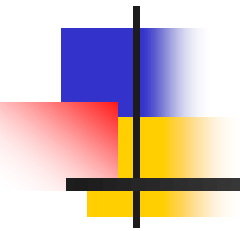
Alternative Designs

The One-with-Many Design

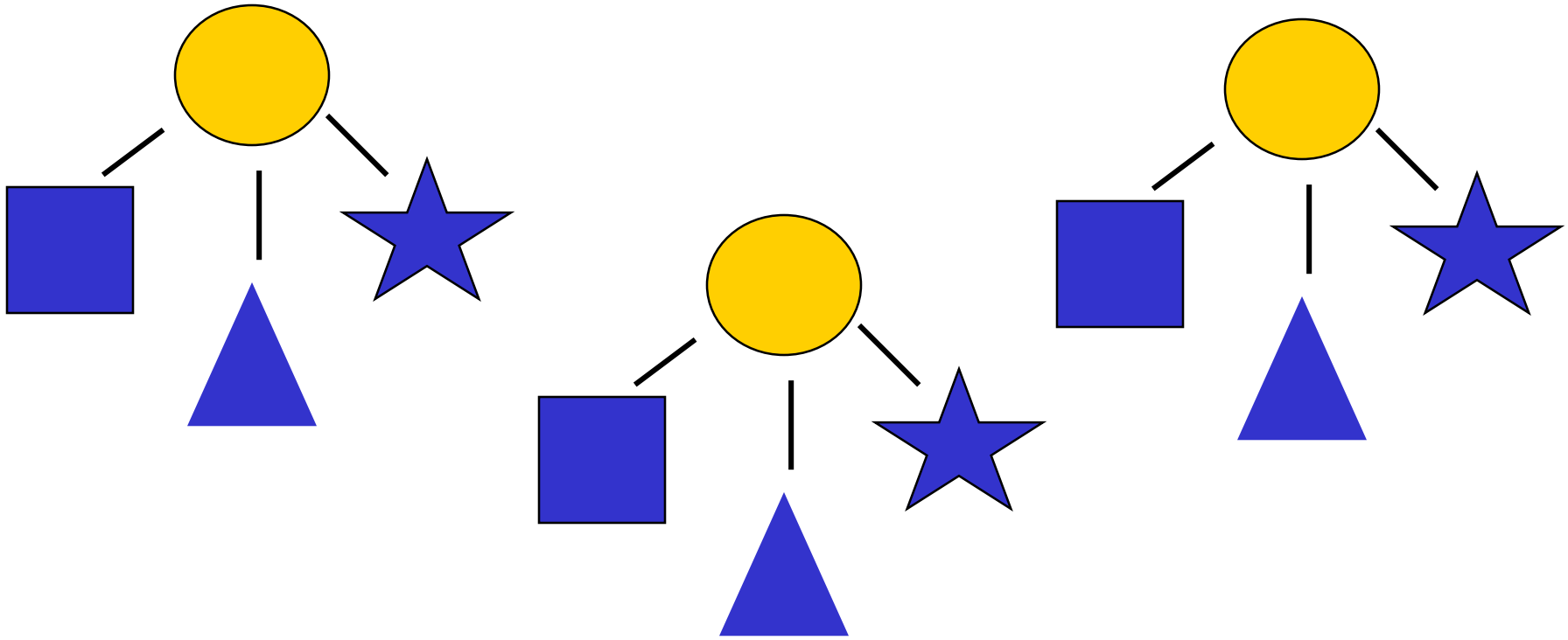


The One-with-Many Design

- A person is in multiple dyads, but each partner is in a dyad only with that person
- The "One" is the focal person
- The "Many" are the partners
- Blend of the standard dyadic design and a Social Relations Model design
- In the intergroup context, the focal person may be a member of one group (e.g., a woman), and the partners may be members of another group (e.g., men)

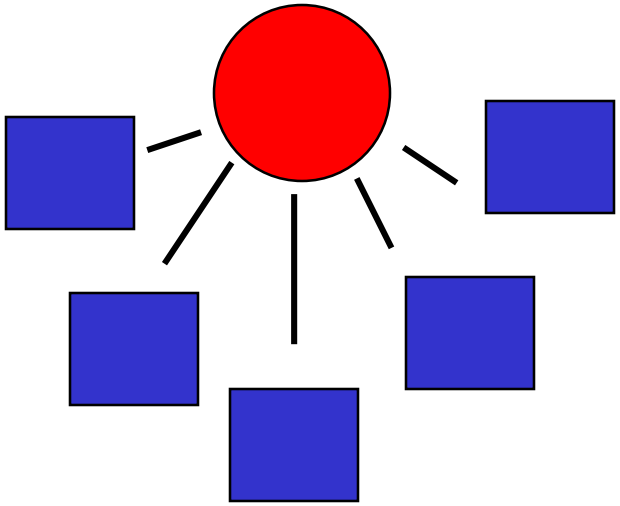
Distinguishable case:
Partners can be distinguished by roles

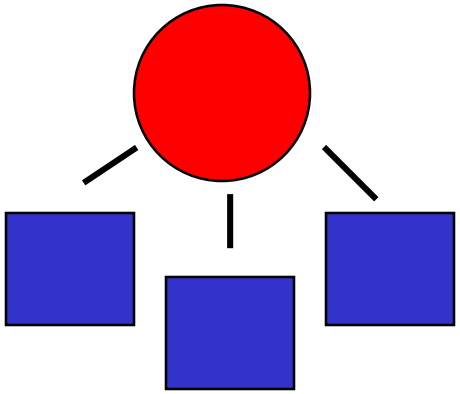
- e.g., family members (Mother, Father, Sibling)
- Typically assume equal # of partners per focal person

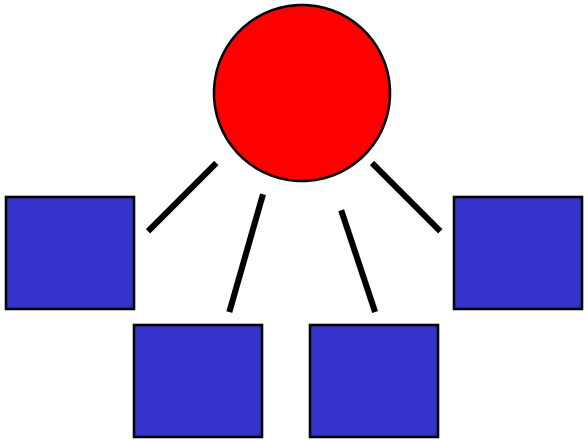


Indistinguishable case: All partners have the same role with the focal person

- e.g., students with therapist with patients; person with relationship partners; target and informants
- No need to assume equal N







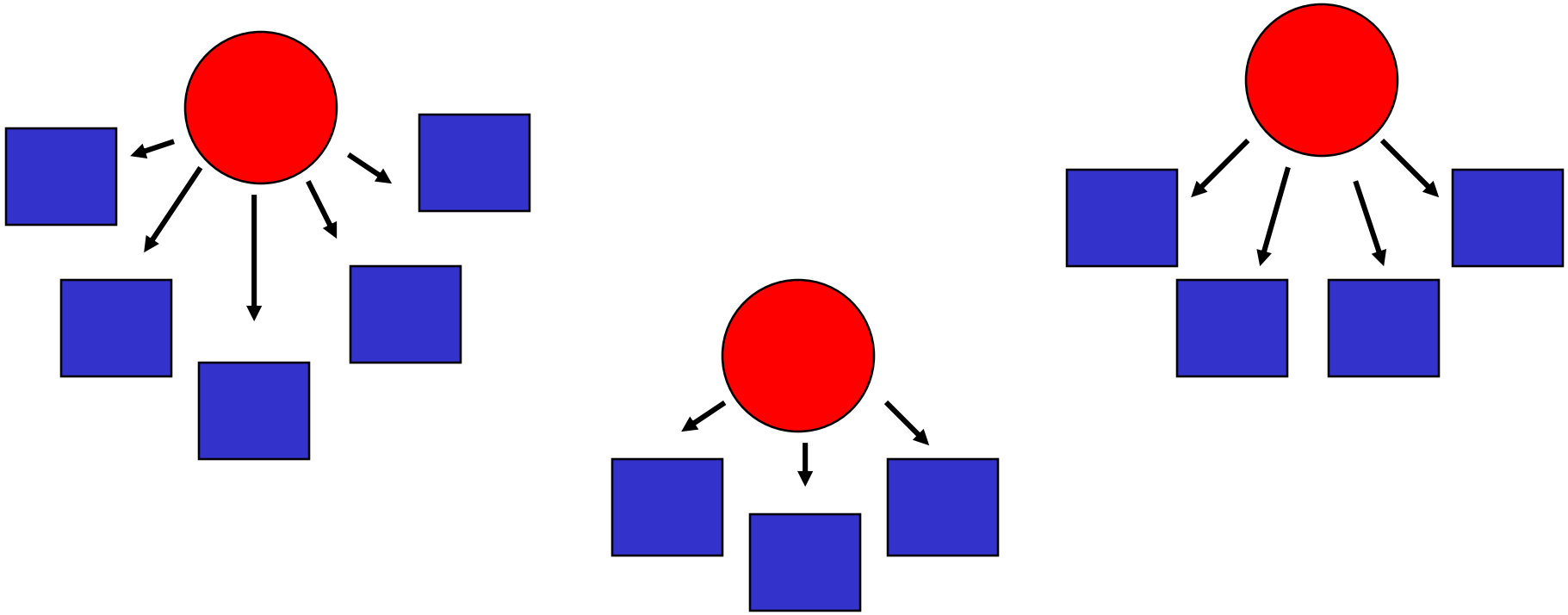
Who provides the data?

- 1PMT = 1 perceiver, many targets
  - Focal person provides data for each partner
  - E.g., teacher rates each child on agreeableness

1PMT: Focal person provides data with respect to the partners

Source of nonindependence:

- Actor effect: tendency to see all partners in the same way



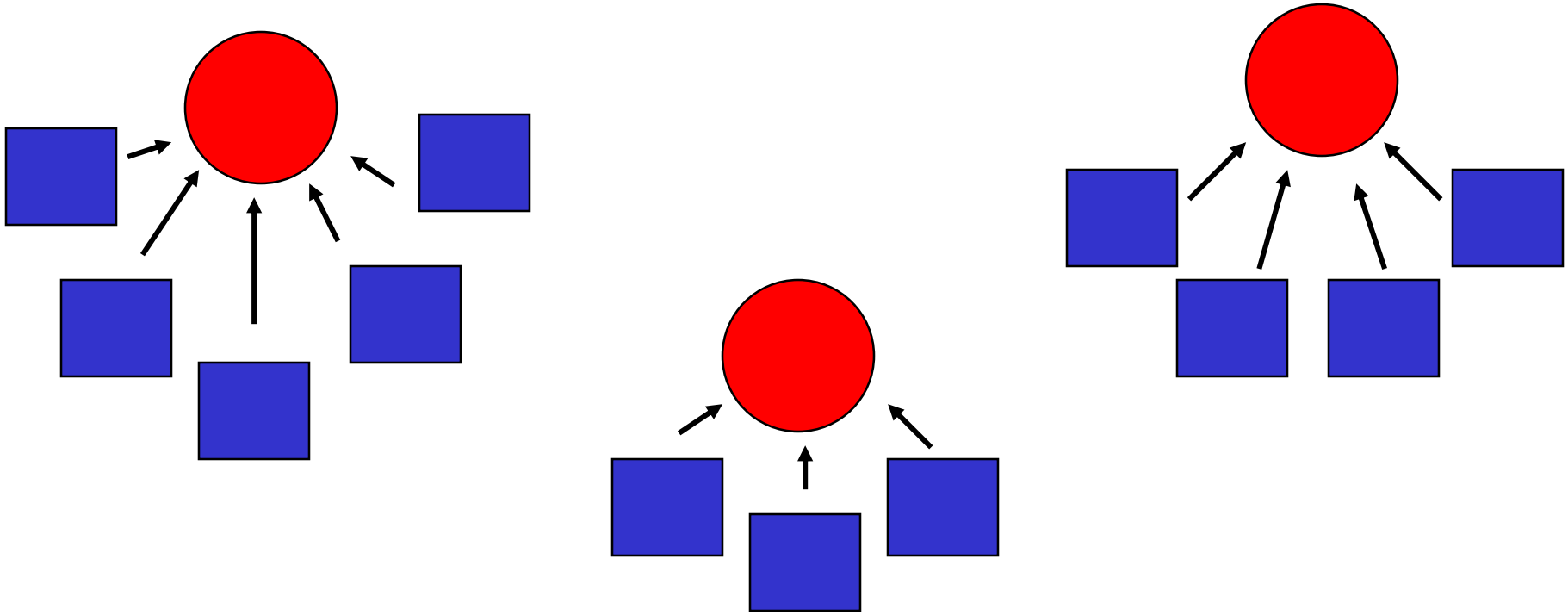
Who provides the data?

- MP1T = Many perceivers, one target
  - Each partner provides data for the focal person
  - E.g., each student in a class rates the teacher

MP1T: Partners provide data

Source of nonindependence:

- Partner effect - tendency of all partners to see the focal person in the same way



Who provides the data?

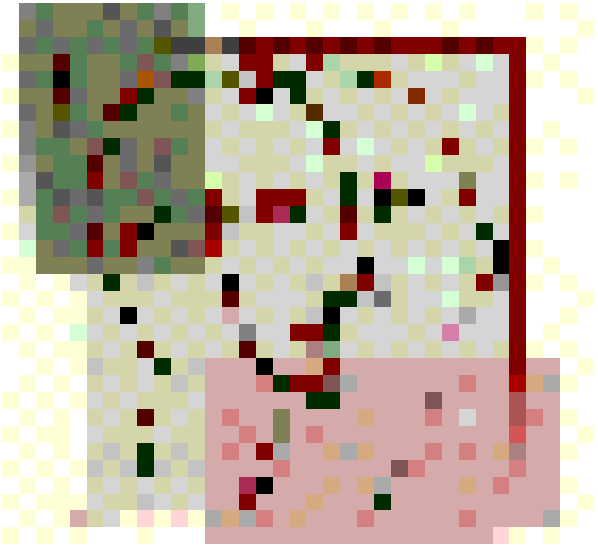
- Reciprocal or 1PMT-MP1T
  - Data are collected from both the focal person and the partners
  - E.g., Teacher rates the students AND students rate the teacher

Published Examples

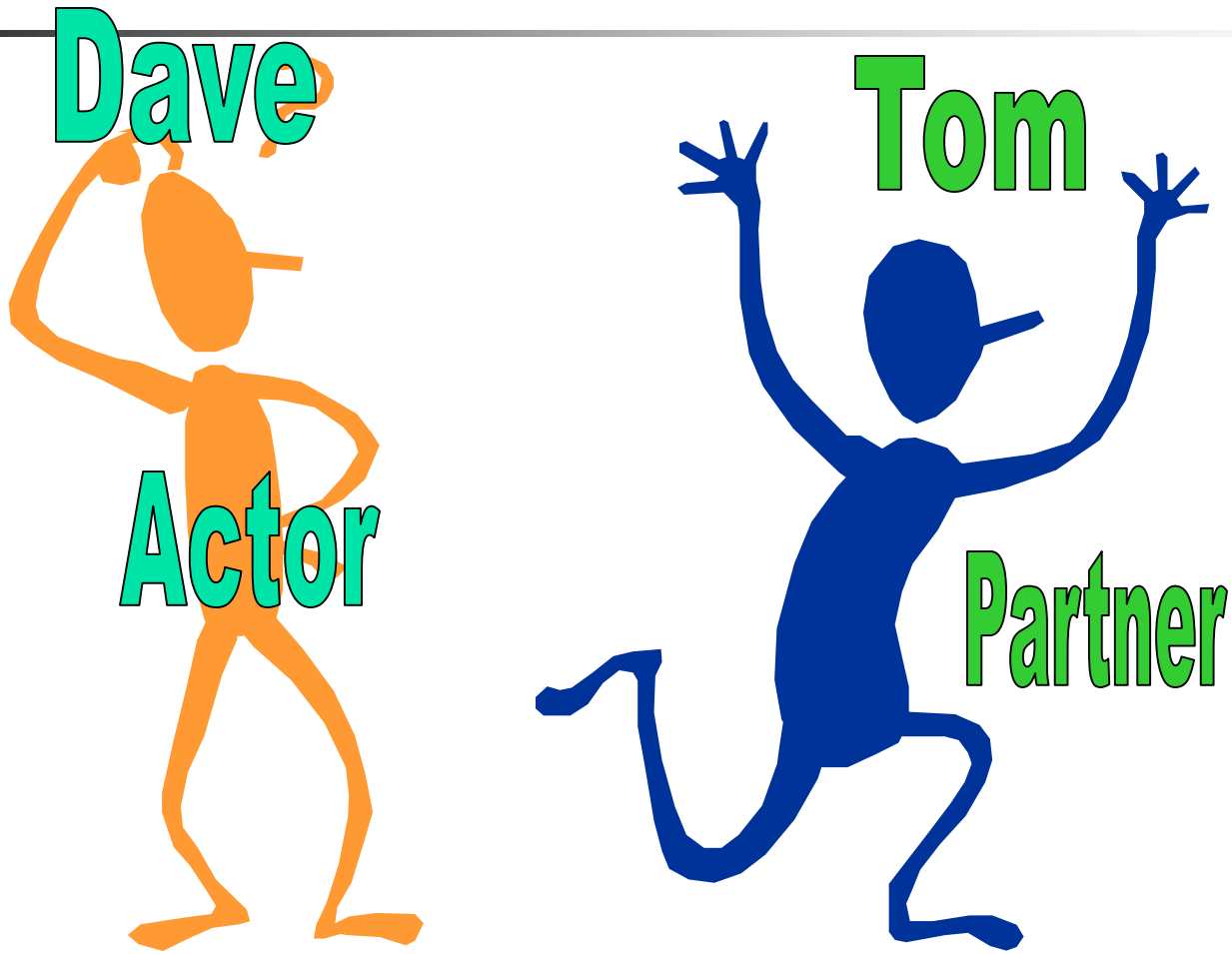
- Kenny, D. A., Veldhuijzen W., Weijden T., Leblanc A., Lockyer J., Légaré, F., & Campbell C. (2009). Interpersonal perception in the context of doctor-patient relationships: A dyadic analysis of doctor-patient communication. *Social Science and Medicine, 70*, 763-768.
- Marcus, D. K., Kashy, D. A., & Baldwin, S. A. (2009). Studying psychotherapy using the one-with-many design: The therapeutic alliance as an exemplar. *Journal of Counseling Psychology, 56*, 537-548.

- See Chapter 10 of Kenny, Kashy, and Cook (1996)

Social Relations Model



The Two Persons



Social Relations Model: Rating

How Friendly Dave Sees Tom

Actor: How friendly Dave sees others in general.

Partner: How friendly is Tom seen by others in general.

Relationship: How much Dave believes that Tom is especially friendly.

Social Relations Model: Liking

How Much Dave Likes Tom

Actor: How much Dave likes others in general.

Partner: How much Tom is liked by others in general.

Relationship: How much Dave particularly likes Tom.

Social Relations Model: Behavior

How Much Dave Gazes at Tom

Actor: How much Dave gazes at others in general.

Partner: How much Tom is gazed at by others in general.

Relationship: How much Dave particularly gazes at Tom.

Round Robin Design

Actor \ Partner	1	2	3	4	5	6
1	-	x	x	x	x	x
2	x	-	x	x	x	x
3	x	x	-	x	x	x
4	x	x	x	-	x	x
5	x	x	x	x	-	x
6	x	x	x	x	x	-

Proportion of Variance for Liking

	Actor	Partner	Relat.	Error
Liking	.18	.11	.40	.34

More Information

- Bibliography of SRM examples available at http://davidakenny.net/doc/srmbiblio.pdf or http://davidakenny.net/doc/srmbiblio.doc
- See Chapter 8 and 9 of Kenny, Kashy, and Cook (1986)

Group Actor-Partner Interdependence Model (GAPIM)

- Generalization of the APIM to groups.
- The APIM "partner effect" is called "others effect" – the effect due to OTHER members of the group.
- Traditional MLM way to study group effects is with the individual's score as well as the group's mean.
- In the GAPIM the individual's score is removed from the group mean.

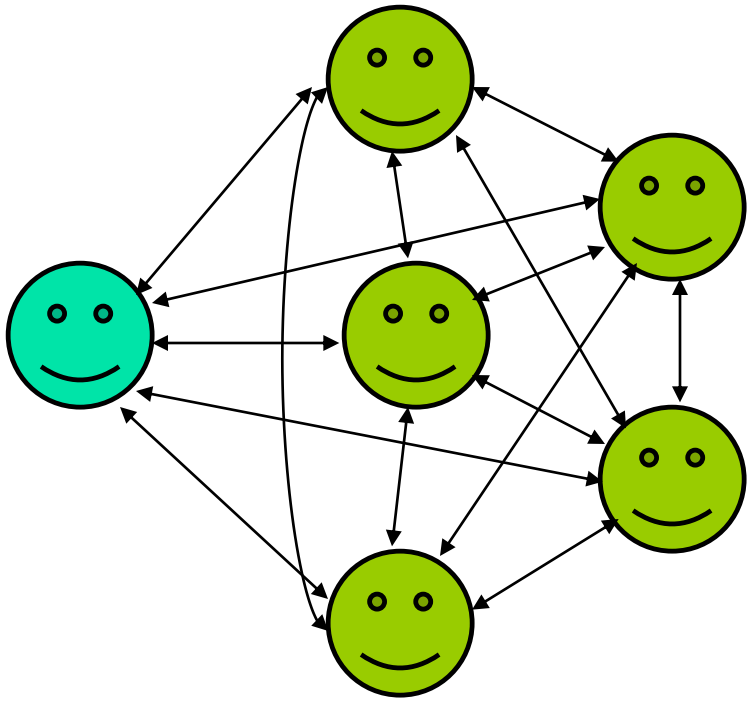
GAPIM-Individual

Actor's Gender

Others Gender

Actor's Similarity

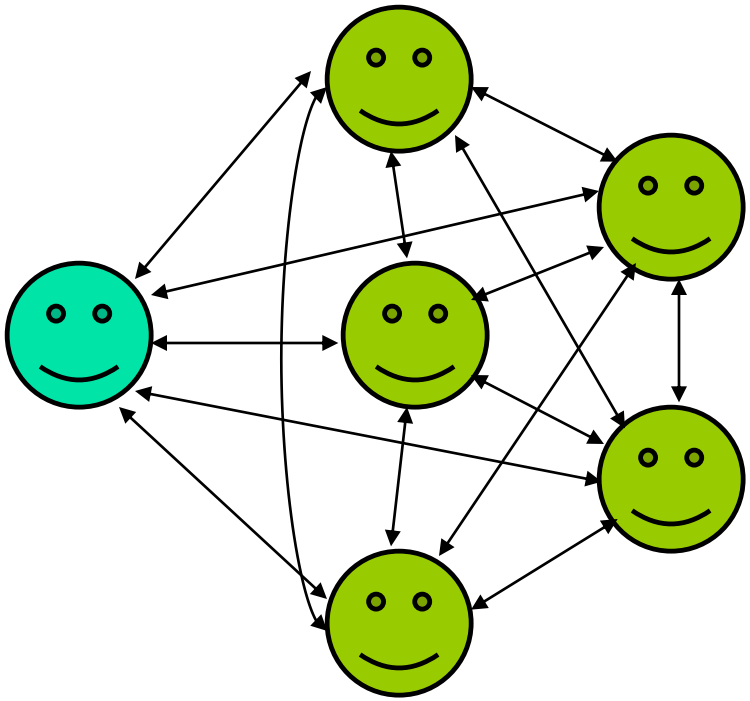
Others Similarity



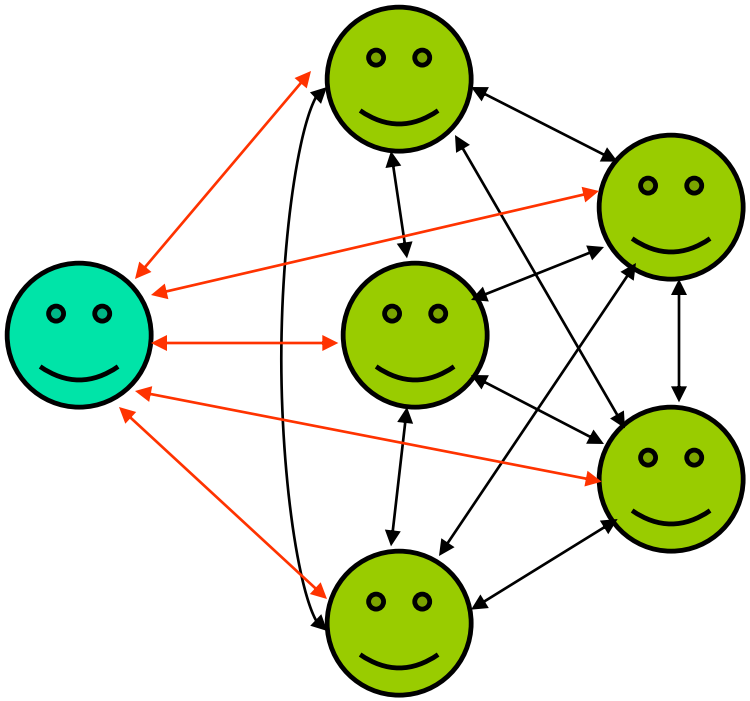
Effects in the GAPIM-I

- *Actor:* Are men (or women) more identified with a group?
- *Others:* If most of the other group members are men (or women), is the person more identified with the group?
- *Actor Similarity (Actor x Others):* If the person is similar to others, is the person more identified with the group?
- *Others Similarity (Other x Other):* If the other members of the group are similar to each other, is the person more identified with the group?

Group Diversity = the Sum of All Possible Relationships



Group Diversity = Actor Similarity + Others Similarity



GAPIM-I Example

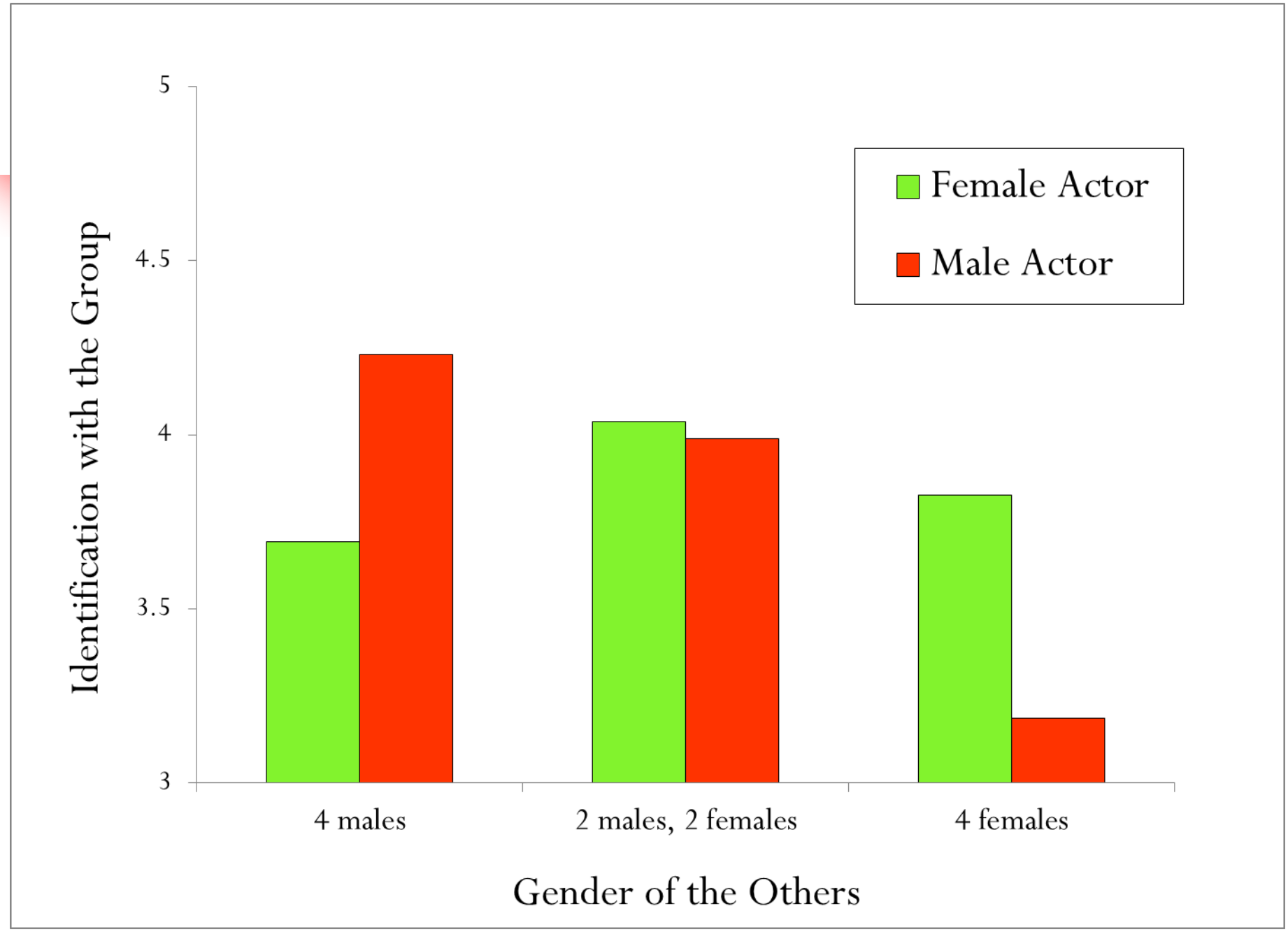
- 52 groups of 4 or 5 University of Connecticut students
- 154 women and 87 men
- Gender composition was allowed to vary
- Procedure
  - Were asked to write an individual short story about a picture
  - Group discussed "strengths" and "weaknesses" of each group member's story
  - The group wrote a group story
    - Leadership was not assigned
- Small group identification measure (adapted from Leach et al., 2008)

GAPIM-I Results of Gender on Individual Identification with Being in the Group

Model	Main Effects		Interactions		Fit
	Gender	Others Gender	Actor Similarity	Others Similarity	SABIC[b]
Main Effects Only	-0.071	0.234^{+}	0[a]	0[a]	672.818
Complete	-0.026	0.227^{+}	0.295*	-0.210	665.788
Interaction Contrast	-0.034	0.198	0.256*	-0.256*	665.224

- A group member is the least identified with the group when he or she is different from the other group members and they are all the same.

Female = -1, Male = 1 [a]Fixed to zero. [b]Smaller SABIC means a better fitting model.


Identification with the Group
5
4.5
4
3.5
3
Female Actor
Male Actor
4 males
2 males, 2 females
4 females
Gender of the Others