

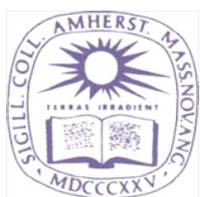
Cities, Schools, and Space

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

Cambridge Chronicle
The Cambridge Sun
Cambridge, Mass., Thursday, March 6, 1975
Founded 183 Years Ago

Twenty Polish Industrialists Will Arrive Here Sunday To Study Data Processing
Twenty Polish industrialists from the cities of Lodz, Katowice, and Gdansk are expected to arrive in Cambridge on Sunday for a three-day study tour. The group, organized by the Cambridge Center for International Studies, will be led by Professor William J. Kelly, director of the center. The industrialists will be studying data processing techniques at the Massachusetts Institute of Technology and the University of Cambridge.

Tax Rate Drops 60 Cents; First Cut Since 1954
The city council has approved a 60-cent drop in the city's property tax rate, the first cut since 1954. The new rate will be \$1.94 per \$100 of assessed value. The council also approved a 10-cent increase in the city's sewerage fee.

Anti-Narcotics Drive in Harvard Square Promised by Chief
Police-Planning to Hold in Committee
Harvard Square will become a drug-free zone, according to the chief of police. He has promised a drive against narcotics in the area, which is known for its high concentration of drug stores. The drive will include the installation of drug-free zones and the holding of public hearings.

Public Invited Catholic, Lutheran Students To Join in Ecumenical Art Festival Here Next Week
The public is invited to join in an ecumenical art festival here next week. The festival, organized by the Catholic and Lutheran churches, will feature a variety of art forms, including painting, sculpture, and music. The festival will be held at the Cambridge Community Center.

Exam Marks Landring Tops List for Master in School Dept.
John Landring has topped the list of candidates for a master's degree in the school department. He received the highest score on the exam. The school department is pleased with his performance and expects him to be a valuable asset to the department.

Mrs. Sullivan Says Goodbye to Kerry Corner
Mrs. Sullivan has said goodbye to Kerry Corner, where she has lived for many years. She is moving to a new home in the city. Mrs. Sullivan is a well-known figure in the community and is being remembered for her many contributions.

You Can't Lose! We Guarantee Results on Your 'For Sale' Ads
We guarantee results on your 'For Sale' ads. If you don't sell your property within a certain period, we will refund your advertising fee. This is a unique service that we offer to our customers.

Trucking Firm Revenues Up
The revenues of a local trucking firm have increased significantly. This is due to an increase in the number of trucks and a rise in the price of fuel. The firm is pleased with its performance and expects continued growth.

MIKE'S BACK and CARROLL OUT
Mike and Carroll are back and out. They have returned from their trip and are ready to get on with their work. They are both in good health and are looking forward to the future.

MOVING?
We are moving to a new location. Our new address is 123 Main St., Cambridge, MA. We will be open at our new location starting next week.

JUNK CARS WANTED
We are buying junk cars. We will pay top dollar for your old car. We will also provide towing services. Contact us today for more information.

CENTRAL TAXI
We provide taxi services throughout the city. We are reliable, punctual, and affordable. Call us for a taxi.

CHRISTO FOOD STORE
We have a wide variety of food products. We are open 7 days a week. We are located at 456 Main St., Cambridge, MA.

FREE INCOME TAXES
We offer free income tax services. We will help you with your taxes and provide you with a free consultation. Call us today.

MOVING?
We are moving to a new location. Our new address is 789 Main St., Cambridge, MA. We will be open at our new location starting next week.

FREE PARKING IN CENTRAL SQ.
We offer free parking in Central Square. This is a great benefit for our customers. We are located at 101 Main St., Cambridge, MA.

FREE EXPANSION BAND
We offer a free expansion band. This is a great gift for our customers. We are located at 123 Main St., Cambridge, MA.



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](#).

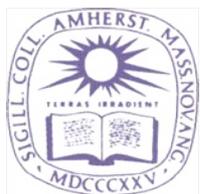
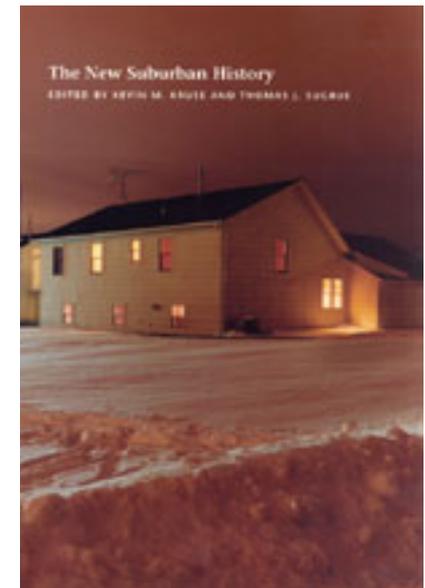
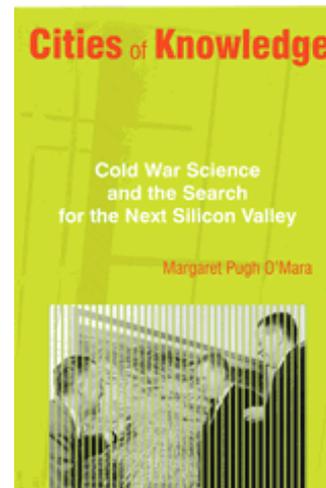
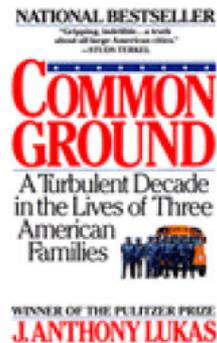
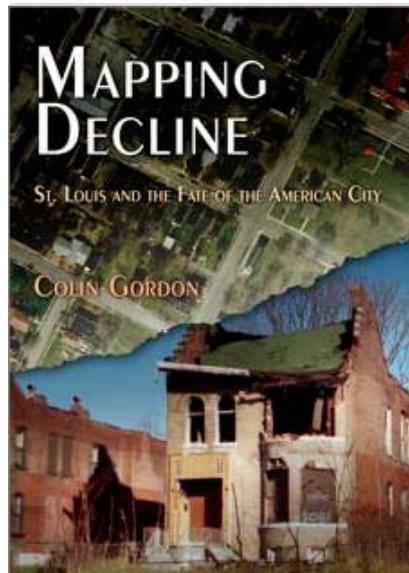
Colin Gordon, [*Mapping Decline: St. Louis and the Fate of the American City*](#) (Penn, 2008)

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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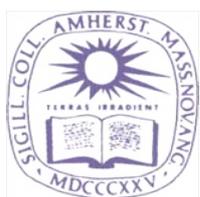
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About this Mellon Tutorial



Students and parent at Tobin School, Cambridge



Web
Page
(Restricted)

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

E-Reserve

Type Due Date

	Type	Due Date
Fisk, Edward. "Controlled Choice in Cambridge, Massachusetts," in <i>Divided We Fail: Coming Together through Public School Choice, 167-208</i> . New York: Century Foundation Press, 2002.		02/01
O'Sullivan, David, and David Unwin. "The Elements of Statistics." In <i>Geographic information Analysis, 384-411</i> . 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, 26-49</i> . 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, 51-66, 71, 73-75</i> . 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, 180-203</i> . 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

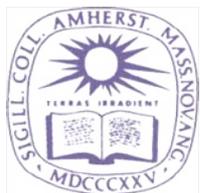
In America, a child's address, more than any other factor, often determines what kind of public education he or she will receive.



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

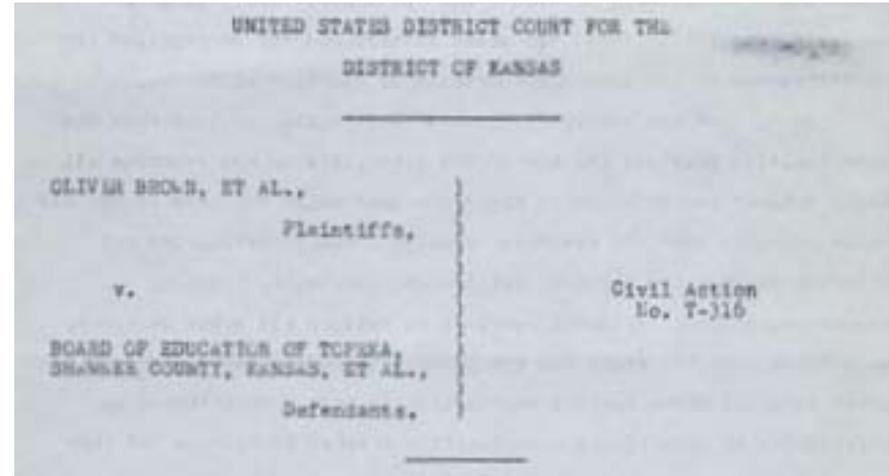


Cambridge, Massachusetts Latin School, 1916
(CHLS Yearbook)



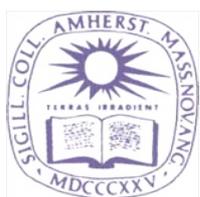
De Jure Segregation

- Legal segregation of public schools by race banned



nationwide in 1954 — separate, *not* equal

- Unequal educational opportunities still exist for a variety of reasons

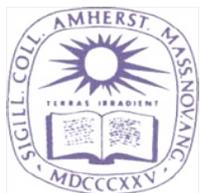


De Facto Segregation

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

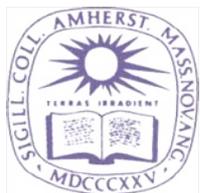


Cities, Schools, and Space



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 20th century

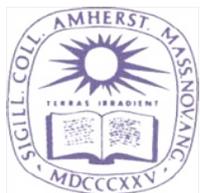


Year	Black Population
1940	4%
1960	5%
1970	7%
1980	11%
2000	12%



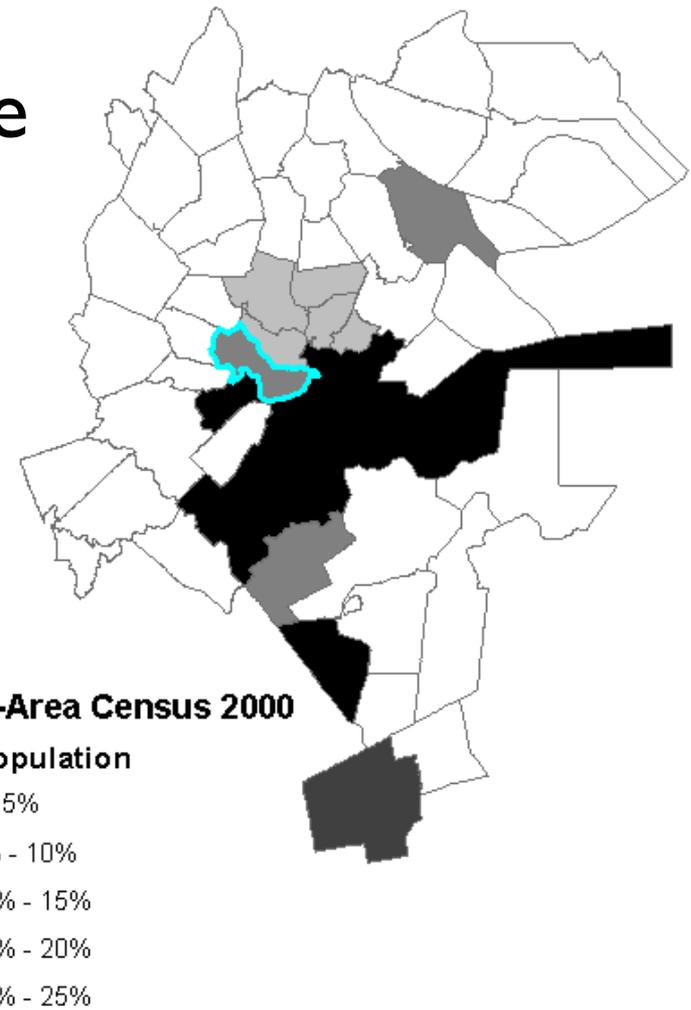
Cambridge Public Library

- 1965: Schools already *racially imbalanced*

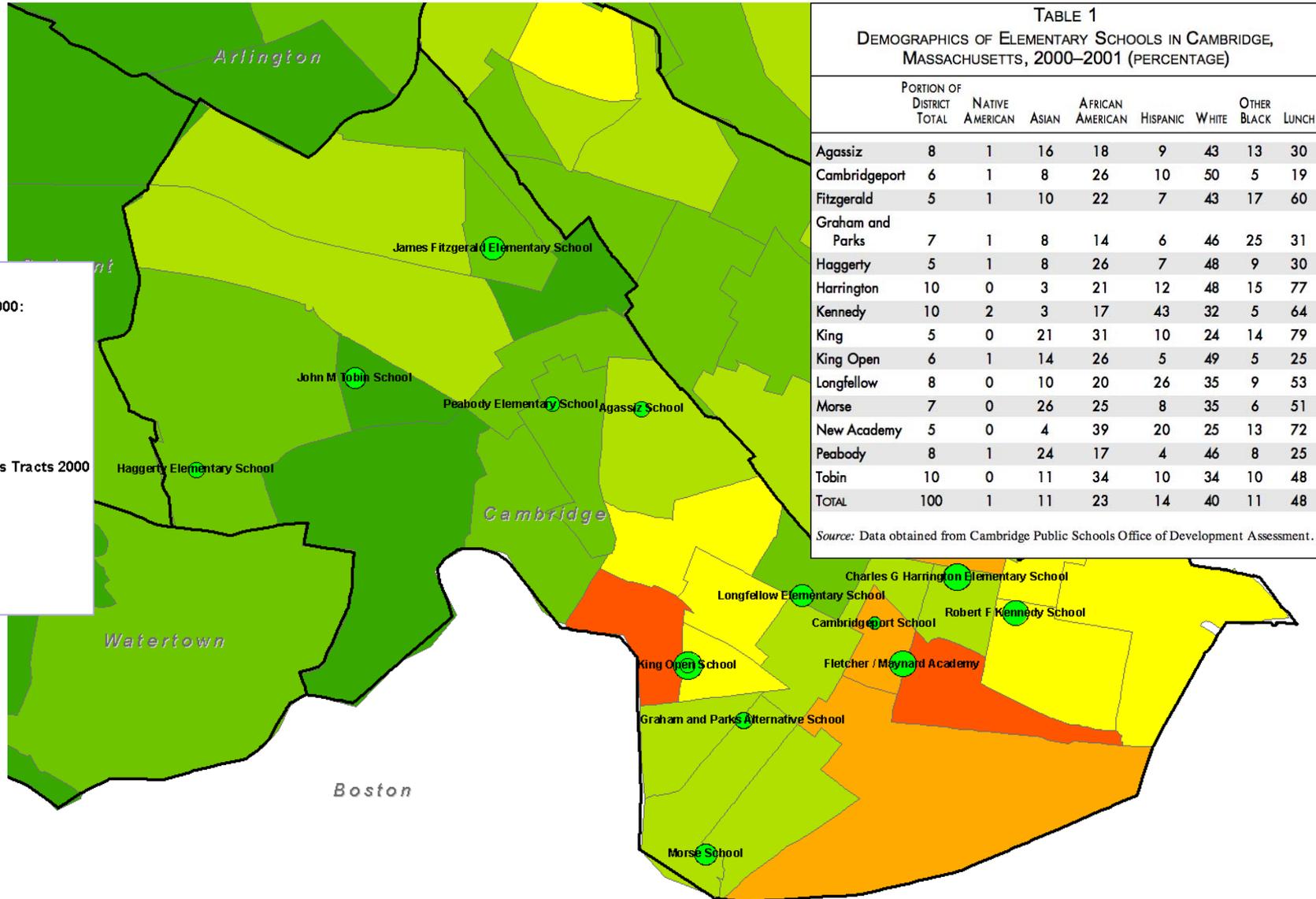


Learning GIS: Basic Skills

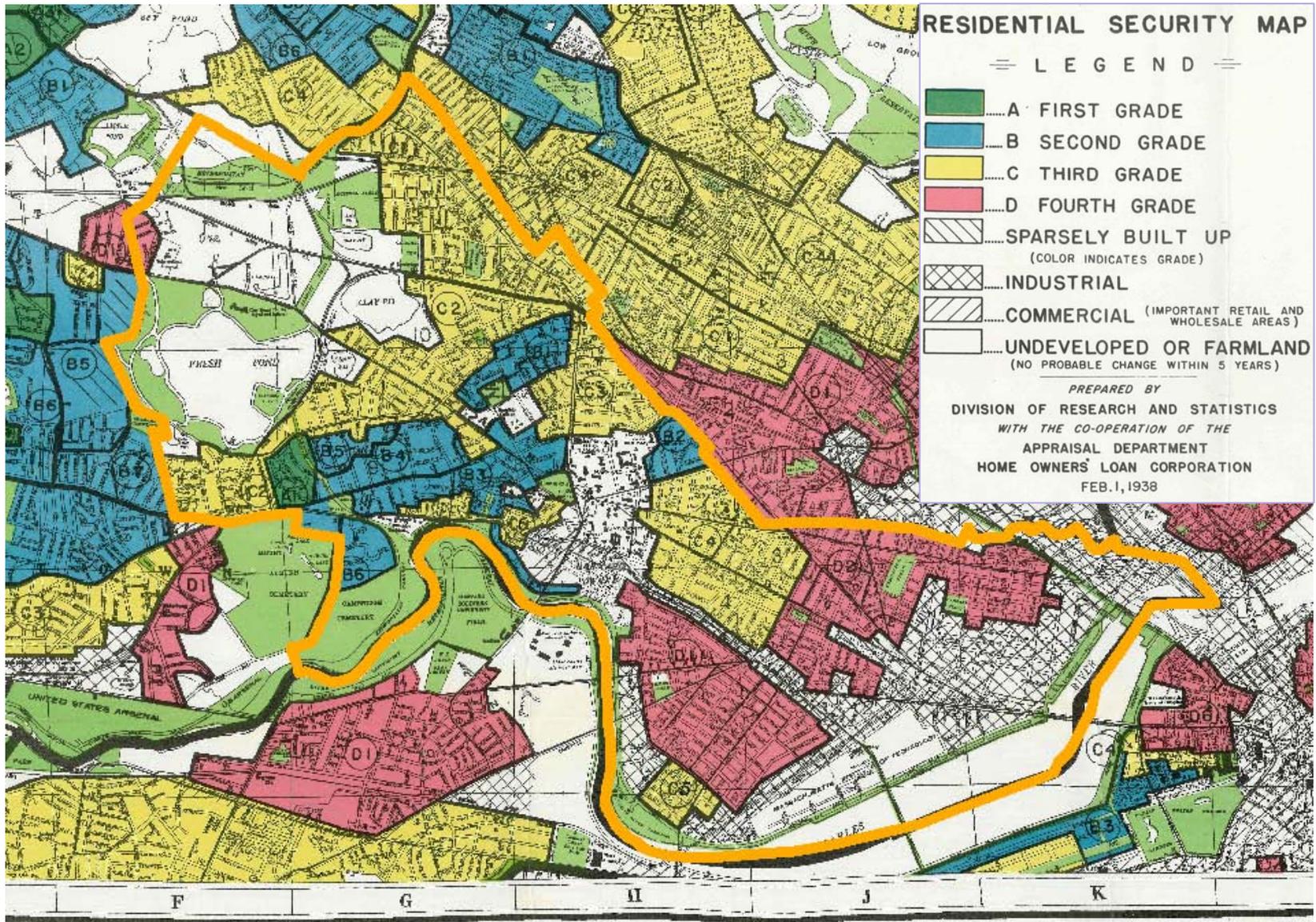
- How does Cambridge compare to nearby communities?
- Census.gov
1990 - 2010
- NHGIS.org
≤ 1980



Creating GIS Data from Text



Georeferencing Historical Maps



Cities, Schools, and Space

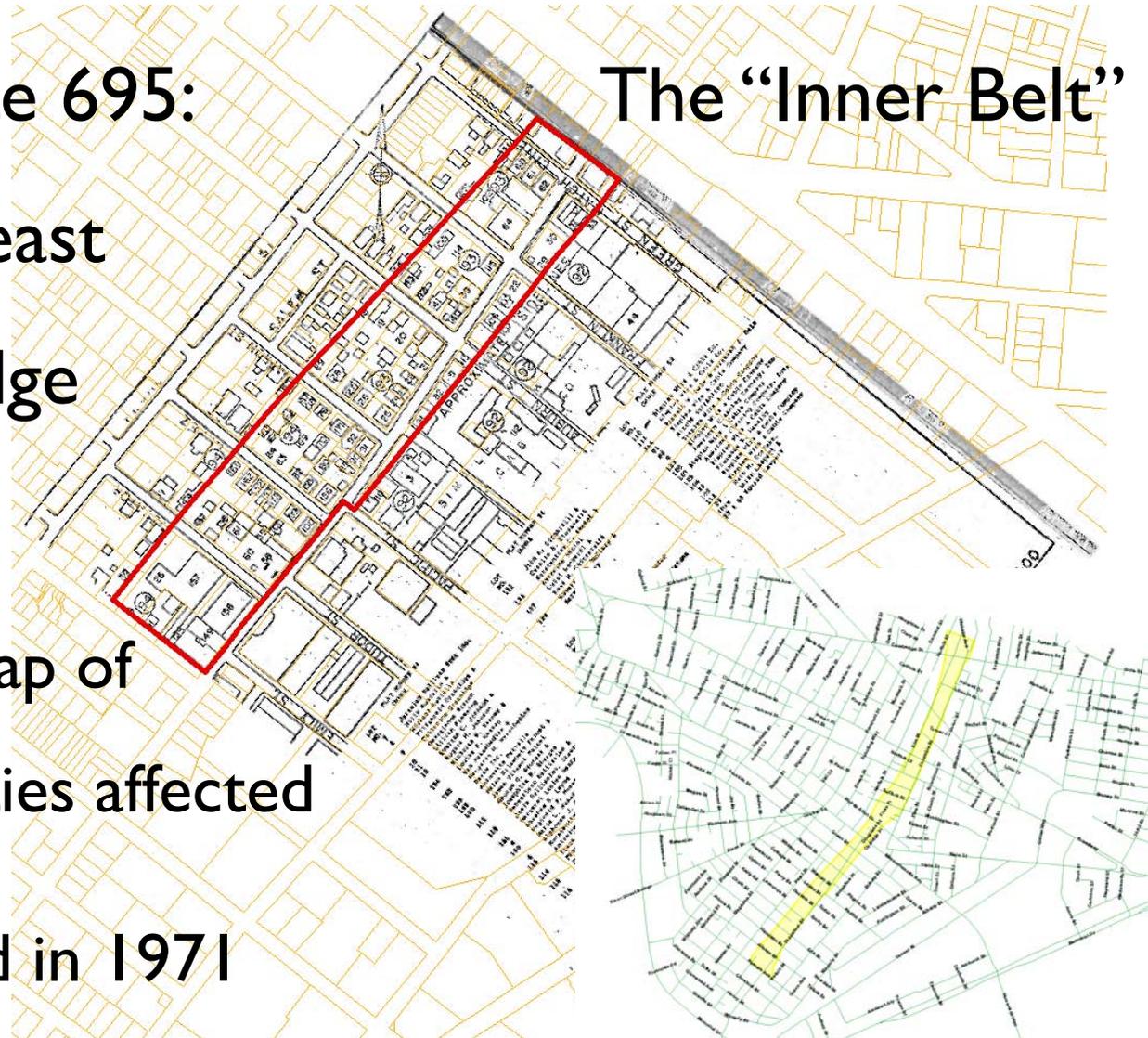


Extracting Map Features

- Interstate 695:
through east
Cambridge

The “Inner Belt”

- 1967 map of
properties affected
- Stopped in 1971

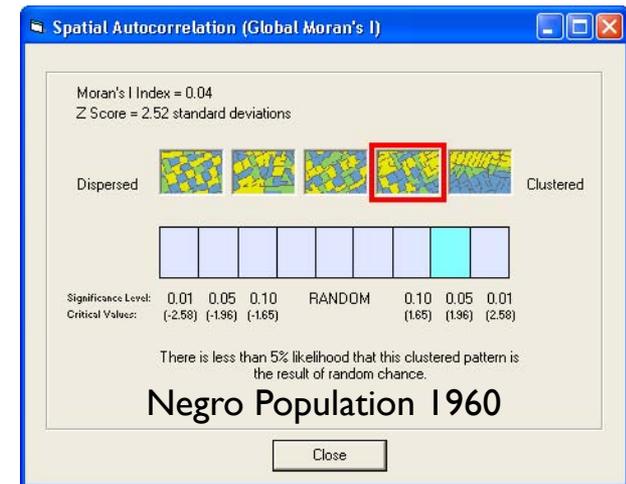
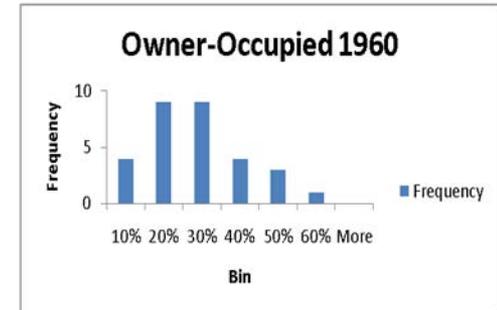


Parcel	Owner	Census_Name	Address	Home	Relation	Sex	ColorRace	Age	Birthplce	FatherBP	MotherBP	Language
89-65	Opella Dumas											
89-66	Thomas J. Cardullo & Alice A. Cardullo	Thomas Cardullo	216 Washington S	R	Head	M	W	35	Italy	Italy	Italy	Italian
89-67	Teodore K. Johnson, Lillian A. Johnson, Walter K. Johnson, & Helen M. Clark	Anupras Nemeikates	330 Columbia Stre	O	Head	M	W	37	Lithuania	Lithuania	Lithuania	Lithuanian
89-7	Anupras Nemeikstis & Eva Nemeikstis	Anupras Nemeikates	330 Columbia Stre	O	Head	M	W	37	Lithuania	Lithuania	Lithuania	Lithuanian
89-8	Julia B. Fashola & Arnold A. Fashola											
89-9												
89-10												
89-81												
89-86												
89-14	bartolomew 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 Aven	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	Josephina 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	Paul A. Revalson	9 Worcester Stree	R	Great nephew	M	N	12	Massachusetts	Massachusetts	Massachusetts	English
89-63	Suzanne R. Greene & Paul A. Revalson	Samuel Merchant	11 Worcester St.	O	Son	M	N	19	Massachusetts	Virginia	Canada-English	English
89-64	Muriel G. Raynor & Samuel L. Merchant											
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

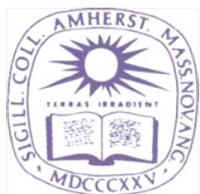
Compare families to the 1930 census!

Possible Inputs to Urban Renewal

- Data from the 1960 census:
 - Older Housing (*Before 1940*)
 - Housing Value
 - Owner-Occupied Housing
 - Negro Population
- Data requirements:



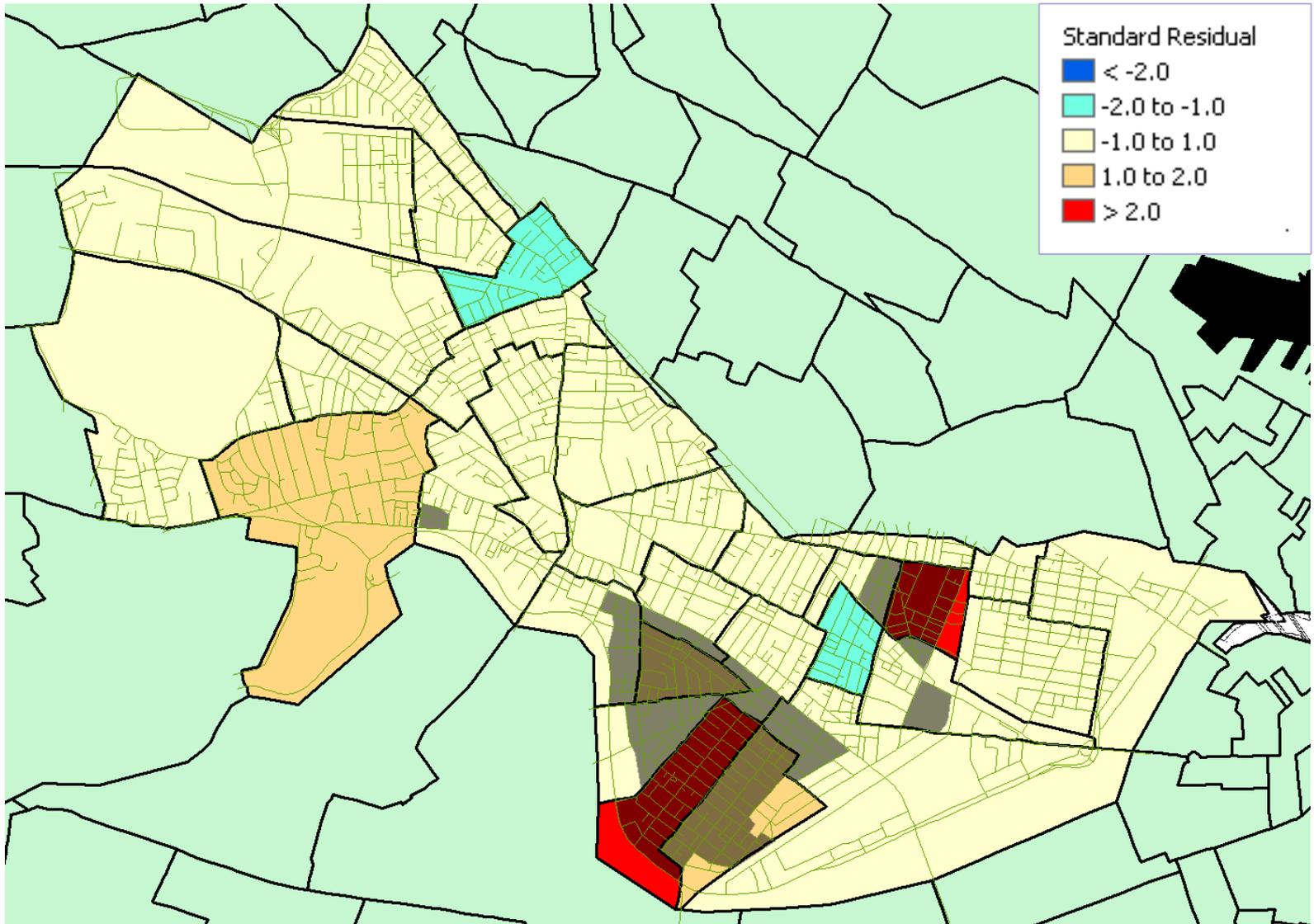
- Not cross-correlated: use Excel's *CORREL*
- Spatially auto-correlated: use ArcGIS' *Moran's I*



Geostatistical Analysis

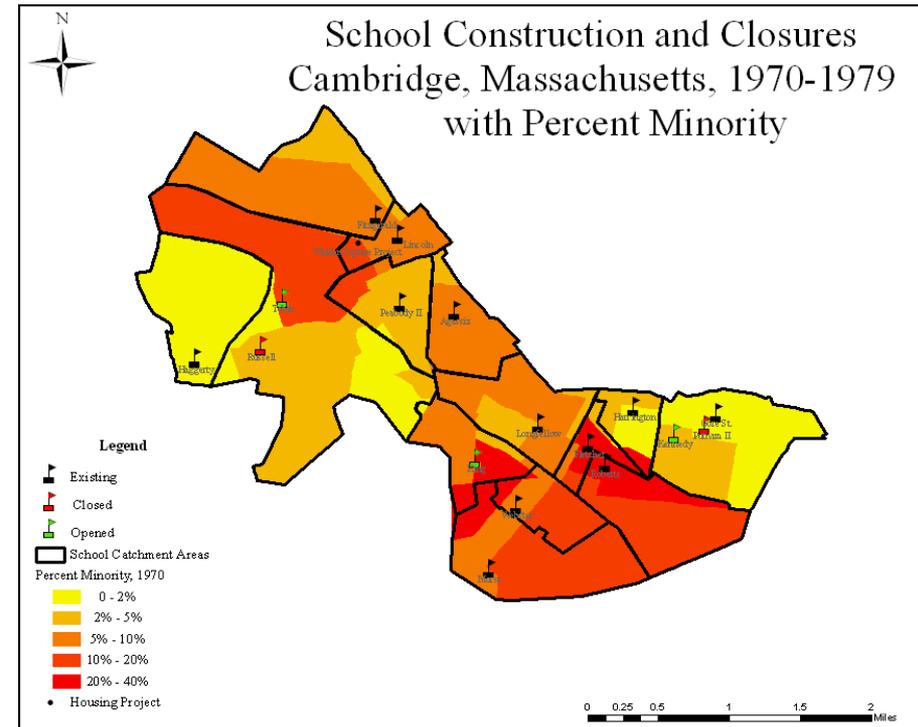
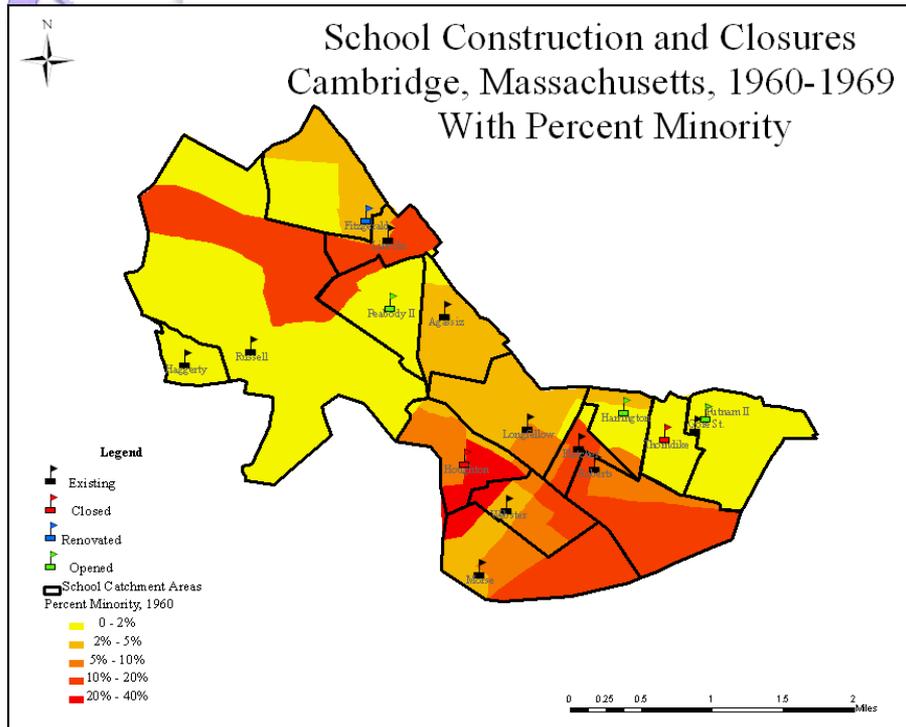
$$\text{UrbanRenewalArea} = \mathbf{0.13} \text{ Negro} - \mathbf{0.08} \text{ OwnerOccupied} + \mathbf{0.05} \text{ Before1940} - \mathbf{0.03} \text{ HousingValue} + \mathbf{0.18}$$

± 0.05 ± 0.05 ± 0.05 ± 0.05 ± 0.49

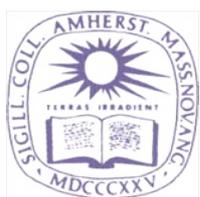


What Influenced School Building?

- One of the eight student projects

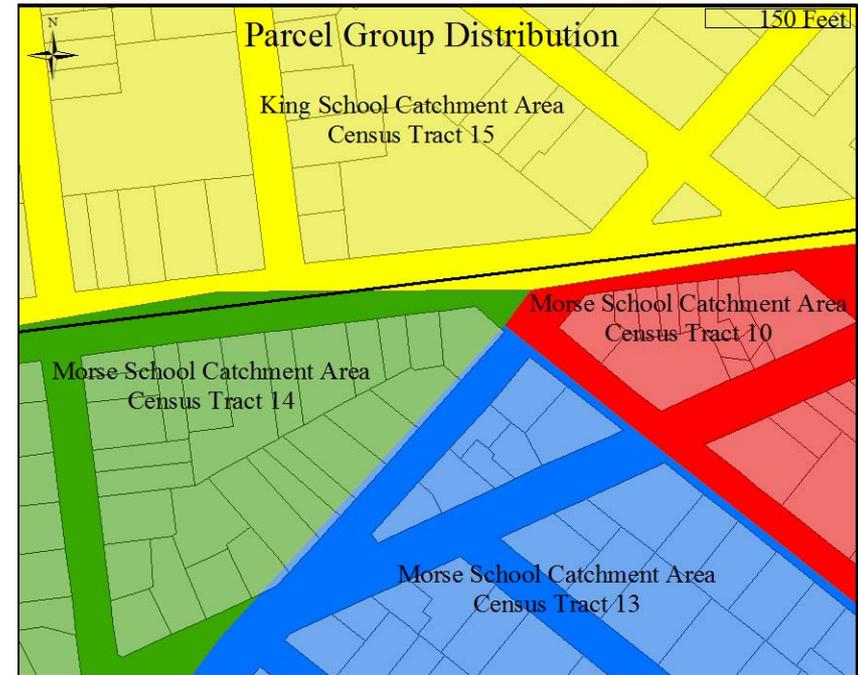


- Six new or reconstructed schools
- Worst school, Fletcher, untouched



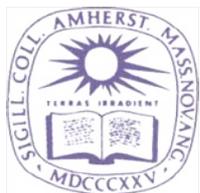
What Influenced School Building?

- 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

