

# Juvenile Arrest and Peer Relationships

Findings from Rural Schools in Pennsylvania and Iowa



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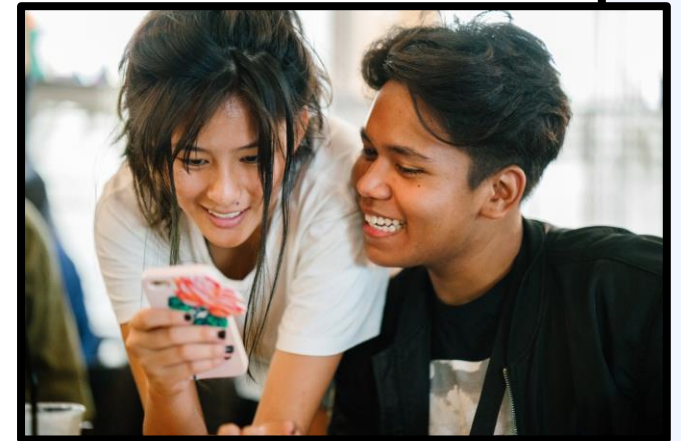
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# Peer relationships in adolescence

- Increasing attachment to peers
  - Normative peers are a source of social capital (Coleman 1988; Crosnoe 2000; Crosnoe et al. 2003)
  - Important for shaping transition to adulthood
- Schools structure peer relationships
  - Bring youth together, sort them by grade and ability – providing a consistent body of similar-aged peers
  - Within this structure, students choose friends according to preferences.



# Justice involvement in adolescence

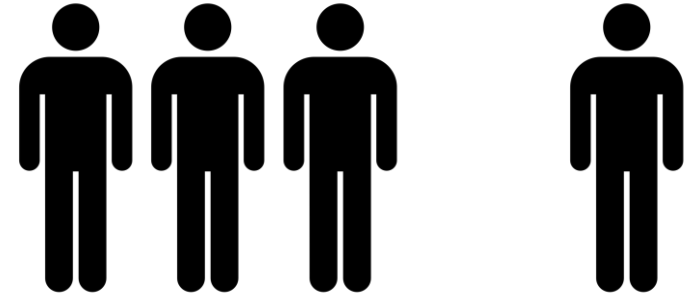


- Increasing risk of criminal justice involvement
  - About 18% of US youth arrested by age 18 (Brame et al. 2012)
- May be harmful for adolescent development
  - Associated with weakened attachment to important institutions like school, employment (Bernburg and Krohn 2003)
  - Possibly due in part to stigma (Chung et al. 2005)

# Criminal justice stigma

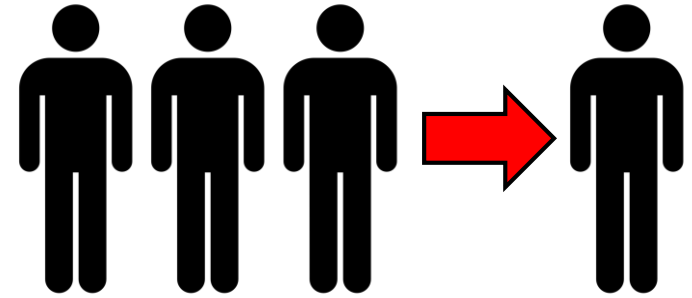
- Most prior research has focused on stigma that emerges through interactions with institutions (social exclusion)
  - Places of employment (Pager 2003)
  - Post-secondary education (Stewart and Uggen forthcoming)
- Much of this research has centered on adults
- Among adolescents, such stigma may be more apparent in relationships with peers (**interpersonal exclusion**)

# Interpersonal exclusion



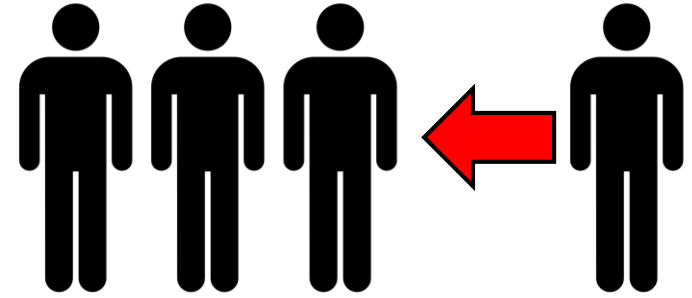
- Represents a loss of social capital
  - Blocked access to friends who would promote normative development
  - Constrains youth toward greater involvement with antisocial peers
- Three mechanisms implied in stigma theories (Goffman 1963)
  - Rejection, withdrawal, homophily

# Rejection



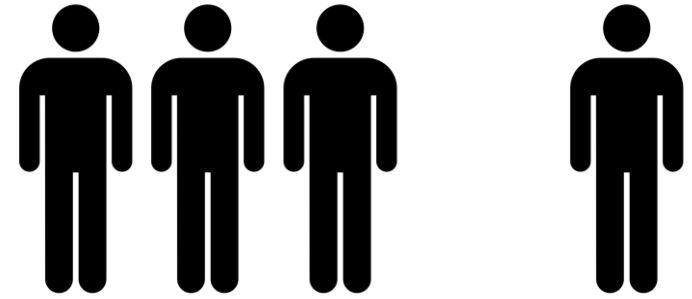
- Efforts of peers to distance themselves from certain youth in response to stigma (Goffman 1963; Link et al. 1987)
  - To escape guilt by association
  - To protect their own group values
- Would be evident if conforming peers at school avoid or break ties with arrested youth.

# Withdrawal



- Efforts of stigmatized youth to distance themselves from normative others (Goffman 1963; Link et al. 1989)
  - Stereotypes take on personal significance for arrested youth
  - Anticipation or fear of rejection (Link and Phelan 2001)
- Would be evident if arrested youth avoid or break ties with conforming peers at school.

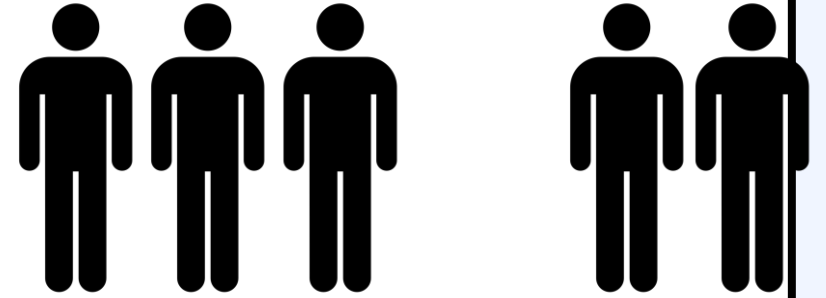
# More on rejection and withdrawal



- Linked to poor outcomes (Lansford et al. 2014; Rubin et al. 2009)
- Social stigma theories suggest stigmatized youth:
  - More often rejected by normative as opposed to antisocial peers
  - More likely to withdraw from normative peers
- Would be evident if loss of ties is smaller when peers exhibit antisocial behaviors (weaker associations)



# Homophily



- Tendency for youth to prefer friendships with peers who share similar characteristics (McPherson et al. 2001)
- Goffman (1963) proposed that stigmatized individuals seek out similarly stigmatized peers.
- An adolescent's arrest may signal to them that they now belong with other "bad kids."
  - Companionship, mentorship, navigating system (Kreager et al. 2017)

# Non-urban focus

- Most prior research on consequences of criminal justice involvement focus on urban areas
- Juvenile arrest may not be stigmatizing in disadvantaged urban communities where heavily concentrated (Hirschfield 2008)
- Rural areas characterized by factors that might make arrest more stigmatizing (Fischer 1982; Marsden and Srivastava 2012)
- Friends important source of social capital in rural communities



# Network Approach

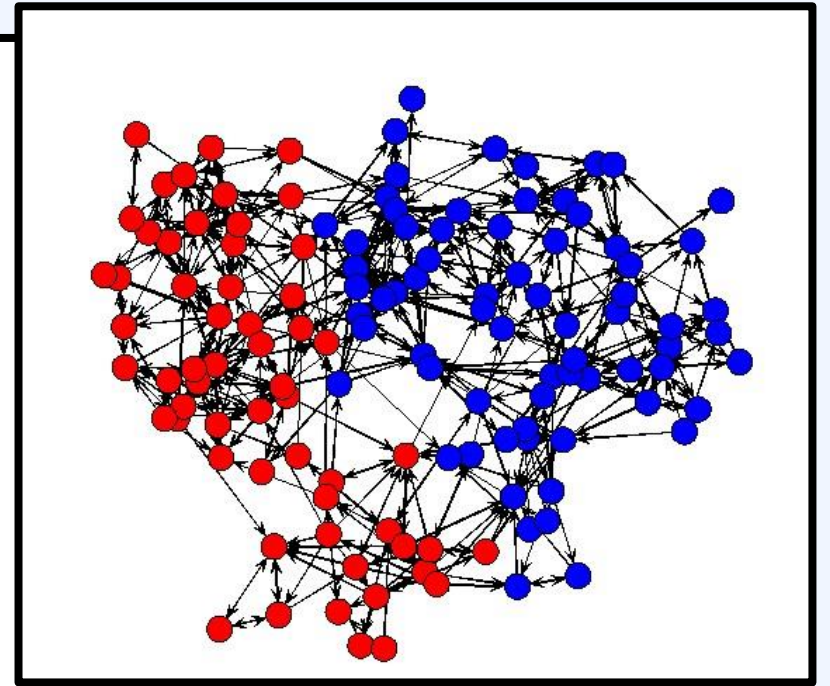
- Prior research has relied on perceptions of exclusion and peer deviance, but this may be biased (Young et al. 2011)
- Instead, we rely on self-reports of respondents and peers
  - Consider respondent preferences separately from peer preferences
  - Observe patterns that should be present with rejection, withdrawal, homophily
- Similar to Schaefer et al. (2011) on mental health stigma:
  - Rejection – lower likelihood of receiving friendship nominations from peers
  - Withdrawal – lower likelihood of “sending” nominations to peers
  - Homophily – greater likelihood of sending nominations to arrested peers

# Three research questions

1. Is arrest among rural youth associated with a lower likelihood of:
  - a) nominating a same-grade peer as a friend? (withdrawal)
  - b) being nominated by a peer as a friend? (rejection)
2. Are arrested youth in rural schools more likely to nominate other arrested youth as friends? (homophily)
3. Are the effects of arrest on friendship selection in these rural schools (rejection and withdrawal) attenuated by peer antisocial behavior?

# Prosper Data

- All students in 27 rural school districts in Iowa and Pennsylvania (Spoth et al. 2007)
- Required enrollment 1,300-5,200 with at least 15% eligible for free or reduced-price lunch
- Two sixth-grade cohorts (fall 2002, fall 2003) completed follow-up surveys every spring thereafter through grade 12
- Participation rates each year about 75%
- 54 same-grade networks over 8 waves



# Who gets included in our analyses

- Exclude baseline observations; very low arrest rates prior to grade 6
- Exclude grade 12 observations because some districts had low completion rates (below 40%) at this last wave (less time at school senior year)
- Exclude some networks for data collection or analytical problems.
- Our analyses rely on 48 networks (25 school districts) and include 50,000 observations from more than 13,000 students.

# Friendships

- At each wave, students asked to list names of 2 closest friends in grade and up to five other close friends in grade
- 96% made at least one nomination during the study; 80% of nominations matched to class rosters
- For each friendship pair, tie may be present (1) or absent (0)
- Average number of incoming or outgoing nominations ranges from 6.0 in grade 6 to 4.3 in grade 11

# Juvenile arrest

- During the past 12 months, how many times picked up by police for breaking the law?
- More encompassing than definitions in other large-scale surveys
- Two measures:
  - ever-arrested by given wave
  - first-reported arrest



# Control variables

## Antisocial or deviant behavior

- Delinquency in past year (vandalism, violence, theft, etc.)
- Marijuana in past month
- Drinking alcohol in past month
- Sensation-seeking behavior

## Other controls

- Absences last year for any reason (suspension, truancy, court, etc.)
- School attachment scale
- Gender, race, socioeconomic disadvantage

# Stochastic actor-based models (SAB)

- For examining processes associated with change in network panel data
- Estimated with Simulation Investigation for Empirical Network Analysis (SIENA; Snijders 2001, 2005; Snijders et al. 2010)
  - Underlying model is a continuous-time Markov process
  - Decomposes the change from one wave to the next into a series of simulated microsteps (creation of tie, removal of tie, or leave tie alone)
  - Estimates are adjusted until patterns of change in simulations are comparable to patterns in observed data

# Three measures for arrest

- *Alter arrest* represents tendency for students, regardless of their own arrest, to extend ties to peers who have been arrested (**rejection**)
- *Ego arrest* represents tendency for arrested youth to extend more ties than non-arrested youth to peers, regardless of peers' arrest (**withdrawal**)
- *Similarity arrest* represents tendency among students to extend ties to others in the network with similar arrest status (**homophily**)
- Corresponding parameters for each of the other variables as well

# Structural parameters to account for changes endogenous to network

- Overall rate of friendship choice (outdegree, density)
- Naming of at least one friend (outdegree, truncated at 1)
- Tendency for reciprocation of ties (reciprocity)
- Nomination of friends of friends (transitive triplets)
- Interaction between former two (transitive reciprocated triplets)
- Tendency for some to receive more nominations (indegree – popularity sqrt)
- Tendency for frequently nominated to name other frequently nominated
- Change in rates of friendship selection due to merging of middle schools into single high school or transitioning from middle to high school

# Combining results across networks

- SIENA produces separate parameter estimate and corresponding standard error for each of the 48 networks
- Meta-analysis techniques: 3-level hierarchical linear models (HLM) to combine estimates across networks
  - Level 3: school district
  - Level 2: grade cohort within district
  - Level 1: known variance (squared standard error) of estimate
- Accounts for nesting within study design; weights estimates inversely by corresponding standard error

# Results: Alter (rejection)

Log odds of a friendship tie being present

	Model 1			Model 2		
	Ever Reported Arrest			First-Reported Arrest		
	b	se		b	se	
Arrest						
Alter arrest (rejection)	-0.081	(0.021)**		-0.158	(0.022)***	
Ego arrest (withdrawal)	-0.112	(0.017)***		-0.167	(0.026)***	
Similarity arrest (homophily)	-0.096	(0.016)***		-0.229	(0.016)***	

Notes: PROSPER. SE = standard error. \*\*\*p<.001; \*\*p<.01 (two-tailed). Controlling for delinquent behaviors, drinking, marijuana use, sensation-seeking behavior, absence, school attachment, demographics, network processes

# Results: Ego (withdrawal)

Log odds of a friendship tie being present

	Model 1			Model 2		
	Ever Reported Arrest			First-Reported Arrest		
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<b>Arrest</b>						
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# Results: Similarity (homophily)

Log odds of a friendship tie being present

	Model 1			Model 2		
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	b	se		b	se	
Arrest						
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# Two questions addressed so far ...

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3. Are the effects of arrest on friendship selection in these rural schools (rejection and withdrawal) attenuated by peer deviance?

# Arrest X marijuana use of peers

	Model 1			Model 2		
	Interaction with Alter Marijuana			Interaction with Ego Marijuana		
	b	se		b	se	
Arrest						
Alter arrest (rejection)	-0.155	(-0.023)	***	-0.162	(-0.024)	***
Ego arrest (withdrawal)	-0.169	(-0.025)	***	-0.162	(-0.026)	***
Arrest similarity (homophily)	-0.226	(-0.016)	***	-0.226	(-0.016)	***
Marijuana use						
Alter marijuana use	-0.038	(-0.021)		-0.036	(-0.021)	
Ego marijuana use	-0.148	(-0.021)	***	-0.159	(-0.020)	***
Marijuana use similarity	-0.062	(-0.019)	**	-0.064	(-0.019)	**
Arrest-Marijuana use						
Ego arrest X Alter marijuana	0.27	(-0.053)	***			
Alter arrest X Ego marijuana	-----	-----		0.319	-0.045	***

Notes: PROSPER. b=log odds; se = standard error. \*\*\*p<.001; \*\*p<.01 (two-tailed). Controlling for delinquent behaviors, drinking, marijuana use, sensation-seeking behavior, absence, school attachment, demographics, network processes

# Arrest X drinking of peers

	Model 1			Model 2		
	Interaction with Alter Drinking			Interaction with Ego Drinking		
	b	se		b	se	
Arrest						
Alter arrest (rejection)	-0.158	(0.023)	***	-0.164	(0.023)	***
Ego arrest (withdrawal)	-0.176	(0.026)	***	-0.166	(0.026)	***
Arrest similarity (homophily)	-0.229	(0.016)	***	-0.228	(0.016)	***
Drinking						
Alter drinking	-0.005	(0.007)		-0.003	(0.007)	
Ego drinking	-0.036	(0.009)	**	-0.035	(0.009)	**
Drinking similarity	0.039	(0.010)	**	0.040	(0.011)	**
Arrest-Marijuana use						
Ego arrest X Alter drinking	0.140	(0.025)	***			
Alter arrest X Ego drinking	-----	-----		0.065	(0.035)	

Notes: PROSPER. b=log odds; se = standard error. \*\*\*p<.001; \*\*p<.01 (two-tailed). Controlling for delinquent behaviors, drinking, marijuana use, sensation-seeking behavior, absence, school attachment, demographics, network processes

# Arrest X delinquency of peers

	Model 1			Model 2		
	Interaction with Alter Delinquency			Interaction with Ego Delinquency		
	b	se		b	se	
Arrest						
Alter arrest (rejection)	-0.160	(0.024)	***	-0.175	(0.023)	***
Ego arrest (withdrawal)	-0.175	(0.027)	***	-0.169	(0.025)	***
Arrest similarity (homophily)	-0.231	(0.016)	***	-0.235	(0.016)	***
Delinquency						
Alter delinquency	0.011	(0.002)	***	0.011	(0.002)	***
Ego delinquency	0.012	(0.003)	***	0.010	(0.003)	**
Delinquency similarity	0.221	(0.036)	***	0.206	(0.036)	***
Arrest-Delinquency						
Ego arrest X Alter delinq	0.023	(0.009)	*			
Alter arrest X Ego delinq				0.036	(0.009)	***

Notes: PROSPER. b=log odds; se = standard error. \*\*\*p<.001; \*\*p<.01 (two-tailed). Controlling for delinquent behaviors, drinking, marijuana use, sensation-seeking behavior, absence, school attachment, demographics, network processes

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2. Are arrested youth in rural schools more likely to nominate other arrested youth as friends? (homophily) **NO – LESS LIKELY**
3. Are the effects of arrest on friendship selection in these rural schools (rejection and withdrawal) attenuated by peer deviance? **YES**



# Reiterating limitations

- No information on incarceration, alternative school placement, etc.
- Findings based on observational data, there may be other factors for which we have not accounted in models
- Generalizability—future research should examine friendship changes after arrest among urban youth
- Race – future research should use more diverse samples to test whether interpersonal exclusion is more or less severe for racial minority youth

# Implications for theory

- Our findings join prior studies that have used similar methods for understanding reactions to stigma
  - Mental health (Schaefer et al. 2011)
  - Body size (de la Haye et al. 2011)
  - Immigrant status (McMillan 2019)
  - School suspension (Jacobsen 2019)
- Overall support for stigma theories, but lack of support for Goffman's "sympathetic others" argument in context of arrest
  - Perhaps avoiding surveilled peers (similar to Goffman 2009)

# Implications for future research

- Future research – can interpersonal exclusion explain association between justice contact and school completion? Employment? College?
- Future research should apply this approach to other forms of criminal justice contact: police stops, convictions, jail stays
- In Maryland:
  - What are the effects of involvement with juvenile justice system on college enrollment and employment?
  - What is the role of peer relationships in explaining these outcomes?

# Implications for inequality

- Arrest is disproportionately concentrated among racial minority youth and appears to have negative consequences for friendship
- Therefore, relying on juvenile arrest to address youth behavior problems may foster adolescent inequality
  - May limit access to key source of social capital for some youth
  - Greater marginalization of youth who are already more marginalized in these rural, mostly white networks

# Implications for policy, practice

- Reliance on law enforcement to address student behavior should be minimized
  - More than 60,000 students arrested at school in 2013-2014 (CRDC 2019)
  - Number of schools with a sworn officer present has increased, even though school crime and victimization has decreased

# More implications for policy, practice

- Perhaps schools can help in reducing stigma:
  - Avoid singling out or drawing attention to justice involvement among youth
  - Avoid language that reinforces stereotypes of justice-involved individuals (Denver et al. 2017; use person-first language)
  - Peer mentorship programs for maintaining connectedness to school; some evidence in rural high schools (Karcher 2005)

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