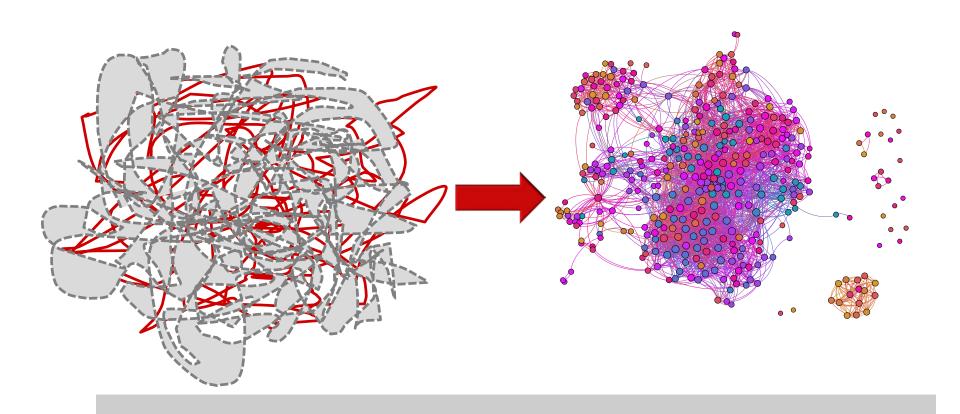


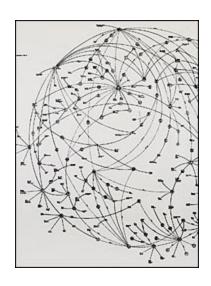
## Social Network Analysis

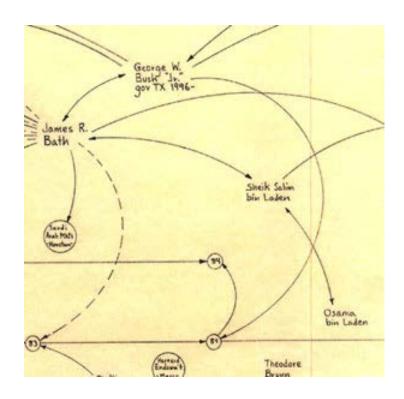
# What do we get out of studying systems as networks?



#### examples: Political/Financial Networks

 Mark Lombardi: tracked and mapped global financial fiascos in the 1980s and 1990s from public sources such as news articles



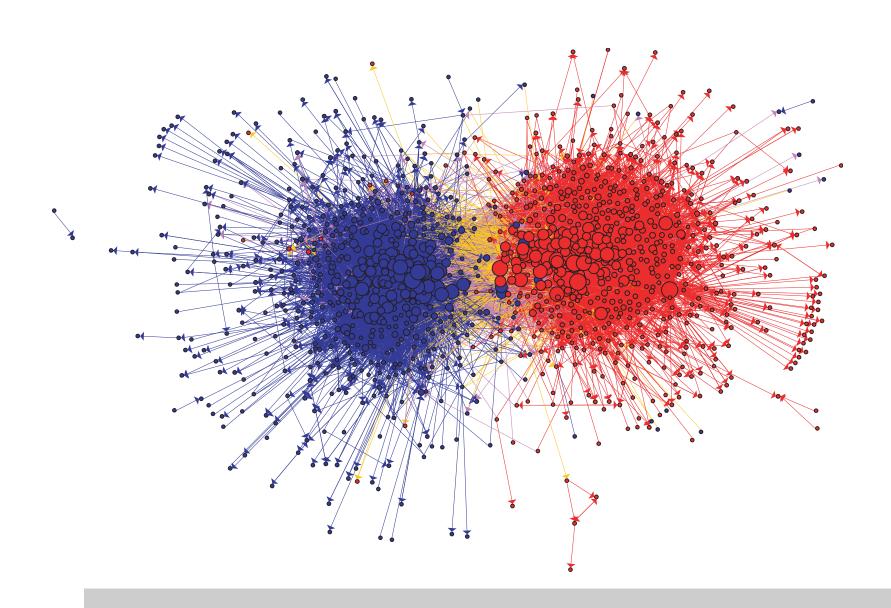


## Understanding through visualization

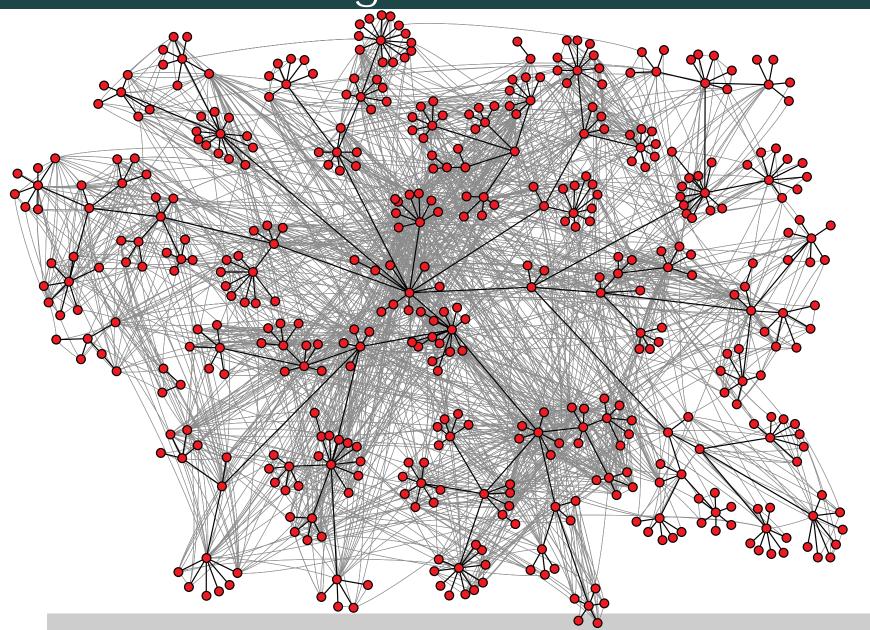
"I happened to be in the Drawing Center when the Lombardi show was being installed and several consultants to the Department of Homeland Security came in to take a look. They said they found the work revelatory, not because the financial and political connections he mapped were new to them, but because Lombardi showed them an elegant way to array disparate information and make sense of things, which they thought might be useful to their security efforts. I didn't know whether to find that response comforting or alarming, but I saw exactly what they meant."

> Michael Kimmelman Webs Connecting the Power Brokers, the Money and the World NY Times November 14, 2003

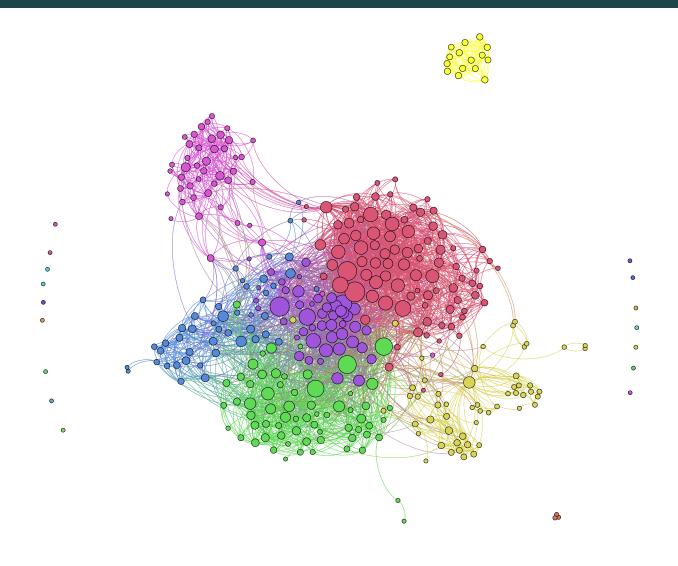
# Political blogs



## Organizations

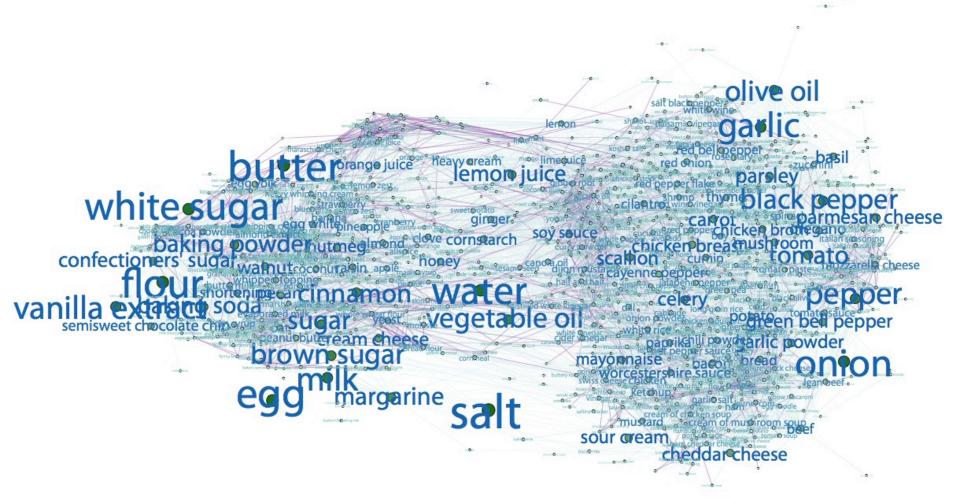


### Facebook networks



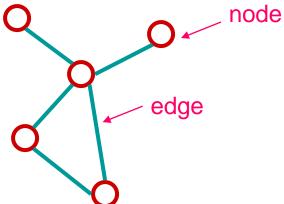


#### Ingredient networks



#### What are networks?

Networks are sets of nodes connected by edges.



points	lines	
vertices	edges, arcs	math
nodes	links	computer science
sites	bonds	physics
actors	ties, relations	sociology