

Structural Holes Notes

Overview: This is a particular argument in a wider field about the role of social networks. The argument turns on how individuals gain advantage through the structure of their networks.

I. Some key background ideas:

Social Networks are systems composed of people and the links that create relations. These range from social networks to business networks to kinship networks, and are fundamental to our understanding of social order, action & identity.

“To speak of social life is to speak of the association between people – their associating in work and in play, in love and in war, to trade or to worship, to help or to hinder. It is in the social relations men establish that their interests find expression and their desires become realized.”

Peter M. Blau

Exchange and Power in Social Life, 1964

If we ever get to the point of charting a whole city or a whole nation, we would have ... a picture of a vast solar system of intangible structures, powerfully influencing conduct, as gravitation does in space. Such an invisible structure underlies society and has its influence in determining the conduct of society as a whole."

J.L. Moreno, *New York Times*, April 13, 1933

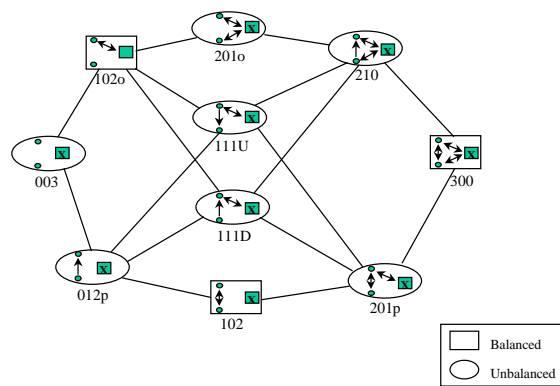
Homophily: The tendency for attributes to correlate across relations: we are similar to our friends for most attributes you measure.

Why? 3 explanations:

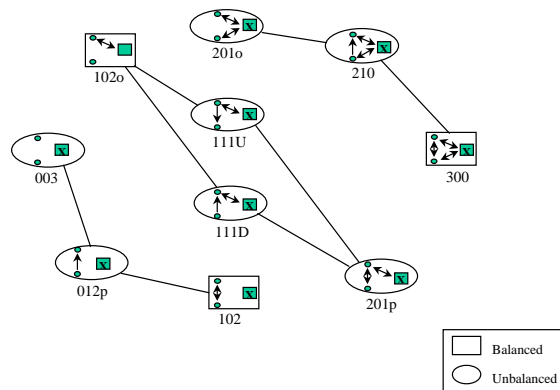
- a) Social Organization: Social systems sort people into similar situations (think of redlining in neighborhoods)
- b) Social Balance: We prefer people like us because it makes negotiating differences simpler. (Recall the basic balance model)

There are more options if the attributes are changeable:

Changeable attributes:



Fixed attributes:



- c) “Selection & Influence” – people change each other and seek out similar alters.
- d) Ecologies of relations (McPherson, Bourdieu, Blau)

A generalization of this idea is Bourdieu’s Habitus: if we share a habitus we can communicate easier, and this facilitates interaction. Similar ideas are given by

McPherson & Blau in an ecology frame: that we seek out niches in attribute space.

Strength of Weak Ties: A famous idea from Granovetter, that you get most of your benefit in networks from weak ties rather than strong ties. Why?

Because your strong ties know all the stuff you know, so there's no new information advantage. Burt is arguing that he is providing the actual causal mechanism behind SWT.

II. Structural Holes.

a. Social Capital

The chapter is about how "...social structure renders competition imperfect by creating entrepreneurial opportunities for certain players and not for others" (p.8)

Investment return is a function of human, financial and social capital. The three work together to create profit.

Social capital differs from human capital in that (a) it is jointly owned, (b) social capital governs the "rate of return" in markets; this is so because SC provides the opportunities to invest.

Two reasons soc cap matters: Who & How

- a) Who: network as access to people with particular resources – conduit effect, networks provide a means to a resource
- b) How: networks are a resource in-themselves. Here the structure itself is important (larger networks, for example).

Combine for a general def:

"Social capital is at once the resources contacts hold and the structure of contacts in a network. The first term describes whom you reach. The second describes how your reach." p.12

Burt focuses on the *structure* (how)

b. Two sources of social capital benefits

1. Information

Access: simply receiving a valuable bit of information

Timing: when needed – (which subtly turns on trust) – key is knowing in time to do anything about the opportunity.

Referrals: What you know also reveals; people know of you

1.1:

BENEFIT-RICH NETWORKS

A player with a network rich in information benefits has contacts: (a) established in the places where useful bits of information are likely to air, and (b) providing a reliable flow of information to and from those places.

You need to trust your contacts, but he's basically going to ignore that question for now, as the source is ambiguous. Instead, focus on the structural location

information are likely to air. Everything else constant, a large, diverse network is the best guarantee of having a contact present where useful information is aired. This is not to say that benefits must increase linearly

Key point is to have non-redundant contacts; contacts that bring you into a diverse information world.

The issue is opportunity costs. At minimum, the dense network is inefficient in the sense that it returns less diverse information for the same cost as that of the sparse network. A solution is to put more time and energy into adding nonredundant contacts to the dense network. But

This gives rise to the notion of *structural hole* the gap between actors:

Structural Holes

I use the term structural hole for the separation between nonredundant contacts. Nonredundant contacts are connected by a structural hole. A structural hole is a relationship of nonredundancy between two contacts. The hole is a buffer, like an insulator in an electric circuit. As a result of the hole between them, the two contacts provide network benefits that are in some degree additive rather than overlapping.

1.2: Empirical Indicators

Two ways to *lack* a structural hole: Cohesion & Equivalence

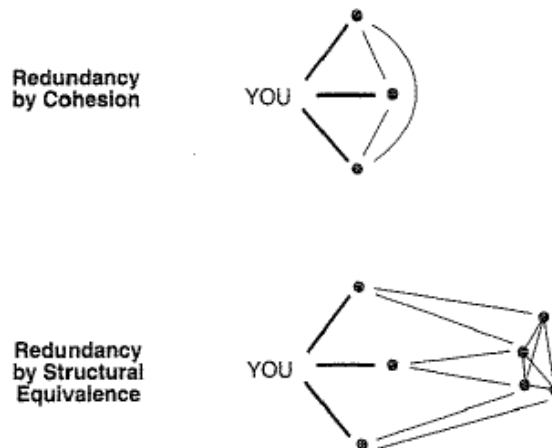


Figure 1.2 Structural indicators of redundancy

The “efficient – Effective” Network

Efficiency:

Efficiency

The first design principle of an optimized network concerns efficiency: Maximize the number of nonredundant contacts in the network to maximize the yield in structural holes per contact. Given two networks of

Effectiveness

The second design principle of an optimized network requires a further shift in perspective: Distinguish primary from secondary contacts in order to focus resources on preserving the primary contacts. Here contacts are

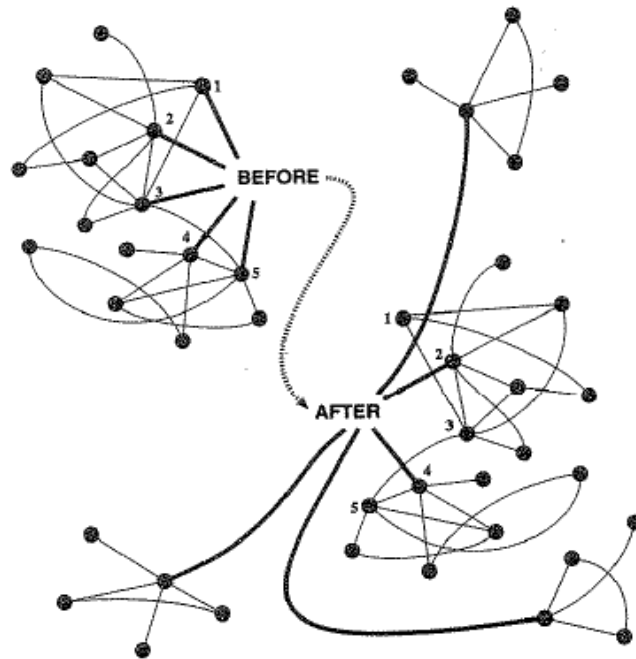


Figure 1.4 Optimizing for structural holes

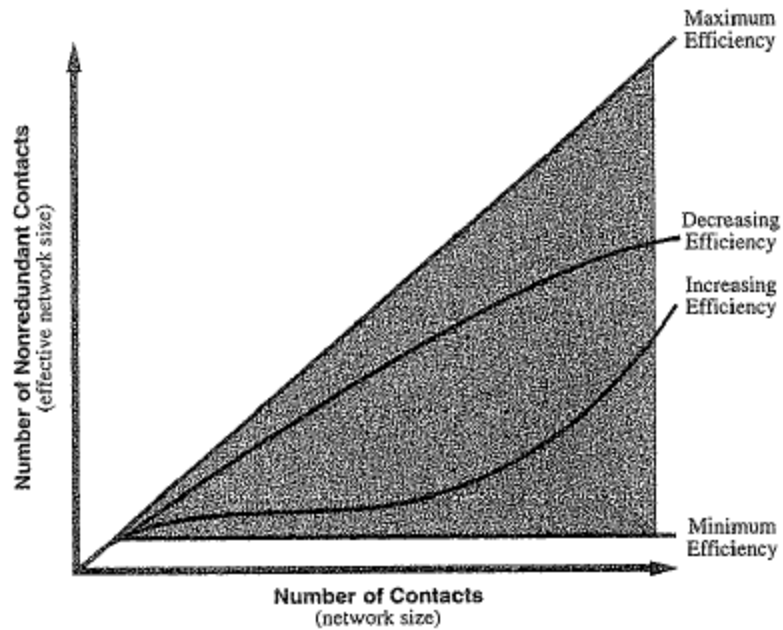


Figure 1.5 Efficiency and effectiveness

This takes him to the SWT argument:

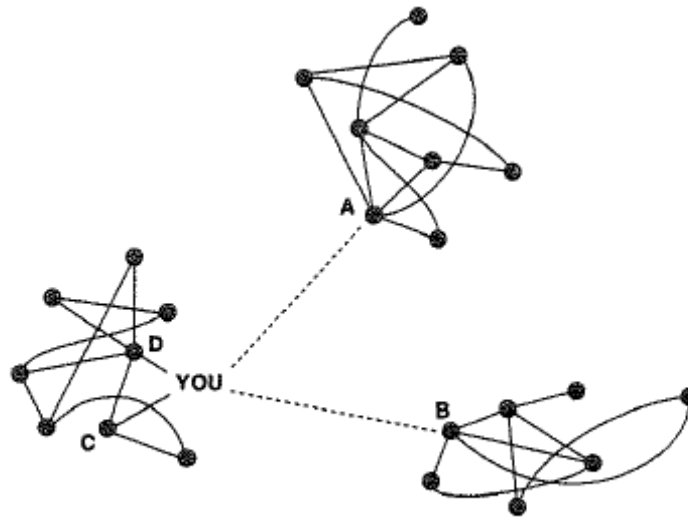


Figure 1.6 Structural holes and weak ties

Weak ties have an advantage only because they correlate with structural holes. *The key is the positioning of the tie, not the strength per se.*

2. Control:

The second way to gain benefits is through control, and this turns essentially on the *tertious gaudens* idea from Simmel.

Two forms:

- a) bridge competators on a single relation (woman and two suitors)
- b) Bridging two or more relations with conflicting demands (playing two people against each other for your benefit). This is more strategic and risky; it can easily fail (they can see your ploy and ally against you). This is simmels “divide and rule” strategy.

The control strategy only works if there is tension between the two actors; else you really just have ego against a pair of allied alters.

We expect a correlation between control benefits and information benefits.

c) Entrepreneurs

What prompts people to pursue these advantages? (the real question here, is whether this is selection or influence: is it just that successful people act this way, or does the structure create success?). Basically he sidesteps this question...

d) Secondary Holes: Extend the argument past ego’s ties to ties of ties: Secondary only refers to the remove of a hole from the central player. Primary holes are between a player’s direct contacts, secondary holes between indirect contacts. Of the two kinds of holes, the latter are the more intense.

e) Depth of structural holes: The ease with which a hole can be played for resources; turns on the combination of equivalence & cohesion”

Table 1.2 Depth of a structural hole between players

Equivalent ties to clusters	Cohesion between players	
	None	Strong
None	HOLE	SHALLOW
Strong	DEEP	NO HOLE

Cohesion defines the depth of the hole between them. In terms of a regression model, the depth of the hole between two players increases with their equivalence, decreases with the strength of relation between them, and decreases sharply with the extent to which they are equivalent and strongly connected.

f)

Structural autonomy is determined by the extent to which your environment is rich in structural holes.

omy. Players with relationships free of structural holes at their own end and rich in structural holes at the other end are structurally autonomous. These are the players best positioned for the information and control benefits that a network can provide. Structural autonomy summarizes the action potential of the *tertius*'s network. The budget equation for optimizing structural autonomy has an upper limit set by the *tertius*'s time and energy, and a trade-off between the structural holes a new contact provides versus the time and energy required to maintain a productive relationship with the contact. The summary conclusion is that players with networks optimized for structural holes—players with networks providing high structural autonomy—enjoy higher rates of return on their investments because they know about, have a hand in, and exercise control over, more rewarding opportunities.

