

Introduction

A discipline is established as a categorization mechanism when the set of possible labels for the same cultural object shrinks to a short and ranked list.

The position at the top of that list will be occupied by what we call the disciplinary prefix, and below it variations on nouns used to capture different aspects of cultural content from created work to the authors themselves.

Consider five social science disciplines—anthropology, economics, political science, psychology, and sociology.

In english the labels that like flags lay claim to disciplinary resources are the prefixes anth-, econ-, poli-, psyc-, and soci-.

In sociology the term “social problem” is an example of the flag being established as a claim to disciplinary relevance.

We contend that these prefixes will diffuse first as generic and weakly categorical terms that could modify and lay claim to any worldly object.

Temporal Sequencing Methods

Correlations between time series are difficult to tease out due to several dynamics that if not controlled for can lead to spurious correlations. Before we can attempt to test causal order we must decompose historical trends in terms into their systematic and residual components, such that we may test the residuals for patterns between two series.

ARIMA models have been criticized for their irrealism (Isaac and Griffin 1989:877). After establishing statistical considerations and laying bare our assumptions, we will discuss the historical and ontological limitations of the statistical approach.

Series

ARIMA model

ARIMA, or AutoRegressive Integrated Moving Average, models are effective in decomposing several categories of within-series correlations.

$$I = \frac{MA}{AR} \tag{1}$$

This says that I , the change in our series, is a function of MA , a moving but systematic average (a line or higher order polynomial) and

Table 1: Terms searched in the Google Books Ngrams Database

	soci	econ	anth	poli	psyc
Genre	social	economic	cultural	political	mental
Technique	sociological	economical	anthropological	political	psychological
Ontology	society	economy	culture	polity	mind
Discipline	sociology	economics	anthropology	political science	psychology
Profession	sociologist	economist	anthropologist	political scientist	psychologist
Subdiscipline	sociology of	economics of	anthropology of	political science of	psychology of

$$(1 - B)^d y_t = \frac{c + (1 + \theta_1 B + \dots + \theta_q B^q) e_t}{(1 - \phi_1 B - \dots - \phi_p B^p)} \quad (2)$$

Where c is a constant drift up or down,

Granger Causality

Results

As table ?? shows.

Which came first?

Granger tests can help determine which (Thurman and Fisher 1988; Granger 1969)

Clear secular trends and period effects surrounding WWII and the baby boom.
To control:

- Model the trends. We could estimate the linear trend or splines and then subtract them.
- First differences. Subtract from each point the previous point.
- Link relatives. Divide each point from the point before it.

Box Cox doesn't mean

$$y'_t = c + \phi_1 y'_{t-1} + \dots + \phi_p y'_{t-p} + \theta_1 e_{t-1} + \dots + \theta_q e_{t-q} + e_t, \quad (8.1)$$

References

Granger, C W J. 1969. "Investigating Causal Relations by Econometric Models and Cross-spectral Methods." *Econometrica* 37 (3): 424.

Isaac, Larry W, and Larry J Griffin. 1989. "Ahistoricism in Time-Series Analyses of Historical Process: Critique, Redirection, and Illustrations from U.S. Labor History." *American Sociological Review* 54 (6): 873.

Thurman, Walter N, and Mark E Fisher. 1988. "Chickens, Eggs, and Causality, or Which Came First?" *American Journal of Agricultural Economics* 70 (2): 237.