

# Inter-Group Relations

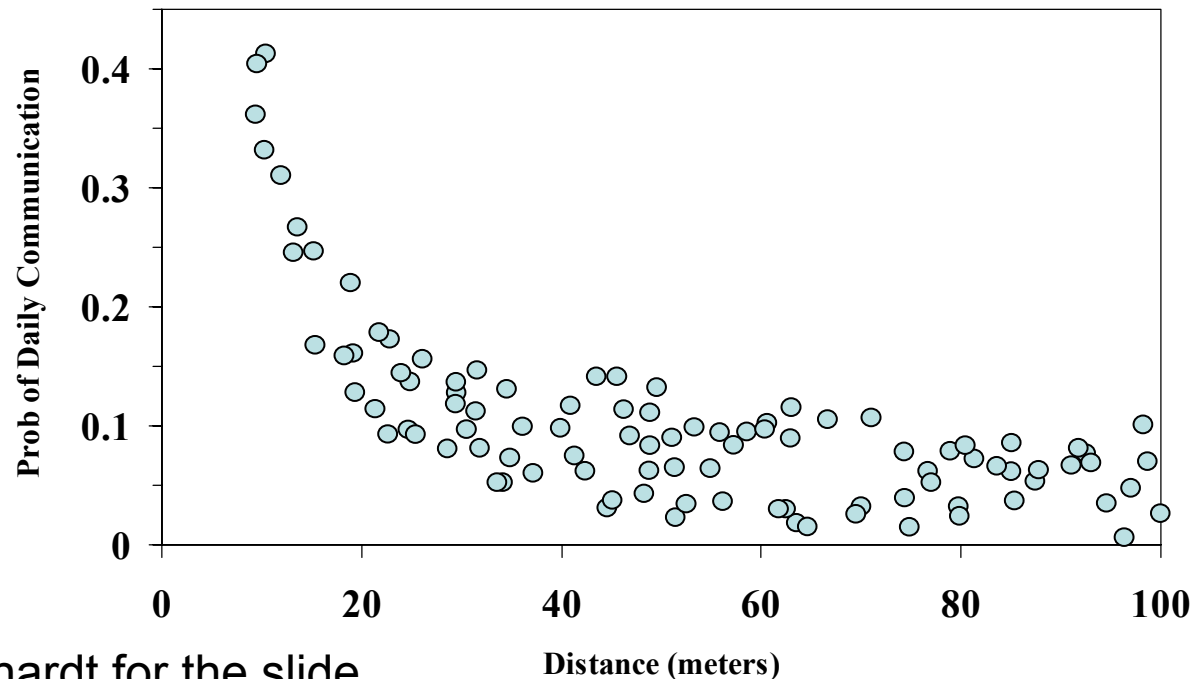
## Marsden & Krackhardt-Stern

Steve Borgatti

Mb 109

# Ties across boundaries

- Homophily strongly structures human interaction
  - Temporal/spatial propinquity
  - Social categories such as age, sex, education, race, religion
  - Organizational categories such as department, unit, division, etc.



# Gender

Who do you discuss important matters with?

	Male	Female
Male	1245	748
Female	970	1515

# Race

Who do you discuss important matters with?

Race	White	Black	Hispanic	Other
White	3806	29	30	20
Black	40	283	4	3
Hispanic	66	6	120	1
Other	21	5	3	34

# Religion

Who do you discuss important matters with?

Religion	Protestant	Catholic	Jewish	None	Other
Protestant	2129	305	22	83	30
Catholic	241	790	24	41	13
Jewish	13	7	68	5	1
None	92	66	12	131	14
Other	27	11	1	4	37

# Age

Who do you discuss important matters with?

Age	< 30	30 - 39	40 - 49	50 - 59	60 +
< 30	567	186	183	155	56
30 - 39	191	501	171	128	106
40 - 49	88	170	246	84	70
50 - 59	84	100	121	210	108
60 +	34	127	138	212	387

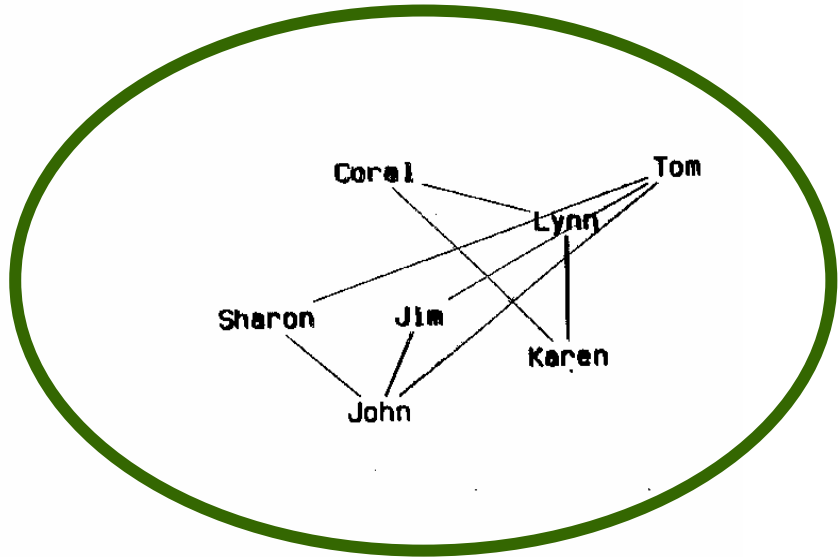
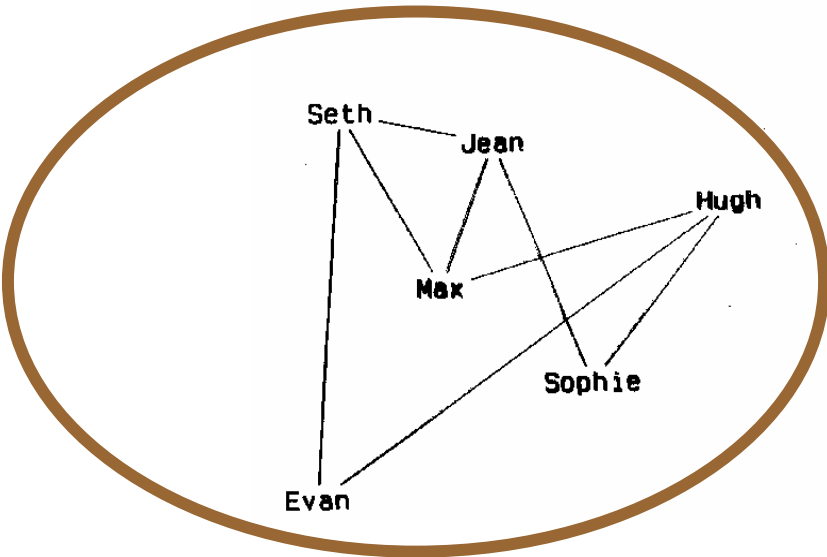
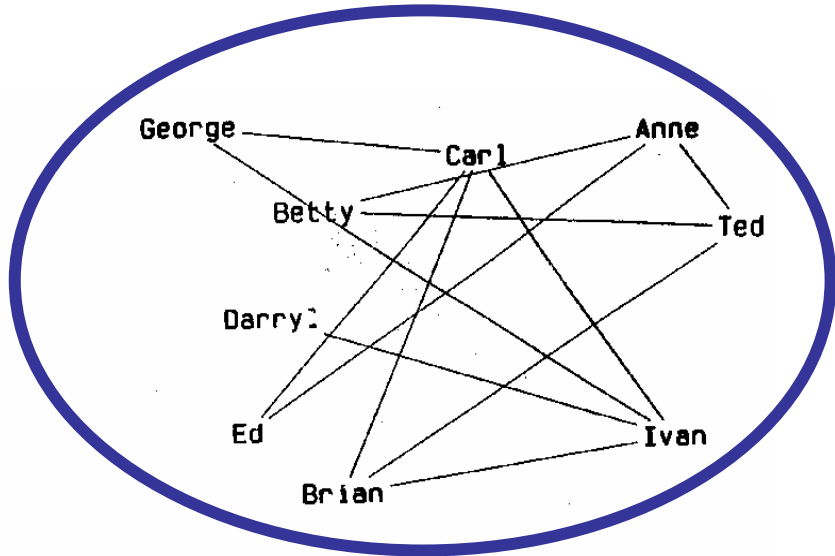
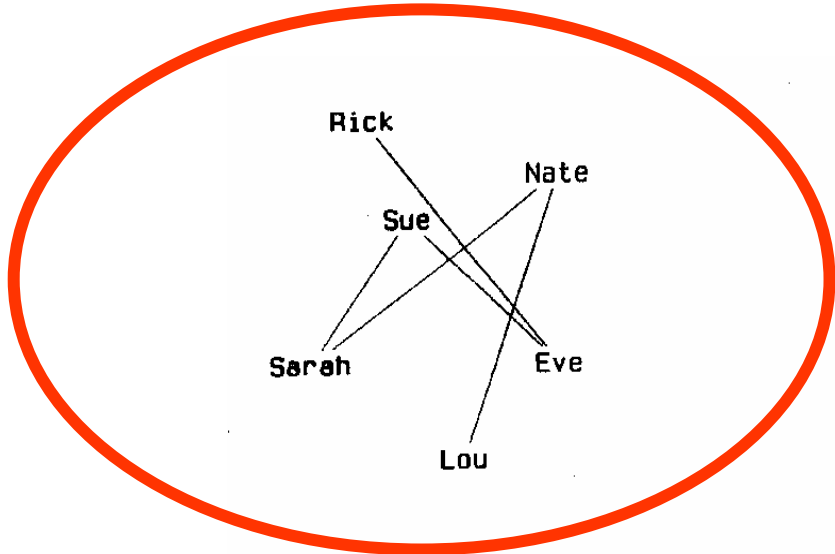
# Krackhardt & Stern E-I Index

- We can measure the relative homophily of a group using the E-I index

$$\frac{E - I}{E + I}$$

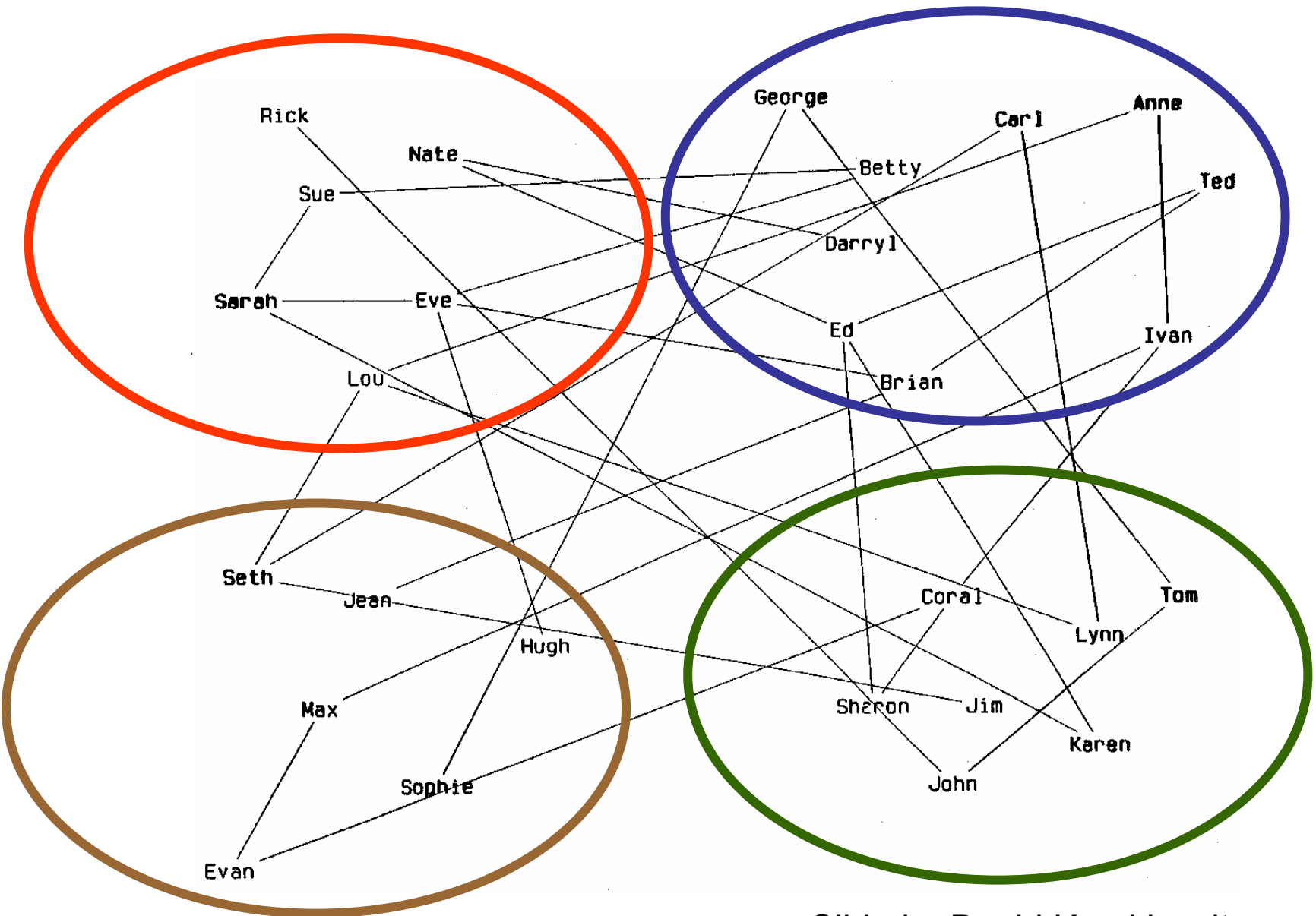
- E is number of ties between groups (External)
  - I is number of ties within groups (Internal)
- Index is positive when a group is outward looking, and negative when it is inward looking
  - E-I index is often negative for close affective relations, even though most possible partners are outside a person's group

# The Natural Organization





# The Optimal Organization



Slide by David Krackhardt

# The Krackhardt & Stern Experiment

- Weekend class exercise
- Class divided into two independent organizations
  - Each subdivided into 4 departments, with some interdependencies
- A measure of overall performance which included financial performance, efficiency, and some human resource metrics
- Staffing was controlled by the experimenter
  - “natural org” placed friends together within departments
  - “optimal org” separated friends as much as possible (high E-I value)
- As they went along, the experimenter introduced organizational crises, such as imposing layoffs

# From Krackhardt & Stern

Some examples will help to illustrate this difference in cooperation. At the close of the first session in Trial 1, the Red Division in (coincidentally) both organizations failed to turn in some necessary forms. The penalty for failing to do so was reasonably severe for each organization, although those in the Red Division would bear the brunt of the penalty. In both cases the members of the Red Division felt disillusioned, embarrassed, and angry, but the responses of those in the other divisions differed markedly between the two organizations. In the natural organization, the people in Red were blamed for the oversight; they were labeled as incompetents who were going to ruin the organization and were isolated from the rest of the organization. Future attempts by those in Red to help the organization were met with suspicion.

In the optimal organization, a delegation of representatives from the other divisions (who were friends of those in Red) approached those in Red to ask what had happened. Red replied that they were simply unaware of the rule that had required the forms to be turned in. (The same lack of awareness was responsible for Red's mistake in the natural organization.) The group asked if there was anything it could do to help Red at this point. It was decided jointly to spread out the penalty in such a way as to minimize the impact on the organization as a whole, rather than to let Red suffer the penalty alone. By the middle of Session 2, those in Red were integrated into useful roles throughout the organization.

Production in the optimal organization was not confined solely to efforts of the assigned production units. An integrative form of subcontracting developed in which the Red Division, job- and resource-poor, was given puzzles to solve on commission. Red borrowed funds from other units to supplement what little money they owned, and had the production units buy them puzzles. The return on solved puzzles was split among the production units and the Red Division. In the fourth round of this trial, several diaries show that staff units loaned funds to the production units to purchase raw materials. Units in the optimal game also began to pool resources for reinvestment in the firm as early as Round 2. They cooperated in an effort to deal with the unexpected absence of a unit head, which could have cost the entire group available resources and opportunities.

This cooperative effort contrasts sharply with events in the parallel natural organization. Two production units that must cooperate were merged through the actions of one of those units and then changed their name to Supercomtin. One member's diary for Session 3 says, "I really do think we are the most important (unit). We are really tight now. We have decided to stay together no matter what. It is also evident that the rest of the organization is against us."

During this trial, both groups were presented with a high-risk opportunity to expand their markets and to make a substantial improvement in performance indicators. Chance of success was only 50 percent, however, and failure meant a major decline in the indicators. In the optimal organization, the unit heads sent delegates to a meeting arranged by the communications unit and decided that they were doing well enough and should not take the risk. The natural organization proceeded in a dramatically different manner. The unit with information on the current indicator levels decided that for the "good of the organization" the market expansion should be attempted. The members of the unit drafted a statement which they read to other units, telling them that the group could afford to take the risk and would be all right even if the attempt failed. In order to persuade the other units, the communication group presented false information to the others regarding current indicator levels.

One diary describes this episode by saying, "Crunode [communication] was lying about some of the indicators in order to get the other units to contribute to the investment." Then she points out that there was "complete lack of trust and sympathy between Emrel [personnel], Crunode and Comtin [production] which I understand since Crunode has been totally dishonest with us all until now."

# Krackhardt & Stern Results

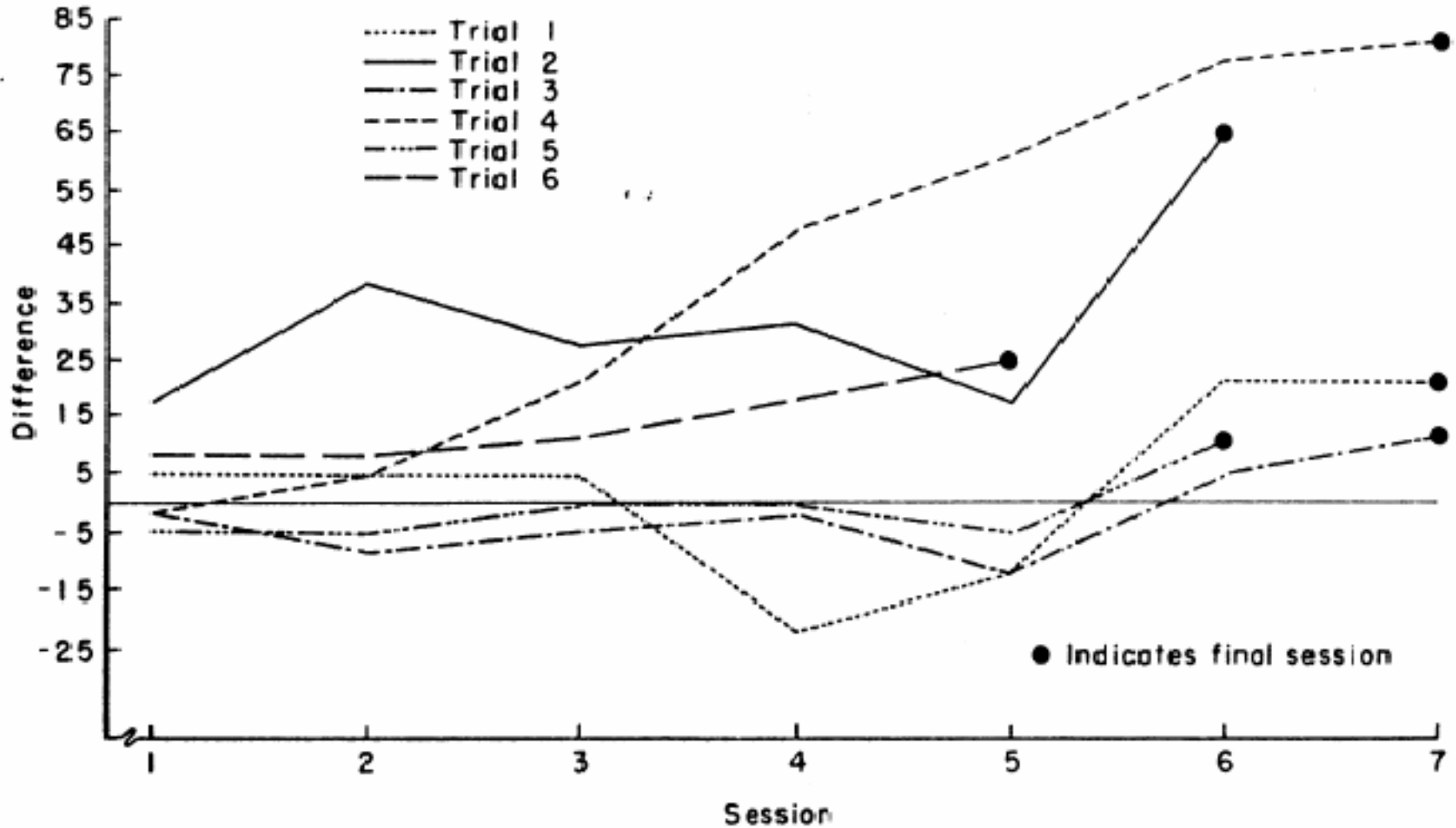
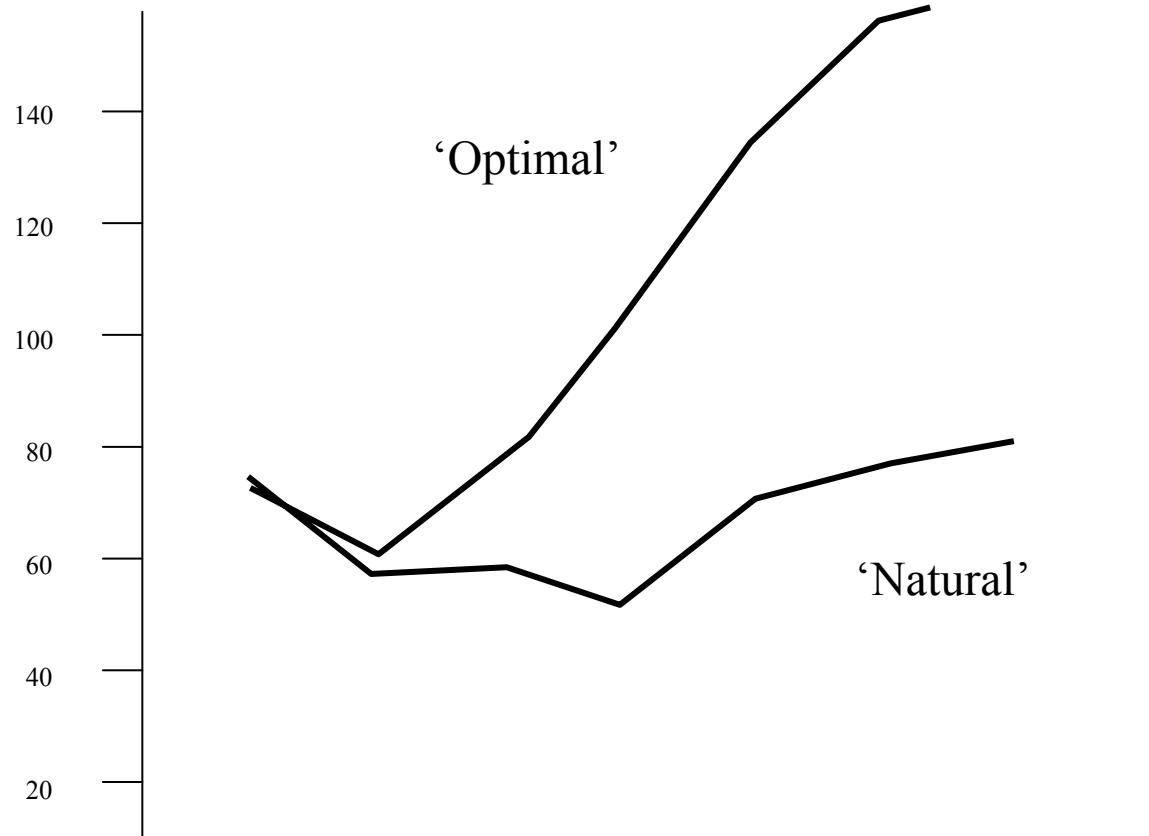


Figure 1. Difference between Optimal and Natural Performance Indicators for Each Session in Each Trial

# Results for best trial



6 trials at 3 universities. Results shown for most dramatic trial.

# Why?

- In crisis, the organization needs to pull together\* across departments
- But when you have few close ties across departments
  - The tendency is opposite – start retrenching, pointing fingers
- When you have lots a friends across departments,
  - you trust them not to screw you, and
  - you are more inquiring and willing to share needed information than blaming and hoarding