Segregation and Residential Location Patterns
Urban Economics

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Residential Location Patterns

- Recent research has shown that the neighborhood where people live has important implications for short-run, long-run and even intergenerational outcomes.

- Residential choice can be driven by multiple factors:

  - Neighborhood/Housing/Amenities preferences

  - Racial discrimination

  - Others: Disparities in income, Information, Taxes/subsidies, Labor market opportunities, etc...
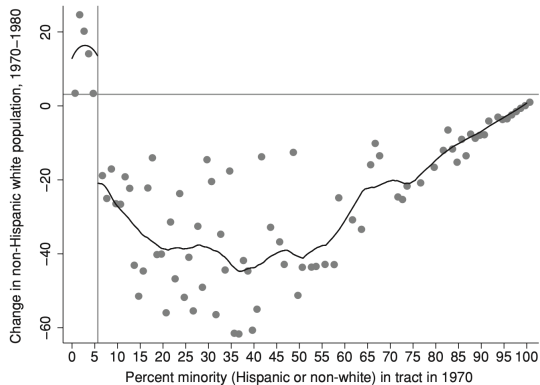
Tipping And The Dynamics Of Segregation

FIGURE I
Neighborhood Change in Chicago, 1970–1980
Source: Card et al. (2016) Tipping And The Dynamics Of Segregation

Tipping And The Dynamics Of Segregation
Model

- Two groups of buyers: $g \in w, m$

- These are willing to pay at least:

$$b^g(n^g, m) \tag{1}$$

- $\frac{\partial b^w}{\partial n^w}$ and $\frac{\partial b^m}{\partial n^m}$ weakly negative

- $\frac{\partial b^w}{\partial m}$ and $\frac{\partial b^m}{\partial m}$ social interaction effects.

- Beyond a point (m^*) is negative $\frac{\partial b^w}{\partial m} < 0$ (key assumption)

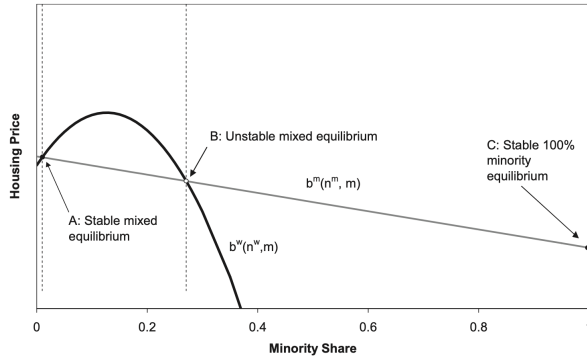# Tipping And The Dynamics Of Segregation
Model

FIGURE II
Three Equilibria

Source: Card et al. (2016) Tipping And The Dynamics Of Segregation

Tipping And The Dynamics Of Segregation
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Tipping And The Dynamics Of Segregation

FIGURE I
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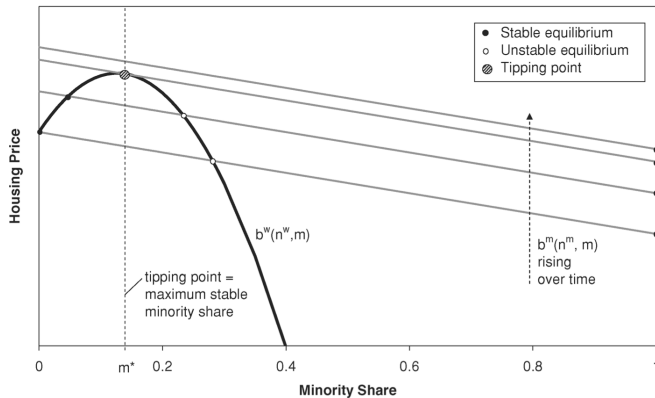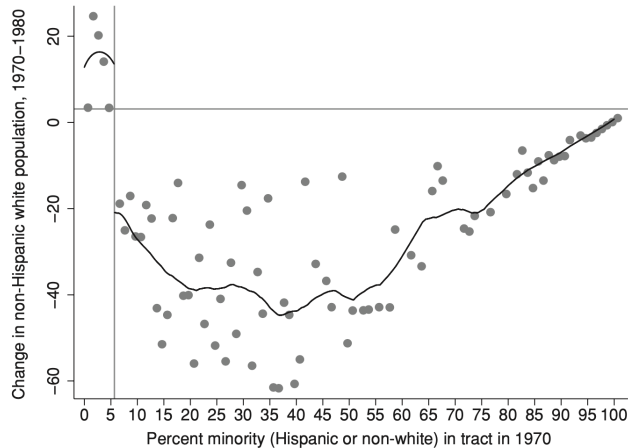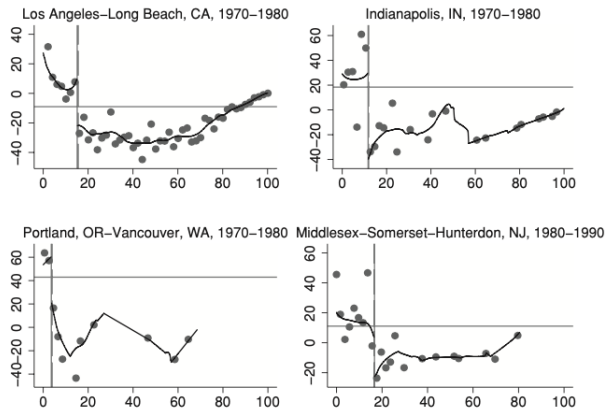
Source: Card et al. (2016) Tipping And The Dynamics Of Segregation

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Tipping And The Dynamics Of Segregation

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TABLE II

OVERVIEW OF CANDIDATE TIPPING POINTS

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	1970–1980		1980–1990		1990–2000	
	Fixed point method	Structural break method	Fixed point method	Structural break method	Fixed point method	Structural break method
	(1)	(2)	(3)	(4)	(5)	(6)
Mean	11.87	8.98	13.53	11.69	14.46	13.96
SD	9.51	8.78	10.19	8.23	9.00	9.68
# of MSAs in sample	104	104	113	113	114	114
# without identified points	4	—	3	—	0	—
Correlations						
1970–1980, fixed point	1.00					
1970–1980, structural break	0.55	1.00				
1980–1990, fixed point	0.46	0.45	1.00			
1980–1990, structural break	0.45	0.39	0.64	1.00		
1990–2000, fixed point	0.50	0.44	0.59	0.68	1.00	
1990–2000, structural break	0.45	0.61	0.58	0.73	0.73	1.00

Notes. Tipping points describe the minority share in the census tract, measured in percentage points. Summary statistics are unweighted. All candidate points are estimated using a two-thirds subsample of the original data.

Source: Card et al. (2016) Tipping And The Dynamics Of Segregation

Tipping And The Dynamics Of Segregation

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TABLE III

BASIC REGRESSION DISCONTINUITY MODELS FOR POPULATION CHANGES AROUND THE CANDIDATE TIPPING POINT

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	Change in white population				Change in minority population		Change in total population	
	Pooled		Fully interacted		Pooled		Pooled	
	Fixed point	Struct. break	Fixed point	Struct. break	Fixed point	Struct. break	Fixed point	Struct. break
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1970–1980								
Beyond candidate tipping point in 1970	−12.1	−10.4	−14.2	−16.4	2.0	−0.1	−10.1	−10.4
	(2.7)	(3.4)	(3.1)	(4.3)	(1.0)	(1.2)	(3.0)	(3.5)
Demographic/housing controls	y	y	n	n	y	y	y	y
N	11,611	11,886			11,611	11,886	11,611	11,886
R^2	0.25	0.25			0.22	0.22	0.23	0.24
1980–1990								
Beyond candidate tipping point in 1980	−13.6	−11.4	−17.0	−18.6	−1.1	0.3	−14.7	−11.1
	(2.0)	(3.5)	(3.1)	(3.5)	(1.1)	(1.1)	(2.6)	(4.1)
N	12,151	13,067			12,151	13,067	12,151	13,067
R^2	0.30	0.30			0.26	0.26	0.29	0.29
1990–2000								
Beyond candidate tipping point in 1990	−7.3	−9.3	−3.6	−6.6	2.9	1.4	−4.3	−7.9
	(1.5)	(1.8)	(2.1)	(2.0)	(1.1)	(0.8)	(2.1)	(2.2)
N	13,371	13,371			13,371	13,371	13,371	13,371
R^2	0.15	0.14			0.18	0.19	0.13	0.13

Source: Card et al. (2016) Tipping And The Dynamics Of Segregation

The Rise and Decline of the American Ghetto

The Rise and Decline of the American Ghetto
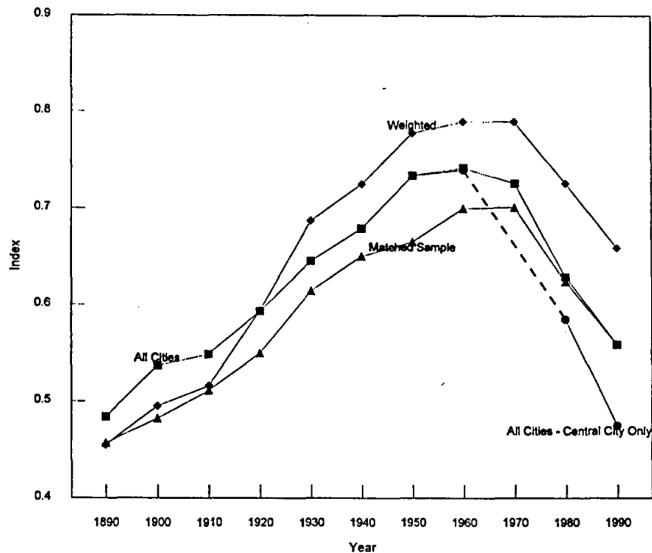
The Rise and Decline of the American Ghetto

TABLE 1

SUMMARY STATISTICS FOR MEASURES OF SEGREGATION

	INDEX OF DISSIMILARITY				INDEX OF ISOLATION			
	1890	1940	1970	1990	1890	1940	1970	1990
Number of cities	60	109	211	313	60	109	211	313
Average segregation:								
Unweighted	.485	.679	.726	.559	.214	.371	.412	.255
Weighted by black population	.455	.717	.790	.659	.227	.463	.612	.467
Matched cities	.390	.610	.697	.559	.042	.219	.363	.255
By region (matched index):								
Northeast	.394	.601	.678	.592	.000*	.098	.253	.215
Midwest	.431	.645	.745	.621	.012	.219	.390	.309
South	.387	.611	.689	.552	.213	.385	.466	.320
West	...	...	.683	.444	...	...	.230	.084
	Correlations over Time							
1890	1.000				1.000			
1940	.607	1.000			.309	1.000		
1970	.362	.460	1.000		.229	.519	1.000	
1990	.470	.447	.676	1.000	.142	.501	.875	1.000
Correlation between dissimilarity and isolation	.385	.657	.633	.791	...	...	...	...

NOTE.—Statistics include all cities, except as noted. Indices for 1890 and 1940 are ward-based indices adjusted for comparability to tract-based indices. See App. B for details. Matched cities are those included in the sample as of the year in the previous column. Matched indices are normalized to overall means in 1990 and linked to previous decades by mean differences.

* Estimate slightly below zero because of changes in sample of cities over time.

Source: Cutler (1999) The Rise and Decline of the American Ghetto

The Rise and Decline of the American Ghetto

TABLE 2

DEMOGRAPHIC CHANGE AND SEGREGATION

	YEAR				
	1890	1910	1940	1970	1990
Number of ghettos, all cities	1	5	55	127	98
Percentage of sample cities	1.7	7.0	50.5	60.2	29.5
Percentage of sample black population	1.7	4.6	72.4	93.1	72.4
Black population, matched cities:*					
Number (thousands)	874	1,499	3,772	13,945	18,732
Annual growth rate (%)	...	2.7	3.1	4.4	1.5
Northeast/Midwest	...	3.7	4.4	4.7	.9
South/West	...	2.3	2.2	4.0	2.0
Percentage black	7.5	7.1	10.8	13.9	16.2
Percentage black in ward/tract of average black[†]	20.0	22.6	37.6	69.7	60.9
	Alternative Measures of Dissimilarity, All Cities				
< High school–educated black/nonblack	...	...	...	.757	.688
= High school–educated black/nonblack	...	...	...	.746	.634
> High school–educated black/nonblack	...	...	...	.743	.544

NOTE.—Ward-based indices up to 1940 have been adjusted for comparability to tract-based indices.
* Constant set of 102 cities/MSAs with population data reported in every year.
[†] Based on 50 cities in 1890, 55 cities in 1910, 71 cities with ward data in 1940, and 102 cities in 1970 and 1990.

Source: Cutler (1999) The Rise and Decline of the American Ghetto

The Rise and Decline of the American Ghetto

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TABLE 3

EXPLAINING CHANGES IN SEGREGATION OVER TIME

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INDEPENDENT VARIABLE	1910–40		1940–70		1970–90	
	Dissimilarity (1)	Isolation (2)	Dissimilarity (3)	Isolation (4)	Dissimilarity (5)	Isolation (6)
Constant	.087**	.020	.085**	.025	−.055**	−.050**
	(.031)	(.034)	(.041)	(.048)	(.024)	(.017)
Annualized Δ ln(black)	2.481**	3.466**	1.556**	3.615**	−.149	1.217**
	(.966)	(.897)	(.761)	(.672)	(.731)	(.501)
Annualized Δ ln(nonblack)	.393	1.086	1.148*	−.297	−2.064**	−2.918**
	(1.490)	(1.810)	(.659)	(.984)	(.467)	(.522)
High segregation	.034	.136*	−.068*	−.029	−.042	−.050**
	(.047)	(.068)	(.040)	(.053)	(.027)	(.021)
High segregation × Δ ln(black)	−2.696**	−4.006**	−1.436*	−.499	−1.141	−1.455**
	(1.238)	(1.477)	(.837)	(1.019)	(.808)	(.728)
Observations	59	59	102	102	203	203
R^2	.149	.245	.304	.402	.285	.369

* Statistically significant at the 10 percent level.
** Statistically significant at the 5 percent level.

Source: Cutler (1999) The Rise and Decline of the American Ghetto

The Rise and Decline of the American Ghetto
Theories of Segregation

- ▶ Ports of Entry

  - ▶ Ghettos are a mechanism to help a group assimilate into a new environment.

  - ▶ Recent migrants more likely to cluster (Tiebout, 1956).

- ▶ Collective Action Racism

  - ▶ Ghettos result from collective actions by Whites to enforce separation from Blacks.

  - ▶ Use of specific policy instruments, such as racial zoning.

Discrimination

Table 6: Restrictive Deed Covenants

City	Dissimilarity Index, 1940	Number of Deeds		Comments
		In Sample	With Race Restrictions	
Most segregated cities: 25 deeds, 68% have restrictive covenants				
Chicago	.944	15	10 (67%)	Technically, restrictions are "conditions," not covenants.
Cleveland	.871	2	0 (0%)	
Los Angeles	.838	4	4 (100%)	"Caucasian only" restrictions directed primarily at Asians.
Detroit	.834	4	3 (75%)	
Less segregated cities: 26 deeds, 50% have restrictive covenants				
Boston	.814	3	0 (0%)	
Baltimore	.789	3	3 (100%)	"Seller approval" restrictions in two cases.
New York	.766	2	0 (0%)	
Minneapolis	.760	2	2 (100%)	
Lansing MI	.739*	1	1 (100%)	Alienation restricted, but not occupancy.
Kansas City MO	.734	2	2 (100%)	
Springfield MA	.719*	1	0 (0%)	
Seattle	.709	4	2 (50%)	"Caucasian only" restrictions directed primarily at Asians.
San Francisco	.693	1	1 (100%)	"Caucasian only" restrictions directed primarily at Asians.
Louisville	.689	2	0 (0%)	
Birmingham	.686	1	1 (100%)	Occupancy restricted, but not alienation.
Providence	.653	2	0 (0%)	
South Bend	.582*	1	1 (100%)	"Caucasians only, except business"
Little Rock	.536*	1	0 (0%)	

Note: Dissimilarity is based on tract data. Ward-based indices, corrected for mean differences between ward and tract indices, are used where noted by *.
T-statistic of mean difference is 2.57. Source: Monchow (1928) pp. 47-50.

Source: Cutler (1999) The Rise and Decline of the American Ghetto

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- Collective Action Racism

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    - Use of specific policy instruments, such as racial zoning.

- Decentralized Racism

    - Ghettos are maintained by White racism.

    - Segregation is enforced by individual Whites' decision to live among other Whites (Schelling, 2010).

Discrimination

TABLE 6

PREDICTIONS OF ALTERNATIVE THEORIES

RELATION BETWEEN SEGREGATION AND:	THEORY		
	Port of Entry	Collective Action Racism	Decentralized Racism
House prices	Blacks pay more (esp. migrants)	Blacks pay more	Whites pay more
Attitudes toward integration	Blacks prefer segregation (esp. migrants)	Whites prefer segregation	Whites prefer segregation

Source: Cutler (1999) The Rise and Decline of the American Ghetto

Discrimination

TABLE 7

A. SEGREGATION AND HOUSE RENTS

Dependent Variable: ln(Annual Rental Payment)

Independent Variable	1940 City (1)	1940 City (2)	1970 MSA (3)	1970 MSA (4)	1970 Tract (5)	1990 MSA (6)	1990 MSA (7)	1990 City (8)
Black head of household	−1.301** (.258)	−1.443** (.369)	−.359** (.159)	−.416** (.132)	−.063** (.005)	.155** (.075)	.147** (.072)	.126 (.212)
Dissimilarity × black head of household	1.262** (.320)	1.328** (.516)	.261 (.207)	.377** (.163)	...	−.354** (.110)	−.380** (.105)	−.340 (.284)
Black × population growth rate past 30 years	−4.290 (2.812)	−3.787 (2.431)	1.034 (1.854)	.652 (1.871)	...	2.072 (2.358)	2.448 (2.015)	−2.980 (5.637)
Born in different state	...	.089 (.097)	...	...	...	...	...	...
Born in different state × dissimilarity	...	−.134 (.113)	...	...	...	...	...	...
Born in different state × black	...	.310 (.465)	...	...	...	...	...	...
Born in different state × black × dissimilarity	...	−.246 (.636)	...	...	...	...	...	...
Percentage of renter households living in structure built in past 30 years × black	...	...	−.052** (.022)	−.050** (.020)	...	−.042** (.021)	−.043** (.017)	.003 (.043)
Share of MSA population in suburbs × black	...	...	−.081 (.062)	−.021 (.062)	...	−.174** (.064)	−.121** (.055)	−.273** (.136)
Log(median family income in tract)	...	...	...	...	.720** (.010)	...	...	...
Percentage black in tract	...	...	...	...	.123** (.009)	...	...	...
Public housing units per capita × black	...	...	...	...	...	−6.70** (3.15)	−6.22** (2.75)	−1.236 (3.839)
Section 8 rent subsidy payments per capita × black	...	...	...	...	...	−.0003 (.0006)	−.0001 (.0006)	.001 (.001)
City/MSA fixed effects	yes	yes	yes	yes	no	yes	yes	yes
Structural characteristics	no	no	no	yes	yes	no	yes	yes
R^2	.199	.200	.126	.290	.490	.194	.334	.274
Observations	61,180	61,180	145,236	145,236	156,369	193,619	193,619	69,799
Number of cities/MSAs	40	40	111	111	...	237	237	92

Source: Cutler (1999) The Rise and Decline of the American Ghetto

Discrimination

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Born in different state	⋯	.089 (.097)	⋯	⋯	⋯	⋯	⋯	⋯
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Born in different state × black × dissimilarity	⋯	−.246 (.636)	⋯	⋯	⋯	⋯	⋯	⋯

Source: Cutler (1999) The Rise and Decline of the American Ghetto

Discrimination

TABLE 8
SEGREGATION AND ATTITUDES TOWARD INTEGRATION

INDEPENDENT VARIABLE	BLACK ATTITUDES	WHITE ATTITUDES		
	Prefers Majority-White Neighborhood (1982) (1)	Believes in Right to Segregated Housing (1972–93) (2)	Supports Ban of Interracial Marriage (1972–93) (3)	Would Not Live in 50% Black Neighborhood (1990) (4)
Dissimilarity index, 1980/1990†	.250	.196**	−.104**	.356
	(.462)	(.062)	(.052)	(.221)
South region	−.251**	.077**	.152**	.047
	(.060)	(.015)	(.013)	(.053)
Midwest region	−.024	.022	.061**	−.067
	(.072)	(.015)	(.012)	(.051)
West region	.022	−.023	−.016	−.042
	(.091)	(.015)	(.012)	(.057)
Year effects	...	yes	yes	...
Education, sex, and age controls	yes	yes	yes	yes
Observations	362	8,795	11,111	677
R^2	.112	.113	.204	.042

NOTE.—Standard errors, corrected for grouped observations, are in parentheses.
* Statistically significant at the 10 percent level.
** Statistically significant at the 5 percent level.