Wasserman and Faust Chapter 7: Cohesive Subgroups

“Subsets of actors among whom there are relatively strong, direct, intense, frequent or positive ties” (p 249)

Freidkin says to expect homogeneity amongst those who have frequent contact or are connected through other people (p 250)

Collins argues that tightly knit groups are more impacted by group standards and therefore motivated to conform (p 250)

Strive to define specific terms such as social group, subgroup, and clique as an attitude of “everyone knows what they mean is pervasive” (p 251)

4 characteristics of cohesive subgroups:
   1) Mutality of ties
   2) Closeness or reachability of members
   3) Frequency of ties among members
   4) Relative frequency of ties among members as compared to nonmembers (p 252)

A clique is a subset of at least 3 nodes that are all adjacent to each other (p 254)

Subgroups based on reachability or diameter are important because diffusion of information has been hypothesized to occur this way (p 257)

n-cliques are defined by how large the geodesic distances within the network are. This gives researchers a convenient cut off point. (p 258)

Mokken proposed 2 additional restrictions on n-cliques that created n-clans and n-clubs
n-clubs are maximal subgraph of diameter n: the distance between all of the nodes in the subgraph is <= n
an n-clan is is an n-clique that has a geodesic distance of no more than n paths within the subgraph (p 261)

Subgroups based on nodal degree require all members to be connected to at a minimum number of other subgroup members (p 263)

k-plexes are subgroups in which every member is connected to no fewer than g(s) – k members of the subgroup (p 265)

k-cores are sub groups in which each node is adjacent to at least k other nodes (p 266)

LS sets are subgroups that focus on a greater number of ties among members than among non subgroup members. Seidman defines it as:
“a set of nodes S in a social network is an LS set if each of its proper subsets has more ties to its complement within S than to the outside of S” (p 268)

Lambda sets were developed by Borgatti Everett and Shirey to stress the importance of connectivity in subgroups. The line connectivity of nodes a and b is the minimum number of lines that must be removed to destroy any connection between the two. The smaller the number, the more vulnerable the group. A lambda set is defined by any two nodes within the set having greater line connectivity than a pair of nodes consisting of one from inside the set and one from outside. Lambda sets do not overlap unless one is contained within another. Any LS set will be contained within a lambda set (p 269-270)


Addresses several factors that impact cohesiveness:
1. Attractiveness: The members might just like each other. The group may be prestigious. There may be financial rewards, etc.
2. Costs: Costs tend to be the exact opposite of attractiveness. If you don’t like the people, it has a bad reputation, or it will cost you money to join, you probably won’t
3. Cognitive Dissonance: Some groups are attractive because of their high costs. During the Vietnam war, those who were unlikely to be drafted were more satisfied with ROTC programs
4. Loyalty makes a group more cohesive, particularly if forged by struggle

Addresses the results of cohesiveness
1. Uniformity of attitudes: There was a test developed by Back that induced varying levels of cohesiveness into the groups he was studying. Those in more cohesive pairs reported feeling more pressure to agree with one another and a greater acceptance of that pressure. Similarly, Schachter conducted an experiment in which he planted three people within a conversation. The first was told to take the most popular view within the group. The second was told to start out as deviating from the group’s attitude but slowly come around and the third was told to stay deviant. Person charged with taking a deviant position was ultimately rejected by the group as they were given up on.
2. Groupthink: Janis, through studying US policy fiascoes has determined 8 symptoms of groupthink among the members of a group:

   - Over estimation of the group they are part of
   - Belief of the inherent morality of the group
   - Development of group rationalizations for defective policies
   - They rely on stereotypes of their adversary
   - Suppression of doubts about group plans
   - Believe that the group is unanimous in its decision
   - Overtly call on critics to suppress their criticisms for the good of the group
   - Sometimes appoint a mindguard who suppresses dissent
To avoid groupthink, it is encouraged for groups to enact policies that allow everyone to speak their mind.

Asks the question: Do Groups perform better than individuals?

In the matter of bias, pooling large numbers of people does not necessarily overcome a bias if it is shared by a large number of people. Conversations amongst people who share the same bias serve to perpetuate that bias.

On the matter of communication, those in egalitarian groups are the most satisfied and those in centralized groups are least satisfied. More centralized structures are unable to solve more complex problems.


Defining periphery

1) The periphery is any part of a group that is not contained within the core. The definition of core is left intentionally vague. This distance from any node to the core is defined as the shortest graphic distance from that node to any member of the core.

2) CP measure: All core members have a CP= 1 all others fall somewhere on a scale of 0-1 depending on the volume of ties between nodes.

The first definition can lead to peripheries that are quite large.

The second definition can be used to restrict the size of the peripheries.

Actors can be in more than one core and more than one periphery, these actors can exploit their position in the same way that actors with high betweeness and centrality scores can.


**Intuitive Concepts:**
A network cannot be divided into smaller, exclusive subgroups, everyone belongs to some extent or another.

Nodes cannot be members of both the core and the periphery.

Nodes that occur near the middle of a map of a network are close to not only each other but to all other nodes, those that appear further away from the center are relatively close only to the center.

**Discreet Model:**
The concept that a node either belongs to the core or not.
Periphery nodes do not connect with other periphery nodes

*Continuous Model:*
The partition based model (discreet) has a weakness in that it only has 2 categories
We can have three categories: Core, semiperiphery, and periphery
This is reasonable but would be very hard to implement, and would only get harder if you added more classes
An alternative approach would be to assign each node a “coreness” score that would determine where it fell on the continuum of core-periphery

*Coreness and Centrality:*
It is pretty hard to miss that the idea of coreness is the same as that of centrality and very similar to that of degree.
The authors view coreness measures as centrality measures but do not necessarily find the opposite to be true.


*Purpose and objectives*: This paper identifies, describes and explains the basis of discrete networks among state supreme courts for communication of legal precedent. In order to analyze these networks, the author investigates “connectedness” (who cites whom) and “structural equivalence” (which sets of courts adopt similar patterns of citation).

*Theoretical framework*: Prior literature has established a tradition of regionalism: policy makers emulate national and regional leaders. Neighboring states often borrow policies based on the belief that the characteristics and problems of these states are sufficient to justify borrowing. Prior studies have identified this trend in legal borrowing as well, although a weaker role within appellate courts.

*Data and methods*: Count of references made in all 50 state supreme courts plus the court of appeal for DC in 1975. These data were tabulated in a 51x51 matrix containing the number of times one supreme court cited another, weighted by the total number of interstate citations made per state. Data were analyzed for configurations of social cohesion and structural equivalence. Social cohesion measures direct ties. Structural equivalence measures similar connections instead of direct ties. Finally, the author uses discriminant analysis to account for cluster relationships.

*Results: Social cohesion*: As expected, proximal and regional states share more direct ties with each other than states further apart from each other. The discriminant analysis indicates that judicial prestige and legal professionalism divide cliques. Wealth and caseload create cliques. Innovativeness, legal capital and progressivism provide some leverage for a clique. Population bears little relationship on cliques. Structural equivalence: Prestigious, affluent and large states tend to share similar status. The discriminant analysis supports prestige as a driving factor. Regionalism is a better indicator of structural equivalence than social cohesion.
Significance: Social, political and economic forces explain social cohesion, direct ties, between state supreme courts. However, prestige and legal forces explain similar patterns of citations more accurately.


Purpose and objectives: This paper investigates the degree of integration among the political elites in the United States.

Theoretical framework: Prior literature has theorized both a strongly integrated as well as a pluralist (low integration) political elite in the US. Integration is measured as social homogeneity, value consensus and personal interaction.

Data and methods: American Leadership study 1971-71; survey of 545 leaders of key institutions. The sample includes a snowball sample of 61 opinion-leaders. Integrated networks are identified as groups through which communication can spread easily from one of its parts to another. 32 cliques and circles emerged, identified through centrality. Cohesion was identified as the integration of each member into tightly knit groups with other members.

Results: A total of 876 networked and 65 isolated individuals were analyzed, resulting in 32 circles. The 32 cliques were mostly small and dense, related to one narrow issue. Only 3 out of 32 have more than 10 members, the largest having 227 with no distinct unifying feature. Members of this circle appear well connected to each other. This central circle is linked to most of the smaller circles through at least one member. The central circle with its connections to smaller issue-based groups suggests that the political elites are integrated. Half of the members of this central group belong to federal political sectors. This central circle contains more influential members than the rest, as measured by their participation in certain activities of policy influence: committee memberships, Congressional testimony, and major planning organizations. Generally, center circle members do not differ statistically from non circle members with regards to social status (parents’ SES, enthoreligious status and education), with the exception of labor leaders, who tend to come from lower SES origins than other leaders. Furthermore, center circle members are not more likely to be members of social clubs, with the exception of business leaders who tend to participate more frequently in social clubs.

Significance: The political elite in the United States appear to be highly integrated, although this integration does not appear to be linked to members’ social origins or affiliations. While other studies have identified that social origins are related to attaining elite political status, once such a position has been attained, social origin appears to be of little consequence. As a result, the center circle appears to be broad and inclusive.


Purpose and objectives: This paper investigates the influence of the Internet on policy processes:
that is, the methods by which policies are discussed, debated, evaluated, and eventually made. Preliminarily, the Internet appears to reinforce existing patterns of authority and influence.

Theoretical framework: Prior literature has identified policy networks as sets of interdependent organizations with an interest in public decisions within a specific policy area. Resource dependency theory has identified resources as determinants of influence. The Internet may impact material-institutional resources by extending or diminishing their impact. However, if the Internet impacts most organizational resource equally, then the effects are moot. This analysis seeks to understand the impact of the Internet on social structural resources: a persistent pattern of communication and resource exchange. Communication ties are created to maintain and coordinate resources, reduce uncertainty and fulfill roles. The Internet may have served to facilitate 1) greater inclusiveness, 2) stalemate or 3) greater exclusivity based on the interplay of technology, material-institutional resources and social structural resources.

Data and methods: Five types of data were collected on 2 policy networks: adult basic education (ABE) and mental health (MH): network, compositional, observational, survey and interview data. A realist perspective identified 28 actors in the ABE network and 40 actors in the MH network. Most informants were CEOs or CFOs. Network data included routine and confidential communication via non-Internet and Internet modes. Compositional data collected information about communications between organizations. The ABE network was composed of those who control and those who seek state funding. The MH network consisted of providers and a more diverse set of clients. Data were collected in 1998.

Results: Findings support hypothesis 3) the impact of the Internet has generated greater exclusivity.

- Finding 1 The Internet has not broadened participation.
- Finding 2 The Internet is not being used to create new relationships within the network.
- Finding 3 The primary users of the Internet are those network members who are highly influential and well positioned structurally.
- Finding 4 The members of the cores, consciously and unconsciously, construct barriers to entry.
- Finding 5 Use of the Internet to mobilize mass constituencies seems to be unrelated to structural position and only affects influence rankings in certain circumstances

Significance: These results indicate that the Internet has not broadened democratic participation in the policy process. Several limitations to generalizability are observed: in 1998, the internet was not as widely used as it is now; the state studied represented a small geographic area; both of these networks are heavily reliant on the state for funding; state funding was high rather than limited. Scarce resources may alter the outcomes. Future studies should include geographic diversity in the states studied, substantive diversity in the networks studied, and longitudinal study of the states and networks selected.