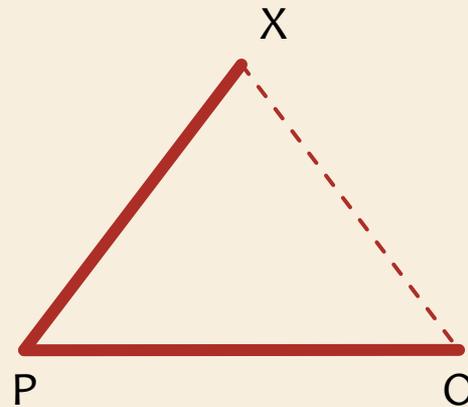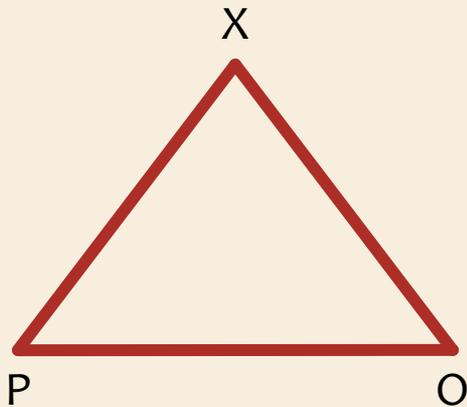# Socio-Cognitive Balance Theory

Samuel Freilich
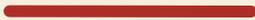
Social Network Theory

- Gestalt theory, Wolfgang Kohler (1930s)
- Jacob Moreno's sociogram (1933)
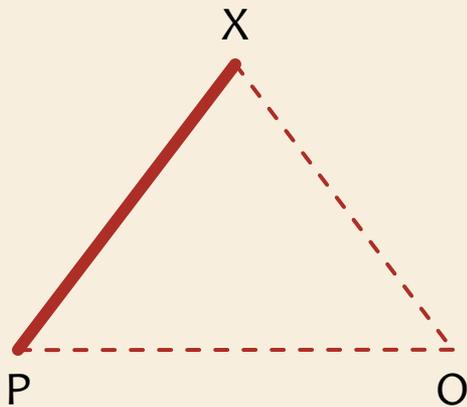- Applying graph theory to social science
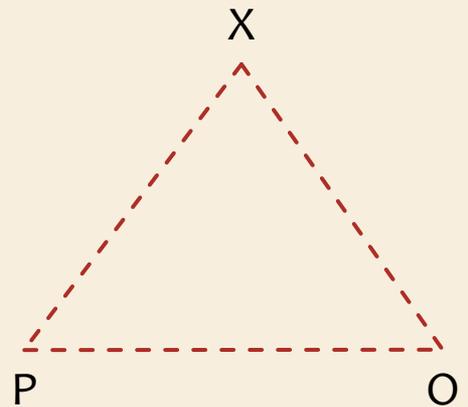
Heider's Balance Theory (1946)

P = Person
O = Another Person
X = Something Else

Balanced

Unbalanced

Like

Dislike

Associated

Not Associated

Examples

- Unbalanced
  - Paul likes Oliver, Oliver likes Xavier, Paul dislikes Xavier

- Transition to Balanced
  - Paul convinces Oliver that Xavier is a jerk
  - Xavier convinces Oliver that Paul is a jerk
  - Oliver convinces Paul that Xavier is all right

More Examples

- Unbalanced
  - Paul, Oliver, and Xavier all dislike eachother
- Transition to Balanced
  - Paul and Oliver bond over their mutual dislike of Xavier
- Balanced
  - Paul and Oliver both dislike Xavier

Cartwright and Harary's Generalization (1956)

- Heider's theory applied to larger graphs
- Social networks only
- Structure theorem (two sets)
- Non-association

Balanced

Unbalanced

Like

Dislike

Associated

(No Line)   Not Associated
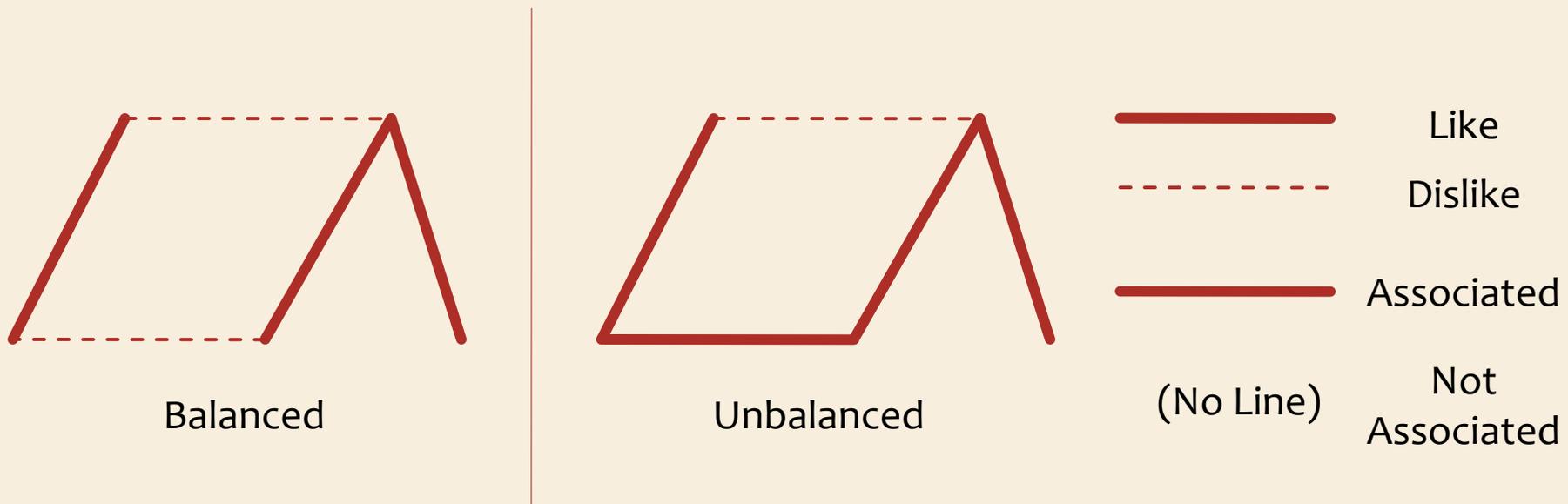
Jordan's Experiment (1953)

- Rate unpleasantness of Heiderian triads
  - Scale from 10 to 99
  - Balanced: 46
  - Unbalanced: 57
  - People prefer positive relationships
- With Cartwright and Harary's correction
  - Balanced: 39
  - Vacuously Balanced: 51
  - Unbalanced: 66

Opp's Critique (1984)

- Vague predictions
  - What forces towards balance?
  - What changes will they produce?
  - What final configurations are likely?
- Empirical verification
  - "Exceptions" rather than "falsifiers"
  - New theories not presented as challenges
- Critique of social science in general

Hummon's Simulation (2003)

- Based on Cartwright and Harary
- Agent-based model
- Still needs verification

Conclusions

- Social science and math
- Formal and informal organization
- Useful heuristic
- More to be done