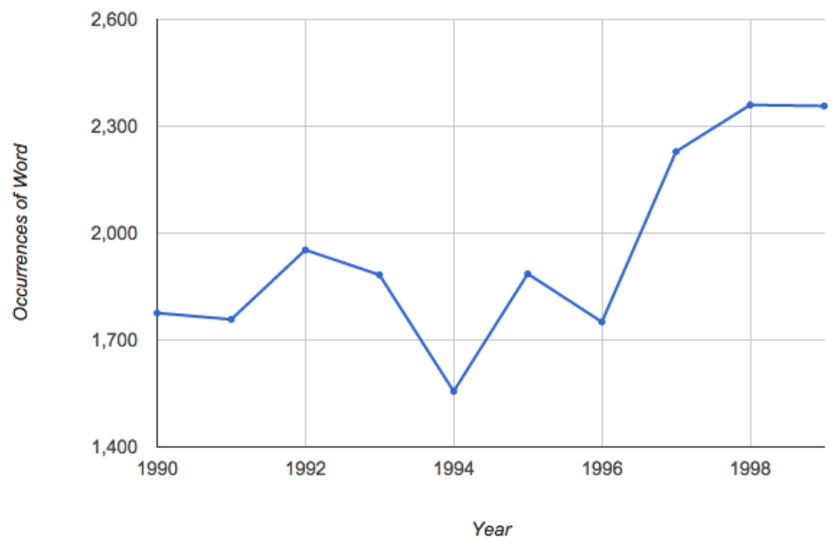
Completed analysis tasks

You have no analysis tasks already completed.

Dataset: Nature '90s

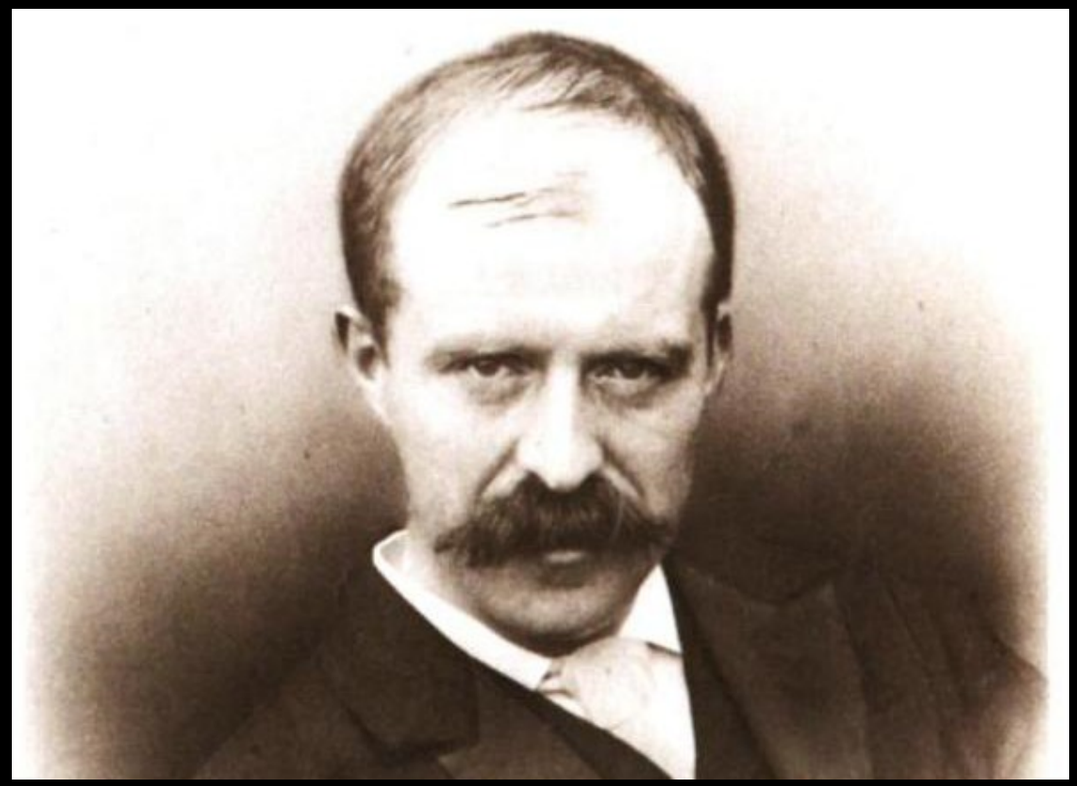
Occurrences of evolution, plotted by year

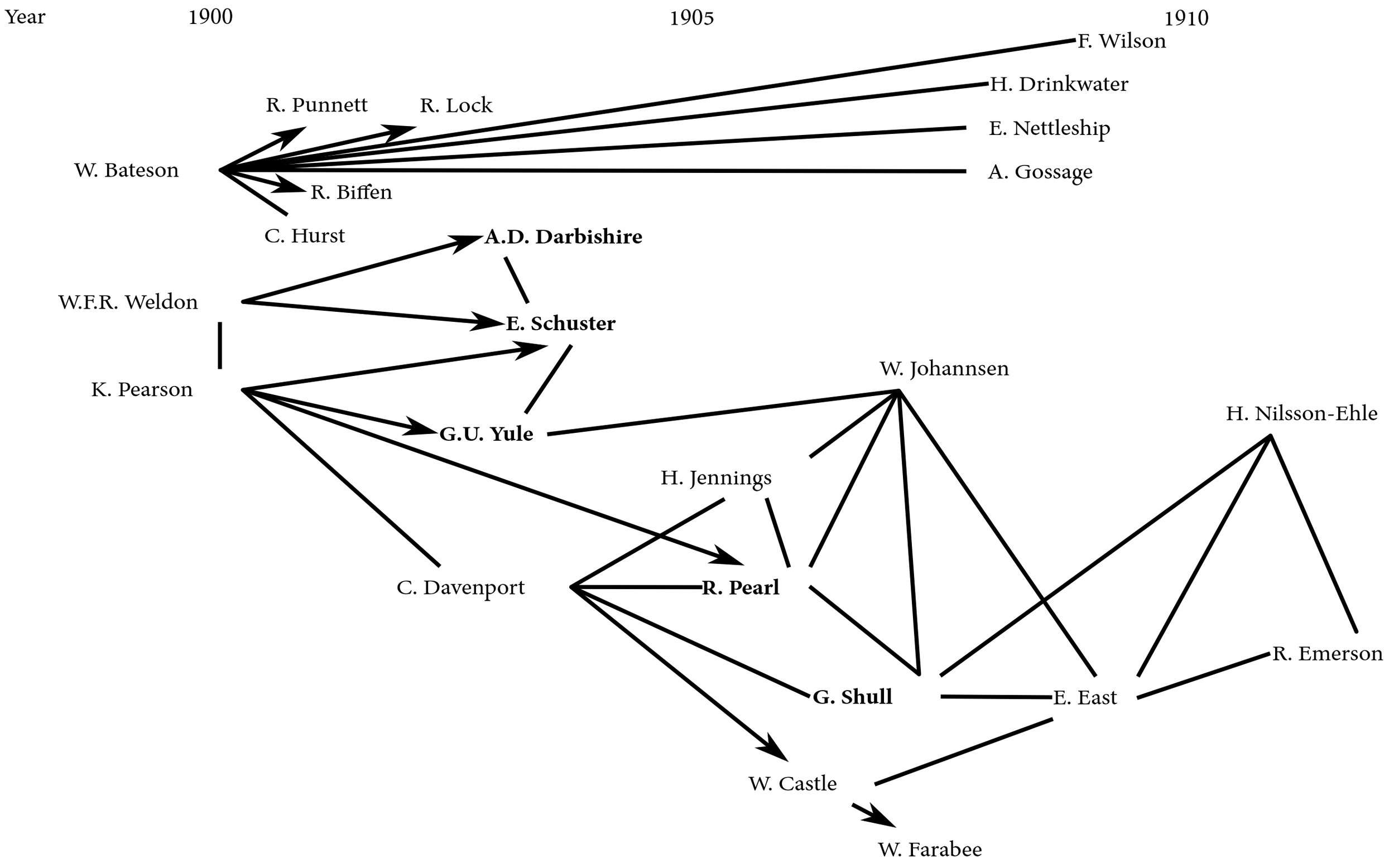
Download in CSV format



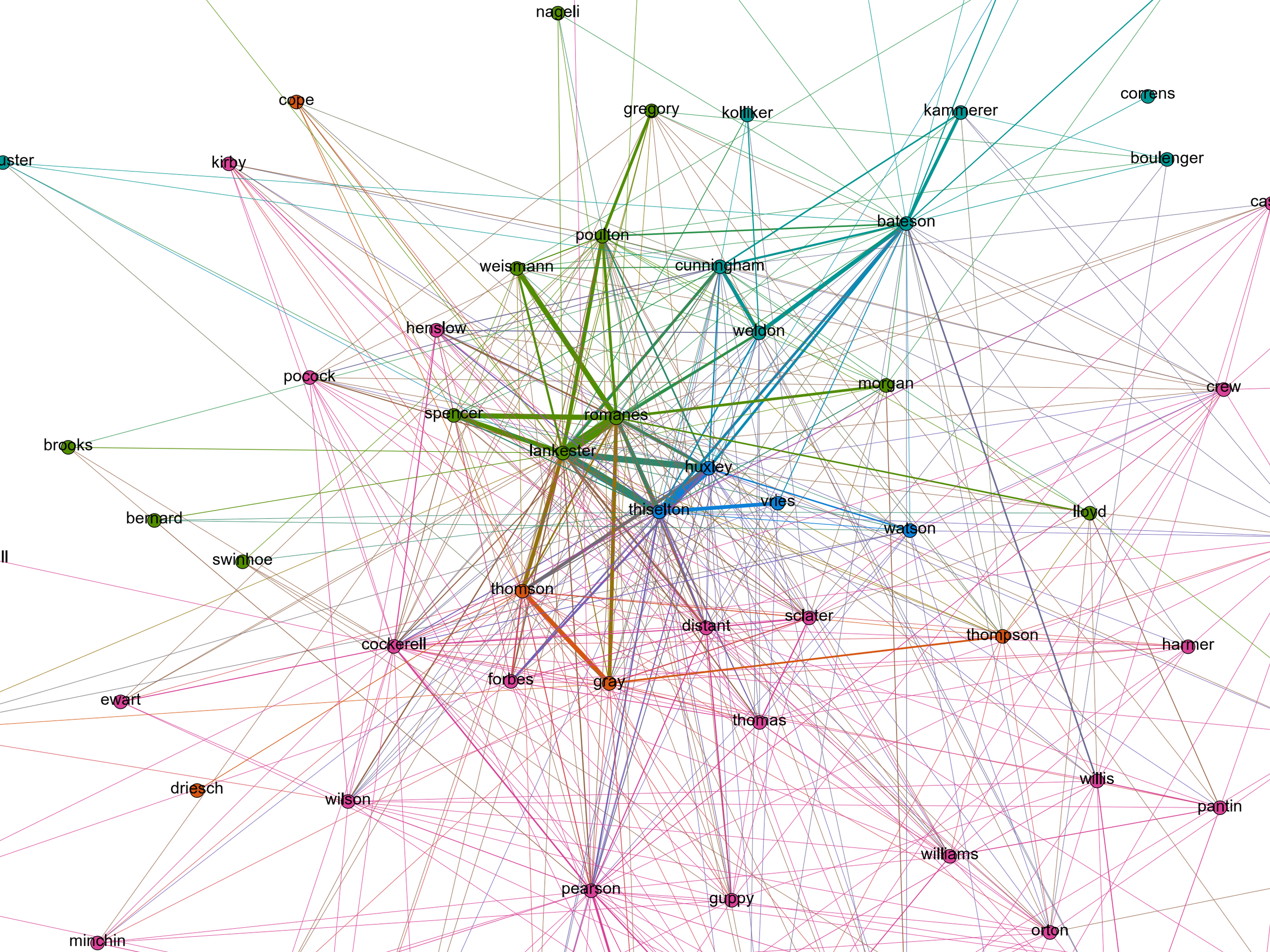
Year ▲	Occurrences of Word
1990	1776
1991	1758
1992	1953
1993	1883
1994	1556
1995	1886
1996	1751
1997	2229
1998	2360
1999	2357

3. Preliminary results from evoText




Year
1900
1905
1910
F. Wilson
H. Drinkwater
R. Punnett
R. Lock
E. Nettleship
W. Bateson
A. Gossage
R. Biffen
C. Hurst
A.D. Darbishire
W.F.R. Weldon
E. Schuster
K. Pearson
W. Johannsen
H. Nilsson-Ehle
G.U. Yule
H. Jennings
C. Davenport
R. Pearl
R. Emerson
G. Shull
E. East
W. Castle
W. Farabee

- A network of ~100 biologists
- Publishing in *Nature* from 1869–1940
- Total of ~2,000 articles (or letters)


nageli
cope
gregory
kolliker
kammerer
correns
kirby
boulenger
bateson
poulton
weismann
cunningham
henslow
weldon
pocock
morgan
crew
spencer
romanes
brooks
lankester
huxley
bernard
thiselton
vries
lloyd
watson
swinhoe
thomson
sclater
distant
thompson
harmer
cockerell
forbes
gray
ewart
thomas
driesch
wilson
willis
pantin
williams
pearson
guppy
orton
minchin

—1894

1895–99

1900–04

1905–09

1910—

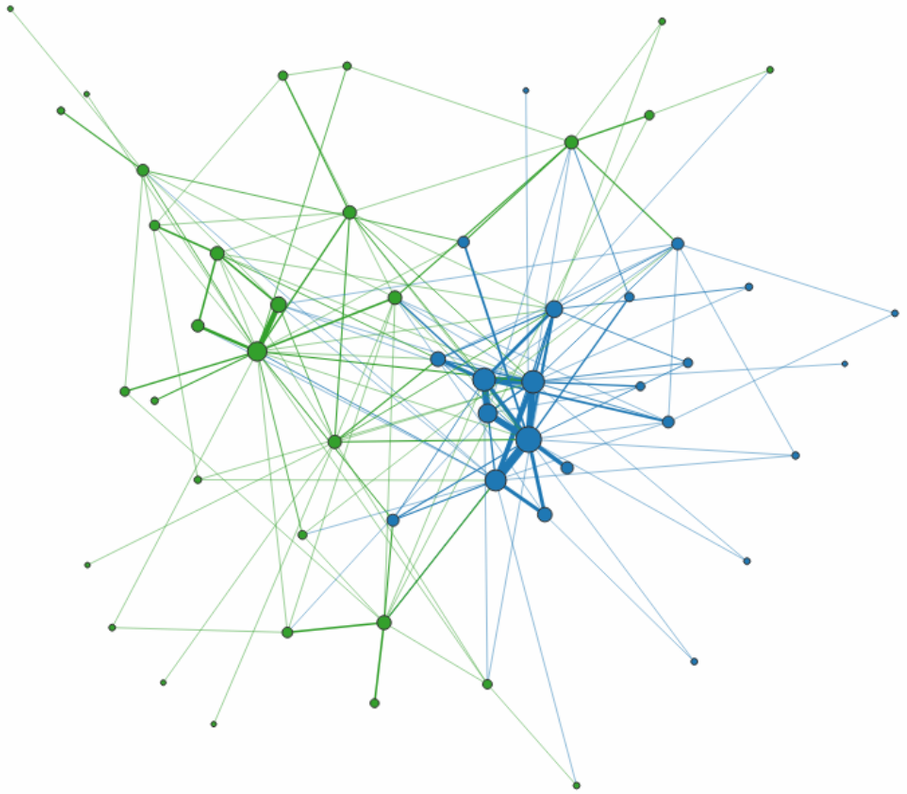
—1894

1895–99

1900–04

1905–09

1910—



—1894

1895–99

1900–04

1905–09

1910—

- Network of discourse **does** reflect community structure!

- Paradigm "debaters" or "warriors" pull themselves out of the broader discussion

- Networks of discourse give us a way to draw connections **across** paradigms at times of crisis

Thank You