

# Cities, Schools, and Space

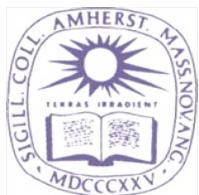
Andy Anderson (Academic Technology Services)

Hilary Moss (Departments of Black Studies & History)

## Amherst College



- A research seminar for juniors
- Urban history and education policy
- Potential thesis students encouraged!

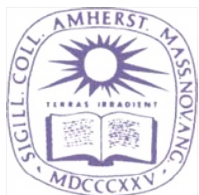


# Many Research Methodologies

- Archival analysis
- Oral interviews



- **GIS:** integrated into the course



## Cities, Schools, & Space

Announcements

Syllabus

### ■ Course Readings

E-reserves

Library Resources

Assignments

Discussion

Dropbox

Expectations & Requirements

Faculty Information

Class Roster

About this Mellon Tutorial

## Course Readings

Copies of all books will be available for purchase at [Amherst Books](#) and placed on 2-hour reserve at Frost Library. In addition, a number of shorter documents will be available through [the course web site](#).

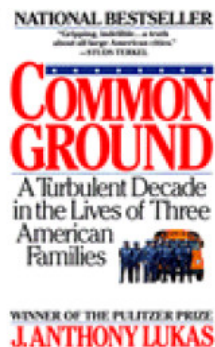
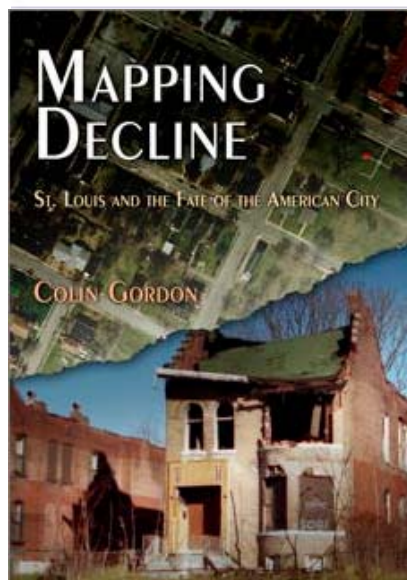
Colin Gordon, [\*Mapping Decline: St. Louis and the Fate of the American City\*](#) (Penn, 2008)

Richard D. Kahlenberg, [\*All Together Now: Creating Middle-Class Schools through Public School Choice\*](#) (Brookings, 2001)

J. Anthony Lukas, [\*Common Ground: A Turbulent Decade in the Lives of Three American Families\*](#) (Vintage, 1986)

Margaret Pugh O'Mara, [\*Cities of Knowledge: Cold War Science and the Search for the Next Silicon Valley\*](#) (Princeton, 2005)

Thomas J. Sugrue and Kevin Kruse, eds. [\*The New Suburban History\*](#) (Chicago, 2006)



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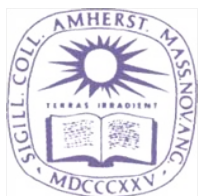
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Students and parent at Tobin School, Cambridge



Web  
Page  
(Restricted)

## E-reserves for COLQ-32 'Cities, Schools, & Space'

### ◆ E-Reserve

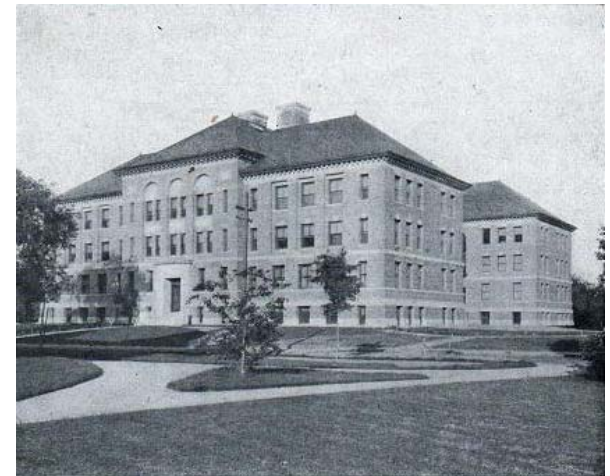
◆ Type ◆ Due Date

Fisk, Edward. "Controlled Choice in Cambridge, Massachusetts," in <i>Divided We Fail: Coming Together through Public School Choice</i> , 167-208. New York: Century Foundation Press, 2002.		02/01
O'Sullivan, David, and David Unwin. "The Elements of Statistics." In <i>Geographic information Analysis</i> , 384-411. Hoboken, New Jersey: John Wiley & Sons, 2003.		02/01
Hillier, Amy. "Redlining and the Home Owners' Loan Corporation." <i>Journal of Urban History</i> 29, no. 4 (2003): 394-420.		02/08
Hillier, Amy. "Redlining in Philadelphia." In <i>Past Time, Past Place--GIS for History</i> , edited by Anne Kelly Knowles, 79-92. Redlands: ESRI Press, 2002.		02/08
O'Sullivan, David, and David Unwin. "The Pitfalls and Potentials of Spatial Data." In <i>Geographic information Analysis</i> , 26-49. Hoboken, New Jersey: John Wiley & Sons, 2003.		02/08
Mohl, Raymond A. "Planned Destruction--The Interstates and Central City Housing." In <i>From Tenements to the Taylor Homes--In Search of an Urban Housing Policy in Twentieth-Century America</i> , edited by John F. Bauman, Roger Biles and Kristin Szylvian, 226-245. University Park, PA: The Pennsylvania State University Press, 2000.		02/15
O'Sullivan, David, and David Unwin. "Fundamentals: Maps as Outcomes of Processes." In <i>Geographic information Analysis</i> , 51-66, 71, 73-75. Hoboken, New Jersey: John Wiley & Sons, 2003.		02/15
Highsmith, Andrew R. "Demolition Means Progress: Urban Renewal, Local Politics, and State-Sanctioned Ghetto Formation in Flint, Michigan." <i>Journal of Urban History</i> 35, no. 3 (2009): 348-368.		02/22
Hillier, Amy. "Residential Security Maps and Neighborhood Appraisals: The Homeowners' Loan Corporation and the Case of Philadelphia." <i>Social Science History</i> 29, no. 2 (2005): 207-233.		02/22
Lassiter, Matthew D. "De Jure/De Facto Segregation--The Long Shadow of a National Myth." In <i>The Myth of Southern Exceptionalism</i> , edited by Matthew D. Lassiter and Joseph Crespino, 25-48. New York, New York: Oxford University Press, Inc., 2010.		02/22
O'Sullivan, David, and David Unwin. "Area Objects and Spatial Autocorrelation." In <i>Geographic information Analysis</i> , 180-203. Hoboken, New Jersey: John Wiley & Sons, 2003.		02/22
Carriere, Michael. "Fighting the War Against Blight: Columbia University, Morningside Heights, Inc., and Counterinsurgent Urban Renewal." <i>Journal of Planning History</i> 10, no. 1 (2011): 5-29.		03/01
Winling, LaDale. "Students and the Second Ghetto: Federal Legislation, Urban Politics, and Campus Planning at the University of Chicago." <i>Journal of Planning History</i> 10, no. 1 (2010): 59-86.		03/01
Benjamin, Karen. "Suburbanizing Jim Crow: The Impact of School Policy on Residential Segregation." (Submitted).		03/08
Benjamin, Karen. Longview Brochure--Easy to Buy., Submitted.		03/08
Erickson, Ansley T. "Building Inequality: The Spatial Organization of Schooling in Nashville, Tennessee." <i>Journal of Urban History</i> (Submitted).		03/08
Bell, Courtney. "Geography in Parental Choice." <i>American Journal of Education</i> 115, no. 4 (2009): 493-521.		04/12
Dougherty, Jack, and et al. "School Choice in Suburbia: Test Scores, Race, and Housing Markets." <i>American Journal of Education</i> 115, no. 4 (2009): 523-548.		04/12

In America, a child's address,  
more than any other factor,  
often determines  
what kind of public education  
he or she will receive.



Black School in Louisa County, Virginia, ca. 1935  
(LOC/NAACP)

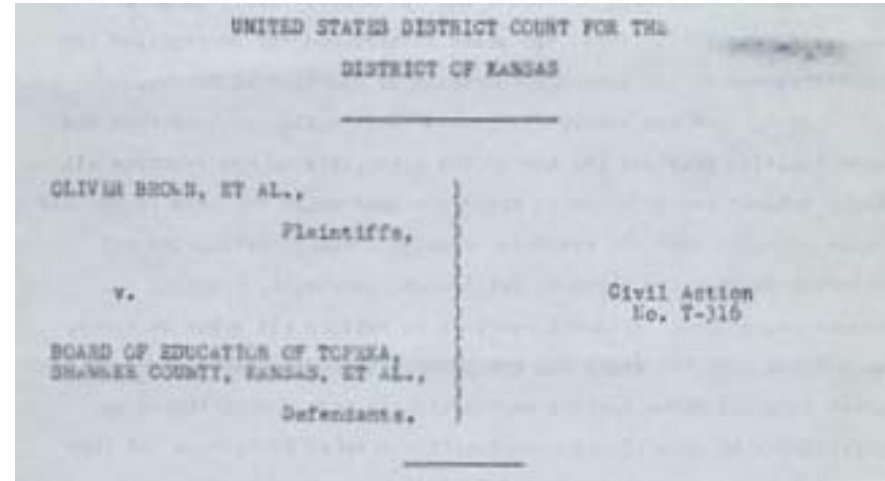


Cambridge, Massachusetts Latin School, 1916  
(CHLS Yearbook)



# De Jure Segregation

- Legal segregation of public schools by race banned



nationwide in 1954 — separate, *not* equal

- Unequal educational opportunities still exist for a variety of reasons



# *De Facto Segregation*

- Federal policies that expanded suburbs and facilitated “white flight” and job loss:
  - Mortgage assistance
  - Investment depreciation
  - Highway construction
  - Public housing
  - Urban renewal



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# Disguised Segregation

- Subtle school segregation can still exist:
  - Shifting school catchment areas
  - Building new schools in white/upper-class areas at the expense of existing facilities
  - Educational tracking of students





# Cambridge, Massachusetts

- A progressive city of 110,000 people
- Black and Hispanic populations substantially increased in the late 20<sup>th</sup> century



Year	Black Population
1940	4%
1960	5%
1970	7%
1980	11%
2000	12%



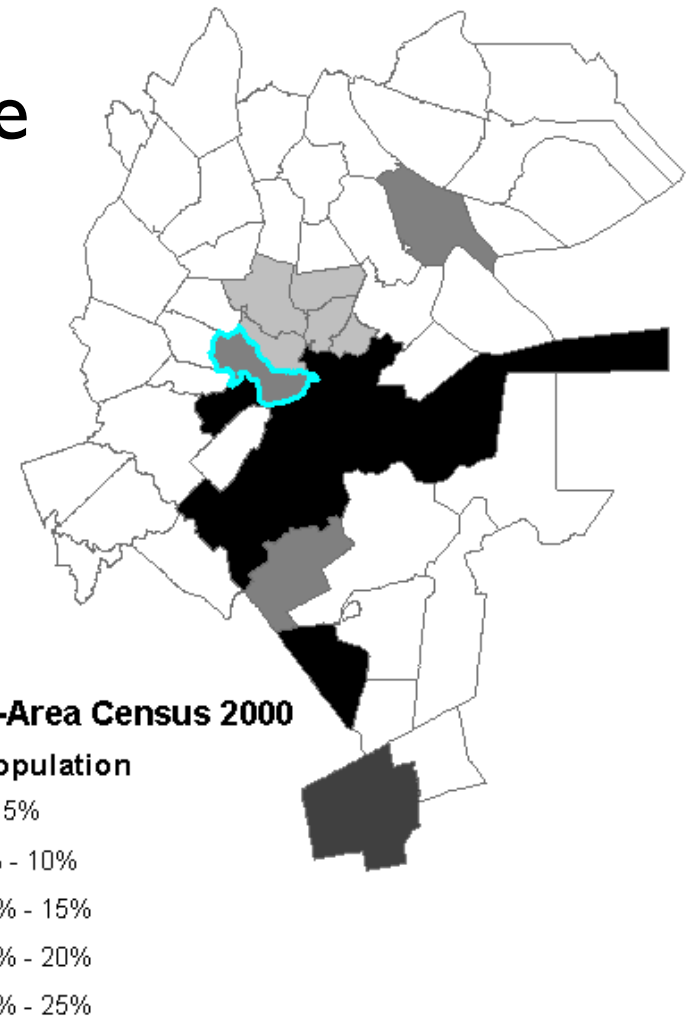
Cambridge Public Library

- 1965: Schools already *racially imbalanced*

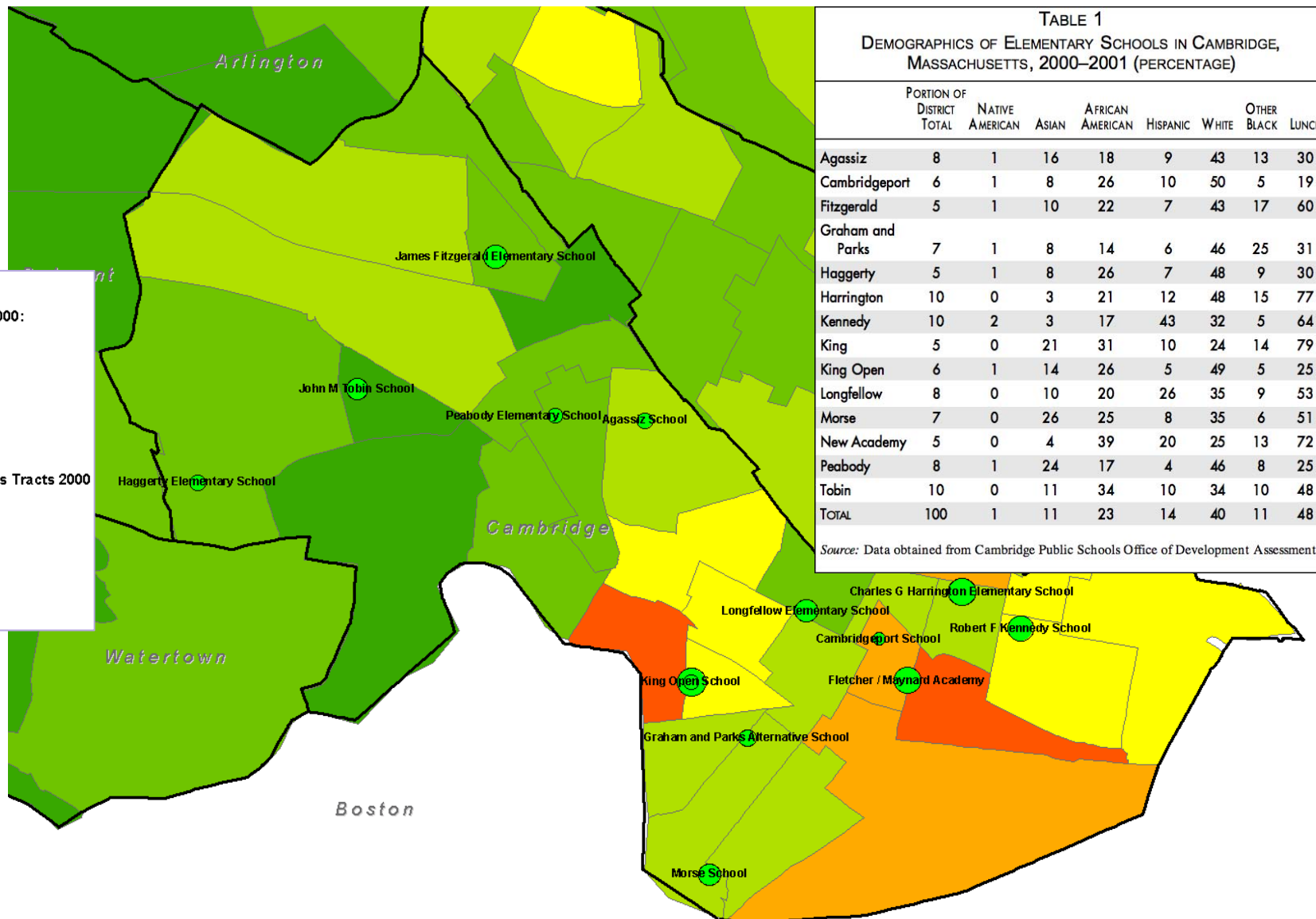


# Learning GIS: Basic Skills

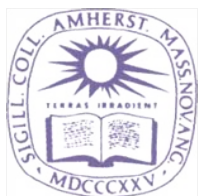
- How does Cambridge compare to nearby communities?
  - Census.gov  
1990 - 2010
  - NHGIS.org  
≤ 1980



# Creating GIS Data from Text

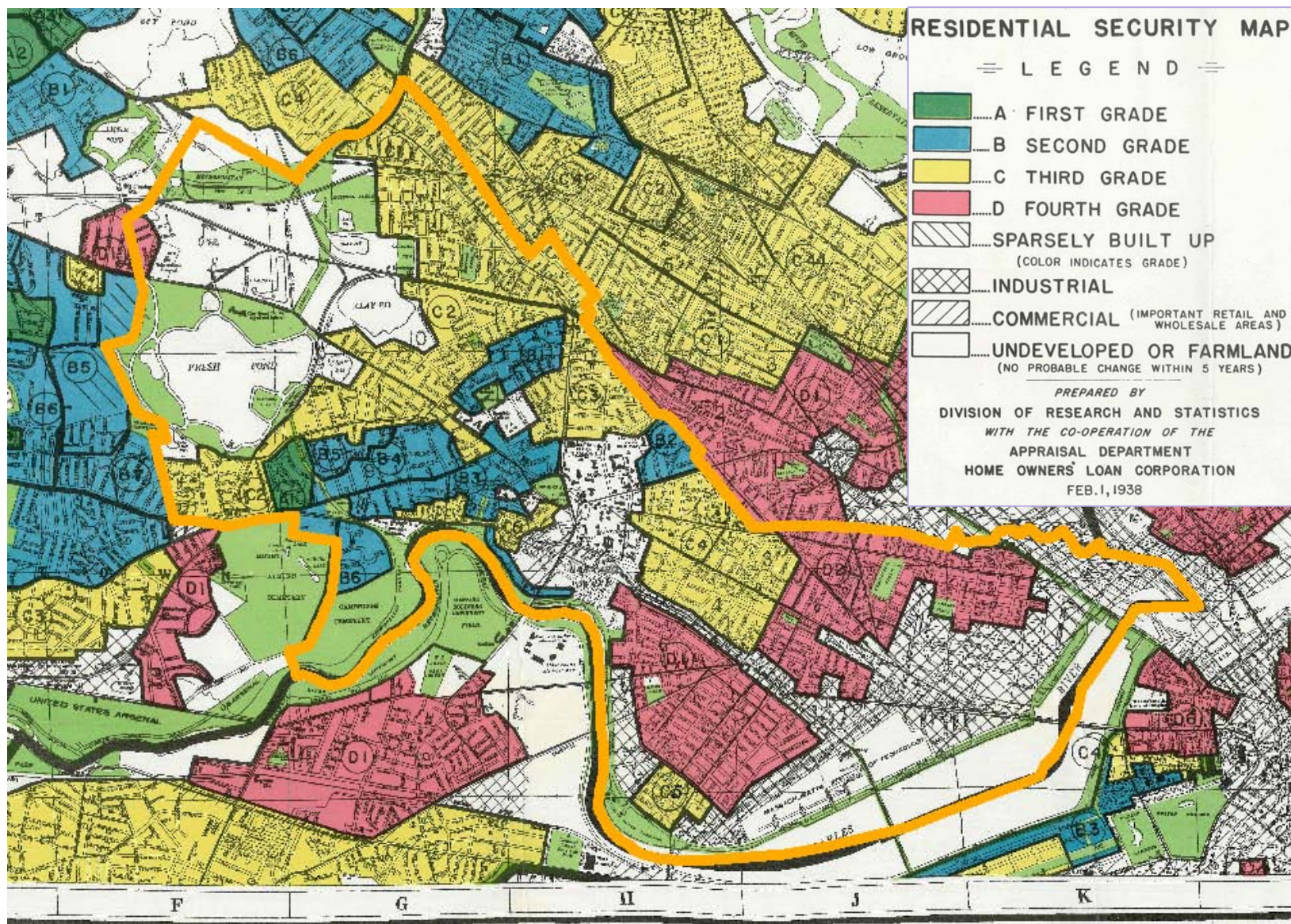


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# Georeferencing Historical Maps

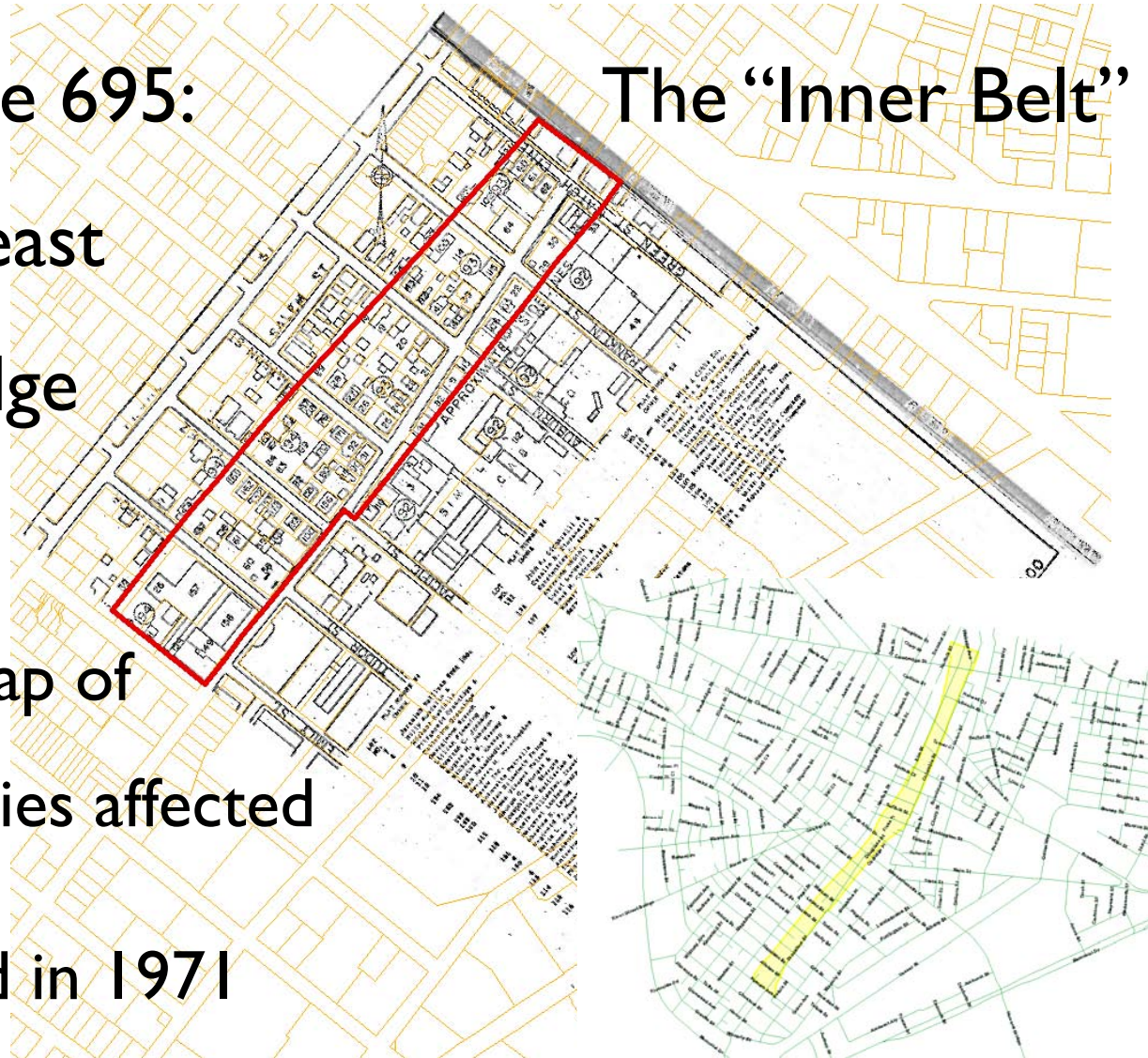


*Cities, Schools, and Space*



# Extracting Map Features

- Interstate 695:  
*through east*  
Cambridge
- 1967 map of  
properties affected
- Stopped in 1971



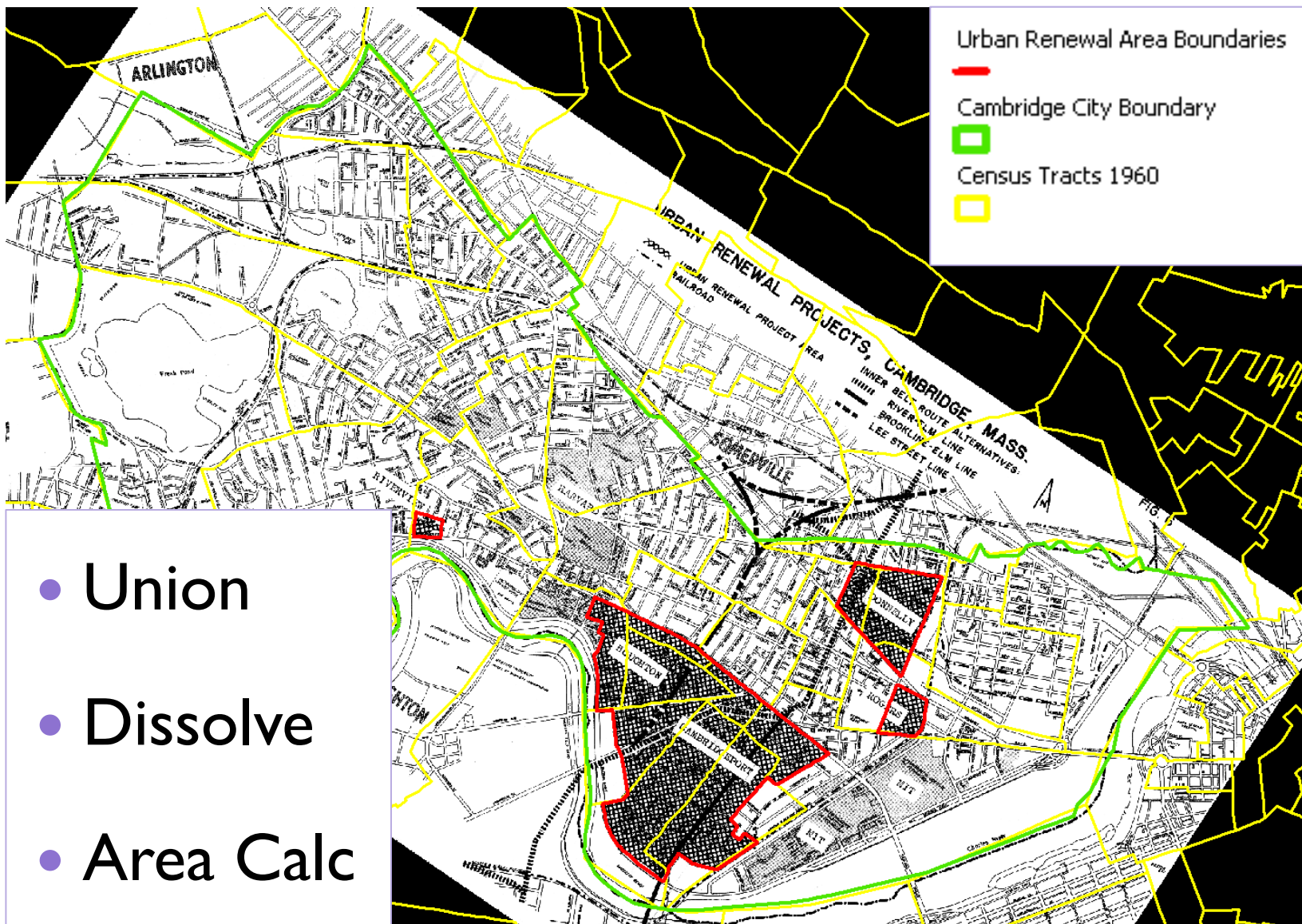


Parcel	Owner	Census_Name	Address	Home	Relation	Sex	ColorRace	Age	Birthpce	FatherBP	MotherBP	Language
89-65	Opella Dumas											
89-66	Thomas J. Cardullo & Alice A. Cardullo	Thomas Cardullo	216 Washington S	R	Head	M	W	35	Italy	Italy	Italy	Italian
89-67	Teodore K. Johnson, Lillian A. Johnson, Walter K. Johnson, & Helen M. Clark											
89-7	Anufas Nemeikstis & Eva Nemeikstis	Anupras Nemeikates	330 Columbia Stre	O	Head	M	W	37	Lithuania	Lithuania	Lithuania	Lithuanian
89-8	Paul B. Fackler & Russell A. Fackler											
89-9												
89-10												
89-81												
89-86												
89-14	Bartolomeu Masse											
89-15	Lillian A. Mahon	Lillian Mahon	275 River Street	R	Wife	F	N	43	Barbados	Barbados	Barbados	English
89-16	John S. Moseley, James A. Betts, and Athelston I.O. Moseley	James A. Betts	63 Magee Street	R	Son	M	N	14	Massachusetts	Massachusetts	Massachusetts	English
89-17	John S. Moseley, Florence G. Moseley, and Athelston I.O. Moseley	John S. Moseley	235 Western Aven	R	Head	M	N	37	Barbados	Barbados	Barbados	English
89-18	John S. Moseley, Florence G. Moseley, and Athelston I.O. Moseley											
89-19	Clyde A. Henry & Theresa T. Henry											
89-82	Alphonso Wallcott & Elmira B. Wallcott	Alphonso Walcott	15 Douglass Stree	R	Head	M	N	42	West Indies	West Indies	West Indies	English
89-81	Joseph Nunziato, Trustee of Margaret Nunziato Trust	Joseph Nunziato	50 Howard Street	R	Son	M	W	10	Massachusetts	Italy	Italy	Italian
89-21	John E. Scott & Edna A. Scott	John E Scott	91 Inman Street	R	Brother-in-law	M	N	25	British West Indies	British West Indies	British West Indies	English
89-22	Doris A. Kelley											
89-23	Angela Leonardo											
89-24	Catherine T. Ellison & Frances E. Irwin	Francis E. Irwin	79 Auburn Street	O	Head	M	W	18	Massachusetts	Massachusetts	England	English
89-25	Minna Yogel											
89-31	Roman Catholic Archbishop of Boston Corp. Sole											
89-89	Roman Catholic Archbishop of Boston Corp. Sole											
89-72	Joseph N. Payne & Sola V. Payne											
89-83	Samuel L. Merchant & Althea D. Merchant	Samuel Merchant	11 Worcester St.	O	Son	M	N	19	Massachusetts	Virginia	Canada-English	English
89-84	Samuel L. Merchant & Althea D. Merchant	Samuel Merchant	11 Worcester St.	O	Son	M	N	19	Massachusetts	Virginia	Canada-English	English
89-34	Alfred S. Mahon	Alfred Mahon	275 River Street	R	Son	M	N	5	Massachusetts	Barbados	Barbados	English
89-35	Abbie A. Coleman											
89-36	Rufus Bowen & Martha E. Bowen	Rufus Bowen	20 Soden Street	R	Husband	M	N	33	Barbados	Barbados	Barbados	English
89-37	Sarah A. Bates, Ronald C. Bates, Barbara A. Bates, & Elizabeth F. Bates											
89-38	Della L. Brown											
89-39	Della L. Brown											
89-40	Della Louise Brown											
89-41	Jennie Fieler & Elizabeth Kilpatrick											
89-42	Benjamin Chalfen											
89-43	Mildred Driscoll & Lillian B. Driscoll	Mildred Driscoll	3 Suffolk Street	O	Daughter	F	W	20	Massachusetts	Massachusetts	Massachusetts	English
89-44	Benjamin Chalfen											
89-79	Charles J. Fanning & Mary C. Fanning											
89-80	Mary M. Curtin											
89-78	Richard J. Larkin & Mary J. Larkin	Richard J. Larkin	9 Grenough Avenu	O	Son	M	W	10	Massachusetts	Irish Free State	Sweeden	English
89-46	Antonio Crendone											
89-87	Walter & Mary A.											
89-54	Lester A. Randall & Beatrice G. Randall											
89-76	Josephina Spampinato	Josephine Spampinato	210 Harvard Squa	R	Sister in-law	F	W	30	Italy	Italy	Italy	Italian
89-91	Joseph B. Maynard	Joseph Maynard	134 Hampshire St	R	Son	M	W	8	Massachusetts	Massachusetts	Massachusetts	English
89-90	Roman Coffon & Mary E. Coffon	Roman Coffin	266 Windsor Stree	R	Husband	M	W	33	Russia	Russia	Russia	Russian
89-56	Edith H.E. Pedro, Helen J. O'Brien, & Rose C. Maraca											
89-57	Anna M. Hunt, Winifred Godfrey, Sarah J. Murphy, M. Lorraine Clifford, & Claire J. Murphy											
89-58	Iva W. Nelson & Elizabeth C. Nelson											
89-58A	Murray L. Yogel											
89-75	Murray L. Yogel											
89-73	Murray L. Yogel											
89-60	Fernando J. Monteiro											
89-61	Clara Finstein	Clara Finstein	131 Columbia Stre	R	daughter	F	W	33	Massachusetts	Austria	Austria	Yiddish
89-62	Willie Jane Hall & Willie Jane Hall, Trustee for Anthony Wyche & Anthony Wyche	Wyche & Anthony Wyche										
89-63	Suzanne R. Greene & Paul A. Revalson	Paul A. Revalson	9 Worcester Stree	R	Great nephew	M	N	12	Massachusetts	Massachusetts	Massachusetts	English
89-64	Muriel G. Raynor & Samuel L. Merchant	Samuel Merchant	11 Worcester St.	O	Son	M	N	19	Massachusetts	Virginia	Canada-English	English
89-5	Ora H. Jackson & Florence H. Agard											
89-6	Berardino M. Santeusanio & Antoinette Santeusanio											
88-20	Rose Cohen											
88-51	Mary O. DeGugliemo	Mary O. DeGuglielmo	793 Cambridge St	O	Wife	F	W	44	Italy	Italy	Italy	Italian
88-52	Mary O. DeGugliemo	Mary O. DeGuglielmo	793 Cambridge St	O	Wife	F	W	44	Italy	Italy	Italy	Italian
88-27	John E. Aufiero & Gilda C. Aufiero											
88-38	Anthony Colosimo, Elizabeth Colosimo, & Bruno Colosimo	Anthony Colosimo	21 Park Ave	O	Head	M	W	38	Italy	Italy	Italy	Italian

# Compare families to the 1930 census!



# What Influences Urban Renewal?



Cities, Schools, and Space

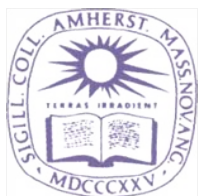
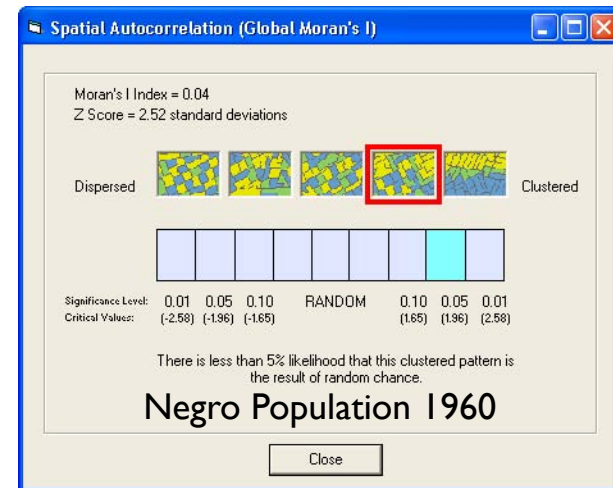
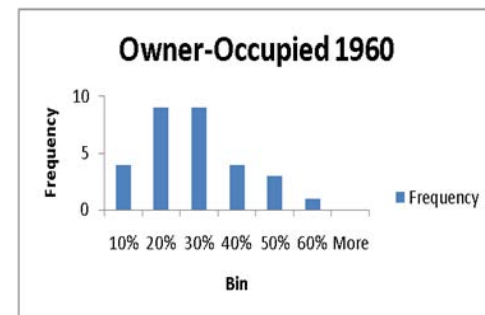
# Possible Inputs to Urban Renewal

- Data from the 1960 census:

- Older Housing (*Before 1940*)
- Housing Value
- Owner-Occupied Housing
- Negro Population

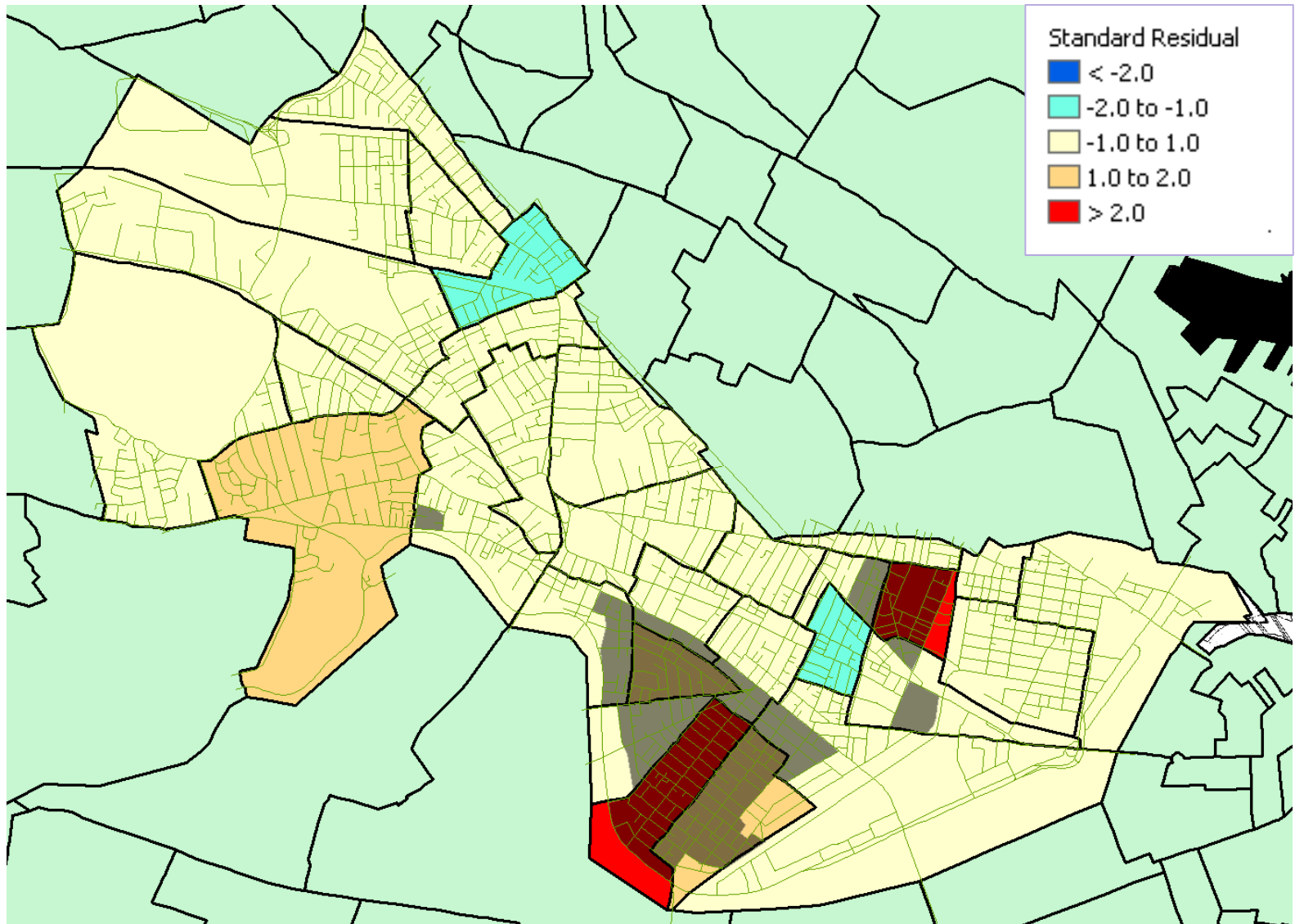
- Data requirements:

- Not cross-correlated: use Excel's *CORREL*
- Spatially auto-correlated: use ArcGIS' *Moran's I*



# Geostatistical Analysis

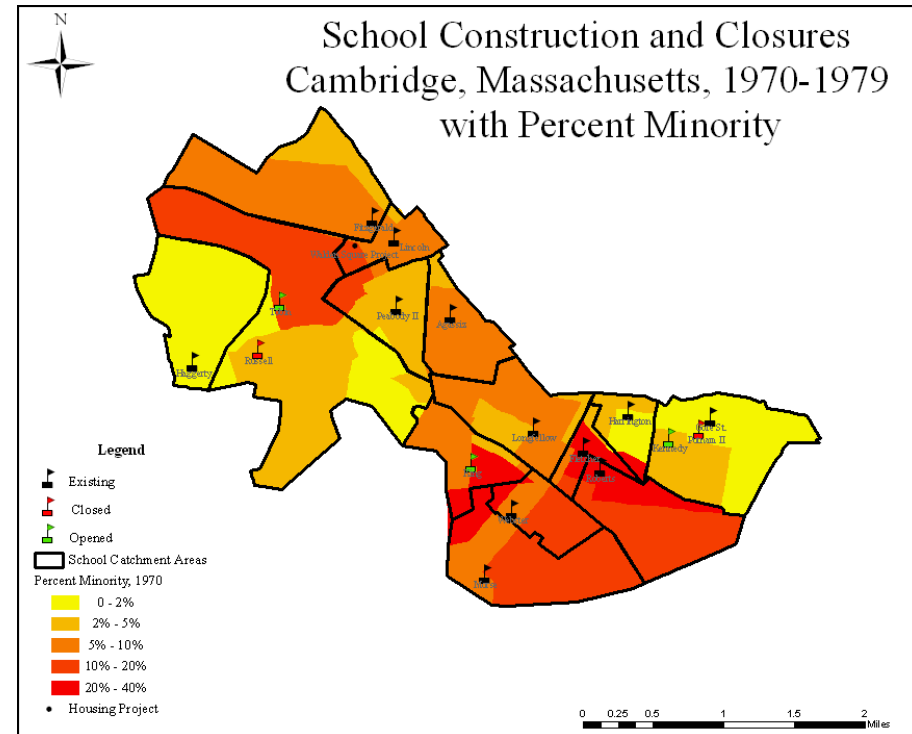
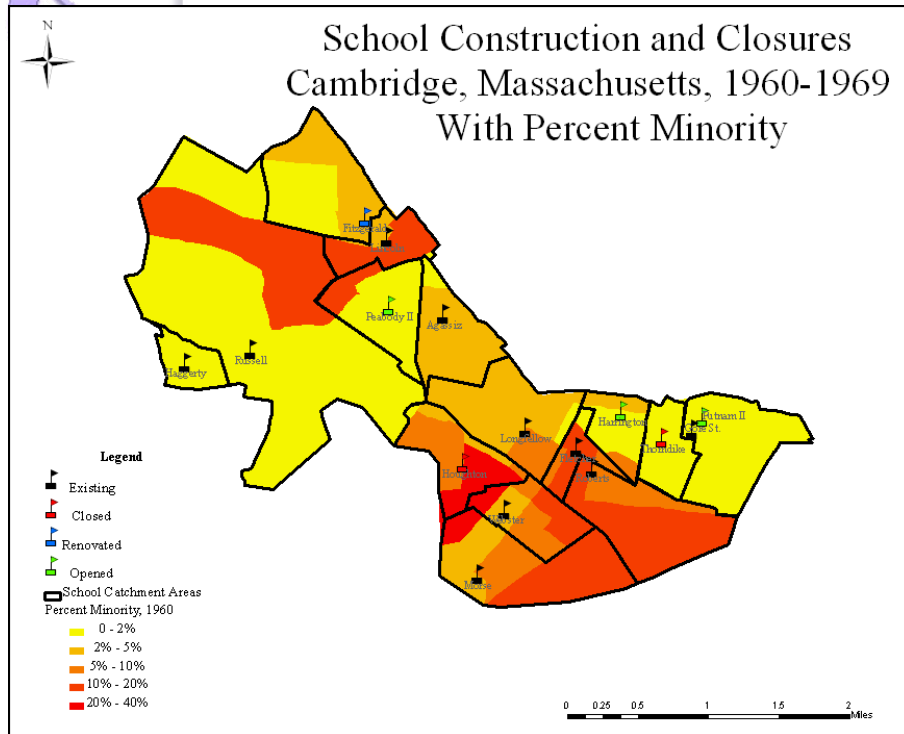
$$\text{UrbanRenewalArea} = \underset{\pm 0.05}{0.13} \text{ Negro} - \underset{\pm 0.05}{0.08} \text{ OwnerOccupied} + \underset{\pm 0.05}{0.05} \text{ Before1940} - \underset{\pm 0.05}{0.03} \text{ HousingValue} + \underset{\pm 0.49}{0.18}$$





# What Influenced School Building?

- One of the eight student projects



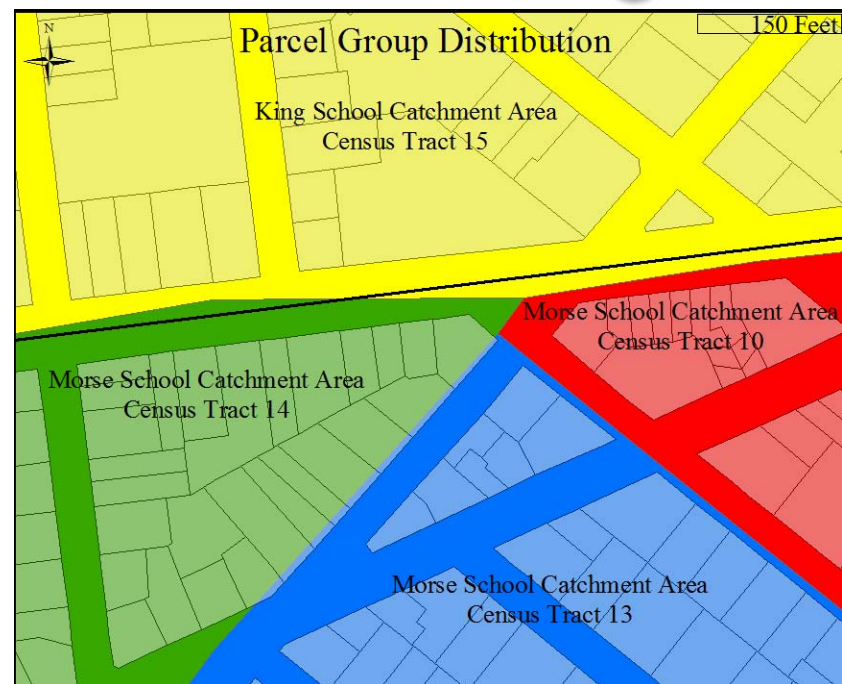
- Six new or reconstructed schools
- Worst school, Fletcher, untouched



# What Influenced School Building?

- Parcel Analysis
  - Distribute census info by housing type on parcels

<u>School District</u>	<u>Minority Reported</u>	<u>Minority from Census Analysis</u>	<u>Difference from Census Analysis</u>
Putnam-Gore St.	0	3	100.00%
Thorndike	0	8	96.05%
Haggerty	5	4	-26.35%
Harrington	47	59	19.54%
Fitzgerald	77	90	14.26%
Longfellow	65	77	15.34%
Agassiz	31	30	-3.63%
Peabody	80	48	-65.68%
Russell	85	125	32.15%
Morse	95	105	9.19%
Fletcher	72	126	43.16%
Lincoln	50	64	21.76%
Roberts	191	74	-157.95%
Webster	152	110	-38.59%
Houghton	273	299	8.78%
<i>Total</i>	<i>1224</i>	<i>1222</i>	<i>-0.14%</i>



<u>School District</u>	<u>Average Income</u>
Russell	\$14,339.69
Peabody	\$12,250.89
Agassiz	\$10,520.23
Haggerty	\$8,881.98
Lincoln	\$8,714.56
Longfellow	\$8,337.93
Fitzgerald	\$8,211.01
Webster	\$7,613.17
Morse	\$7,460.60
Putnam-Gore St.	\$7,314.95
Roberts	\$7,252.42
Fletcher	\$7,239.24
Harrington	\$6,960.14
Houghton	\$6,959.93
Thorndike	\$6,871.54

# Thanks!

- Cambridge GIS! Jeff Amero, et al.
- Cambridge Assessor
- Cambridge Historical Society
- MIT Archives
- National Historical GIS @ U. Minn

