THE HOME OWNERS' LOAN CORPORATION MAPS AND THE TRAJECTORIES OF URBAN DISADVANTAGE: SHIFTING THE PARADIGM

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I   Introduction

This paper suggests a new way of looking at a pivotal moment in American urban history by situating the residential security maps created in the late 1930s by the Home Owners' Loan Corporation (HOLC) and contemporary urban racialized disadvantage in the context of white flight and the Second Great Migration, the two powerful mid-20th century migrations that between them largely shaped the form of today's older American cities. I argue that, rather than the maps themselves, differential White and Black migration patterns during that period and since can be shown to be the principal driver of the spatial patterns that underlie the very real disparities and inequities that exist in American cities today, and which are increasingly associated in both the research literature and popular media with the HOLC maps.

Few people today are familiar with the activities of the Home Owners' Loan Corporation, a New Deal agency created in 1933 to buy and refinance the mortgages of homeowners at risk of foreclosure (Fishback, Rose and Snowden 2013), but it is safe to say that almost everyone with even a cursory interest in contemporary urban challenges and racial inequities has heard of the residential security maps that the HOLC commissioned for American cities and towns between the end of 1935 and 1940. Although the rediscovery of the maps by scholar Kenneth Jackson, who described them in a 1980 paper (Jackson, 1980) and more fully in his book *Crabgrass Frontier* (1985) attracted little notice at the time, more recently and particularly since 2019 the association between the areas characterized today as the redlined[1] areas on the HOLC maps and a host of social, economic and, in particular, racial disparities in today's urban areas has been the subject of both extensive research and widespread media attention.

The HOLC maps divided urban areas into four categories to reflect the surveyors' assessment of the quality of the area – a highly subjective measure that included both physical and environmental conditions and characteristics of the population, notably the presence of immigrant and Black residents. The lowest quality or D areas were colored red on the maps, while other areas, in ascending quality, were C (yellow), B (blue) and A (green). Yet while statistical associations between an area being classified as D and contemporary conditions such

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as low property values (Appel and Nickerson 2016), gun violence (Benns et al. 2020), air pollution (Jung et al. 2022), preterm births (Krieger et al. 2020) and green space (Nardone et al. 2021), among others, have been established by various scholars, the mechanisms that link the two have remained obscure. Exhaustive research into the manner in which they were or were not used by the HOLC or by others has failed to identify any specific actions based on those maps that offers a credible basis for asserting a causal relationship between the maps and contemporary conditions.

It is a statistical truism that correlation is not causation, and that when two variables strongly correlate with one another but no apparent basis exists for a relationship between the two, it is likely that both variables are correlated with a missing variable or variable which account for the association (Wheelan 2013). While some of the scholarly literature on the maps is fairly careful to refer to "associations" between the maps and the particular condition being investigated, other authors are less scrupulous, writing, *inter alia*, that the maps "profoundly contribute to" the contemporary conditions identified (Schuyler and Wenzel 2022) or explicitly asserting a causal relationship (Hynsjo and Perdoni 2022). Urban historian Robert Gioielli has called this phenomenon the "redlining vampire":

> Much like Dracula was undead and eternal, never growing or aging as he moved throughout history, within these narratives HOLC redlining practices never morph or change. The maps that were created in the 1930s seem to have a permanent, trans-historical impact on the American metropolis, shaping the lived experience of city residents all the way up to the present day […] The bureaucrats of the 1930s are the undead that continue to create the destructive inequalities of our contemporary cities (Gioielli, 2022).

When research is picked up by popular authors or the media, however, distinctions between correlation and causation typically disappear. A recent Washington Post column, reporting on a study that showed an association between the maps and air pollution, was headed "Redlining means 45 million Americans are breathing dirtier air, 50 years after it ended" (Fears, 2022).

Although my reinterpretation de-emphasizes the link between the HOLC maps *as such* for subsequent racial inequities, I neither exculpate those who created those maps, nor minimize the significance of racism and racial discrimination, both overt and covert, in bringing about those inequities. Indeed, as I will discuss in more detail in the final section of this paper, I believe that reducing the centrality of Gioielli's "redlining vampire" in the discourse is needed in order to encourage a deeper and more nuanced understanding of the complex web of racially invidious policies and practices that have led to the pervasive racial inequality that is today's reality, as well as to promote more constructive ways to frame strategies and policies that might lead to a different future reality.

The next section of the paper explores the literature on the HOLC maps. Because of its significance to my argument, I give greater emphasis to the work that has explored how the maps were created and their relationship to the activities of the HOLC and others, and less to

the much larger body of literature on the associations between the maps and current urban conditions. In the sections that follow, I analyze the key demographic and physical features not only of the redlined or D areas, but of the A, B and C areas, as mapped by the HOLC in seven older American cities at three points in time: in 1940, as the maps were being created, in 1980, roughly the endpoint of the Second Great Migration, and again in 2019. The final section offers conclusions, and some discussion of the implications of the findings for future research and policy formation.

II   Literature Review: What Do We (Think We) Know About the Redlining Maps?

For nearly two decades after Jackson published his 1980 paper describing the maps, hardly any published research appeared that was based on the HOLC maps. The first significant research into the maps after Jackson's initial work was done by Amy Hillier, first in her Ph.D dissertation at the University of Pennsylvania (Hillier 2001), and over the next few years (Hillier 2003a, Hillier 2003b, Hillier 2003c and Hillier 2005). Despite her work and related work by Kristen Crossney and David Bartelt (Crossney and Bartelt 2005a, Crossney and Bartelt 2005b), few scholars followed suit for more than a decade. The opportunity to do quantitative research on the HOLC maps without severe brain damage only arrived with the launch of the Mapping Inequality website at the University of Richmond in 2016 (Nelson et al, n.d.), which for the first time made the maps available in digitized form suitable for the quantitative analysis needed to identify statistically meaningful associations between map categories and contemporary conditions. Even then, the response was far from immediate; of the nearly 50 studies of associations listed in Table 1, only six were published prior to 2020.

For purposes of this analysis, however, the early studies by Hillier and others, as well as more recent work by Fishback, Michney and others building on that research, are most germane, since by relating the maps to the policies and activities of the HOLC and others, they provide critical insight into the important question of the relationship between the maps and those activities, in particular the making or denial of loans. Jackson (1985) explored the distribution of HOLC loans by map category in Essex County (Newark), New Jersey and Shelby County (Memphis), Tennessee; Mohl (1987) calculated the same for Miami, while Metzger (1999) did so for Chicago.

Hillier (2003c) went further. By matching a sample of HOLC loans for Philadelphia with Census records as well as the map categories, she was able to establish not only where the loans were made, but the racial or ethnic category of the homeowner. Michney (2020) subsequently analyzed the entire corpus of HOLC loans by the homeowner's race, including not only quantitative information but also mining the HOLC administrative correspondence to shed light on the agency's decision-making practices. In a subsequent paper, Michney and Winling (2022) provide a nuanced analysis of the manner in which the HOLC maps were created, used and disseminated (or not). Many of these writers, particularly Hillier (2003a), Crossney and Bartelt (2005b) and Michney and Winling (2022), have also looked closely at the important question of

the extent to which the HOLC maps may have influenced the decisions of other lenders, including the Federal Housing Administration (FHA) and private lenders. The findings and conclusions of this research will be discussed in the next section of the paper.

The second principal area in which the research literature has engaged the HOLC maps is through quantitative research showing statistical associations between the map geographies that were classified D or redlined and variables reflecting different environmental, social, economic or health conditions. Of these, well over half address physical or environmental health issues. I summarize this literature in Table 1, noting the nature of the variable which the authors found to be associated with the redlined areas on the maps. While the table is undoubtedly incomplete, it includes the great majority of the studies that have appeared to date. Taken as a whole, the most salient thing about this research is that the variables the authors have found to be associated with the maps are also cross-correlated; not only with each other, but with place-specific poverty concentration, racial disparities, and the invidious outcomes of racial discrimination. Perry and Harshbarger (2019) and Gerken et al. (2023), however, have cast doubt on the policy salience of these associations.

Many secondary writings have also appeared. These have been the principal means by which the narrative of the HOLC maps and their effect on contemporary racial inequities has been disseminated beyond academic circles. Perhaps the most prominent one is Richard Rothstein's *The Color of Law* (2017), while another extended treatment was a 2018 report by the National Community Reinvestment Coalition (Mitchell and Franco 2018), which was widely disseminated in policy circles. Among many blog posts, columns and TV or radio reports featuring the HOLC maps, Lockwood (2020), Best and Mejia (2022), Mock (2018) on Cleveland, Green (2016) on San Francisco, and Moran (2021) on Haverhill and Merrimack, Massachusetts, are representative. All of these works accept or elaborate on the conventional narrative.

Important as well are curriculum guides and related materials which use the maps as an educational tool for students (Connecticut State Library, n.d.; National Geographic Society, n.d.; Digital Scholarship Lab 2020) and the products of organizations that have created guides for practitioners and policymakers to use the maps (My Sidewalk, n.d.; DiversityDataKids 2022). Many of these sites directly attribute causality to the HOLC map ratings, as in "these ratings channeled the flow of real estate credit into affluent, White neighborhoods, while depriving communities of color of much-needed investments (DiversityDataKids 2022)"; or "these neighborhoods still feel the unfair social and environmental effects of [the HOLC surveyors'] word choices a century later" (Digital Scholarship Lab 2020).

III   The use and dissemination of the HOLC maps

An argument that there is a meaningful and potentially causal relationship between the HOLC maps and urban conditions associated with poverty and racism today, as distinct from a statistical association without larger significance, hinges on the ability to establish that the HOLC maps prompted actions, by the HOLC or others, such as denial of mortgage credit, that led either directly or indirectly to racially discriminatory outcomes.

TABLE 1: Studies of associations between the HOLC redlining maps and specified conditions

AUTHORS	YEAR	ASSOCIATION(S)
Aaronson, Faber, Hartley, Mazumder, and Sharkey	2021	Place-based measures of economic opportunity and socioeconomic success
Aaronson, Hartley and Mazumder	2021	Reduced home ownership, house values and rents
An, Orlando, and Rodnyansky	2019	Distribution of single-family and multifamily housing stock
Appel and Nickerson	2016	Property values
Benns, Ruther, Nash, Bozeman, Harbrecht, and Miller	2020	Gun violence in Louisville
Bloch and Phillips	2021	Anti-gang enforcement in Los Angeles
Campbell, Sims,. Hill, and Willis	2023	Air pollutants and adult asthma incidence
Cushing, Li, Steiger, and Casey	2023	Fossil fuel plant siting and emissions
Diaz, O'Reggio, Norman, Thumma,. Dimick, and Ibrahim	2021	Outcomes after inpatient hospitalization
Erikson, Dent, Park, and Luo.	2022	Spatial distribution of behavioral health practitioners
Gibbons	2023	Concentrated Black poverty
Gonzalez, Nardone,. Nguyen, Morello-Frosch, and Casey	2022	Siting of oil and gas wells
Graetz and Esposito.	2022	Life expectancy
Hicks, Woodward, Niziol, Lu, Kang, Stagg, Jakpor, Elam, and Newman-Casey	2022	Visual impairment and blindness
Hollenbach, Thornburg, Glantz and Hill	2022	Obstetric outcomes in Finger Lakes Region (NY)
Huang and Sehgal	2022	Health conditions in Baltimore
Hynsjö and Perdoni	2022	Reduced property values
Jacoby, Dong, Beard, Wiebe, and Morrison	2018	Urban violence in Philadelphia
Joshi, Horn and Berrens	2020	Property values
Jung, Pitkowsky, Argenio,. Quinn, Bruzzese, Miller, Chillrud, Perzanowski, Stingone, and Lovinsky-Desir	2022	Air pollution around New York City public schools

Krieger, Van Wye, Huynh, Waterman, Maduro, Li, Gwynn, Barbot, and Bassett	2020	Risk of preterm birth in New York City
Krieger, Wright, Chen, Waterman, Huntley, and Arcaya	2020	Breast, cervical, lung, and colorectal cancers in Massachusetts
Krimmel	2018	Neighborhood housing supply and population
Lane, Morello-Frosch, Marshall, and Apte	2022	Air pollution disparities
Li, Newman, Wilson Zhang, and Brown	2022	Urban heat
Li and Yuan	2022	Resident exposure to COVID-19
Li and Yuan	2021	Unhealthy food environments
Linde, Walker, Campbell, and Egede.	2022	Diabetes mortality
Lukes and Cleveland	2021	School funding, diversity and performance
Lynch, Malcoe, Richardson, Mitchell, and Meier	2021	Mortgage lending and health
McClure Feinstein, Cordoba, Douglas, Emch, Robinson, Galea, and Aiello	2019	Self-rated health in Detroit
Mehdipanah, McVay and Schulz.	2023	Health determinants in Detroit area
Mehranbod, Gobaud, Jacoby, Uzzi, Bushover, and Morrison	2022	Firearm violence
Mitchell and Franco	2018	Persistent economic inequality and racial segregation
Mitchell and Chihaya.	2022	Fatal encounters with police
Motairek, Lee, Janus, Farkouh, Freedman, Wright, Nasir, Rajagopalan, and Al-Kindi	2022	Contemporary cardiometabolic risk
Moxley and Fischer	2020	Environmental impacts in Indianapolis
Mujahid, Gao, Tabb, CMorris, and Lewis	2021	Cardiovascular health
Nardone, Casey, Rudolph, Karasek, Mujahid, and Morello-Frosch	2020	Birth outcomes in California
Nardone, Rudolph, Morello-Frosch and Casey	2021	Green space
Nguyen, Buckle-Rashid, Thorsness, Agbai, Crews and Trivedi.	2023	Incidence of kidney failure
Rhynhart	2020	Homicides in Philadelphia

Schinasi, Kanungo, Christman, Barber, Tabb and Headen.	2022	Heat vulnerability and land cover in Philadelphia
Schuyler and Wenzel	2022	Asthma in Black adults
Schwartz, Onnen, Craigmile, and Roberts	2021	Tobacco retailer density in Ohio
Shaker, Grineski, Collins, and Flores	2023	Food access
Swope, Hernández, and Cushing,	2022	Neighborhood environmental and health outcomes
Wilson	2020	Urban heat conditions
Wing, Lynch, Laurent, Mitchell, Richardson, and Meier	2022	Stroke prevalence in Columbus, OH

Thus, finding that the maps had no bearing on the mortgage buying and refinancing activities of the HOLC, or on lending activity by others, would raise questions about the meaning of an association between the maps and conditions associated with poverty and racism. Even if the actions of the HOLC, the Federal Housing Administration (FHA) or others, were tainted by racism – as there is ample reason to believe - a connection between those actions and the *maps* must be established to claim a causal role for them. Thus, defining the relationship of the maps to actions by the HOLC or others, particularly its fellow New Deal agency the FHA, is a critical threshold question. If no such relationship can be established, the second and more important question then becomes how to account for the strong statistical association between the maps and the conditions identified in the literature.

1   The role and activities of the HOLC

In addressing these questions, it is important to understand the role of the Home Owners' Loan Corporation. *The HOLC did not make mortgages to home buyers.* With the nation facing a foreclosure crisis of unparalleled proportions, the HOLC used government-backed bonds to buy from lenders the mortgages of homeowners who were in default, refinancing them at lower interest rates and for longer terms so that they would be affordable to the homeowners.[2] Under its authorizing legislation, the HOLC was authorized to refinance loans for three years, or until June 12, 1936, after which time it initiated no new loans (Fishback, Rose and Snowden 2013). During those three years, the HOLC received nearly 1.9 million loan applications, and refinanced slightly more than 1 million mortgages, or roughly 1 of 5 nonfarm one to four family owner-occupied homes in the United States (Fishback et al. 2013).[3] After June 1936, the HOLC serviced its loan portfolio until the last mortgage was paid off in 1951. The HOLC was then dissolved, returning a small profit to the U.S. Treasury.

An extensive body of research has provided something close to definitive answers about how the maps were used. The chronology of the maps alone indicates that their effect on HOLC refinancing activity was minimal at most. The decision to make the maps was not made until September 1935, field offices did not receive any maps until February 1936, and the great majority of the maps were not prepared until well after the June 1936 cut-off date (Michney and Winling 2020). Michney and Winling calculate that, by the point the *first* field office received the *first* maps, 97 percent of the loans that the HOLC was eventually to make had already been made.

A number of separate studies have also found that the HOLC routinely refinanced mortgages in areas that were later designated D areas on the maps. Jackson found that 29 percent of the HOLC loans in Essex County, New Jersey and 31 percent of those in Shelby County, Tennessee were in D areas. Similar findings elsewhere have been noted earlier. After extensive analysis, Hillier concluded that "HOLC did not practice redlining through its own lending program. *Nothing in HOLC's policies put areas with older homes or racial and ethnic minorities at a disadvantage."* (Hillier 2003a, p. 397 (emphasis added)).

Since, as I will show, the great majority of residents and homeowners in D areas were white, findings about the spatial distribution of HOLC loans does not answer the question of whether they discriminated against Black homeowners, nearly all of whom, however, lived in D areas. Hillier, using a relatively small sample, found that "HOLC provided assistance to whites and African Americans in proportion to their overall numbers within the city. But according to the 1940 census, only 3.3 percent of homeowners were 'Negro', so HOLC likely provided assistance to a greater proportion of African American homeowners than to whites" (Hillier 2003c, p. 13). Michney and Winling, after reviewing national HOLC records, found that "in the aggregate on the national level, Black homeowners had just shy of their fair share of HOLC mortgages in 1940, at *95 percent of what would be expected* relative to their proportion of all homeowners (Michney and Winling 2020, pp. 157-158)".[4]

HOLC staff were not anti-racists before their time. The internal correspondence of the HOLC, as documented by Michney (2022), is replete with racist comments and observations. While many factors, including commitment to the organization's mission, white paternalism, and a desire to perpetuate the stability of spatial racial boundaries, all played roles, Michney and Winling concluded that "the most compelling explanation for African American access to government aid in HOLC's rescue phase is that refinancing Black-owned homes served the agency's purpose as a bailout for mortgagees [lenders] (Michney and Winling 2020, p. 169)". In the end, however, all of this leads to the conclusion that there is *no* evidence of any pattern of discriminatory lending by the HOLC that could have potentially led to future negative consequences for the neighborhoods where Black households owned homes.

2 The HOLC, the FHA and private lenders

The question that remains is whether the HOLC maps were shared with others, and if so, whether they may have been used to deny mortgage access to redlined areas. Jackson appears to have assumed *a priori* not only that "HOLC appraisal methods, and probably the maps themselves, were adopted by the Federal Housing Administration" (1985, p. 203), but that they were also widely used by private lenders. Based on far more thorough research, later scholars have found that the reality was otherwise. Michney and Winling (2020) established through extensive review of HOLC internal materials that HOLC policy precluded sharing the maps with private lenders, although it is impossible to prove that no isolated unauthorized exceptions may have taken place.

With respect to the FHA, the consensus of scholars who have studied the matter is that while the maps were shared with the FHA, they were unlikely to have had any effect on FHA practices, which were driven by the FHA's *Underwriting Manuals*, the first of which was adopted in 1934, long before the HOLC maps were made.

The framework of those manuals, written under the direction of Homer Hoyt, a prominent economist of the Chicago School of Human Ecology who became chief underwriter of the FHA soon after its founding, was unabashedly racist. It manifested a strong preference for single-use over mixed-use neighborhoods, for low densities over higher ones, and for new homes over

older ones. It also made clear that underwriters should privilege racially and ethnically homogenous neighborhoods, reflecting Hoyt's thinking, as he wrote elsewhere, that it was in the "twilight zone, where members of different races lived together[,] that racial mixtures tend to have a depressing effect on land values (Hoyt, 1939)". The *Manual* warned against the introduction of "inharmonious racial or nationality groups" into existing neighborhoods or new developments, and encouraged the use of restrictive covenants in real estate deeds to bar Blacks, and often Jews and Asians as well, from "invading" white neighborhoods (FHA, 1935). Although precise figures are not available, such covenants were common in residential developments across the United States during the 1920s and 1930s (Gotham 2000, Jones-Correa 2000).

The FHA commissioned its own maps for its underwriters' use. In contrast to the HOLC maps, which were carefully preserved in the archives, the FHA maps were apparently destroyed in conjunction with civil rights litigation in the 1960s (Greer 2014). The sole map that has been found, a copy of the 1938 Chicago map, was saved by Chicago School sociologist Ernest Burgess and subsequently discovered in his papers (Greer 2014). Its boundaries were only partially congruent with the Chicago HOLC map, which in any event was not finished until April 1940.

In contrast to the HOLC, which bought and refinanced mortgages in all urban neighborhoods, FHA lending at the time was spatially and racially discriminatory. Fishback and his colleagues (2021) have documented comparative lending practices of the HOLC and FHA in Baltimore, Peoria and Greensboro. In Greensboro, where 23 percent of all home owners were Black in 1930, nearly 22 percent of all HOLC loans went to Black home owners. By contrast, "in Greensboro," they write, "we find exactly one FHA-insured loan that was made [between 1935 and 1940] to a Black borrower, in a city with about 1,300 Black home owners by 1940 (p. 16)". Consistent with others' findings, Fishback and his colleagues found no evidence of any effect of the HOLC maps on FHA redlining policies. Although the FHA made some changes to their policies after World War II, making more loans to Black homebuyers in central cities (Glock 2016), by 1960, Black owners accounted for only 2.5 percent of all outstanding FHA mortgages, although 6 percent of all United States homeowners were "nonwhite" (U.S. Bureau of the Census 1960).[5]

Finally, although there may have been scattered exceptions, private lenders do not appear to have been privy to the HOLC maps. Moreover, although some HOLC personnel and private lenders undoubtedly knew one another, HOLC staff did not engage with lenders in their capacity of making new loans, but only with respect to their existing troubled loan portfolios. While the HOLC was a direct lender, the FHA operated by insuring loans made by private lenders; thus, Fishback points out that "Private lenders worked closely with the FHA and were very familiar with which neighborhoods the FHA was willing to insure—naturally so since this was the only way to arrange for FHA insurance coverage (2021, p. 22)". It is likely in any event that the lenders were following their predilections; it stretches credulity to the breaking point to believe that the typical white male banker of the 1930s, untrammeled by either prevailing social norms or fair housing laws, would need the imprimatur of a government map to discriminate against Black would-be home buyers.

Insofar as federal practices during the 1930s paved the way for future racial inequities, they were those of the FHA, not the HOLC, that should be seen in that light. It is important to remember,

moreover, that while the mission of the HOLC was to preserve the homes of existing owners, which thus maintained the spatial (and social) status quo ante, the FHA provided loans for new home buyers, thus defining and delimiting the spatial scope of future home ownership opportunities.

IV   Tracking urban change 1940 to 2019

Nothing in the body of research presented above has offered any mechanism by which the area delineations of the HOLC maps could have had an effect on the subsequent trajectories of those areas or plausibly have led to the associations found by so many scholars. Since the statistical basis for those associations does not appear to be in doubt, an intervening variable or variables must exist, therefore, that can account for these associations. In this section, I search for that variable by examining change in the economic and demographic characteristics of the areas as delineated in the HOLC maps in seven Northeastern and Midwestern cities at three points in time: in 1940, the year closest to when the maps were made; in 1980, which represents the approximate end of the Second Great Migration and large-scale white flight; and in 2019, representing present-day conditions.[6]

To determine the characteristics of the different areas, I used the shapefile maps from the University of Richmond's *Mapping Inequality* project (Nelson et al. n.d.) to match the HOLC maps with 1940 census tract boundaries using the National Historical Geographic Information System (NHGIS) database (Manson et al 2022) and for subsequent comparison 2010 decennial census tract boundaries normalized to 1980 and 2019 by the US2010 Project at Brown University.[7] While I initially selected ten cities for analysis, three of the cities were removed after a closer examination, because of poor matching between 1940 and 2010 census tract/HOLC category relationships or because of large-scale annexation after 1940.[8] The remaining cities, which vary by size and location within the overall Northeast/Midwest region, were Baltimore, Cleveland, Detroit, Philadelphia, Rochester, St. Louis, and Trenton. The first part of this section will describe the features of the areas designated A, B, C and D respectively at the time they were mapped by the HOLC in the selected cities.

1   Conditions in 1940 by HOLC category

The HOLC survey procedure was highly subjective but very thorough. Cities were divided into small subareas (Detroit was divided into 239 subareas), for each of which surveyors not only assigned a category from A through D, but completed an Area Description form. These forms required the surveyors to describe positive and negative environmental influences; building characteristics and conditions; market activity, including sales prices, volumes and mortgage activity; the economic condition of residents; and the extent and pace of "negro" and foreign-born resident population and/or infiltration.[9] Some surveyors filled out the forms in copious detail, while others made only a few cursory entries. Although the forms give the illusion of statistical precision, most of the numbers were probably educated guesswork.

The 1940 Census data provides quantitative proxies for many of the factors that were used by

the surveyors, including the level of home ownership, the condition of the housing stock, and the Black and immigrant population.[10] For housing condition, we looked separately at three measures: overcrowding (>1 person/room) and severe overcrowding (>1.5 persons/room);[11] lack of central heating; and need for major repair. While the first two are self-explanatory, the third was based on the enumerator's visual observation that "parts of the structure such as floors, roof, plaster, walls, or foundations required repairs or replacements, the continued neglect of which would impair the soundness of the structure and create a hazard to its safety as a place of residence (U.S. Census Bureau, 1940)".

The distribution of population by race in the redlined areas can be summed up as follows: *the great majority of the population of the redlined areas was white, but the vast majority of Black households lived in redlined areas.* While this may seem inconsistent, if not contradictory, it reflects the reality that in most Northern cities the 1940 Black population was far smaller than it was to become after World War II and the Second Great Migration. Thus, while Blacks were over-represented in the D areas, they made up only a small part of the population of most areas, as shown in Table 2. The largest Black population shares were in St. Louis and Baltimore, the southernmost cities of the seven, with the highest prewar Black populations.

TABLE 2: Black population share of HOLC D areas

	Black share of total D area population	D area share of citywide Black population
Rochester	3%	83%
Trenton	16%	70%
Cleveland	17%	96%
Detroit	19%	95%
Philadelphia	21%	91%
St. Louis	31%	91%
Baltimore	39%	90%

While Immigrants and their children were highly over-represented in the redlined areas as well, their distribution varied considerably from city to city, while the gradient of their distribution between HOLC areas was far less pronounced than that of the Black population (Table 3). It is likely that the surveyors made distinctions between different categories of immigrant. Thus, the presence of "Americanized" immigrants from Ireland or Germany would not prompt the same reaction as that of more recent Italian or Jewish immigrants, with their distinctive language, clothing, and street life. As Markley (2022), who studied the HOLC survey forms in detail, concluded " neighborhoods where "whiter" "foreign-born" groups were listed were generally less likely to be assigned a "D" grade than areas with East Asian or Pacific Islander, Black, "Latin", or Southern or Eastern European populations, respectively (Markley 2022, p. 11)." This is borne out by a recent analysis of 1940 census data from Syracuse, New York, which found that 77 percent of foreign-born whites from Poland and Russia (mostly Jewish) and 57 percent of foreign-born whites from Italy, but only 28 percent of foreign-born whites from Ireland, and 21 percent of foreign-born whites from Germany, lived in redlined areas.[12] The large immigrant presence in redlined areas was to play a significant role in their postwar trajectories.

TABLE 3: Immigrant population share of total White population by HOLC category

	PHILADELPHIA	DETROIT	CLEVELAND	BALTIMORE	ROCHESTER	ST. LOUIS	TRENTON
A	34.1%	37.8%	25.2%	13.0%	25.1%	22.5%	39.7%
B	42.1%	42.0%	43.4%	23.4%	34.0%	28.4%	34.5%
C	39.5%	56.3%	60.6%	29.0%	44.3%	48.3%	64.4%
D	55.7%	59.9%	67.3%	37.7%	59.1%	32.1%	53.2%
CITY	48.4%	55.9%	63.2%	30.0%	46.3%	35.4%	56.0%

The main focus of the HOLC surveys, however, was on the physical features and condition of the neighborhood and its properties. Surveyors were instructed to consider housing type, age, physical condition, and tenure (owner/renter) as well as negative environmental influences, such as industrial areas or pollution. Many of these features account for the greatest difference

TABLE 4: Housing condition indicators in 1940 by HOLC category

		% Overcrowded {1+/room}	% Severely overcrowded (1,5+/room)	% Need major repairs	% no central heat
Detroit	A	3%	<1%	1%	4%
	B	6%	<1%	3%	5%
	C	11%	3%	4%	8%
	D	22%	5%	10%	32%
Philadelphia	A	8%	5%	4%	5%
	B	10%	7%	2%	2%
	C	15%	6%	4%	3%
	D	19%	9%	9%	12%
Cleveland	A	3%	<1%	0%	2%
	B	4%	<1%	1%	1%
	C	7%	2%	3%	15%
	D	17%	5%	9%	37%
Baltimore	A	4%	<1%	1%	2%
	B	7%	1%	3%	3%
	C	14%	3%	5%	10%
	D	22%	6%	17%	56%
Rochester	A	2%	<1%	3%	6%
	B	4%	<1%	9%	3%
	C	7%	2%	10%	4%
	D	13%	3%	20%	11%
St. Louis	A	5%	1%	1%	3%
	B	16%	5%	2%	12%
	C	24%	8%	3%	26%
	D	35%	19%	9%	67%
Trenton	A	2%	<1%	1%	0%
	B	9%	<1%	6%	2%
	C	17%	3%	12%	20%
	D	19%	5%	23%	37%

between A, B, C and D areas on the HOLC maps. An analysis of the three housing conditions described above by HOLC category shows a sharp gradient between the different areas, with D areas showing significantly worse physical conditions and overcrowding than the other areas, often markedly so (Table 4). Particularly notable are the high levels of visible disrepair, and the widespread absence of central heat, even in cities with harsh winters like Detroit or Cleveland.

Within D areas, there is a strong relationship between the Black population share of a census tract and the severity of negative housing conditions, particularly with respect to the number of dwellings in need of major repair. This is no surprise. The dreadful housing conditions in those parts of Northern cities to which Black families were largely relegated during the 1920s and 1930s, hemmed in by blatant racial discrimination, poverty, and exploitation, have been widely documented (Drake and Cayton 1945, Sugrue 1996, Ehrenhalt 1999). The HOLC maps provide clear evidence of how longstanding unequal treatment limited Black housing opportunities in the 1930s. As Fishback and his colleagues conclude, "the assignment of a D rating […] to those neighborhoods where the share of Black families was higher would almost certainly have happened even if the HOLC decision makers had not known the race of the families in the neighborhood (Fishback et al 2021, p. 27)".

TABLE 5: Housing condition indicators for D areas in 1940 by Black population share

BALTIMORE	<20% Black	20-49.9% Black	50%+ Black
Severe crowding	6%	7%	8%
Need major repairs	10%	12%	26%
No central heat	46%	63%	64%
ST LOUIS	<20% Black	20-49.9% Black	50%+ Black
Severe crowding	18%	17%	18%
Need major repairs	6%	10%	16%
No central heat	63%	64%	76%
DETROIT	<20% Black	20-49.9% Black	50%+ Black
Severe crowding	7%	9%	8%
Need major repairs	8%	10%	18%
No central heat	29%	40%	41%
PHILADELPHIA	<20% Black	20-49.9% Black	50%+ Black
Severe crowding	5%	6%	9%
Need major repairs	7%	9%	18%
No central heat	10%	12%	17%

2   *White flight, the Second Great Migration and urban reconfiguration*

The HOLC maps are a snapshot of American cities at a particular moment, the Depression Era of the late 1930s. Over the next forty or so years, American cities changed radically as the result of two massive migration processes, the Second Great Migration and white flight. In the former,

roughly five million African Americans migrated from the South to the North, Midwest and West between 1940 and 1980,[13] seeking, with uneven and often limited success, economic opportunity and relief from the oppressive weight of Southern segregation and racial violence. In the latter, which is rarely treated as a migratory event of comparable significance, a much larger number of whites left their neighborhoods in the nation's urban centers, primarily in the North and Midwest, either for their cities' suburbs or for the growing regions of the South and West.[14]

Many factors went into white flight, including the shabby and overcrowded conditions of large parts of American cities at the end of World War II after a decade of Depression and five years of wartime austerity, the lure of a new home of one's own in a green suburban setting, the availability of affordable FHA and Veterans Administration (VA) mortgages, as well as, inevitably, racism. For the children of immigrants, moreover, who had been exposed to a wider American culture through their wartime service, it was also an opportunity to break away from the confines of an ethnic enclave into a more ethnically, if not racially, diverse society (Suarez 1999).

Whatever the many factors that drove white flight, the critical point is that it was *white* flight. Racial discrimination, including the racist lending criteria of the FHA and VA (which largely followed the FHA's lead), allowed few Black families to benefit from the suburban housing opportunities that grew up around central cities starting in the late 1940s. As late as 1990, only one-quarter of 1 percent of the population of Levittown, New York, the suburban archetype, was Black (Lambert 1997). The racially exclusionary nature of the migration from the cities was one of two factors that determined the character of the urban spatial reconfiguration.

The second factor was the extent to which the white out-migration from central cities exceeded Black in-migration (Boustan 2010). The 25 largest Northeastern/Midwestern cities lost over 10 million white residents between 1950 and 1980, while gaining slightly under 4 million Black residents, for a ratio of 2.76 white residents lost for each Black resident gained. The out/in ratio varied widely by city, but 24 out of those 25 cities (all but Toledo) lost population. Table 6 shows the change for the seven cities discussed in this paper.

TABLE 6: Change in total, white and Black population by city 1950 to 1980

	Total pop. in 1950	White pop.in 1950	White pop. in 1980	Change	Black pop. in 1950	Black pop.in 1980	Change	White/ Black change ratio	Total change (see note)
Philadelphia	2,072,000	1692637	983084	-709553	376041	638878	262837	-2.70	-383790
Detroit	1,850,000	1545847	413730	-1132117	300506	758939	458433	-2.47	-646661
Baltimore	950000	723655	346692	-376963	225099	430934	205835	-1.83	-163225
Cleveland	915000	765264	307264	-458000	147847	251347	103500	-4.43	-341178
St. Louis	857000	702348	242576	-459772	153766	206386	52620	-8.74	-403915
Rochester	332000	324643	168102	-156541	7590	62332	54742	-2.86	-90259
Trenton	128009	113477	45087	-68390	14479	41860	27381	-2.50	-35885

Note: Total population change is affected by in/out migration of people of other races.

The juxtaposition of these two migrations precipitated the spatial reconfiguration of the cities generally, and of the cities' Black populations in particular. Prior to World War II, the great majority of urban Black households lived in areas of concentrated Black population, often referred to as "ghettos" to reflect the fact that they were imposed by external forces analogous to those that had created the historical Jewish ghettos of Europe (Drake and Cayton 1945, Cutler and Glaeser 1999). The lack of housing alternatives for Black households meant that their residents were an economic cross-section of their cities' Black populations.

While it is true that Black households *on average* earned less than white households, urban Black communities contained many households with middle-class incomes, and even more with stable working-class incomes (Drake and Cayton 1945). Moreover, given the severely limited homeownership opportunities available to them, many of those households may have had some savings or cash reserves potentially available to apply to a home purchase.

White flight created that opportunity. White flight, however, also led to Black populations splitting spatially along economic lines. This population movement materially changed the spatial relationship between race and economic condition.

Between 1940 and 1980, the seven cities lost 3.3 million White residents while gaining 1.2 million Black residents. But neither the losses nor the gains were evenly distributed across the city. Most notably, *white out-migrants disproportionately left HOLC D areas, while Black in-migrants disproportionately moved into A, B and C areas*. This is shown in Table 7 which sums the changes of the seven cities.

TABLE 7: White out-migration and Black in-migration in study cities by HOLC map category

	White change 1940 to 1980	Black change 1940 to 1980	Net change	% of White out-migration	% of Black in-migration
D	-1669014	121377	-1547637	50%	8%
C	-1355448	868144	-487304	41%	56%
A/B	-282986	569569	286583	9%	37%
CITIES TOTAL	-3307448	1559090	-1748358	100%	100%

NOTE: Because of the very small number of A census tracts in many of the cities, A and B have been collapsed into a single category.

This was rational behavior by both groups. From the perspective of white working-class families living in D areas, where the dire housing conditions noted in the 1930s by the HOLC surveyors were further exacerbated by postwar overcrowding, a move to the suburbs offered vast improvement in living conditions. While discrimination blocked Black families' ability to move to the suburbs, moving to other parts of the city being vacated by white flight offered them similar opportunities to improve their housing conditions and become home owners.

Overall, only 8 percent of the increase in the cities' Black population took place in D areas; while this varied from city to city, in no city did the majority of Black increase take place in D areas, while in St. Louis and Baltimore the Black population in D areas *declined* significantly

between 1940 and 1980. Between 1940 and 1980, the share of Black populations living in the cities' D areas dropped precipitously. In Baltimore, Detroit and St. Louis the D areas went from containing over 90 percent to barely one-quarter of each city's Black population.

This process also sheds new light on the dynamics of urban population loss during this critical period. The seven cities lost 26 percent of their collective population from 1940 to 1980, *but that was as much a process of internal population shifts as one of overall loss.* The A/B areas actually gained population over that period, largely reflecting new construction in peripheral areas within central city boundaries.[15] During that same period, D areas lost nearly half of their total population.

TABLE 8: Overall population change in cities by HOLC map category 1940 to 1980

	1940 POP	1980 POP	CHANGE 40-80	% CHANGE 40-80
D	3025291	1534463	-1490828	-49%
C	2214171	1765306	-448865	-20%
A/B	1107813	1416107	308294	+28%
CITIES TOTAL	6347275	4715876	-1631399	-26%

While this was also the urban renewal era, displacement from Federally-funded urban renewal projects most likely accounted for only a very small portion of the loss. 8,678 families were displaced in Baltimore by urban renewal (Digital Scholarship Lab, n.d.). This is not trivial, but the net population loss in the city's D areas was over 200,000 people. The relative scale of urban renewal displacement to total population loss was similar in other cities. While the data may understate the extent of displacement – particularly since no figures are available for displacement from Interstate highway construction - it may also overstate the extent to which displacement actually led to net population loss in D areas, since many of the families displaced may have moved to other D areas not being redeveloped, since those areas not only were closest to the areas from which they were being displaced but generally offered the city's lowest rents.

The second critical feature of the migration was that it was economically divided. As Table 9 shows, 1980 Black households who remained or moved into D areas were much poorer than those who moved into C areas, while those who moved into A/B areas were considerably more affluent than those in either D or in C areas. In 5 of 7 cities, the median income of Black

TABLE 9: 1980 median household income of Black households by city and HOLC map category.

	D	C	RATIO C TO D	A/B	RATIO A/B TO D
Baltimore	$7,092	$12,093	1.71	$18,034	2.54
Cleveland	$9,815	$15,919	1.62	$23,758	2.42
Detroit	$10,839	$14,175	1.31	$22,603	2.09
Philadelphia	$8,933	$12,657	1.42	$17,865	2.00
Rochester	$9,326	$14,474	1.55	$20,745	2.22
St. Louis	$8,724	$11,670	1.34	$13,341	1.53
Trenton	$9,257	$11,859	1.28	$14,783	1.60

households moving into A/B areas was more than double that of those in D areas. In 1980, the poverty level for a family of four was $8,414 (U.S. Census Bureau 1981).

The distribution of incomes is paralleled by the distribution of rents and house values by HOLC category, although, as Table 10 shows for selected cities, both the prices and the price gradient vary widely from city to city. In all cases, though, the price gradient for house values, a proxy for sales prices, is steeper than that for rents, something which is still true today.

TABLE 10: Median house values and rents for selected cities in 1980 by HOLC map category

	Detroit		Baltimore		St Louis		Cleveland	
	Median House Value	Median Rent	Median House Value	Median Rent	Median House Value	Median Rent	Median House Value	Median Rent
D	$ 14,507	$ 147	$ 16,672	$ 133	$ 14,904	$ 91	$ 18,409	$ 110
C	$ 19,318	$ 159	$ 21,667	$ 159	$ 18,937	$ 104	$ 27,732	$ 146
A/B	$ 25,782	$ 205	$ 37,254	$ 185	$ 28,967	$ 130	$ 39,974	$ 200

A further significant disparity is evident with respect to home ownership. One outcome of white flight, as Boustan and Margo (2013) have noted, was that it opened up a vast pool of homes for those with the means to buy them, a release for the pent-up demand among Black families. The process was often exploitative and unfair, but despite widespread use of real estate blockbusting (Orser 2014) and predatory contract sales (Sagalyn 1980), by 1980 a large Black homeowner population was a reality in all of these cities. The overall Black homeownership rate in the seven cities went from 10 percent in 1940 to 47 percent in 1980. In Philadelphia and Detroit, a majority of Black households were now homeowners. Black homeownership was unevenly distributed, with substantial homeowner majorities among Black families in A/B areas and large renter majorities among the poorer Black families in D areas (Table 11).

TABLE 11: 1980 Black homeownership rate by city and HOLC map category

	D	C	A/B
Baltimore	24%	38%	54%
Cleveland	38%	53%	78%
Detroit	43%	52%	79%
Philadelphia	44%	60%	70%
Rochester	32%	36%	53%
St. Louis	31%	41%	55%
Trenton	36%	46%	42%

The surge in Black home ownership was far more the exercise of agency by many thousands of Black families who seized the opportunities offered by white flight for better housing and homeownership in the central cities – while being largely denied similar opportunities in the city's suburbs – than the product of change in the legal or regulatory environment. Over three-quarters of the increase in Black homeownership from 1940 to 1980 in these cities took place *before 1970*; that is, before the effects of the Fair Housing Act, which was enacted in

1968, were felt.[16] This does not exculpate the racism that denied these families suburban opportunities – and led to their urban homes ultimately appreciating far less than similar suburban ones – but to stress that Black families were not passive victims, but determined actors within the space available to them in the racially bifurcated housing market.

By 1980, the spatial and economic division of urban Black populations was complete. In contrast to the prewar economic integration of Black communities, by 1980 a disproportionate share of the lowest-income Black families had been relegated to the most distressed and disinvested parts of the city, the areas that had been designated D by the HOLC surveyors. In contrast to the dense populations of those areas in the 1930s, however, the excess of white out-migration over Black in-migration after World War II meant that by 1980, these same areas – which by that point had lost half of their 1940 populations – had already come to show the pattern of pervasive housing abandonment that remains true today, exacerbating the other ills from which these communities suffer.

It was this migratory process, superimposed on the existing conditions reflected in the HOLC maps, rather than the maps themselves, that turned the redlined areas into the heavily disinvested concentrated poverty areas which have become the focus of attention today. That same process also led to the formation of the archipelago of solid Black middle neighborhoods that more than anything else sustained these cities' vitality over the subsequent decades (Woldoff 2011, Mallach and Swanstrom, 2023). The story of those neighborhoods, and their widespread decline after 2000, is a vitally important and still under-appreciated element in the post-World War II story of the American City.

## C	From the Great Migration to the present, 1980 to 2019

While the trajectory of the seven cities from 1940 to 1980 illuminates the mechanism by which the associations between the redlined areas on the HOLC maps and measures of concentrated poverty and abandonment emerged, changes since 1980 strongly suggest that those historical associations have become increasingly irrelevant as a framework for understanding today's dynamics of spatial disadvantage or for framing policies to address the challenges faced by these cities' Black families and their neighborhoods.

By 1980 the Second Great Migration had run its course. Urban out-migration continued, but from this point onward the migrants were as often Black as white. Urban out-migration was offset to varying degrees by the arrival of a new wave of immigration, and from the mid-1990s on, by young college graduates, the so-called Millennial generation (Mallach 2018, Moos, Pfeifer and Vinodrai, ed. 2018). In contrast to the years prior to 1980, during which nearly all older central cities lost population, some cities like Boston or Washington grew back rapidly while some stabilized. Among the seven cities studied here, the populations of Philadelphia, Trenton and Rochester have for the moment stabilized, while the other cities have continued to lose population.

Since 1980, however, Black populations have declined in these cities, with only Philadelphia and Rochester registering growth in their Black population. Black populations, however, have declined more sharply in the HOLC D areas than elsewhere in the city, while continuing to grow in HOLC A/B areas (Table 12). As a result, an even smaller share of these cities' Black populations lives in the D areas. Except for Cleveland, where nearly half of the Black population lives in D areas, the share of each city's Black population living in D areas ranges from a low of 17 to a high of 33 percent (Table 13). These variations reflect not only variation in the spatial dynamics of each city's Black population, but also the variation in the share of each city's populated area that was initially redlined by the HOLC surveyors.

TABLE 12: Black population change by HOLC area 1980-2019, for all cities

	1980	2019	Change 1980-2019	% Change 1980-2019
D	796110	515876	-280234	-35%
C	915701	690215	-225486	-25%
A/B	581009	671592	90583	+16%
CITY	2292820	1877683	-415137	-18%

TABLE 13: Percentage of citywide Black population living in HOLC D areas by city

	1940	1980	2019
Detroit	95%	26%	21%
Cleveland	96%	54%	46%
Baltimore	90%	23%	17%
Philadelphia	91%	47%	33%
Rochester	83%	41%	24%
St. Louis	91%	27%	28%
Trenton	70%	31%	30%

As the spatial distribution of each city's Black population has shifted, the economic disparities that were so stark in 1980 between areas have narrowed. Table 14 shows Black median household incomes by HOLC map category for each city in 1980 and 2019, and the change over that period.

The convergence of incomes between the HOLC D and C areas is particularly worth noting; in most of the cities, the difference between the two today is *de minimis*. Although there are still income disparities between Black households in D/C areas and those in A/B areas, they are much less than they were in 1980. What this reflects, however, is less constant dollar income growth in the D areas (except for Baltimore and Philadelphia) than disproportionate income decline among Black communities in other parts of these cities, where homeownership rates declined as well. This decline was particularly pronounced in Detroit, Rochester and Cleveland, where the median income of Black residents in A/B areas dropped by 50 percent or more in constant dollars, reflecting the out-migration of much of the Black middle class to the suburbs. The effects of that migration can be seen in Table 15, which shows the median income ratios for Black households in the cities and in their adjacent suburbs in 2019. The suburbs have increasingly supplanted the central city's A/B areas as the locus of today's Black middle class.

TABLE 14: Black median incomes in 1980 in current and constant (2019) dollars, median income in 2019, income ratios and change in constant dollars from 1980 to 2019, by city and HOLC map category (D areas = 1.0)

		Median 1980	Median 2019	Ratio 1980	Ratio 2019	1980 median in constant 2019 $$	Change 1980-2019 in constant 2019 $$
Baltimore	D	$ 7,092	$ 38,187	1.00	1.00	$ 25,124	52%
	C	$ 12,093	$ 37,836	1.71	0.99	$ 42,842	-12%
	A/B	$ 18,034	$ 49,880	2.54	1.31	$ 63,890	-22%
St. Louis	D	$ 8,724	$ 28,207	1.00	1.00	$ 30,907	-9%
	C	$ 11,670	$ 30,488	1.34	1.08	$ 41,344	-26%
	A/B	$ 13,341	$ 36,750	1.53	1.30	$ 47,265	-22%
Detroit	D	$ 10,839	$ 25,913	1.00	1.00	$ 38,400	-33%
	C	$ 14,175	$ 27,361	1.31	1.06	$ 50,219	-46%
	A/B	$ 22,603	$ 38,790	2.09	1.50	$ 80,078	-52%
Trenton	D	$ 9,257	$ 30,388	1.00	1.00	$ 32,796	-7%
	C	$ 11,859	$ 37,892	1.28	1.25	$ 42,014	-10%
	A/B	$ 14,783	$ 47,661	1.60	1.57	$ 52,373	-9%
Philadelphia	D	$ 8,933	$ 34,261	1.00	1.00	$ 31,648	8%
	C	$ 12,657	$ 35,154	1.42	1.03	$ 44,841	-22%
	A/B	$ 17,865	$ 50,002	2.00	1.46	$ 63,292	-21%
Rochester	D	$ 9,326	$ 24,561	1.00	1.00	$ 33,040	-26%
	C	$ 14,474	$ 32,962	1.55	1.34	$ 51,278	-36%
	A/B	$ 20,745	$ 37,289	2.22	1.52	$ 73,495	-49%
Cleveland	D	$ 9,815	$ 22,692	1.00	1.00	$ 34,773	-35%
	C	$ 15,919	$ 26,743	1.62	1.18	$ 56,398	-53%
	A/B	$ 23,758	$ 38,797	2.42	1.71	$ 84,170	-54%

These trends reflect the decline of the middle-income neighborhoods created by the Black families who moved into and for the most part bought homes in the neighborhoods being vacated through white flight. The decline of these neighborhoods, which I have written about previously (Mallach 2019, 2021), reflected the convergence of many different factors during the years following the millennium. They included the aging out of the initial homebuyer generation, the widespread predatory subprime lending practices for both refinancing and home purchase between the late 1990s and the subsequent wave of foreclosures, the purchase of foreclosed properties by absentee investors, the increasing predilection of Black homebuyers to buy suburban homes, and the continued reality of a racially demarcated housing market (Mallach and Harrison 2022). The majority of White homebuyers devalue predominately African American neighborhoods (Bonam, Yantis and Taylor, 2020), and do not consider buying homes in those neighborhoods, whatever their social, economic or physical character (Krysan 2008).

As a result, Black poverty has spread more widely and many areas that were never redlined in the HOLC maps have become segregated, high poverty areas. While Black poverty rates in the

TABLE 15: Black median income ratios in 2019 for HOLC map categories in city and for adjacent suburban areas (D areas = 1.0)

		Ratio 2019				Ratio 2019
Baltimore	D	1.00		Trenton	D	1.00
	C	0.99			C	1.25
	A/B	1.31			A/B	1.57
Baltimore Co.		1.78		Mercer Co. Bal.		2.08
Anne Arundel Co.		2.16				
St. Louis	D	1.00		Philadelphia	D	1.00
	C	1.08			C	1.03
	A/B	1.30			A/B	1.46
St. Louis Co.		1.49		Bucks Co.		1.73
St. Charles Co.		3.13		Montgomery Co.		1.86
Detroit	D	1.00		Rochester	D	1.00
	C	1.06			C	1.34
	A/B	1.50			A/B	1.52
Wayne Co. Bal		1.91		Monroe Co. Bal		2.02
Oakland Co.		1.95				
Cleveland	D	1.00				
	C	1.18				
	A/B	1.71				
Cuyahoga Co. Bal		1.91				

redlined areas tend to be higher than elsewhere in the same cities, reflecting the stubborn persistence of concentrated poverty, as Table 16 shows, *in all seven cities the majority of poor Black residents live outside the redlined areas, in most cases a substantial majority.* In Detroit, 69 out of the 111 census tracts with Black poverty rates above 40 percent were in areas designated A through C by the HOLC surveyors. Any urban policies today that single out the D areas for priority or particular attention will ignore areas of equal or greater need in the same cities.

At the same time, different trends have led to the revival or gentrification of some areas which had been redlined by the HOLC in the 1930s. Once-redlined Baltimore neighborhoods like Canton, Federal Hill and Otterbein have become gentrified, while the 2019 median income of households in the redlined tracts as a whole was 15 percent above the citywide median and the 2019 median sales price of houses in those tracts was 21 percent above the citywide median. Race, however, remains a critical demarcation line. Those neighborhoods had remained for years lower income white or racially mixed neighborhoods. Majority Black once-redlined tracts in Baltimore have median sales prices less than half, and household incomes barely more than one-third, of majority White once-redlined tracts.

TABLE 16: Distribution of Black poverty by HOLC map category in 2019

DETROIT	Poverty Rate	Share of citywide poor Black residents		TRENTON	Poverty Rate	Share of citywide poor Black residents
D	40.8%	24.0%		D	33.4%	28.5%
C	36.9%	46.2%		C	21.9%	37.1%
A/B	28.9%	29.8%		A/B	29.6%	34.4%
		100.0%				100.0%
PHILADELPHIA				ROCHESTER		
D	37.7%	42.0%		D	46.5%	29.4%
C	31.6%	31.1%		C	36.3%	56.6%
A/B	21.1%	26.9%		A/B	28.5%	14.0%
		100.0%				100.0%
BALTIMORE				CLEVELAND		
D	37.7%	24.7%		D	46.1%	49.3%
C	30.3%	38.6%		C	36.6%	47.6%
A/B	18.4%	36.7%		A/B	22.0%	3.1%
		100.0%				100.0%
ST LOUIS						
D	32.2%	28.9%				
C	34.6%	34.8%				
A/B	27.1%	36.2%				
		100.0%				

V   Conclusion: exorcising the redlining vampire

In the preceding sections, I have shown that the association between the Home Owners' Loan Corporation maps of the late 1930s and contemporary economic, environmental and health disparities is not a product of the making of the maps or outcomes triggered by the maps, but an artifact of the disparate impacts of the Second Great Migration, White flight, and the ensuing spatial division of urban Black populations along economic lines between 1940 and 1980, all taking place within a racially discriminatory environment. The association arises from the fact that the HOLC maps identified physical and environmental conditions which led to those disparate impacts and spatial division. I further showed that since 1980, while Black residents of redlined areas remain disproportionately poor, the lines have blurred, and the primary locus of Black poverty has shifted to areas that were never redlined by the HOLC.

While research has shown that the maps were not used as a basis for racially or spatially discriminatory activities by the HOLC, or as far as can be determined as the basis for activities by any other public or private entity, *that should not be taken to suggest that redlining, broadly defined as the spatial manifestation of racism, is not a pervasive reality*. Indeed, the record of

the Federal Housing Administration as a racially discriminatory actor at critical points in American urban history is well-established, as is true of private lenders, real estate brokers, insurance providers, and others.

As a basis for research, and even more as a basis for productive policies that can bring about genuine improvement to people's lives, it is essential to frame the discourse about race in ways that engage with the complexity of how racially discriminatory policies and practices interact with the built environment and with economic, demographic and social change. It is in that light that I would like to suggest some directions for future thinking in this area.

First, a discourse that focuses on the HOLC maps as a principal, or even significant, factor in bringing about the interrelated web of social, economic, physical and environmental conditions and disabilities affecting low-income Black communities is problematic, and would still be problematic even if links could be found between the maps and subsequent public or private action. It suggests that there is a particular villain to whom responsibility can be attributed and locking responsibility into a particular historic moment, thus minimizing the complex roles of many actors and the pervasive yet changing dynamics of race over time. Racial discrimination was alive and well long before the HOLC maps were made, and continued long after they had been buried in the archives. As I observed earlier, the proposition that white loan officers in the 1930s or later needed maps in order to discriminate is inherently implausible.

The HOLC maps are a form of story, and while, as historian Yuval Noah Harari writes, "*homo sapiens* is a story-telling animal," (Harari 2018), we can easily, in the words of literary scholar Peter Brooks, be "seduced by story" (Brooks 2022). Today's racial inequities are systemic, and both their origins and the manner in which they are perpetuated are a complex texture of overtly racist elements interwoven with seemingly race-neutral factors, in which racial intent may not be an element, but which nonetheless lead to racially-invidious outcomes. Maps, which are fixed in both their moment in time and in their delineation of space, are a powerful but also particularly reductionist form of story. By focusing on the maps and the story they purport to tell, the complexity of reality is obscured. Moreover, by suggesting that reality has been pre-determined, they take away from people their most valuable attribute, that of *agency.* To quote Gioielli (2022):

> …maps also erase the stories of thousands of people on the ground, like Clyde Ross and others who formed the Contract Buyers League in Chicago, or Ivory Perry and other housing activists in St. Louis, people who fought against disinvestment and redlining, and still managed to produce real community, despite the profound disadvantages of being in a "Grade D" community.

To them, I would add the thousands of people who contended with blockbusting, contract lending, and other obstacles to form thriving neighborhoods in the spaces left behind by white flight.

The digitization of the HOLC maps, while an admirable project, has made it possible for any

computer-savvy scholar with a database to establish statistical associations, but at the price of replacing complexity and nuance with a flattened and arguably misleading narrative. Those statistical associations, although beloved of economists and epidemiologists, do not further either our understanding of complex relationships or the interplay of public and private actions that constitute our reality.

Second, while the areas that were redlined on the HOLC maps often remain areas of concentrated Black poverty today, treating those areas as locus of the spatial distribution of social and economic disadvantage in today's cities fails to reflect reality, while policies that treat the former as a proxy for the latter are bad policy. This is not an abstract concern. As Perry and Harshbarger (2019) note, proposals to use the maps as the basis for plans to correct historical racial discrimination were proposed during the 2020 presidential campaign by candidates Kamala Harris, Elizabeth Warren and Pete Buttigieg.

But the underlying issue is much broader than a clutch of stillborn campaign proposals. It is the need to prevent the dead hand of the past, in terms of perceptions of urban or neighborhood conditions of twenty, fifty or seventy years ago from distorting our understanding of the present and driving policies today.

The changing spatial distribution of concentrated poverty areas in recent decades reflects changes to the American economy and society that were unimaginable in the 1930s. Over the coming decades, further changes are likely to happen in turn that we cannot anticipate today. The HOLC maps, rather than a useful tool, have become a barrier standing in the way of confronting the powerful yet complicated role of race in creating inequity and disadvantage in today's America.

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NOTES

[1] I make this distinction because the term "redlining" was not used, either with respect to the maps or anything else, at the time they were made, nor did Jackson use it in his pioneering paper, although by 1980 the term was in use, having originated in the context of Gale Cincotta's fight against discrimination in home owners insurance in Chicago in the 1960s (Hillier 2003b citing Pogge 1992). Although the term today is generally used retroactively to refer to the HOLC maps among other forms of discrimination from prior to the 1960s, a usage I have adopted in this paper, it is incorrect to suggest that the term arose from the maps, as is often heard (NPR, 2017).

[2] The HOLC also had the ability to limit payments to interest only for up to three years after the loan was refinanced in order to provide a financial cushion for home owners in difficulty.

[3] This stands in sharp contrast to the anemic response of the Bush and Obama administrations to homeowners during the foreclosure crisis beginning in 2007.

[4] While the HOLC readily bought and refinanced loans of Black homeowners, who typically lived in segregated Black ghetto areas, there is suggestive evidence that at least some HOLC offices refused to sell properties in predominately White areas on which it had foreclosed to aspiring Black buyers (Hillier 2003c).

[5] Interestingly, the record of the VA was significantly better; Black homeowners accounted for 3.7% of all outstanding VA mortgages in 1960.

[6] While more recent data is available from the American Community Survey, 2019 is the last year in which the 2010 census tract boundaries were used, and which benefits from the Geolytics Neighborhood Change Data Base, which normalized data from the 1970 Census on to 2010 boundaries. Since the boundaries were changed by the Census Bureau for 2020 and onward, using later data would have required time-consuming effort well beyond any value it would have added to the final product.

[7] Specifically, tracts were considered to fit an HOLC category where >50 percent of the *surveyed* tract area fell into that category, except that a de minimis exception was made for tracts where the largest category represented <1 percent of the tract area. Citywide totals resulting from this analysis are invariably smaller than actual citywide totals for two reasons: (1) tracts where no single category represented a majority of the tract area were excluded from the analysis and (2) while the great majority of areas that were not surveyed were non-residential, those areas did contain varying amounts of residential populations that were omitted by the HOLC surveyors.

[8] Areas subsequently annexed to the cities had generally not been surveyed, so that a large share of the 1980 population of the city lived in areas that lacked any HOLC category; thus the sum of population falling into the HOLC categories was not representative of the city's population as a whole. In the case of Memphis, well over 60 percent of the city's 1980 population lived in areas that had not been surveyed by the HOLC surveyors. Regrettably, limited resources made it impossible for us to replace the cities removed from the sample with other cities.

[9] The instructions asked the surveyor to note "any threat of infiltration of foreign born, negro or lower grade population", and where found, to "indicate these by nationality and rate of infiltration".

[10] To estimate the immigrant population, we combined foreign-born residents and the children of foreign-born residents. Since the latter was not separately tabulated at the census tract level, we used the ratio of the two at the citywide level for cities of 500,000 or larger population, and at the state level for smaller cities.

[11] For example, either >4 or >6 persons in an apartment with two bedrooms, a living rom and a kitchen/dining area.

[12] Email from Charles Buki on March 26, 2023, based on analysis by Karen Beck Pooley.

[13] Some sources consider the Second Great Migration to have ended in 1970, but there is considerable evidence that it continued, although at a gradually slowing pace, for some time thereafter.

[14] Or in some cases for newly built areas within but at or near the city's boundaries as was true in Philadelphia where the Far Northeast, developed after World War II, became a destination for White families leaving older neighborhoods.

[15] A secondary reason may be an increase in the average household size of the population, since the in-migrating families were likely to be younger and larger families on the whole than those out-migrating.

[16] It is impossible to measure the effects of the Shelley v. Kramer decision in 1948 that rendered racial covenants unenforceable, but the nature of the urban housing market in the 1950s and 1960s largely rendered those covenants unenforceable in any event.