CHAPTER SIX

REDLINING IN PHILADELPHIA

Amy Hillier

In the spring of 1933, with hundreds of homeowners facing foreclosures each day, President Franklin Roosevelt called on Congress to provide emergency assistance. "The broad interests of the Nation," Roosevelt said, "require that special safeguards should be thrown around home ownership as a guaranty of social and economic stability."[1] Congress responded by creating the Home Owners' Loan Corporation just two months later. The agency helped homeowners and private mortgage lenders alike by exchanging government bonds for defaulted mortgages on moderate-value homes. Between August 1933 and June 1936, the agency provided one million households across the country with new, low-interest, fifteen-year mortgages. Eight out of ten were able to save their homes and repay the agency in full.

In 1935, having made most of the loans it would make, the Home Owners' Loan Corporation and the Federal Home Loan Bank Board, its parent organization, developed the City Survey Program to investigate economic conditions, real estate trends, and racial and ethnic residential patterns in the nation's largest cities. Board members hoped that the survey would help them decide how to collect on the million

outstanding loans, how to manage the sale of properties whose owners had defaulted on their new mortgages, and how to shore up the savings and loan industry by determining which lenders and communities needed federal support. Staff of the Home Owners' Loan Corporation, together with local realtors, lenders, and appraisers, generated written reports, detailed area descriptions, and color-coded "residential security" maps that indicated levels of risk to real estate investors for neighborhoods in 239 cities *(figure 1)*.

The board established national standards for grading residential areas and distributed an explanation of its standards to field staff across the country. In assigning areas a grade, field staff members were expected to consider demand for housing; homeownership rate; age and type of housing; social status of residents; adequacy of public utilities; access to schools, churches, businesses, and transportation; and presence of race-restrictive covenants aimed at maintaining homogeneity. First-grade areas, referred to as "A" or "best" and colored green, were expected to be racially and ethnically homogeneous and to have room for new residential growth. Second-grade or "B" areas, colored blue, were completely developed but were "still desirable." Third-grade or "C" areas, colored yellow, were "declining" and subject to "infiltration of a lower grade population." Fourth-grade or "D" areas were considered "hazardous" and colored red. They had lower homeownership rates, poor housing conditions, and an "undesirable population or an infiltration of it," referring largely to the presence of Jews and African Americans.

In the late 1970s, while conducting research for *Crabgrass Frontier,* urban historian Kenneth Jackson discovered the security maps in the archival records of the Federal Home Loan Bank Board. Jackson observed that red-colored areas in several cities corresponded with areas that had experienced massive disinvestment in the forty years since the maps were created. He argued that the Home Owners' Loan Corporation had caused redlining by sharing its maps with the Federal Housing Administration and private lenders who, in turn, avoided the red areas on the maps.[2] Researchers have traced the practice of mortgage discrimination back to at least the 1910s, but the word "redlining" was not used until the late 1960s, when community organizers in Chicago began identifying mortgage lenders and providers of homeowner insurance that drew red lines on maps around areas they refused to service.[3] There were few protections against redlining before the Fair Housing Act of 1968 outlawed discrimination at any

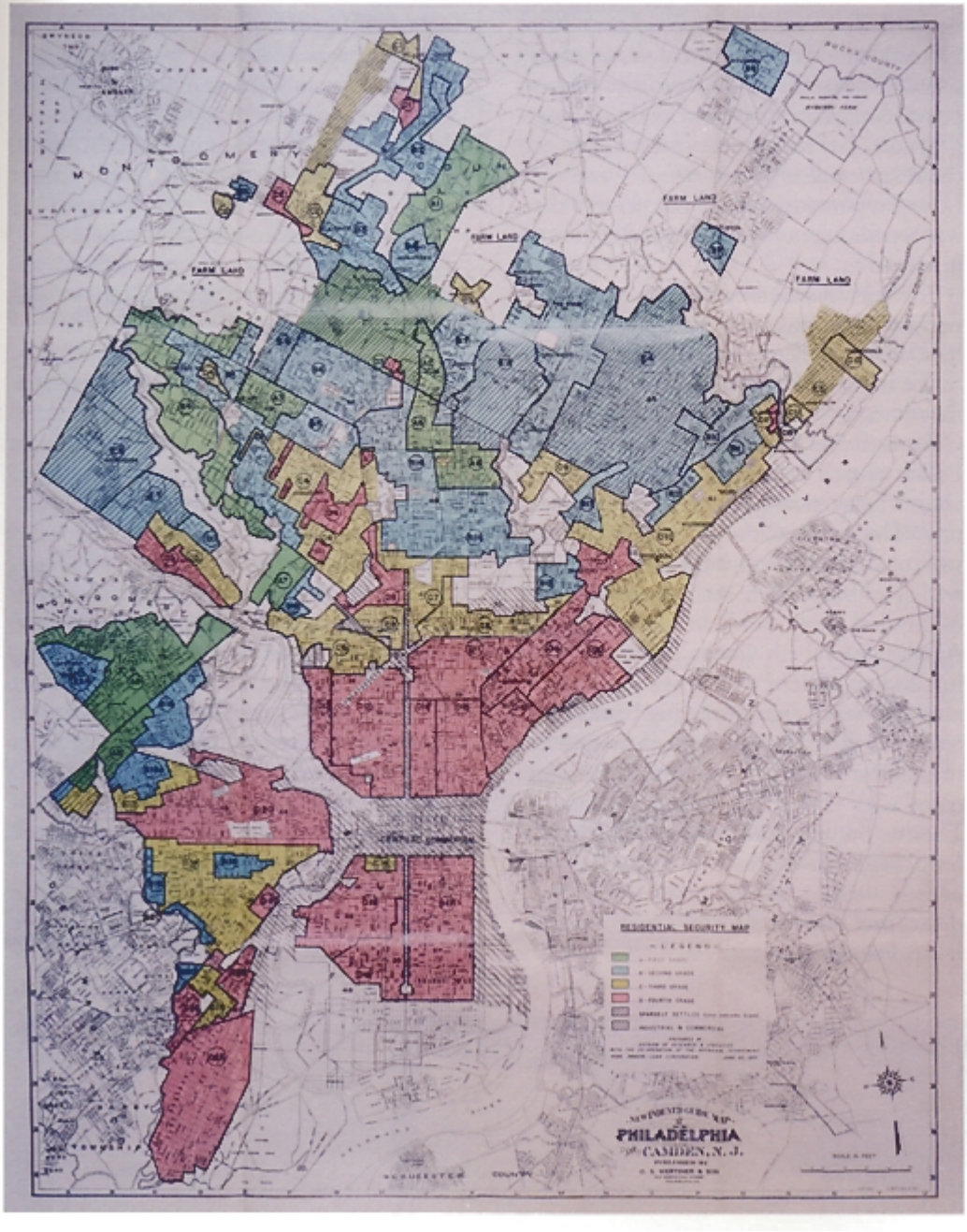


Figure 1. Residential security map for Philadelphia, 1937
Local real estate agents, appraisers, and lenders worked with staff from the Home Owners' Loan Corporation to create this security map for Philadelphia. The grades corresponded to their perception of real estate prospects, with red being reserved for hazardous areas. Records of the Federal Home Loan Bank Board, Record Group 95, Box 71, National Archives at College Park, College Park, Maryland.

stage in the home-buying process and the Home Mortgage Discrimination Act of 1975 mandated that certain financial institutions provide information about their lending practices. Jackson was the first to connect the maps created by the Home Owners' Loan Corporation with an old practice that was generating new attention at the time of his research.

In their subsequent efforts to explain the decline of central cities, urban researchers have elevated Jackson's redlining hypothesis to the status of fact while introducing little new evidence to support it. Writing about Gary, Indiana, Raymond Mohl and Neil Betten argued that the HOLC had a "pernicious impact" on segregation. They wrote that "The impact of the HOLC in Gary . . . was to consign the city's black sections, as well as adjacent white sections, to a future of physical decay and increased racial segregation." Lizabeth Cohen explained that in Chicago, "Faced with fewer alternatives after the depression to the big banks that respected these ratings, workers became victimized for years by a 'redlining' that originated with these HOLC classifications." Thomas Sugrue stated that the HOLC's residential security maps were the "primary sources used by brokers and lenders to determine eligibility for mortgages and home loans." People living in areas given "C" or "D" grades were "unlikely to qualify for mortgages and home loans. Builders and developers, likewise, could expect little or no financial backing if they chose to build in such risky neighborhoods."[4]

Writing about Charlotte, North Carolina, Thomas Hanchett argued that the HOLC survey caused disinvestment in low-income, mixed-use, and black areas and that it influenced decisions about lending in undeveloped areas. He focused on the agency's role in institutionalizing the already existing practice of redlining, a distinction that Jackson also made. Hanchett argued that "The HOLC's work served to solidify practices that had previously only existed informally," wiping out the "fuzziness" that existed when lenders determined creditworthiness on their own. "The handsomely printed map with its sharp-edged boundaries made the practice of deciding credit risk on the basis of neighborhood seem objective and put the weight of the U.S. government behind it."[5]

Rather than testing Jackson's theory that the Home Owners' Loan Corporation caused redlining, urban historians have endorsed and even embellished his account, extending his conclusions to a number of cities. I used GIS in conjunction with archival research to investigate the effect of the residential security maps on lending in

Philadelphia. Specifically, I used GIS to see where the Home Owners' Loan Corporation made its own mortgages, to understand how field agents assigned grades to Philadelphia's neighborhoods, and to determine if those grades affected private mortgage lending.

Home Owners' Loan Corporation records show that it made the majority of its loans in Philadelphia before the first security map of the city was drafted in 1935. So staff members could not have used the map grades to decide where to make loans. But analyzing the location of the agency's loans relative to the grades still allows for an assessment of its intent to provide assistance across racial and income groups. From agency loan summaries we know that in Chicago, Memphis, and Newark, 60 percent or more of its loans were made to areas it later gave third-grade (yellow) or fourth-grade (red) ratings. Since no summaries are available for Philadelphia, I collected and mapped data on individual loans there.

To map the location of loans using GIS, I digitized the final, 1937 version of the security map for Philadelphia and then *geocoded* a list of addresses where the agency made loans. Digitizing the security map was the more difficult of these tasks, although it was made easier by modifying a digital basemap rather than starting from scratch. The different colored areas on the security maps did not correspond to any political or administrative boundaries, so wards or census tract maps from the 1930s could not be used as basemaps. But the areas did correspond to streets, so I digitally combined census blocks to create the larger areas shown on the security maps *(figure 2)*.[6]

I then collected and geocoded the addresses for a random sample of three hundred loans that the agency made in Philadelphia. The security grade for the location of each mortgage was determined by joining the geocoded addresses and the digitized security map.[7] Results indicate that the attention the agency paid to areas it later deemed hazardous or declining was even greater in Philadelphia than in other cities.

Security grade	Loans	Percent of sample
First (green)	5	1.7%
Second (blue)	46	15.3%
Third (yellow)	63	21.0%
Fourth (red)	186	62.0%

Clearly, the agency did not refuse to make loans to homeowners in neighborhoods it deemed hazardous *(figure 3)*. Jackson and several other researchers have acknowledged this fact, but others have

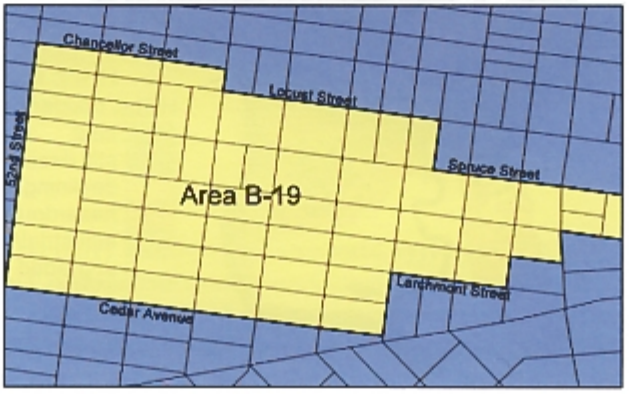


Figure 2
Once selected digitally, the boundaries of the blocks within this blue (second-grade or "B") area were dissolved to create ("digitize") Area B-19. Using an existing digital basemap made digitizing the residential security map simpler and more accurate.

failed to distinguish between the loans that the Home Owners' Loan Corporation made and the lending record of public and private lenders who might have had access to the security maps when they made decisions about loans. An argument that the Home Owners' Loan Corporation encouraged redlining must, therefore, focus on its later activities and the effect its maps had on subsequent lenders.

The Federal Home Loan Bank Board's materials were explicit about the basis for the security map grades, but the board left it up to the agency's staff and the real estate consultants to decide how to integrate and weight all of the different factors in order to assign each area a single grade. Of particular interest is the role of race in determining the map grade. Redlining generally refers to race-based lending discrimination, so learning whether race was a significant factor in determining the grade should tell us whether the Home Owners' Loan Corporation caused redlining.

Between 1935 and 1937, the Home Owners' Loan Corporation created three different drafts of the security map for Philadelphia *(figure 4)*. Changes from version to version show how staff refined their grading techniques. For example, later maps remove

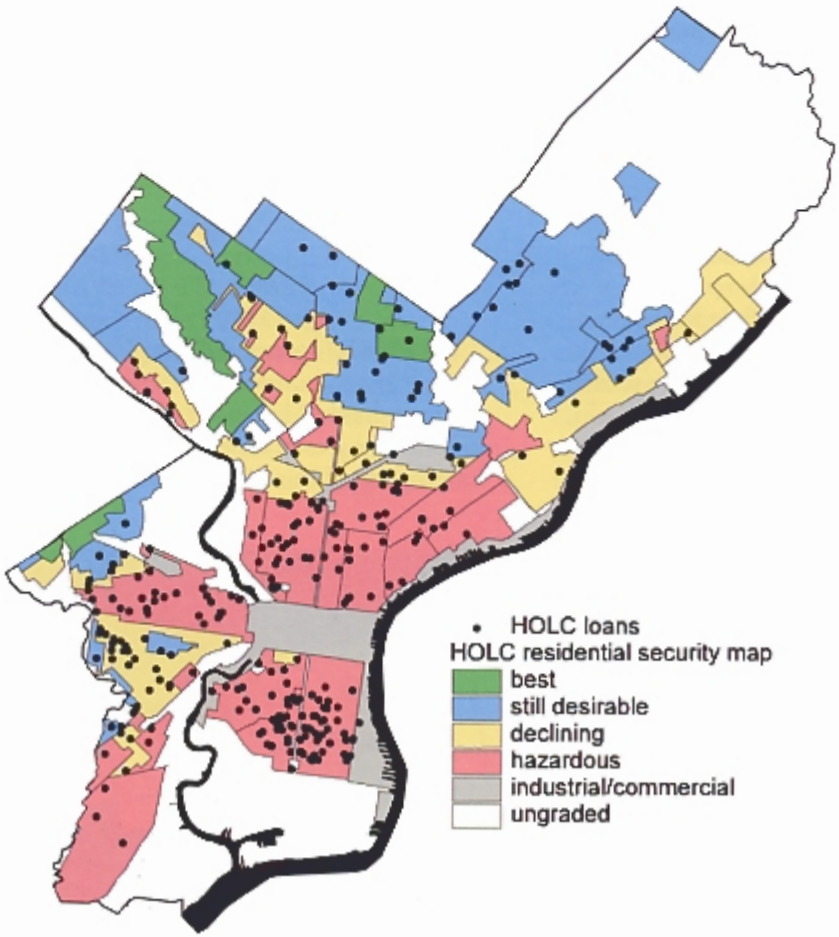


Figure 3. Home Owners' Loan Corporation loans in Philadelphia
Mapping the locations of a sample of loans made in Philadelphia shows that the agency provided a disproportionate amount of assistance to neighborhoods it deemed hazardous on the security maps.

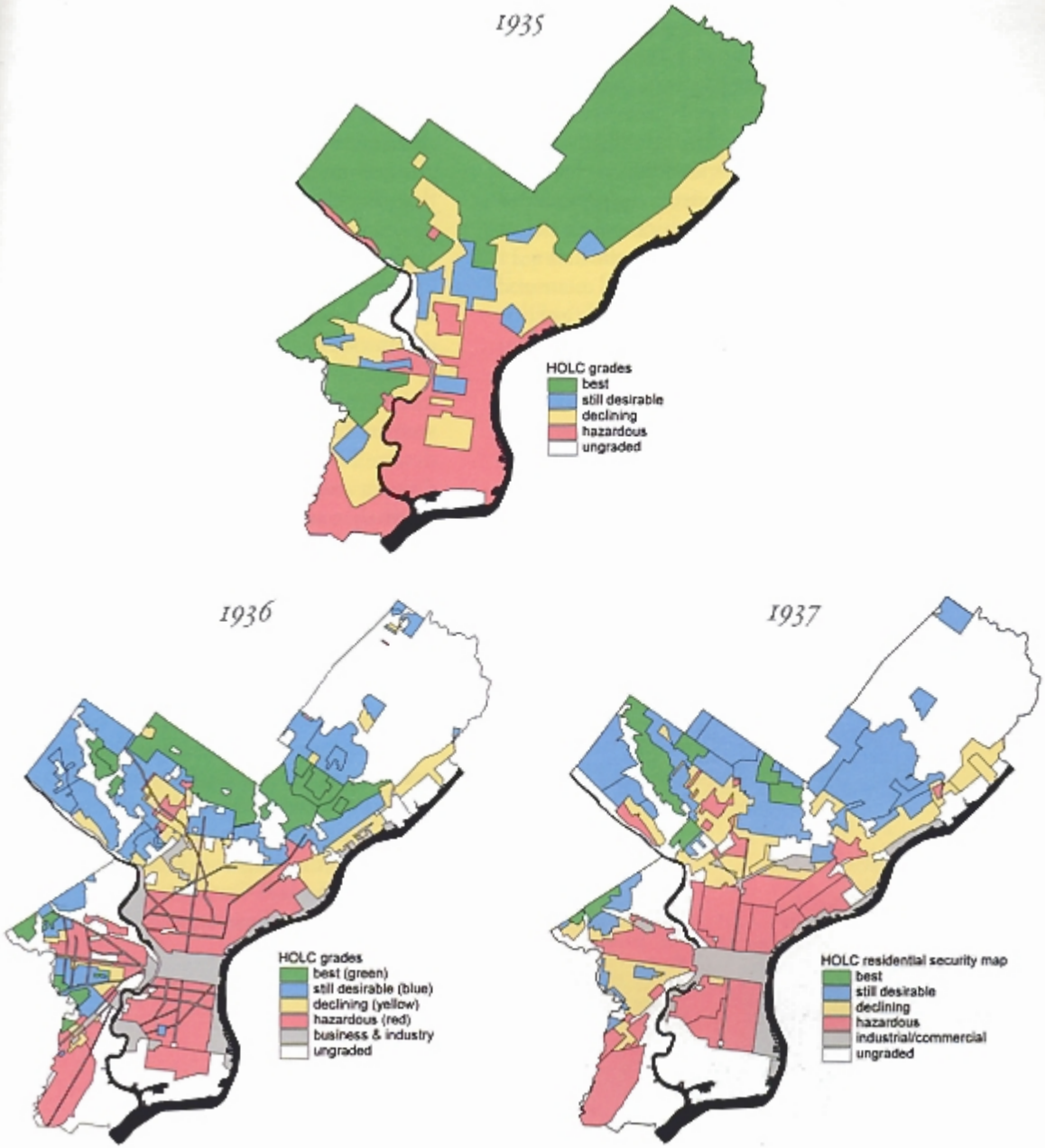


Figure 4. Successive drafts of the security map for Philadelphia, 1935–1937

The first draft map, drawn in 1935 (top), offered the most encouraging picture of real estate prospects in Philadelphia. Fifty-four percent of the total appraised area was coded green (best) while 18 percent was coded red (hazardous). In 1936 (lower left), conditions had changed little, but the agency assessed only 13 percent of real estate in the "best" category and red areas jumped to 31 percent. The gloom deepened in the 1937 map (lower right), which coded 34 percent of the city's real estate "hazardous" and only 8 percent "best."

grades from major parks, industrial and commercial corridors, and undeveloped land. They also demonstrate how the agency's perception of real estate prospects evolved in those three years. For although Philadelphia's housing and economic conditions changed very little, each successive map provided a gloomier picture of the city's real estate.

The City Survey Program reflected a larger shift in focus within the real estate and appraisal industries, from how creditworthy the property and borrowers were to how risky the neighborhood was. This change was partly intended to protect lenders against the kinds of losses they suffered during the Depression. It also reflected the influence of the ecological theory promoted by the Chicago School's Robert Park, Ernest Burgess, and Homer Hoyt, among others. This theory held that neighborhoods naturally decline as some residents move to find more suitable habitats. In this view, African Americans, Jews, and certain immigrant groups were seen as invaders, warning signs that neighborhoods had reached the last phase of their decline.[8] As long-term, self-amortizing mortgages became more popular, lenders were increasingly concerned about making loans in neighborhoods where decline seemed imminent or under way.

To understand the influence of ecological theory on Philadelphia's residential security map and, more specifically, to determine the effect of race, housing conditions, and location on the final security grade that areas received, I assigned each census tract a HOLC grade based on the proportionate area of the tract covered by each grade *(figure 5)*. It would be virtually impossible to calculate this as precisely without GIS software, which can automatically measure distance and area. Using tract-level data on property and residents from the 1934 Works Progress Administration's Real Property Survey and the 1940 U.S. Population Census, I confirmed that areas with more African Americans and more recent immigrants received poorer grades from HOLC staff, controlling for housing conditions, housing values,

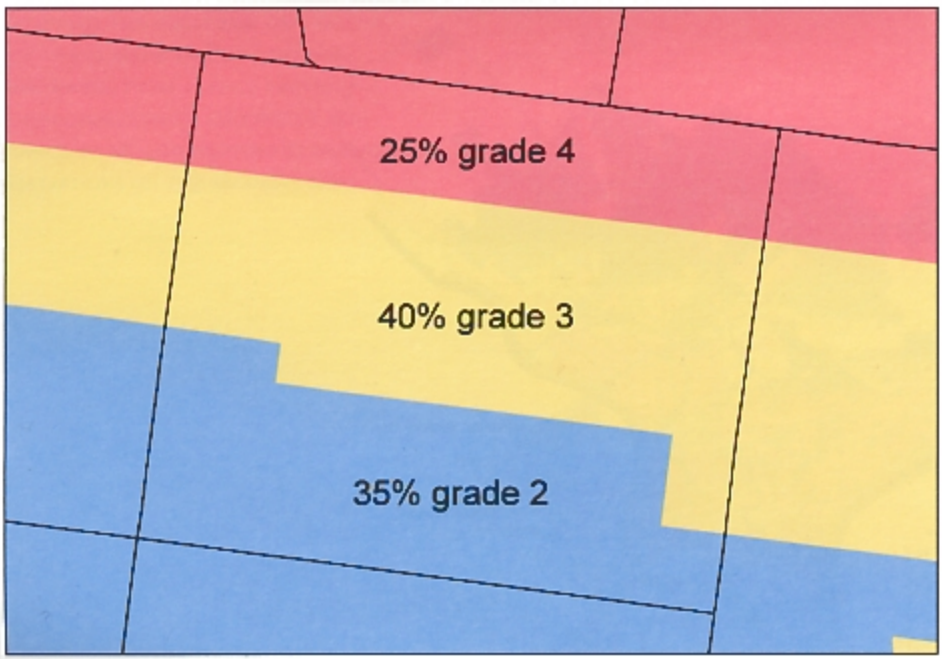


Figure 5. Assigning a grade to each tract
The areas defined on the residential security maps did not correspond to census tract boundaries. In order to assign a grade to each census tract, the proportion of the tract covered by each grade was calculated and multiplied by the grade. In this example, (0.25 × 4) + (0.40 × 3) + (0.35 × 2) = 2.9, so this tract was assigned a grade of 2.9.

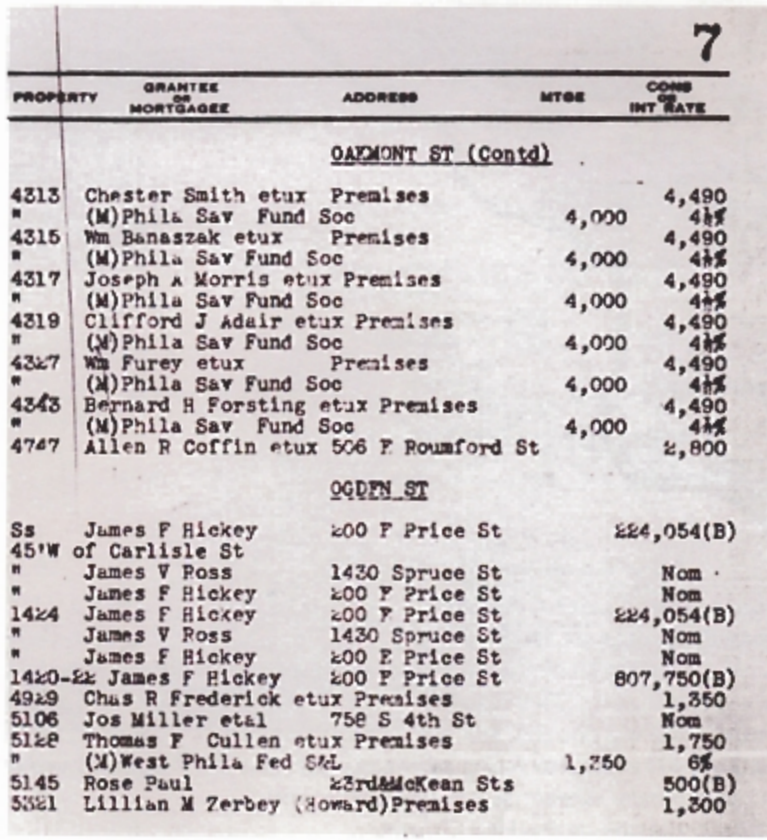
homeownership rate, and the location of the neighborhood within the city.[9]

The final question to ask about the Home Owners' Loan Corporation is whether the grades on the agency's security maps influenced where private lenders made their mortgages. This, rather than the agency's own lending record, was the basis for Jackson's charge that it caused redlining. Only if lenders avoided making loans on properties in areas marked red on the security maps or made loans with worse terms (such as higher interest rates or lower loan-to-value ratios) could the maps be said to have caused redlining. In order to test the redlining theory, then, I analyzed a sample of mortgage transactions in Philadelphia involving private lenders between 1937 and 1950 to see what effect the grades had on their lending patterns.

I collected information about a sample of loans (including a random citywide sample as well as all the loans made in four small areas) from the *Philadelphia Realty Directory and Service,* an annual listing of mortgage transactions published between 1926 and 1959 *(figures 6, 7).* I geocoded the sample properties, assigned them the appropriate security grade, and calculated the distance of each property from the boundary of a red area. Results show that neither the security grade nor the property's proximity to a red area explain differences in the total number of loans it received or in the loan-to-value ratio. Mortgages made in areas with worse grades and closer to red areas did have slightly higher interest rates. These higher interest rates probably reflected widespread knowledge of where racial minorities lived rather than access and adherence to the Home Owners' Loan Corporation grading scheme.

This empirical analysis indicates that urban researchers have overstated the significance of the security maps on lending, particularly by arguing that private lenders categorically refused to make loans in areas colored red. The areas considered most hazardous by the agency probably did suffer from disinvestment over the next

FIGURE 6. PHILADELPHIA REALTY DIRECTORY AND SERVICE
THIS DIRECTORY LISTED ALL REAL ESTATE TRANSACTIONS IN PHILADELPHIA, REGARDLESS OF WHETHER THEY INVOLVED A MORTGAGE, ORGANIZED BY STREET ADDRESS AND THE MONTH AND YEAR OF THE TRANSACTION. FOR EACH TRANSACTION, THE DIRECTORY LISTED THE OWNER, OWNER'S ADDRESS (OR "P" IF OWNER LIVED ON PREMISES), NAME OF MORTGAGE COMPANY (M), AMOUNT OF MORTGAGE, INTEREST RATE, AND SALE PRICE (CONSIDERATION). AN INDEX IN THE BACK OF THE DIRECTORY INCLUDED A COMPLETE LIST OF PROPERTIES, THEIR SIZE, ASSESSED VALUE, AND DATE OF THE MOST RECENT TRANSACTION.



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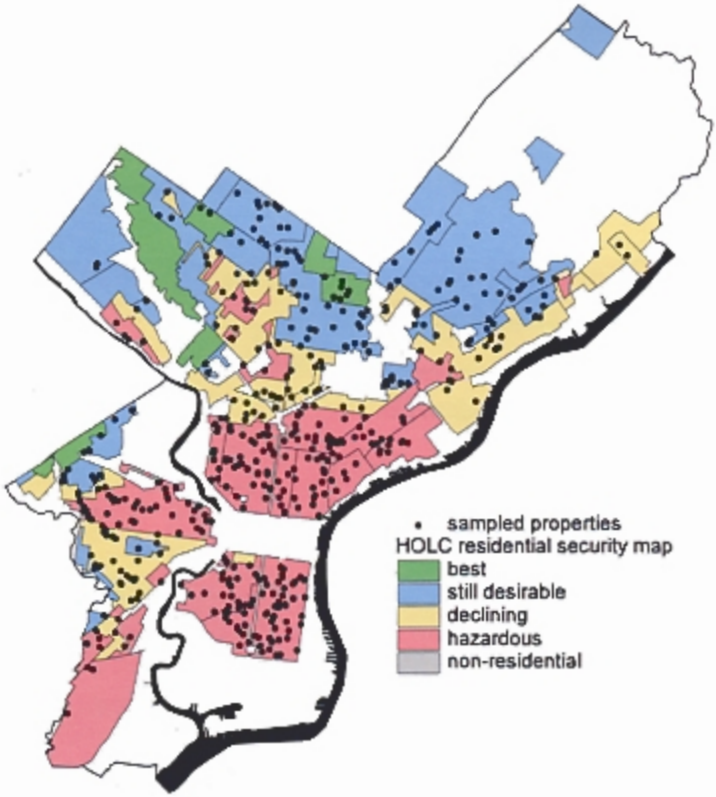
PROPERTY	GRANTEE OR MORTGAGEE	ADDRESS	MTGE	CONS OR INT RATE
		OAKMONT ST (Contd)		
4313	Chester Smith etux	Premises		4,490
"	(M)Phila Sav Fund Soc		4,000	4½%
4315	Wm Banaszak etux	Premises		4,490
"	(M)Phila Sav Fund Soc		4,000	4½%
4317	Joseph A Morris etux	Premises		4,490
"	(M)Phila Sav Fund Soc		4,000	4½%
4319	Clifford J Adair etux	Premises		4,490
"	(M)Phila Sav Fund Soc		4,000	4½%
4327	Wm Furey etux	Premises		4,490
"	(M)Phila Sav Fund Soc		4,000	4½%
4343	Bernard H Forsting etux	Premises		4,490
"	(M)Phila Sav Fund Soc		4,000	4½%
4747	Allen R Coffin etux	506 E Roumford St		2,800
		OGDEN ST		
Ss	James F Hickey	200 E Price St		224,054(B)
45'W of Carlisle St				
"	James V Ross	1430 Spruce St		Nom
"	James F Hickey	200 E Price St		Nom
1424	James F Hickey	200 E Price St		224,054(B)
"	James V Ross	1430 Spruce St		Nom
"	James F Hickey	200 E Price St		Nom
1420-22	James F Hickey	200 E Price St		807,750(B)
4929	Chas R Frederick etux	Premises		1,350
5106	Jos Miller etal	758 S 4th St		Nom
5128	Thomas F Cullen etux	Premises		1,750
"	(M)West Phila Fed S&L		1,250	6%
5145	Rose Paul	32rd&McKean Sts		500(B)
5321	Lillian M Zerbey (Howard)	Premises		1,300

several decades, as Jackson noted. But disinvestment happened independently of the HOLC's security maps. Rather than causing redlining, the maps reflected the conditions in Philadelphia's neighborhoods in the 1930s as well as the dominant attitudes and methods of the real estate and appraisal industries.

Redlining during the middle decades of the twentieth century was a more complicated process than many historians have appreciated, in part because the Home Owners' Loan Corporation was neither the only nor the first lending organization to make maps with symbolic red lines. The Federal Housing Administration (FHA), created in 1934 to protect mortgage lenders against the risk of foreclosure, started collecting quantitative data and making maps a year before the Home Owners' Loan Corporation initiated its City Survey program *(figure 8)*.



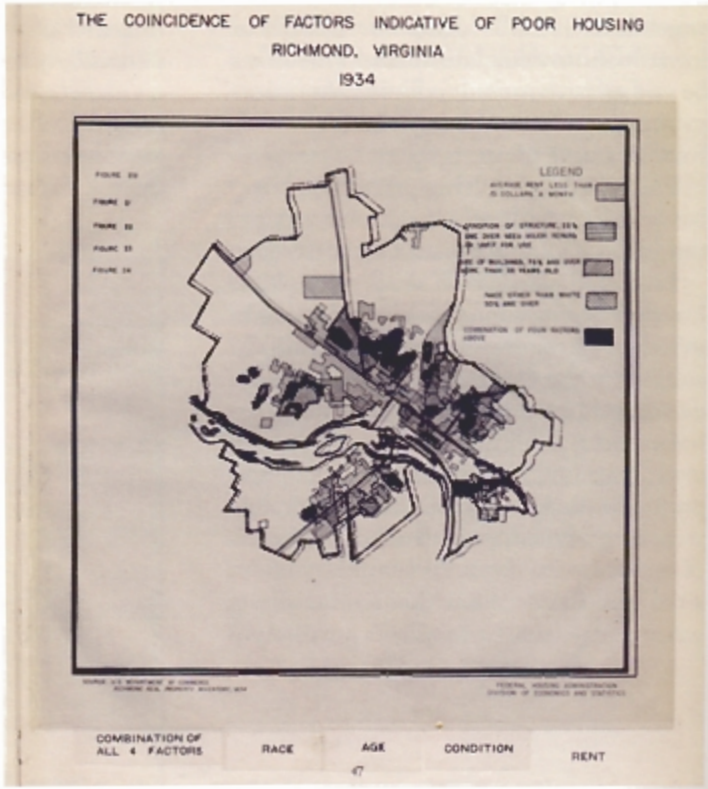


Figure 7. Random citywide sample of mortgages made by private lenders in Philadelphia, 1937–1950
Using the Philadelphia Realty Directory and Service, a random sample of properties was selected. Properties in the central part of the city, most of which was colored red, made up the majority of this sample. Data was collected on all of the transactions at each of these five hundred properties and analyzed in conjunction with the 1937 version of the HOLC's map.

Figure 8. FHA overlay map
The FHA included this map in The Structure and Growth of Residential Neighborhoods in American Cities in 1939. The map used a series of transparent overlays to represent map layers in order to determine the spatial concentration of undesirable housing and demographic characteristics.

The FHA created and shared detailed maps showing racial composition and housing conditions in cities across the country. It also promoted its own standards for appraising neighborhood risk levels by requiring that private lenders follow them in order to receive federal mortgage insurance.

The FHA, like the Federal Home Loan Bank Board, also encouraged private lenders to make their own maps, although private lenders probably did not need any encouragement. The former chief appraiser for the Metropolitan Life Insurance Company in Philadelphia, J. M. Brewer, created a map of the city that categorized neighborhoods according to class and showed where Jews, Italians, and "Colored" people lived *(figure 9)*. He did this a year before the Home Owners' Loan Corporation created its first security map for Philadelphia—and

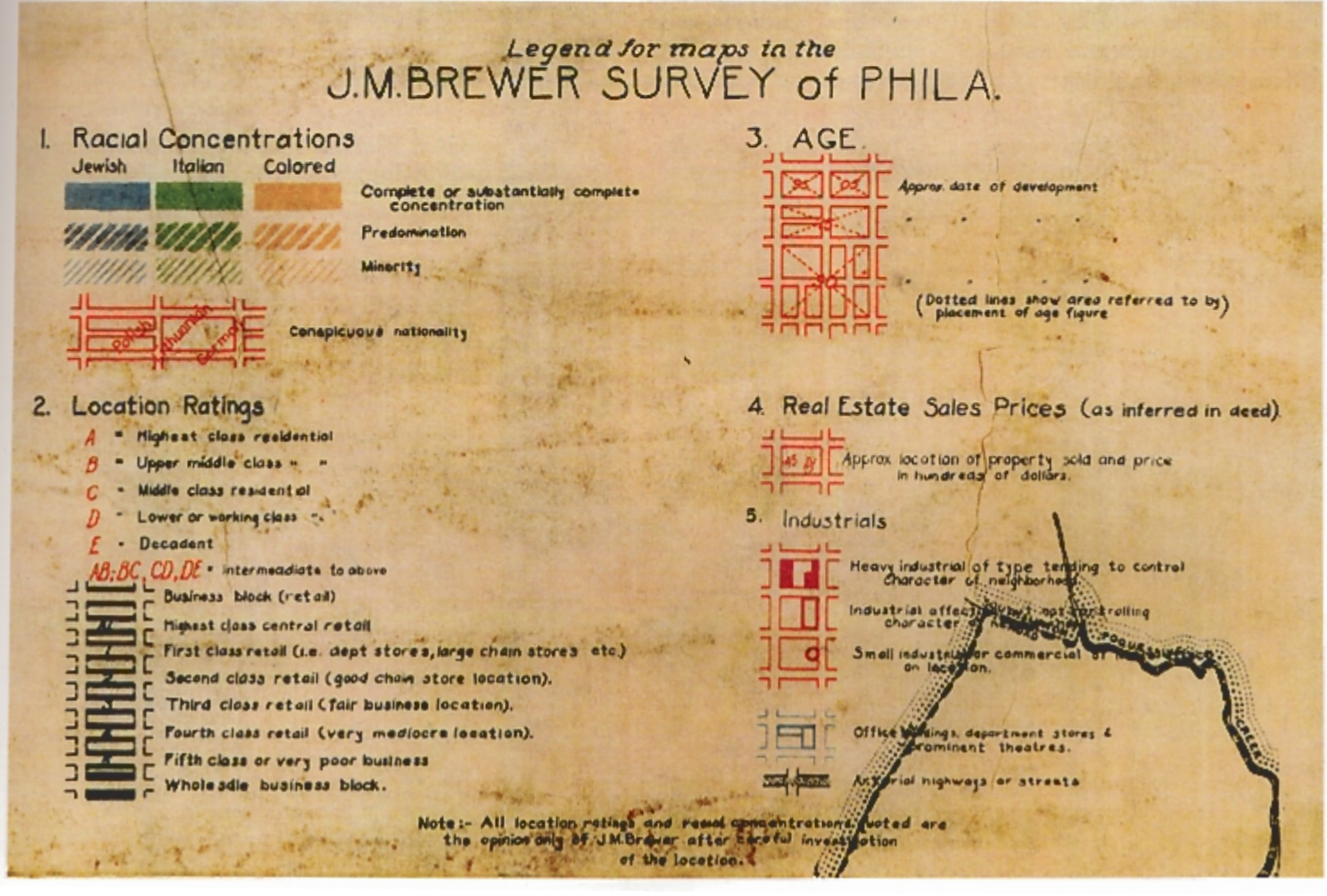


FIGURE 9. LEGEND OF J. M. BREWER'S MAP OF PHILADELPHIA
BREWER CONDUCTED HIS DETAILED BLOCK-LEVEL SURVEY IN 1934, BEFORE THE START OF THE CITY SURVEY PROGRAM. BREWER LATER SERVED AS MAP CONSULTANT TO THE HOME OWNERS' LOAN CORPORATION. MAP COLLECTION, FREE LIBRARY OF PHILADELPHIA, PHILADELPHIA, PENNSYLVANIA.

he later served as a map consultant to the agency. The Security-First National Bank of Los Angeles also had an active research staff that produced a map of Los Angeles neighborhoods displaying five residential categories that borrowed the language of ecological theory: subdivision, growth, maturity, decline, or decadence *(figure 10)*. Although the bank created this map after the Home Owners' Loan Corporation started its maps in Los Angeles, the Security-First classification system was different enough to indicate that it was made separately. While the Philadelphia and Los Angeles maps created by private organizations used different colors and categories, they assumed a racial and ecological conception of neighborhood change just as the Home Owners' Loan Corporation's security maps and FHA's underwriting guidelines did.

GIS helps one see the spatial patterns that constituted redlining. It brings a precision to the analysis that many previous studies have lacked. As researchers discover more maps that lenders created and examine mortgage lending patterns in other cities, GIS offers them a valuable complement to traditional archival research for understanding where lenders made loans and how they decided where to lend.

Figure 10. Security-First National Bank of Los Angeles real estate map
The FHA printed this black-and-white version in its journal, Insured Mortgage Portfolio, in 1938.

Acknowledgments

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Hardware and software

Pentium® II PC with 64 megabytes RAM; ArcView 3.1.

Further reading

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Notes

1. David A. Bridewell, *The Federal Home Loan Bank Board and Its Agencies* (manuscript in the Research Library of the Federal Home Loan Bank Board, dated May 14, 1938), 186.

2. Kenneth Jackson, *Crabgrass Frontier* (New York: Oxford University Press, 1985), 190–218.

3. John Goering and Ron Wienk, eds., *Mortgage Lending, Racial Discrimination, and Federal Policy* (Washington, D.C.: The Urban Institute Press, 1996); Gregory Squires, *From Redlining to Reinvestment: Community Responses to Urban Disinvestment* (Philadelphia: Temple University Press, 1992).

4. Raymond A. Mohl and Neil Betten, *Steel City: Urban and Ethnic Patterns in Gary, Indiana, 1906–1950* (New York: Holmes & Meier, 1986), 66–70; Lizabeth Cohen, *Making a New Deal: Industrial Workers in Chicago, 1919–1939* (New York: Cambridge University Press, 1990), 276; Thomas J. Sugrue, *The Origins of the Urban Crisis* (Princeton, N.J.: Princeton University Press, 1996), 43–44.

5. Thomas W. Hanchett, *Sorting Out the New South City: Race, Class, and Urban Development in Charlotte, 1875–1975* (Chapel Hill: University of North Carolina Press, 1998), 231.

6. Census blocks represent the space created by intersecting streets. Census tracts are made up of block groups, which are made up of census blocks.

7. Geocoding assigns x and y coordinates to addresses located along line segments (each representing a range of house numbers) within a street centerline file. Through a spatial join, geocoded addresses can be assigned the attributes of a geographic area, such as areas defined by the HOLC, that they fall into.

8. Robert E. Park and Ernest W. Burgess, *The City: Suggestions for Investigation of Human Behavior in the Urban Environment* (Chicago: The University of Chicago Press, 1925); Homer Hoyt, *The Structure and Growth of Residential Neighborhoods in American Cities* (Washington, D.C.: Federal Housing Administration, 1939); Jackson, "Race, Ethnicity, and Real Estate Appraisal: The Home Owners' Loan Corporation and the Federal Housing Administration," *Journal of Urban History* 6 (August 1980): 423–24; Raymond Moyl, "The Second Ghetto," in June Manning Thomas and Marsha Ritzdorf, eds., *Urban Planning and the African American Community: In the Shadows* (Thousand Oaks, Calif.: Sage Publications, 1997).

9. All relationships were significant at the 0.05 level. This statistical analysis used a spatial lag model, rather than Ordinary Least Squares regression, in order to incorporate spatial autocorrelation, the spatial dependence within values on the dependent variable that can lead to biased estimates of the size and significance of relationships. The weight matrix used defined neighbors as all census tracts with centroids within 0.6 miles. The model explained an estimated 59 percent of the variance in HOLC grade. See Amy Hillier, "Redlining and the Home Owners' Loan Corporation" (*Journal of Urban History*, forthcoming).