

Is it a matter of research subjects? (STM) 1/2

Gender and ethnic
patterns of
publication in top
sociology journals

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Akbaritabar (Ali),
Flaminio
Squazzoni

Topic Modeling with Python

CONTINUUM
LDA vs LDA

ch_dolg chdolg

Machine Learning

```
graph TD; ML[Machine Learning] -- "no labels" --> UL[Unsupervised learning]; ML -- "labels" --> SL[Supervised learning]; UL --> Clustering[Clustering]; UL --> LVS[Latent variables/structure]; SL --> C[Classification]; SL --> R[Regression]; Clustering --> Kmeans["K-means  
Hierarchical clustering  
Topic modeling"]; LVS --> DR["Dimensionality reduction  
Topic modeling"]; C --> LR["Logistic regression  
SVM  
Decision trees  
k-NN"]; R --> LR["Linear regression"]
```

Unsupervised learning

Supervised learning

Classification

Regression

LDA:
Latent Dirichlet Allocation

LDA:
Linear Discriminant Analysis

PY TEXAS

13:53 / 50:13

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Is it a matter of research subjects? (STM) 2/2

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Topic Modeling with Python

The video player interface shows a presentation slide titled "Topic Modeling with Python". The slide features a diagram illustrating the Topic Modeling process. On the left, a woman is speaking at a podium. On the right, the diagram shows a flow from "collection of text documents" (containing "M Documents" and "N Words") through a central process to "Topics" (represented by circles with "K Topics" and "cluster of words") and "Document" (represented by a grid with "phi" and "frequency of words"). Concentration parameters "alpha" and "beta" are shown on the left. The slide is titled "Parameters and variables". A speech bubble logo for "PY TEXAS" is visible in the bottom left corner. The video player includes standard controls like play/pause, volume, and a progress bar showing 16.46 / 50:13.

CONTINUUM
Parameters and variables

ch_dolg chdolg

M Documents

N Words

collection of text documents

alpha beta Concentration parameters

K Topics cluster of words

Topic

Document frequency of words

phi distribution of topics

PY TEXAS

16.46 / 50:13

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Results of STM (high prob)

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Topic	V1	V2	V3	V4	V5	V6	V7
1	racial	black	ethnic	segregation	white	race	population
2	class	crime	law	legal	rights	race	cultural
3	organizational	work	practices	organization	organizations	management	process
4	public	religious	social	violence	community	religion	school
5	human	social	article	states	united	male	female
6	family	effects	educational	education	life	data	children
7	gender	labor	market	women	employment	men	womens
8	economic	income	inequality	countries	growth	welfare	development
9	political	social	state	movement	organizations	politics	movements
10	social	network	networks	cultural	theory	status	model

Results of STM (frex, low prob)

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Topic	V1	V2	V3	V4	V5	V6	V7
1	ethnic	segregation	whites	residential	immigrants	hispanic	assimilation
2	homicide	offenders	classification	interviewers	law	tolerance	citizenship
3	accountability	lawyers	leaders	conversation	rational	cohesion	formalization
4	religious	church	pluralism	schools	religiosity	conservative	violence
5	delinquency	socioeconomics	disorders	male	human	govt	juvenile
6	cohort	cohorts	adulthood	childhood	children	birth	college
7	jobs	wage	wages	career	workers	markets	market
8	welfare	foreign	poverty	investment	growth	economic	countries
9	movements	protest	mobilization	polity	voting	movement	protests
10	homophily	network	networks	trust	exchange	generalized	scientific

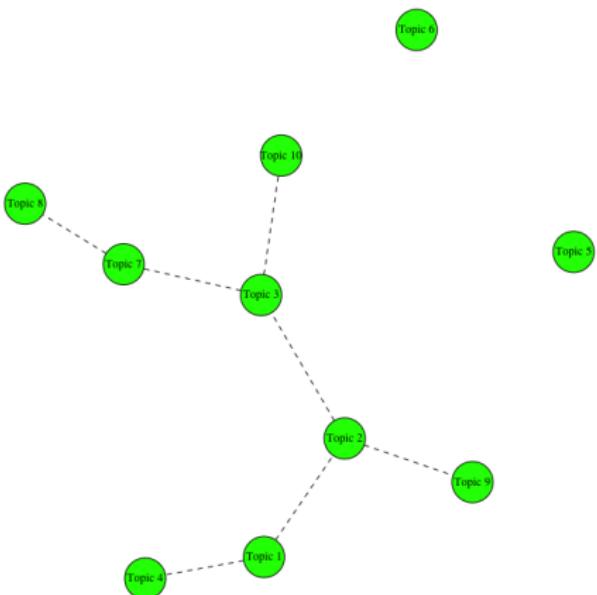
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Correlations between Topics found in STM



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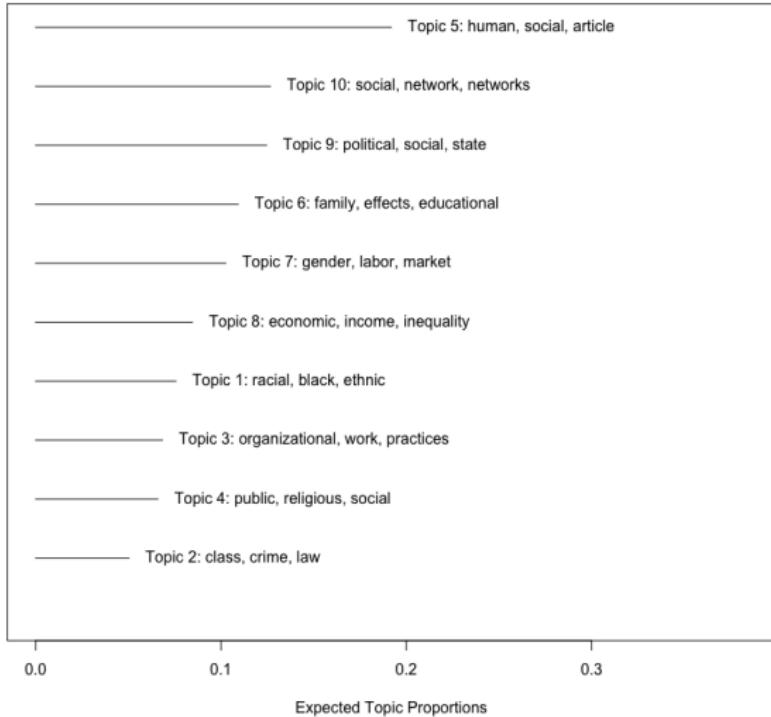
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Top Topics



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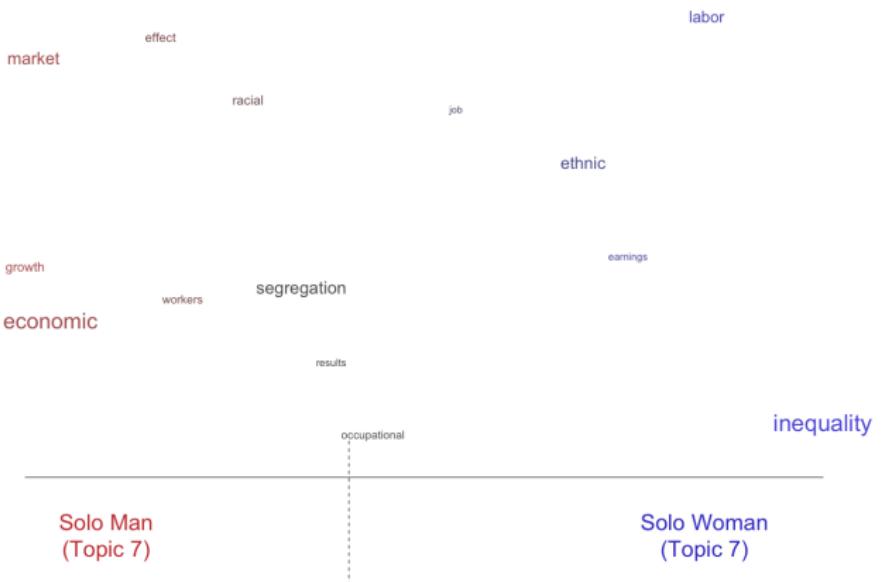
Topic 10: close focus on Networks and Exchange theory



American Journal of Sociology
(Topic 10)

American Sociological Review
(Topic 10)

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