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Aggression, Prosociality, and Popular Status:

Selection and Influence Processes in Friendship and Affiliative Networks

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Birds of a feather…?

Beyond Homophily

- Default selection rather than homophily explained friendship among aggressive children
(Sijtsema, Lindenberg, & Veenstra, 2010)
- The role of network structure, gender, and popularity status
(Dijkstra, Cillessen, Lindenberg, & Veenstra, 2010 ;Dijkstra, Berger, and Lindenberg, 2011; Snijders, Bunt, Steglich, 2010; Witvliet et al., 2010)
- Heterogeneity in the peer group
(Farmer et al., 2001)

The Present Study

- Questions:
  1. How attractive are popular peers?
  2. Homophily in popularity > homophily in aggressive or prosocial behavior?
  3. Socialization of popularity and its effect on aggressive and prosocial behaviors
- Friendship and affiliative networks (Gest, Moody, & Rulison, 2007; Rodkin & Ahn, 2009)

Popularity and Peer Selection

- Priority of status peak as children reach adolescence(LaFontana & Cillessen, 2010)
- One could improve his/her status by forming close affiliation with popular peers (Dijkstra, Cillessen, Lindenberg, & Veenstra, 2010)

Hypothesis:

Children would select popular peers as their friends or affiliates, regardless of whether these peers were aggressive or prosocial

Popularity and Peer Group Formation

- Friends were similar in their perceived popularity (Rose, Swenson, & Carlson, 2004, Marks, Cillessen, Crick, 2012)
- Friends were more similar in terms of their status than in terms of their behaviors (Witvliet, et al., 2010)
- Homophily in aggressive behavior disappeared when popularity was taken into account (Dijkstra, Berger, & Lindenberg, 2011)

Hypothesis:

Homophily in popularity would be stronger compare to homophily in aggressive or prosocial behavior

Popularity and Socialization

- Popularity was contagius (Marks, Cillessen, Crick, 2012)
- Friends's popularity predicted overt aggression in boys, and both relational aggression and prosocial behaviors in girls (Peters, Cillessen, Riksen-Walraven, Haselager, 2010)

Hypothesis:

- Socialization of popularity
- Being popular might increase one's aggressive or prosocial behavior

Method

Participants:

- N = 569 (M_{age} = 10.71 years, SD = 0.42)
- 34 5th-grade classrooms in 13 schools in Illinois, Indiana, and Pennsylvania
- 53% boys, 47% girls
- 61.6% European American, 26.5% African American, 6.8% Hispanic, 2.9% Asian, and 2.2% "Other."
- 3 time points

Method

Measures:

Peer Networks

- Friendship Networks
  - "*Some kids have a number of close friends, but others have just one best friend and still others don't have a best friend. What about you? Do you have any friends? Please circle the names of your friends.*"
- Affiliative Networks
  - *"Do you hang around a lot with some kids in your classroom? If yes, who do you hang around with?"*

Method

Measures:

Popularity, Aggression, and Prosociality

- Popularity:
  - *"These are the most POPULAR kids in my class"*
- Aggression: (3 items, α = .89)
  - *"These kids starts FIGHTS," ; "These kids MAKE FUN of people,"; "These kids SAY MEAN THINGS about other kids"*
- Prosociality: (2 items, α = .91)
  - *"These kids COOPERATE" ; "These kids are always willing to do something NICE for somebody else"*

❖ Transformed into discrete variables

Analytical Strategy

- Stochastic actor-based models with RSiena (Ripley, Snijders, & Preciado, 2011 ; Snijders, Steglich, & Schweinberger, 2007; Snijders, van de Bunt, & Steglich, 2010)
- Multi-group analysis:
  - Binds multiple classroom into a large multi-group project
  - Assumption: each dataset has the same parameter values
  - 26 out of 34 classrooms
- Control for:
  - Outdegree (density), Reciprocity, Transitivity
  - Gender ego, Gender alter, Gender similarity

Selection Process

	Friendship	**Affiliation**
	Estimate (SE)	Estimate (SE)
Ego Effect		
Aggressive ego	0.03 (0.03)	0.06 (0.04)
Prosocial ego	0.09 (0.03)**	-0.02 (0.04)
Popular ego	0.09 (0.02)***	0.01 (0.03)
Alter Effect		
Aggressive alter	-0.15 (0.03)***	-0.09 (0.04)*
Prosocial alter	0.07 (0.03)*	0.04 (0.04)
Popular alter	0.21 (0.03)***	0.23 (0.03)***
int: aggressive alter X popular alter	0.06 (0.05)	0.00 (0.06)
int: prosocial alter X popular alter	-0.06 (0.04)	-0.15 (0.06)**
Homophily Effect		
Aggressive similarity	0.13 (0.07)	0.41 (0.08)***
Prosocial similarity	0.19 (0.08)*	0.24 (0.08)**
Popular similarity	0.71 (0.06)***	0.68 (0.07)***

Note. * p-value > .05; ** p-value > .01; *** p-value > .001

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Influence Process

	Friendship	Affiliation
	Estimate (SE)	Estimate (SE)
Aggressive behavior		
Linear shape	-0.12 (0.11)	-0.12 (0.11)
Quadratic shape	0.46 (0.17)**	0.55 (0.18)**
Socialization effect	2.65 (0.86)**	3.69 (0.92)***
Effect of being popular	0.33 (0.13)**	0.35 (0.15)*
Prosocial behavior		
Linear shape	-0.22 (0.11)*	-0.18 (0.10)
Quadratic shape	0.58 (0.16)***	0.47 (0.15)**
Socialization effect	3.85 (0.84)***	3.40 (0.86)***
Effect of being popular	0.33 (0.15)*	0.37 (0.14)**
Popularity		
Linear shape	-0.17 (0.11)	-0.38 (0.14)**
Quadratic shape	0.86 (0.16)***	0.96 (0.19)***
Socialization effect	3.77(0.76)***	5.20 (1.06)***

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Conclusion & Implication

- Support previous studies:
  - Popularity as an important factor in peer relationship
  - Peers as significant agents in socializing both positive and negative behaviors
  - Popularity affects one's aggressive and/or prosocial behavior
- Popular-prosocial peers were less likely to be chosen in affiliative network
- Nature of relationship matters in selection process

Limitations

- Variability among classroom network characteristic
- No information on children's relationship history
- Did not control for social-preference

Future Direction

- Socialization from popular peers (Cohen and Prinstein, 2006; Shi and Xie, 2011)
- Popular-prosocial and popular-aggressive adolescents (Rodkin, Farmer, Pearl, & Van Acker, 2000)
- Peer mediated intervention program (Hektner, August, Realmuto, 2003)

Thank you!

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