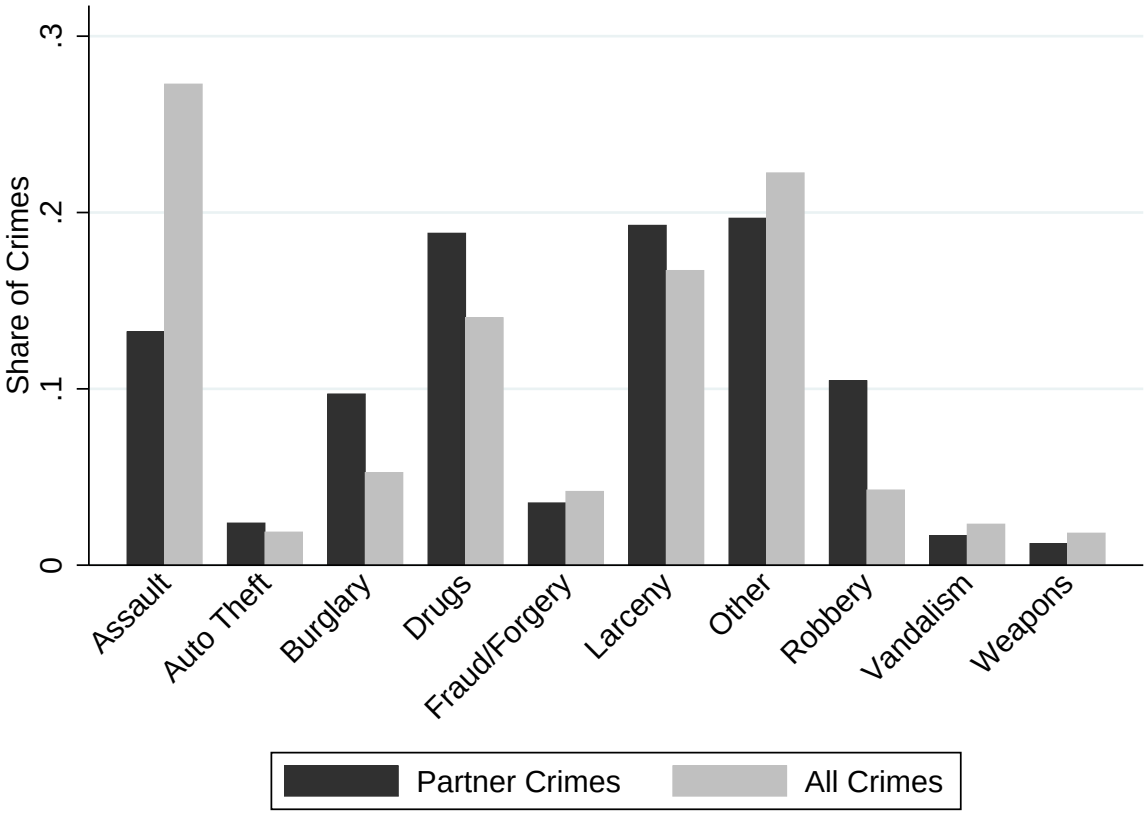
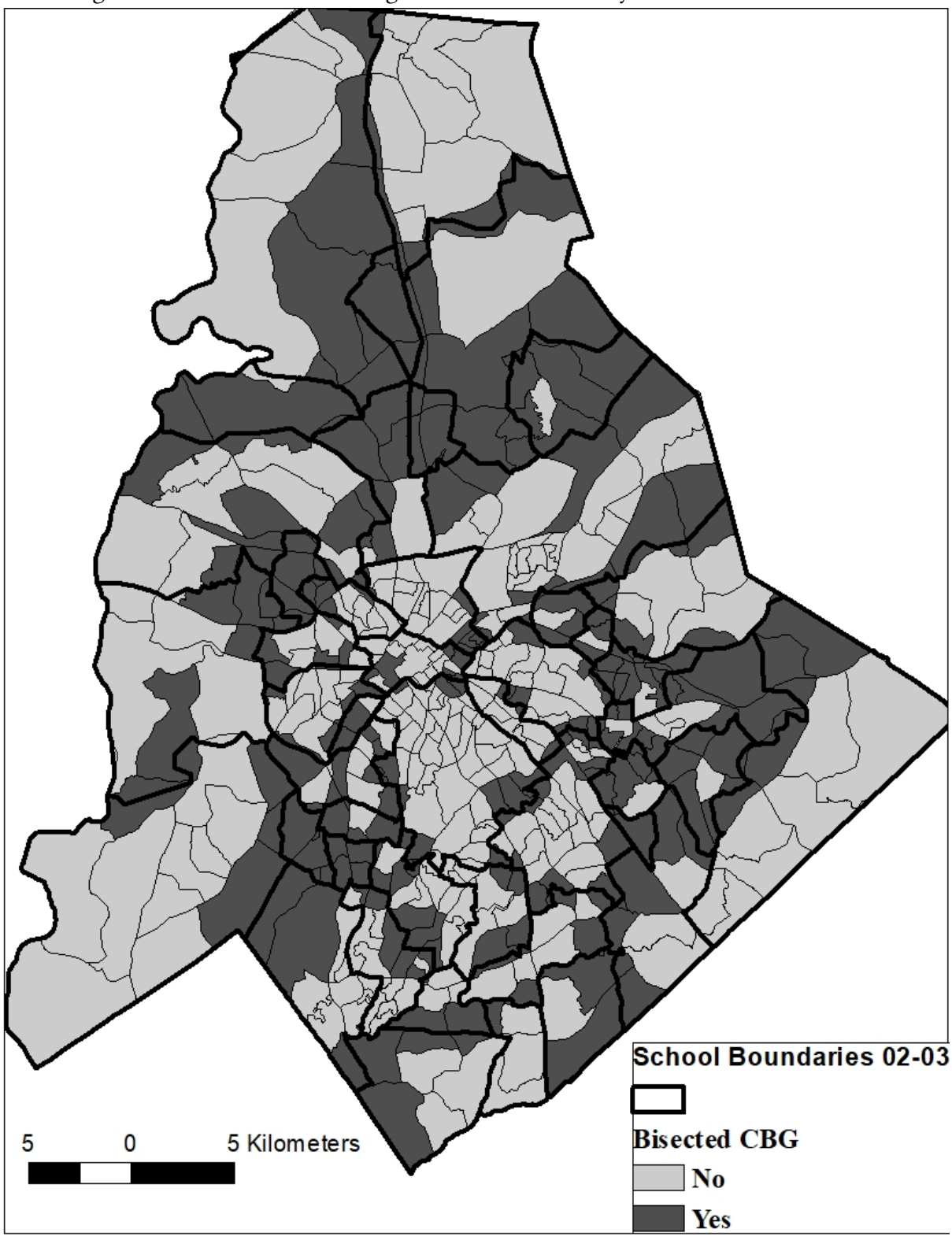
A. Online Appendix for "Partners in Crime" by Stephen B. Billings, David J. Deming and Stephen L. Ross

Figure A.1: Distribution of Crime Types



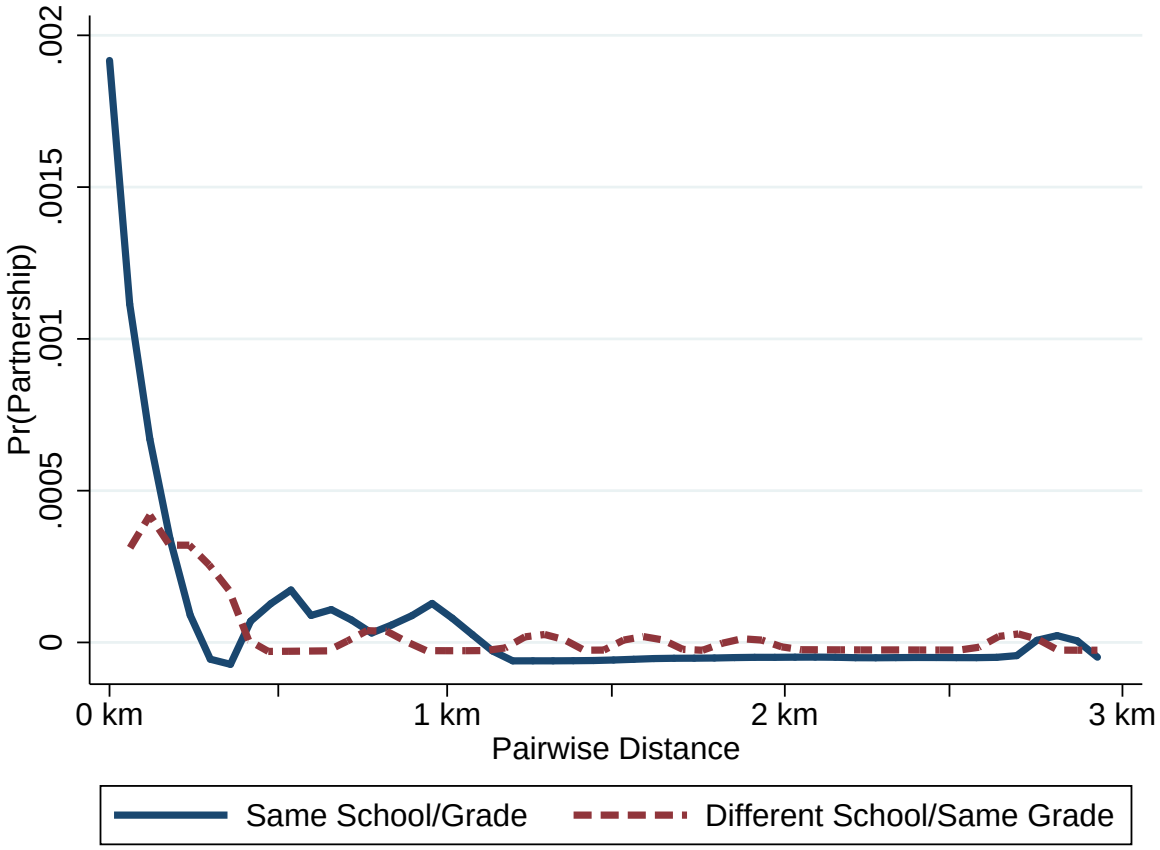
This figure provides the distribution of crime categories for all crimes that led to an arrest of a 16-21 year old in 2005-2013 as well as only those crimes that involve criminal partnerships.

Figure A.2: Distribution of Neighborhoods Bisected by Attendance Boundaries



This figure provides a map highlighting in dark gray the CBG 2000 neighborhoods bisected by a newly drawn middle or high school boundary (given by dark, thicker lines) in the summer of 2002. A few neighborhoods are not counted as bisected if less than 5 students were captured on one side of the boundary within the CBG.

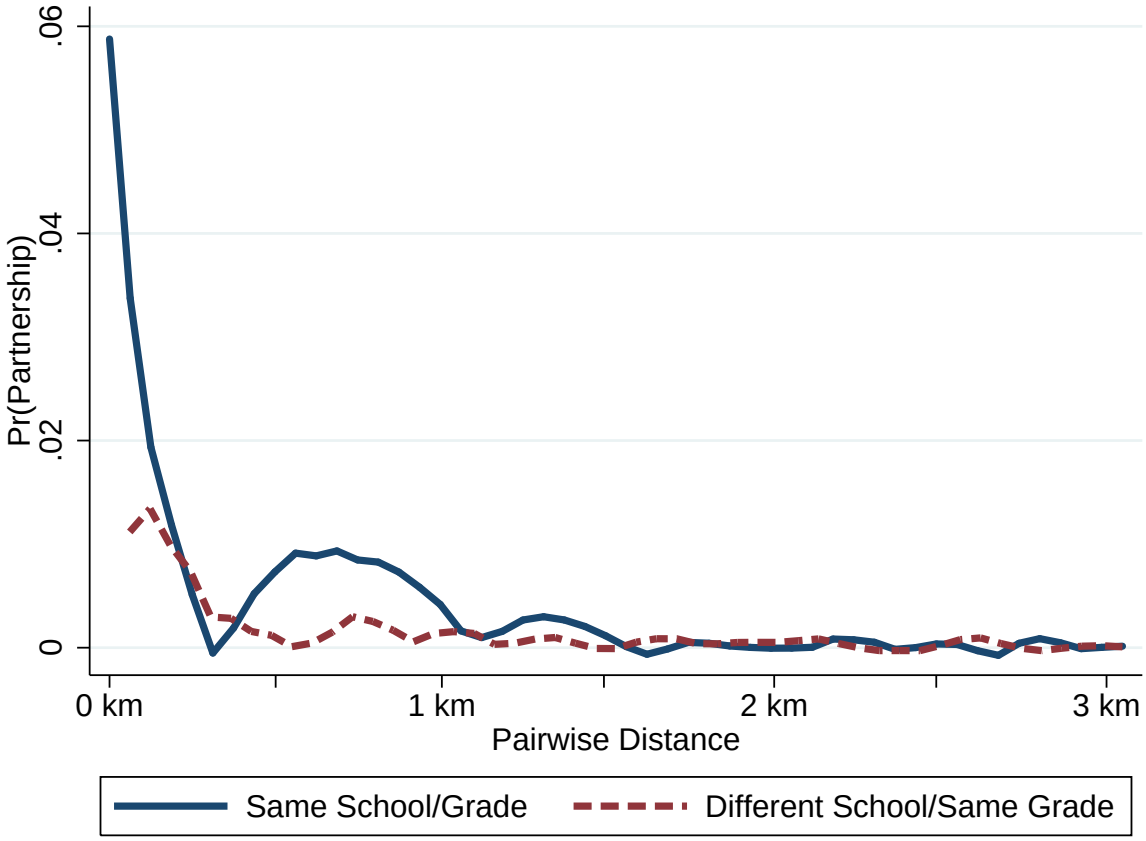
Figure A.3: Conditional Probabilities of Partnership (2001 Address)



This figure provides the distribution of partnership probabilities conditional on individual and neighborhood attributes for our sample of all student pairs. The solid line represents pairs assigned to the same middle or high school and the same grade while the dotted line represents pairs assigned to different schools. The x-axis indicates the pairwise distance between each individual's home address (based on 2001 school year) and conditional probabilities based on the residuals from a first stage regression which controls for individual attributes of person j , school year born fixed effects for k and CBG fixed effects for i. We also implement kernel-weighted local polynomial smoothing in order to generate a continuous distribution of conditional probabilities.

The sample included in this figure represents all pairs of students who are three years or less apart in age (less than 5% of criminal partners are more than 3 year apart), live within 3 km of each other based on 2001 address and at least one student resides in a Census Block Group (CBG) bisected by a new middle or high school attendance zone boundary.

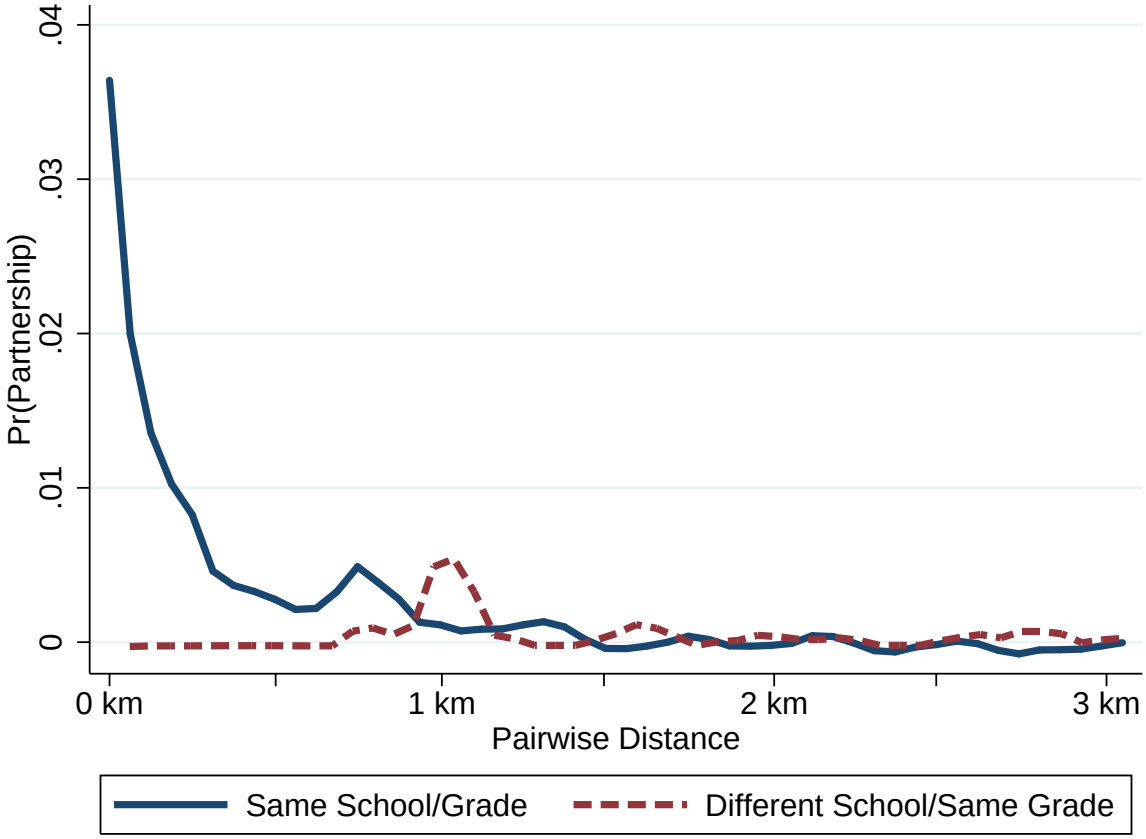
Figure A.4: Conditional Probabilities of Partnership (2001 Address) - Just Offenders



This figure provides the distribution of partnership probabilities conditional on individual and neighborhood attributes for our sample of offender pairs. The solid line represents pairs assigned to the same middle or high school and the same grade while the dotted line represents pairs assigned to different schools. The x-axis indicates the pairwise distance between each individual's home address (based on 2001 school year) and conditional probabilities based on the residuals from a first stage regression which controls for individual attributes of person j , school year born fixed effects for k and CBG fixed effects for i. We also implement kernel-weighted local polynomial smoothing in order to generate a continuous distribution of conditional probabilities.

The sample included in this figure represents all pairs of arrested individuals (age 16-21) who are three years or less apart in age (less than 5% of criminal partners are more than 3 year apart), live within 3 km of each other based on 2001 address and at least one offender resides in a CBG bisected by a new middle or high school attendance zone boundary in 2002.

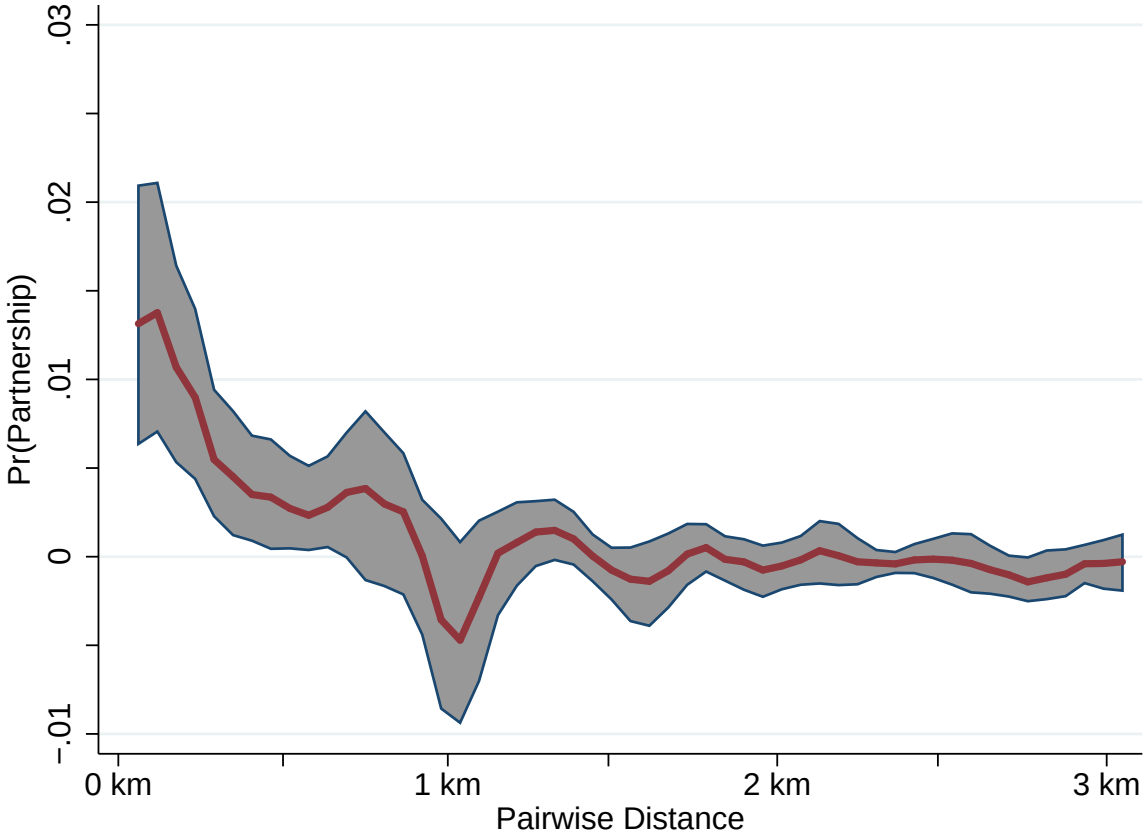
Figure A.5: Conditional Probabilities of Partnership (Same School/Grade vs. Different School/Same Grade) - Just Offenders



This figure provides the distribution of partnership probabilities conditional on individual and neighborhood attributes for our sample of offender pairs. The solid line represents pairs assigned to the same middle or high school and the same grade while the dotted line represents pairs assigned to different schools and the same grade. The x-axis indicates the pairwise distance between each individual's home address (while in school) and conditional probabilities are based on the residuals from a first stage regression which controls for individual attributes of person j (gender, race, lep, test scores, absences, suspensions, assigned school fixed effects) , school year born fixed effects for k and CBG fixed effects for i. We also implement kernel-weighted local polynomial smoothing in order to generate a continuous distribution of conditional probabilities.

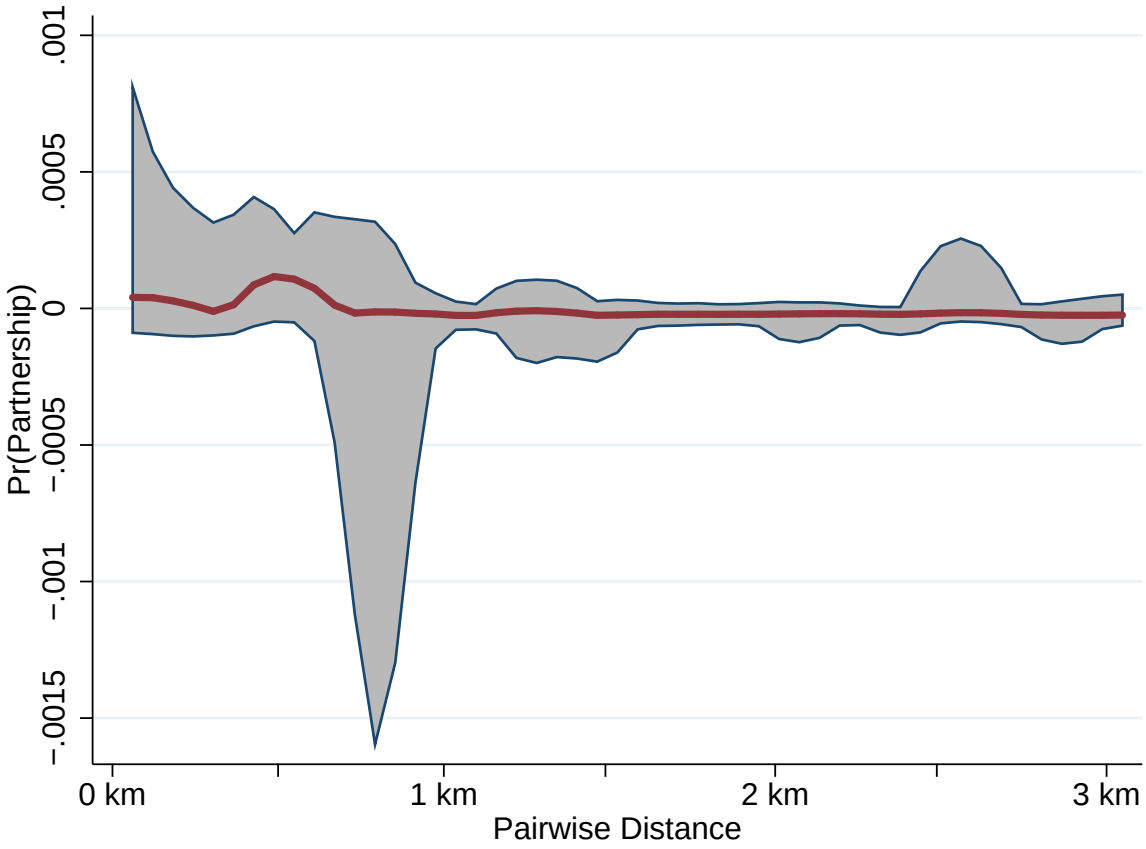
The sample used to construct this figure includes all pairs of arrested individuals (age 16-21) who are three years or less apart in age (less than 5% of criminal partners are more than 3 year apart), live within 3 km of each other based on school age 14 address and at least one offender resides in a Census Block Group (CBG) bisected by a new middle or high school attendance zone boundary.

Figure A.6: Difference in Conditional Probabilities of Partnership (Same School/Grade vs. Different School/Same Grade) - Just Offenders



This figure provides the difference in conditional probability (residuals) of partnership between same school and grade and different school and grade pairs from Figure A5. The solid line indicates same school/grade minus different school partnership probabilities. 95% confidence intervals are given by the shaded area and we derive confidence intervals based on resampling with replacement and recalculating partnership probabilities for each 200 foot distance interval using 500 replications. We also implement kernel-weighted local polynomial smoothing in order to generate a continuous distribution of differences in conditional probabilities.

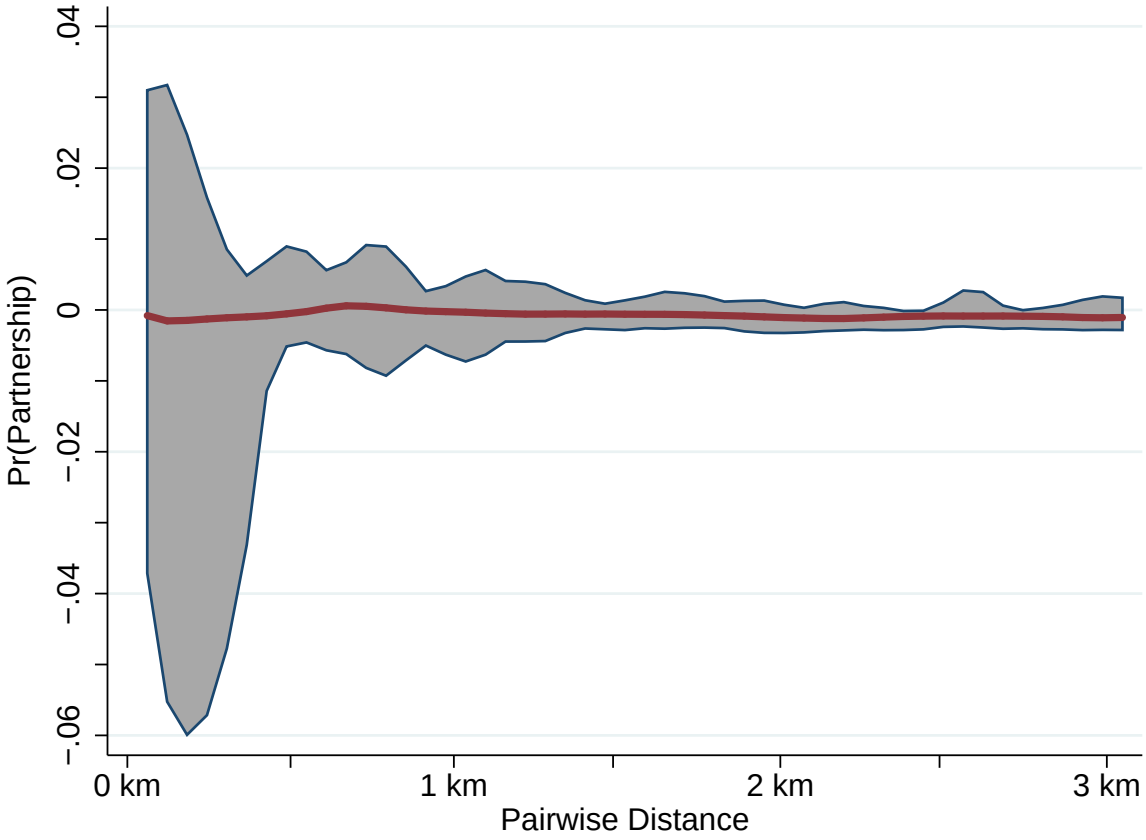
Figure A.7: Falsification Test



This figure provides differences in partnership probabilities based on school assignment using pseudo school attendance boundaries. We simply implement our calculations for Figure 3, but randomly shift school attendance boundaries in all directions by between 1 and 2km. Our original sample of students are then reassigned as same/different schools based on the random boundary shift. With the new school assignments, we calculate the distribution of same school/grade and different school partnership probabilities by distance between students in a pair. The solid line indicates the mean difference between our pseudo same school/grade and different school conditional probabilities and shaded areas indicates the range of results (5-95%) based on 500 replications of these random school boundary shifts.

Conditional probabilities calculated using a first stage regression which controls for individual attributes of person j (gender, race, lep, test scores, absences, suspensions, assigned school fixed effects) , school year born fixed effects for j, and CBG fixed effects for i. We also implement kernel-weighted local polynomial smoothing in order to generate a continuous distribution of conditional probabilities.

Figure A.8: Falsification Test - Just Offenders



This figure provides differences in partnership probabilities based on school assignment using pseudo school attendance boundaries. We simply implement our calculations for Figure 3, but randomly shift school attendance boundaries in all directions by between 1 and 2km. Our original sample of offenders are then reassigned as same/different schools based on the random boundary shift. With the new school assignments, we calculate the distribution of same school/grade and different school partnership probabilities by distance between offenders in a pair. The solid line indicates the mean difference between our pseudo same school/grade and different school conditional probabilities and shaded areas indicates the range of results (5-95%) based on 500 replications of these random school boundary shifts.

Conditional probabilities calculated using a first stage regression which controls for individual attributes of person j (gender, race, lep, test scores, absences, suspensions, assigned school fixed effects) , school year born fixed effects for j, and CBG fixed effects for i. We also implement kernel-weighted local polynomial smoothing in order to generate a continuous distribution of conditional probabilities.

Table A.1: Other Models - 2001 Address

	(1) Main	(2) Dist. FE	(3) *1/2 km*	(4) Dist. FE *1/2 km*	(5) Student FE	(6) *Same HS*	(7) Student FE *Same HS*	(8) Student by CBG FE
All Students (β * 100)								
Assigned Same School & Grade	0.0021	0.0021	−0.0081	−0.0081	0.0020	−0.0005	−0.0006	0.0013
	(0.0028)	(0.0028)	(0.0057)	(0.0057)	(0.0029)	(0.0027)	(0.0028)	(0.0031)
Assigned Same School	0.0040***	0.0035***	0.0061**	0.0058**	0.0043**	0.0048***	0.0050***	0.0038*
	(0.0013)	(0.0012)	(0.0026)	(0.0026)	(0.0019)	(0.0013)	(0.0018)	(0.0022)
Dep. Var (mean) for Diff. School (00s)	0.0055	0.0055	0.0095	0.0095	0.0055	0.0055	0.0055	0.0055
Observations	3,171,883	3,171,883	1,099,904	1,099,904	3,171,883	3,171,883	3,171,883	3,171,883
Just Offenders								
Assigned Same School & Grade	0.0033**	0.0032**	−0.0018	−0.0019	0.0029**	0.0015	0.0010	0.0037
	(0.0015)	(0.0015)	(0.0026)	(0.0026)	(0.0014)	(0.0016)	(0.0012)	(0.0028)
Assigned Same School	0.0025***	0.0023***	0.0034**	0.0033**	0.0015***	0.0032***	0.0019***	0.0021
	(0.0006)	(0.0006)	(0.0013)	(0.0013)	(0.0005)	(0.0007)	(0.0005)	(0.0014)
Dep. Var (mean) for Diff. School	0.0030	0.0030	0.0049	0.0049	0.0030	0.0030	0.0030	0.0030
Observations	85,195	85,195	29,351	29,351	85,195	85,195	85,195	85,195

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors robust to arbitrary correlation within CBG i and within student j.

All regressions include controls for gender, race, lep, 5th grade reading and math test scores, indicator if missing a test score or other 5th grade information, days suspended (5th grade) , total days absent (5th grade), single family home indicator, indicator for year individual j turned age 5 as of 9/1, assigned middle and high school fixed effects, and CBG fixed effects for person i.

Dependent Variable is an indicator for a pair ever being criminal partners. Dist. FE indicates a series of indicator variables for 200 foot intervals of pairwise distances. Same HS indicates that same school only defined based on high schools. Student FE is based on individual j.

Table A.2: Pairs by School Assigned - All Students

	Non-Partners			Partners		
	All	Assigned Same School	Assigned Different School	All	Assigned Same School	Assigned Different School
Same Grade	0.188	0.188	0.188	0.287	0.301	0.048
	(0.39)	(0.39)	(0.39)	(0.45)	(0.46)	(0.22)
One Year Apart in Age	0.327	0.327	0.325	0.434	0.423	0.619
	(0.47)	(0.47)	(0.47)	(0.50)	(0.49)	(0.50)
Two or Three Years Apart in Age	0.485	0.485	0.487	0.279	0.275	0.333
	(0.50)	(0.50)	(0.50)	(0.45)	(0.45)	(0.48)
Both Male	0.255	0.255	0.255	0.842	0.852	0.667
	(0.44)	(0.44)	(0.44)	(0.37)	(0.36)	(0.48)
Both Female	0.246	0.246	0.245	0.060	0.052	0.190
	(0.43)	(0.43)	(0.43)	(0.24)	(0.22)	(0.40)
One Male, One Female	0.500	0.500	0.500	0.098	0.096	0.143
	(0.50)	(0.50)	(0.50)	(0.30)	(0.29)	(0.36)
Same Race	0.699	0.694	0.740	0.825	0.820	0.905
	(0.46)	(0.46)	(0.44)	(0.38)	(0.38)	(0.30)
Different Race	0.301	0.306	0.260	0.175	0.180	0.095
	(0.46)	(0.46)	(0.44)	(0.38)	(0.38)	(0.30)
Both Suspended	0.015	0.015	0.020	0.090	0.090	0.095
	(0.12)	(0.12)	(0.14)	(0.29)	(0.29)	(0.30)
One Suspended, One Not Suspended	0.194	0.191	0.227	0.459	0.455	0.524
	(0.40)	(0.39)	(0.42)	(0.50)	(0.50)	(0.51)
Neither Suspended	0.790	0.795	0.753	0.451	0.455	0.381
	(0.41)	(0.40)	(0.43)	(0.50)	(0.50)	(0.50)
Both in SF Homes	0.649	0.659	0.561	0.743	0.742	0.762
	(0.48)	(0.47)	(0.50)	(0.44)	(0.44)	(0.44)
One SF, One Not in SF	0.233	0.221	0.338	0.175	0.174	0.190
	(0.42)	(0.42)	(0.47)	(0.38)	(0.38)	(0.40)
Neither in SF Homes	0.118	0.120	0.100	0.082	0.084	0.048
	(0.32)	(0.32)	(0.30)	(0.27)	(0.28)	(0.22)
Observations	8,372,921	7,515,784	857,137	366	345	21

Means and standard deviations are reported above. We define assigned to the same school as two individuals being assigned to the same middle or high school based on 2002-2003 school attendance boundaries. Same age based on cohort and determined by the school year an individual turned 5 as of September 1st.

The sample included in this table represents represents all pairs of individuals who are three years or less apart in age (less than 5% of criminal partners are more than 3 year apart), live within 1 km of each other based on school age 14 address and live at least 130 feet apart (minimum distance between two students assigned to different schools) and individual i resides in a CBG bisected by a new 2002 middle or high school attendance zone boundary.

Table A.3: Pairs by School Assigned - Offenders Only

	Non-Partners			Partners		
	All	Assigned Same School	Assigned Different School	All	Assigned Same School	Assigned Different School
Same Grade	0.186	0.187	0.180	0.287	0.301	0.048
	(0.39)	(0.39)	(0.38)	(0.45)	(0.46)	(0.22)
One Year Apart in Age	0.329	0.329	0.326	0.434	0.423	0.619
	(0.47)	(0.47)	(0.47)	(0.50)	(0.49)	(0.50)
Two or Three Years Apart in Age	0.485	0.483	0.494	0.279	0.275	0.333
	(0.50)	(0.50)	(0.50)	(0.45)	(0.45)	(0.48)
Both Male	0.494	0.500	0.458	0.842	0.852	0.667
	(0.50)	(0.50)	(0.50)	(0.37)	(0.36)	(0.48)
Both Female	0.092	0.090	0.106	0.060	0.052	0.190
	(0.29)	(0.29)	(0.31)	(0.24)	(0.22)	(0.40)
One Male, One Female	0.414	0.410	0.436	0.098	0.096	0.143
	(0.49)	(0.49)	(0.50)	(0.30)	(0.29)	(0.36)
Same Race	0.705	0.698	0.743	0.825	0.820	0.905
	(0.46)	(0.46)	(0.44)	(0.38)	(0.38)	(0.30)
Different Race	0.295	0.302	0.257	0.175	0.180	0.095
	(0.46)	(0.46)	(0.44)	(0.38)	(0.38)	(0.30)
Both Suspended	0.097	0.096	0.105	0.090	0.090	0.095
	(0.30)	(0.29)	(0.31)	(0.29)	(0.29)	(0.30)
One Suspended, One Not Suspended	0.427	0.425	0.440	0.459	0.455	0.524
	(0.49)	(0.49)	(0.50)	(0.50)	(0.50)	(0.51)
Neither Suspended	0.475	0.479	0.455	0.451	0.455	0.381
	(0.50)	(0.50)	(0.50)	(0.50)	(0.50)	(0.50)
Both in SF Homes	0.550	0.555	0.525	0.743	0.742	0.762
	(0.50)	(0.50)	(0.50)	(0.44)	(0.44)	(0.44)
One SF, One Not in SF	0.289	0.276	0.362	0.175	0.174	0.190
	(0.45)	(0.45)	(0.48)	(0.38)	(0.38)	(0.40)
Neither in SF Homes	0.160	0.169	0.114	0.082	0.084	0.048
	(0.37)	(0.37)	(0.32)	(0.27)	(0.28)	(0.22)
Observations	123,982	105,191	18,791	366	345	21

Means and standard deviations are reported above. We define assigned to the same school as two individuals being assigned to the same middle or high school based on 2002-2003 school attendance boundaries. Same age based on cohort and determined by the school year an individual turned 5 as of September 1st.

The sample included in this table represents all pairs of arrested individuals (age 16-21) who are three years or less apart in age (less than 5% of criminal partners are more than 3 year apart), live within 1 km of each other based on school age 14 address and live at least 130 feet apart (minimum distance between two students assigned to different schools) and individual i resides in a CBG bisected by a new 2002 middle or high school attendance zone boundary.

Table A.4: Pairs by School Attended - All Students

	Non-Partners			Partners		
	All	Attended Same School	Attended Different School	All	Attended Same School	Attended Different School
Same Course	0.150	0.328	0.000	0.175	0.267	0.000
	(0.36)	(0.47)	(0.00)	(0.38)	(0.44)	(0.00)
Same Grade	0.188	0.240	0.144	0.287	0.313	0.238
	(0.39)	(0.43)	(0.35)	(0.45)	(0.46)	(0.43)
One Year Apart in Age	0.327	0.380	0.282	0.434	0.492	0.325
	(0.47)	(0.49)	(0.45)	(0.50)	(0.50)	(0.47)
Two or Three Years Apart in Age	0.485	0.380	0.574	0.279	0.196	0.437
	(0.50)	(0.49)	(0.49)	(0.45)	(0.40)	(0.50)
Both Male	0.254	0.257	0.252	0.842	0.858	0.810
	(0.44)	(0.44)	(0.43)	(0.37)	(0.35)	(0.39)
Both Female	0.246	0.243	0.248	0.060	0.058	0.063
	(0.43)	(0.43)	(0.43)	(0.24)	(0.23)	(0.24)
One Male, One Female	0.500	0.499	0.501	0.098	0.083	0.127
	(0.50)	(0.50)	(0.50)	(0.30)	(0.28)	(0.33)
Same Race	0.698	0.696	0.700	0.825	0.808	0.857
	(0.46)	(0.46)	(0.46)	(0.38)	(0.39)	(0.35)
Different Race	0.302	0.304	0.300	0.175	0.192	0.143
	(0.46)	(0.46)	(0.46)	(0.38)	(0.39)	(0.35)
Both Suspended	0.015	0.012	0.018	0.090	0.092	0.087
	(0.12)	(0.11)	(0.13)	(0.29)	(0.29)	(0.28)
One Suspended, One Not Suspended	0.194	0.162	0.221	0.459	0.404	0.563
	(0.40)	(0.37)	(0.41)	(0.50)	(0.49)	(0.50)
Neither Suspended	0.791	0.825	0.761	0.451	0.504	0.349
	(0.41)	(0.38)	(0.43)	(0.50)	(0.50)	(0.48)
Both in SF Homes	0.649	0.704	0.604	0.743	0.750	0.730
	(0.48)	(0.46)	(0.49)	(0.44)	(0.43)	(0.45)
One SF, One Not in SF	0.235	0.202	0.263	0.175	0.150	0.222
	(0.42)	(0.40)	(0.44)	(0.38)	(0.36)	(0.42)
Neither in SF Homes	0.116	0.094	0.134	0.082	0.100	0.048
	(0.32)	(0.29)	(0.34)	(0.27)	(0.30)	(0.21)
Observations	8,372,921	3,833,731	4,539,190	366	240	126

Means and standard deviations are reported above. We define assigned to the same school as two individuals being assigned to the same middle or high school based on 2002-2003 school attendance boundaries. Same age based on cohort and determined by the school year an individual turned 5 as of September 1st.

The sample included in this table represents all pairs of individuals who are three years or less apart in age (less than 5% of criminal partners are more than 3 year apart), live within 1 km of each other based on school age 14 address and live at least 130 feet apart (minimum distance between two students assigned to different schools) and individual i resides in a CBG bisected by a new 2002 middle or high school attendance zone boundary.

Table A.5: Pairs by School Attended - Offenders Only

	Non-Partners			Partners		
	All	Attended Same School	Attended Different School	All	Attended Same School	Attended Different School
Same Course	0.030	0.084	0.000	0.175	0.267	0.000
	(0.17)	(0.28)	(0.00)	(0.38)	(0.44)	(0.00)
Same Grade	0.186	0.256	0.148	0.287	0.313	0.238
	(0.39)	(0.44)	(0.35)	(0.45)	(0.46)	(0.43)
One Year Apart in Age	0.329	0.409	0.285	0.434	0.492	0.325
	(0.47)	(0.49)	(0.45)	(0.50)	(0.50)	(0.47)
Two or Three Years Apart in Age	0.485	0.335	0.568	0.279	0.196	0.437
	(0.50)	(0.47)	(0.50)	(0.45)	(0.40)	(0.50)
Both Male	0.494	0.512	0.483	0.842	0.858	0.810
	(0.50)	(0.50)	(0.50)	(0.37)	(0.35)	(0.39)
Both Female	0.092	0.084	0.097	0.060	0.058	0.063
	(0.29)	(0.28)	(0.30)	(0.24)	(0.23)	(0.24)
One Male, One Female	0.414	0.405	0.420	0.098	0.083	0.127
	(0.49)	(0.49)	(0.49)	(0.30)	(0.28)	(0.33)
Same Race	0.705	0.688	0.714	0.825	0.808	0.857
	(0.46)	(0.46)	(0.45)	(0.38)	(0.39)	(0.35)
Different Race	0.295	0.312	0.286	0.175	0.192	0.143
	(0.46)	(0.46)	(0.45)	(0.38)	(0.39)	(0.35)
Both Suspended	0.097	0.095	0.099	0.090	0.092	0.087
	(0.30)	(0.29)	(0.30)	(0.29)	(0.29)	(0.28)
One Suspended, One Not Suspended	0.427	0.406	0.439	0.459	0.404	0.563
	(0.49)	(0.49)	(0.50)	(0.50)	(0.49)	(0.50)
Neither Suspended	0.475	0.500	0.462	0.451	0.504	0.349
	(0.50)	(0.50)	(0.50)	(0.50)	(0.50)	(0.48)
Both in SF Homes	0.550	0.567	0.541	0.743	0.750	0.730
	(0.50)	(0.50)	(0.50)	(0.44)	(0.43)	(0.45)
One SF, One Not in SF	0.289	0.281	0.294	0.175	0.150	0.222
	(0.45)	(0.45)	(0.46)	(0.38)	(0.36)	(0.42)
Neither in SF Homes	0.160	0.152	0.165	0.082	0.100	0.048
	(0.37)	(0.36)	(0.37)	(0.27)	(0.30)	(0.21)
Observations	123,982	44,222	79,760	366	240	126

Means and standard deviations are reported above. We define attended the same school as two individuals matriculating for at least one year at the same middle or high school. Same age based on cohort and determined by the school year an individual turned 5 as of the first day of school. Same course indicates if two individuals took at least two courses together in grades 6-10.

The sample included in this table represents all pairs of arrested individuals (age 16-21) who are three years or less apart in age (less than 5% of criminal partners are more than 3 year apart), live within 1 km of each other based on school age 14 address and live at least 130 feet apart (minimum distance between two students assigned to different schools) and individual i resides in a CBG bisected by a new 2002 middle or high school attendance zone boundary.

Table A.6: Changing School Boundaries and Policing

	(1) Police Div. Boundary Change	(2) Police Div. Boundary Change
Bisected by New School Boundary	0.0148	0.0119
	(0.0448)	(0.0457)
People per sq mile (000s)		−0.0198
		(0.0134)
CBG Median HH Income (000s)		−0.0012*
		(0.0007)
Percent Poverty (%)		0.0147
		(0.0913)
Percent Unemploy (%)		0.9257*
		(0.5061)
Percent Age 15-24 (%)		−0.1175
		(0.4458)
Observations	373	373

This table examines if CBGs which are bisected by a new attendance boundary in 2002 are more likely to experience a change in policing division boundaries in 2007. Charlotte-Mecklenburg Police Department changed policing division in 2007 for about 1/4 of all CBGs. Division boundaries were not redrawn between 2002 and 2007. Policing boundaries were redrawn based on changes in the volume of 911 calls by neighborhoods throughout the study area.

Table A.7: Crime Agglomeration Models - Number of Arrests

	(1) Numb. Arrests	(2) Numb. Arrests Violent	(3) Numb. Arrests Property
Peers = All			
School Peers	0.0109	0.0020	0.0054
	(0.0407)	(0.0064)	(0.0151)
Peers = Same Age			
Same School Peers	0.1528	0.0272	0.0562*
	(0.0962)	(0.0176)	(0.0329)
Peers = Same Age-Race-Gender			
Same School Peers	0.2053***	0.0399***	0.0577**
	(0.0668)	(0.0130)	(0.0249)
Peers = Same Age-Race-Gender High Risk			
School Peers	0.2548**	0.0541***	0.1047**
	(0.1006)	(0.0164)	(0.0417)
Dep. Var (mean)	0.4755	0.0437	0.1240
Observations	34,958	34,958	34,958

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors robust to arbitrary correlation within CBG. All coefficients indicate the marginal effect of a standard deviation increase in the number of peers on number of arrests. We define an individual's number of peers as all students within 1 km, second panel expands to those students that are the same grade, third panel defines peers based on same grade, same gender and same race. The fourth panel includes peer counts based on same grade-race-gender peers that are also identified as high risk for arrest. To determine arrest risk, we conduct a first stage regression of ever being arrested on student attributes for a sample of students that were rising 9th graders prior to 2002 and not involved in criminal partnerships. We define high risk based on those individuals that fall in top quintile of predicted arrest using the first stage estimated coefficients.

The sample used for determining the number of peers is based on all students within 3 grade levels and attending CMS at school age 14 at any time from 2003-2009. Each cell indicates a separate regression and we include but do not report coefficients for total students in same school-neighborhood, total students in the same neighborhood and same neighborhood counts for each peer definition.

All regressions include controls for gender, race, lep, 5th grade reading and math test scores, indicator if missing a test score, days suspended (5th grade) , total days absent (5th grade), single family home indicator, assigned school fixed effects.

The top panel includes Census Block Group 2000 (CBG), second panel includes CBG by grade, third panel includes CBG by grade, gender and race fixed effects. The fourth panel includes CBG by grade, gender, race and quintile of predicted arrest fixed effects.

Table A.8: Crime Agglomeration Models by Residents since 2001

	(1) Ever Arrested	(2) Ever Arrested Violent	(3) Ever Arrested Property
Peers = All			
Same School Peers	−0.0041	0.0015	0.0073
	(0.0118)	(0.0053)	(0.0078)
*Resident since 2001	0.0041	−0.0011	−0.0105
	(0.0104)	(0.0065)	(0.0066)
Peers = Same Age			
Same School Peers	0.0082	0.0166	0.0364***
	(0.0225)	(0.0123)	(0.0131)
*Resident since 2001	0.0131	0.0043	−0.0027
	(0.0108)	(0.0066)	(0.0070)
Peers = Same Age-Race-Gender			
Same School Peers	0.0276*	0.0208**	0.0302***
	(0.0164)	(0.0086)	(0.0115)
*Resident since 2001	0.0261*	0.0030	−0.0027
	(0.0143)	(0.0087)	(0.0104)
Peers = Same Age-Race-Gender High Risk			
Same School Peers	0.0228	0.0310***	0.0258
	(0.0212)	(0.0111)	(0.0157)
*Resident since 2001	0.0244	−0.0022	−0.0031
	(0.0208)	(0.0133)	(0.0172)
Dep. Var (mean)	0.1678	0.0326	0.0713
Observations	34,958	34,958	34,958

* p < 0.1, ** p < 0.05, *** p < 0.01. Models are unchanged from Table 5 except for the inclusion of a dummy that indicates a student lived at the same address in 2001 as they are living at school age 14. Interaction terms provide a test of differences between existing residents and residents that recently moved to the neighborhood. Standard errors robust to arbitrary correlation within CBG.

Table A.9: Crime Agglomeration Models - *Falsification Test*

	Ever Arrested	Ever Arrested Violent	Ever Arrested Property
Peers = All			
Same School Peers	−0.003	0.005	−0.003
	(0.014)	(0.007)	(0.008)
Peers = Same Age			
Same School Peers	0.013	0.001	0.003
	(0.030)	(0.019)	(0.014)
Peers = Same Age-Race-Gender			
Same School Peers	−0.001	−0.002	−0.003
	(0.018)	(0.014)	(0.010)
Peers = Same Age-Race-Gender-High Risk			
Same School Peers	0.006	0.003	0.004
	(0.011)	(0.008)	(0.010)

* p < 0.1, ** p < 0.05, *** p < 0.01. This table indicates the mean and standard deviation of our main coefficients reported in Table 5 for a series of 100 random shifts of school attendance boundaries in all directions by between 1 and 2km. These random shifted boundaries are then used to compute school assignment and all remaining information is unchanged. We removed cases where boundary shifts removed school assignment near the boundaries of the county.

Table A.10: Impact of School Assignment on Partnerships by Types of Crime

	(1) Assault Crime Partner	(2) Burglary Crime Partner	(3) Drug Crime Partnership	(4) Robbery Crime Partnership	(5) Theft Crime Partnership	(6) Other Crime Partnership
All Students (β * 100)						
Assigned Same School & Grade	0.0005*	0.0008**	0.0009	0.0001	0.0002	0.0036***
	(0.0003)	(0.0004)	(0.0005)	(0.0002)	(0.0003)	(0.0012)
Assigned Same School	0.0004**	−0.0002	−0.0002	0.0002	−0.0000	0.0036***
	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0010)
Dep. Var (mean) for Diff. School (00s)	0.00023	0.00035	0.00047	0.00000	0.00035	0.00152
Observations	8,372,921	8,372,921	8,372,921	8,372,921	8,372,921	8,372,921
Just Offenders						
Assigned Same School & Grade	0.0010***	0.0018***	0.0005	0.0001	0.0001	0.0006**
	(0.0003)	(0.0006)	(0.0004)	(0.0003)	(0.0003)	(0.0003)
Assigned Same School	0.0003	0.0009*	0.0001	0.0004***	0.0005	0.0000
	(0.0002)	(0.0005)	(0.0002)	(0.0001)	(0.0003)	(0.0002)
Dep. Var (mean) for Diff. School	0.00016	0.00037	0.00021	0.00000	0.00032	0.00027
Observations	123,982	123,982	123,982	123,982	123,982	123,982

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors robust to arbitrary correlation within CBG i and within student j.

All regressions include controls for gender, race, lep, 5th grade reading and math test scores, indicator if missing a test score, days suspended (5th grade) , total days absent (5th grade), single family home indicator, indicator for year individual k turned age 5 as of 9/1, assigned middle and high school fixed effects, and CBG fixed effects for person i. We also include an indicator in individuals i and j are the same assigned grade.

Dependent Variable is an indicator based on column heading.

Table A.11: Partner Crime Agglomeration Models

	(1) Arrested Partner Crime	(2) Arrested Violent Partner Crime	(3) Arrested Property Partner Crime
Peers = All			
School Peers	0.0014	−0.0023	−0.0014
	(0.0047)	(0.0032)	(0.0040)
Peers = Same Age			
Same School Peers	0.0147	0.0124	0.0105
	(0.0122)	(0.0081)	(0.0099)
Peers = Same Age-Race-Gender			
Same School Peers	0.0202**	0.0084	0.0147*
	(0.0084)	(0.0063)	(0.0077)
Peers = Same Age-Race-Gender High Risk			
School Peers	0.0202*	0.0071	0.0187**
	(0.0107)	(0.0072)	(0.0090)
Dep. Var (mean)	0.0476	0.0179	0.0253
Observations	34,958	34,958	34,958

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors robust to arbitrary correlation within CBG. All coefficients indicate the marginal effect of a standard deviation increase in the number of peers on partner arrest outcomes. We define an individual's number of peers as all students within 1 km, second panel expands to those students that are the same grade, third panel defines peers based on same grade, same gender and same race. The fourth panel includes peer counts based on same grade-race-gender peers that are also identified as high risk for arrest. To determine arrest risk, we conduct a first stage regression of ever being arrested on student attributes for a sample of students that were rising 9th graders prior to 2002 and not involved in criminal partnerships. We define high risk based on those individuals that fall in top quintile of predicted arrest using the first stage estimated coefficients.

The sample used for determining the number of peers is based on all students within 3 grade levels and attending CMS at school age 14 at any time from 2003-2009. Each cell indicates a separate regression and we include but do not report coefficients for total students in same school-neighborhood, total students in the same neighborhood and same neighborhood counts for each peer definition.

All regressions include controls for gender, race, lep, 5th grade reading and math test scores, indicator if missing a test score, days suspended (5th grade) , total days absent (5th grade), single family home indicator, assigned school fixed effects.

The top panel includes Census Block Group 2000 (CBG), second panel includes CBG by grade, third panel includes CBG by grade, gender and race fixed effects. The fourth panel includes CBG by grade, gender, race and quintile of predicted arrest fixed effects.

Table A.12: Other Models

	(1)	(2) Dist. FE	(3) *1/2 km*	(4) Dist. FE *1/2 km*	(5) Student FE	(6) *Same HS*	(7) Student FE *Same HS*	(8) Student by CBG FE
All Students (β*100)								
Assigned Same School & Grade	0.0051***	0.0050***	0.0059**	0.0058**	0.0048***	0.0033*	0.0032*	0.0050***
	(0.0013)	(0.0013)	(0.0028)	(0.0028)	(0.0013)	(0.0017)	(0.0017)	(0.0013)
Assigned Same School	0.0037***	0.0023**	0.0097***	0.0080***	0.0046***	0.0028***	0.0035***	0.0040**
	(0.0011)	(0.0010)	(0.0029)	(0.0027)	(0.0014)	(0.0009)	(0.0011)	(0.0015)
Observations	8,372,921	8,372,921	2,728,835	2,728,835	8,372,921	8,372,921	8,372,921	8,372,921
Just Offenders								
Assigned Same School & Grade	0.0033***	0.0034***	0.0034**	0.0035**	0.0031***	0.0022**	0.0018*	0.0029***
	(0.0007)	(0.0007)	(0.0016)	(0.0016)	(0.0007)	(0.0011)	(0.0010)	(0.0007)
Assigned Same School	0.0021***	0.0011	0.0045***	0.0032**	0.0018**	0.0017***	0.0014**	0.0013*
	(0.0007)	(0.0007)	(0.0017)	(0.0016)	(0.0007)	(0.0007)	(0.0007)	(0.0008)
Observations	123,982	123,982	42,593	42,593	123,982	123,982	123,982	123,982

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors robust to arbitrary correlation within CBG i and within student j.

Dependent Variable is an indicator for an arrested student pair ever being criminal partners. School attended models include fixed effects for each school attended (6-10th grade) by person j, except in cases of individual fixed effects (FE). We also include an indicator if individuals i and j are the same assigned or actual grade. Dist. FE indicates a series of indicator variables for 200 foot intervals of pairwise distances. Same HS indicates that same school only defined based on high schools. Student FE and student by CBG FE is based on individual j.

Table A.13: Impact of School Assignment by Resident since 2001

	(1) Any Crime Partner	(2) 16-18 yr old Partners	(3) 19-21 yr old Partners	(4) Violent Crime Partners	(5) Property Crime Partners
All Students (β*100)					
Assigned to Same School/Grade	0.0031**	0.0025*	0.0001	0.0008	0.0020*
	(0.0015)	(0.0014)	(0.0007)	(0.0007)	(0.0011)
*Resident since 2001	0.0037**	0.0032**	0.0012	0.0017*	0.0019*
	(0.0016)	(0.0013)	(0.0010)	(0.0010)	(0.0011)
Assigned to Same School	0.0041***	0.0032***	0.0017**	0.0012***	0.0027***
	(0.0012)	(0.0010)	(0.0007)	(0.0004)	(0.0010)
*Resident since 2001	−0.0007	−0.0017*	0.0004	−0.0006	−0.0001
	(0.0009)	(0.0009)	(0.0006)	(0.0005)	(0.0006)
Dep. Var (mean) for Diff. School (00s)	0.00163	0.00163	0.00047	0.00047	0.00093
Observations	8,372,921	8,372,921	8,372,921	8,372,921	8,372,921
Just Offenders					
Assigned to Same School/Grade	0.0016**	0.0012	0.0001	0.0007*	0.0008
	(0.0008)	(0.0008)	(0.0004)	(0.0004)	(0.0007)
*Resident since 2001	0.0036***	0.0030***	0.0010	0.0013	0.0022**
	(0.0012)	(0.0009)	(0.0009)	(0.0008)	(0.0009)
Assigned to Same School	0.0020***	0.0015**	0.0010***	0.0006**	0.0014***
	(0.0007)	(0.0006)	(0.0004)	(0.0003)	(0.0005)
*Resident since 2001	0.0002	−0.0004	0.0004	−0.0003	0.0003
	(0.0006)	(0.0005)	(0.0004)	(0.0003)	(0.0003)
Dep. Var (mean) for Diff. School	0.00112	0.00106	0.00032	0.00037	0.00058
Observations	123,982	123,982	123,982	123,982	123,982

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors robust to arbitrary correlation within CBG i and within student j.

All regressions include controls for gender, race, lep, 5th grade reading and math test scores, indicator if missing a test score, days suspended (5th grade) , total days absent (5th grade), single family home indicator, indicator for year individual j turned age 5 as of 9/1, assigned middle and high school fixed effects, and CBG fixed effects for person i. We also include an indicator in individuals i and j are the same assigned grade.

Dependent Variable is an indicator based on column heading. Resident since 2001 based on the years at the same address prior to school age 14 for person i. We also include but do not report the variable *Resident since 2001*, which has a mean of 0.35.

Table A.14: Impact of School Attended on Criminal Partnerships

	(1) Any Crime Partner	(2) 16-18 yr old Partnership	(3) 19-21 yr old Partnership	(4) Violent Crime Partners	(5) Property Crime Partners
All Students ($\beta * 100$)					
Same Course	0.0018**	0.0013	0.0010**	−0.0002	0.0006
	(0.0009)	(0.0008)	(0.0005)	(0.0004)	(0.0007)
In Same School	0.0026***	0.0014**	0.0019***	0.0010***	0.0016**
	(0.0008)	(0.0006)	(0.0006)	(0.0003)	(0.0007)
In Same School & Grade	0.0035**	0.0042***	−0.0002	0.0020**	0.0012
	(0.0017)	(0.0016)	(0.0011)	(0.0010)	(0.0012)
Dep. Var (mean) for Diff. School (00s)	0.00163	0.00163	0.00047	0.00047	0.00093
Observations	8,372,921	8,372,921	8,372,921	8,372,921	8,372,921
Just Offenders					
In Same Course	0.0118***	0.0086***	0.0046***	0.0006	0.0049**
	(0.0034)	(0.0029)	(0.0016)	(0.0012)	(0.0024)
In Same School	0.0022***	0.0011**	0.0017***	0.0006**	0.0012**
	(0.0006)	(0.0005)	(0.0005)	(0.0002)	(0.0005)
In Same School & Grade	0.0010	0.0019*	−0.0007	0.0012**	−0.0001
	(0.0010)	(0.0009)	(0.0007)	(0.0005)	(0.0007)
Dep. Var (mean) for Diff. School	0.00112	0.00106	0.00032	0.00037	0.00058
Observations	123,982	123,982	123,982	123,982	123,982

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors robust to arbitrary correlation within CBG i and within student j.

All regressions include fixed effects for individual j, CBG fixed effects for individual i. We define attended the same school as two individuals matriculating for at least one year at the same middle or high school. Same grade is based on a pair of students attending the same grade. Same course indicates if two individuals took at least two courses together in grades 6-10. We also include an indicator in individuals j and k are in the same grade.

Table A.15: Impact of School Attended *with elementary schools*

	(1) Any Crime Partner	(2) 16-18 yr old Partnership	(3) 19-21 yr old Partnership	(4) Violent Crime Partners	(5) Property Crime Partners
All Students (β*100)					
In Same Elem. School/Grade	0.0044	0.0048	0.0021	0.0022	0.0002
	(0.0041)	(0.0033)	(0.0034)	(0.0028)	(0.0029)
In Same Elem. School	0.0029*	0.0011	0.0027*	0.0012	0.0021
	(0.0017)	(0.0011)	(0.0014)	(0.0009)	(0.0014)
Same Course	0.0018*	0.0011	0.0009*	−0.0003	0.0007
	(0.0010)	(0.0009)	(0.0005)	(0.0004)	(0.0008)
In Same School & Same Grade	0.0025	0.0032**	−0.0009	0.0018**	0.0010
	(0.0015)	(0.0015)	(0.0011)	(0.0009)	(0.0011)
In Same School	0.0028***	0.0015**	0.0020***	0.0011***	0.0017**
	(0.0009)	(0.0007)	(0.0007)	(0.0004)	(0.0008)
Dep. Var (mean) for Diff. School (00s)	0.00163	0.00163	0.00047	0.00047	0.00093
Observations	8,372,921	8,372,921	8,372,921	8,372,921	8,372,921
Just Offenders					
In Same Elem. School/Grade	0.0011	0.0026	−0.0008	0.0011	−0.0006
	(0.0025)	(0.0023)	(0.0014)	(0.0013)	(0.0020)
In Same Elem. School	0.0026**	0.0013	0.0018*	0.0004	0.0021*
	(0.0012)	(0.0009)	(0.0010)	(0.0004)	(0.0011)
In Same Course	0.0072**	0.0055**	0.0016*	0.0002	0.0039*
	(0.0029)	(0.0025)	(0.0009)	(0.0008)	(0.0022)
In Same School & Same Grade	0.0016**	0.0018**	−0.0002	0.0012***	0.0004
	(0.0008)	(0.0008)	(0.0004)	(0.0004)	(0.0006)
In Same School	0.0008	0.0004	0.0007**	0.0002	0.0006
	(0.0005)	(0.0004)	(0.0004)	(0.0002)	(0.0004)
Dep. Var (mean) for Diff. School	0.00112	0.00106	0.00032	0.00037	0.00058
Observations	123,982	123,982	123,982	123,982	123,982

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors robust to arbitrary correlation within CBG i and within student j.

All regressions include fixed effects for individual j, CBG fixed effects for individual i. We also include an indicator in individuals i and j are the same grade. Dependent Variable is an indicator based on column heading. We define attended the same school as two individuals matriculating for at least one year at the same middle or high school. Same grade is based on a pair of students being in the same grade. Same course indicates if two individuals took at least two courses together in grades 6-10.

Same school elementary and Same school/grade elementary are based on attending the same elementary school.