



Effects of Cognitive Complexity on Network Perceptions

Melissa Dobosh

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN



www.illinois.edu

Introduction

- Past research focused on task-oriented communication in groups (Barker et al., 2000; Keyton, 1999)
- Ignoring relational dimension of groups simplifies complexity of group communication
- Important to investigate both task *and* friendship networks in groups



Network Perceptions

- Self-reports of networks do not necessarily reflect actual behavior (Krackhardt, 1987)
- Individuals tend to act based on perception, rather than what is “accurate”
- What shapes our perception?

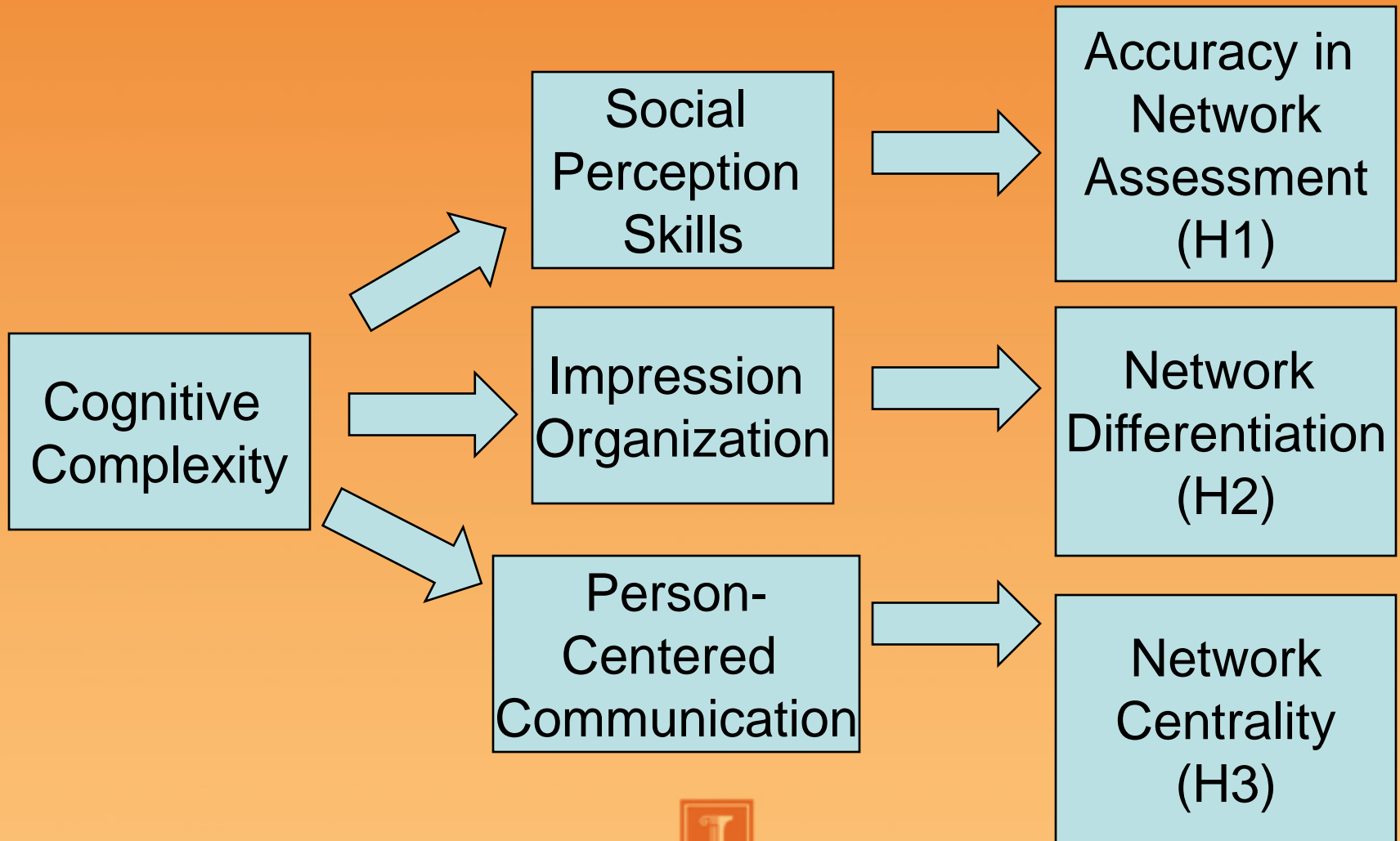


Cognitive Complexity

- Individual difference variable linked to...
 - Social perception skills (Burleson, 1994; Hale & Delia, 1976)
 - Impression organization (O'Keefe 1984; O'Keefe & Delia, 1982)
 - Person-centered communication (O'Keefe & McCornack, 1987; Burleson & Samter, 1985)
- Cognitive complexity may shape perceptions of friendship *and* task networks...



Effects of Cognitive Complexity on Network Perceptions



How are task and friendship networks related?

- One may take precedence in a given group
- In groups formed to fulfill relational needs, friendship networks may be more important than the task networks.
- Thus, the friendship network may drive the relationship between cognitive complexity and motivation to accurately perceive and differentiate the network ties (H4).



Data Collection

- Participants
- Procedures
 - Role Category Questionnaire (RCQ)
 - Friendship Network
 - Task Network
- Analysis
 - Cognitive Social Structures (Krackhardt, 1987; 1990; 1997)
 - *Individual slices of friendship and task networks*
 - *Locally aggregated structure (LAS)*
 - *Consensus structure (CS)*



Cognitive Social Structures

- **Individual slices:** each individual's own viewpoint about the network
- **Locally Aggregated Structure:** 2 individuals agree about their relationship
- **Consensus Structure:** general consensus from network participants about the relationship between 2 other individuals



Hypotheses

- H1: There is a positive relationship between cognitive complexity and accuracy in perceiving friendship and task networks.
 - Compare each individual's own slice with LAS
 - Compare each individual's own slice with CS
- H2: There is a positive relationship between cognitive complexity and differentiation in friendship and task networks.
 - Assess the variability of each individual's slice
 - Greater variability=greater differentiation



Hypotheses continued...

- H3: There is a positive relationship between cognitive complexity and centrality in friendship and task networks.
 - Assess centrality scores (in-degrees)
- H4: Cognitive complexity has a more pronounced impact on friendship network accuracy and differentiation than on task network accuracy and differentiation.
 - Compare friendship LAS & CS matrices to task LAS & CS matrices
 - Compare friendship individual matrices to task individual matrices



In conclusion...

- Implications for relational side of groups
- Future questions
- Questions and comments and suggestions?

