Add Health
The National Longitudinal Study of Adolescent to Adult Health

Historical Neighborhood Redlining

Report prepared by

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1. Introduction

The source data used to construct this contextual file for the National Longitudinal Study of Adolescent to Adult Health (Add Health) come from *Mapping Inequality: Redlining in New Deal America*, compiled by Robert K. Nelson and the Digital Scholarship Lab at the University of Richmond.[1] This file augments the current Add Health contextual data collection by providing information about whether a respondent's place of residence falls inside or within varying proximities to historically redlined neighborhood boundaries at the time of their Wave I, III, IV, and V survey interviews. This contextual database allows researchers to identify potential long-term consequences of redlining for contemporary inequities in neighborhood environments, and individual health and socioeconomic attainment over the life course. Before analyzing these data, however, we urge users to review the following background section and cited references.

2. Background

2.1. A Brief Overview of New Deal-Era Redlining

Rates of homeownership declined rapidly in the United States during the Great Depression. Between 1928 and 1933, home construction plummeted roughly 90% and foreclosures skyrocketed nearly 300%.[2] To rescue imperiled real estate markets from total collapse, the federal government intervened swiftly to promote homeownership. One noteworthy intervention occurred in 1933, when the Roosevelt administration established the Home Owners' Loan Corporation (HOLC).[1] HOLC is perhaps best known for their role in creating and insuring the long-term amortizing mortgage. In recent decades, however, HOLC has acquired a more infamous reputation as the harbinger of institutional racism in real estate markets.[3–5]

Because they were responsible for insuring precarious loans, HOLC was eventually required to forecast the perceived risk of investing in certain neighborhoods. Handed down by their parent organization, the Federal Home Loan Bank Board, this mandate led to systematized appraisal schemes in the form of "residential security" maps.[6] Throughout the 1930s, HOLC contracted local field agents across 239 major cities to design neighborhood maps with hierarchical letter and color grades. Areas that appraisers perceived to be "most desirable" and on the rise were scored A and marked in green, followed by B or blue ("still desirable" but not rising), C or yellow ("definitely declining"), and D or red ("hazardous"). One major factor that appears to have determined neighborhood grades of C or D was the presence of "inharmonious" racial/ethnic groups, especially Black and other working-class ethnic residents.[1] The practice of assessing area-level financial risks based on the racial composition of residents has since become known as "redlining."[7,8]

2.2. What Do HOLC Maps Actually Measure?

There seems to be some confusion about how to interpret HOLC maps in the twenty-first century. For one, while there is evidence that racial/ethnic composition influenced HOLC grades, the common assumption that HOLC pioneered redlining and urban disinvestment is inaccurate. Indeed, HOLC issued loans *before* creating their residential security maps. Federal documentation has also revealed that HOLC issued mortgage assistance impartially, with most of their obligations going to residents in redlined areas. Other archival reviews have led to further discoveries that lenders were avoiding redlined areas decades before HOLC made their maps; HOLC refused to share their maps with private lenders; and numerous other lending institutions created and disseminated similar maps across the country, and to much greater effect.[2,6,7,9–11]

Although the HOLC maps were not widely distributed, and were even used to assist declining areas, the loans administered by HOLC were ultimately miniscule and short-lived compared to later efforts by the Federal Housing Administration (FHA), Veterans Affairs, and numerous other lending institutions, all of whom conspired to systematically defund and undermine urban communities nationwide, in favor of newer and predominantly White suburbs.[4,5,8] A report commissioned by the federal government in 1968 concluded in no uncertain terms that there was evidence of a tacit agreement among all groups—lending institutions, fire insurance companies, and FHA—to block off certain areas of cities within 'red lines', and not to loan or insure within them. The net result, of course, was that the slums and the areas surrounding them went downhill farther and faster than before (Douglas 1968:101).

The HOLC maps must therefore be considered within a broader historical context of racist lending practices that became systematized over the twentieth century, and especially during the New Deal. Recent historical research[8] has traced the intellectual roots of redlining to the Institute for Research in Land Economics and Public Utilities, founded in 1920 by Richard T. Ely at the University of Wisconsin-Madison. Ely's academic collaborators extended to economists, sociologists, and business professors at Ohio State University, Northwestern University, and the University of Chicago, to name a few. Two of Ely's most influential acolytes were Frederick Babcock and Homer Hoyt, both of whom served prominent roles at the FHA, and the latter of whom also trained with University of Chicago sociologists Robert Park and Ernest Burgess. Ely, Babcock, and Hoyt essentially provided the intellectual impetus behind redlining, helping to develop and disseminate standardized appraising principles to lenders across the country.[6,8]

The basic principles of redlining were derived from *neighborhood lifecycle theory*, according to which the trajectory of a neighborhood could be charted as an inevitable function of race-based peaks and declines.[12] Lifecycle theory entailed a sub-theory of *infiltration* by "undesirable" racial elements, especially Black Americans, whose presence was taken as an undeniable omen of area decline.[12] Both theories were carryovers from centuries-old, axiomatized notions of White citizens' superior capacities for stewarding property.[13] Indeed, both Ely[14] and Babcock[15] penned explicitly racist views that Black Americans were incapable of owning land, and should remain as permanent tenants under White landlords.

In short, the unearthed set of HOLC maps represents a single and incomplete indicator of a much more expansive program of institutionalized racism in housing markets throughout the United States. We therefore urge Add Health users to be explicit about the sociohistorical and causal assumptions they are bringing to the HOLC geodata. For example, many areas formerly assessed by HOLC now have drastically different racial and socioeconomic compositions.[16] Models that do not account for neighborhood change could thus be misspecified. Likewise, researchers should be clear about the proposed mechanisms linking HOLC-redlined areas to disparities of interest among the Add Health cohort. Toward this end, we recommend users review some of the theoretical and methodological literature on causal inference in structural racism and disparities research. [e.g., 17–23]

Data Structure and Form

This data file contains a total of nine variables. The first variable is the respondent identifier (AID), by which these contextual data can be merged with other Add Health data files. The remaining eight variables measure the HOLC-graded area nearest to each respondent's geocoded residence, as well as proximity to the HOLC-graded area, across Waves I, III, IV, and V.

The four HOLC grade variables include separate categories for grades A (green), B (blue), C (yellow), and D (red). The four proximity variables include ordinal categories that range from inside the HOLC area, outside by <1 mile, outside by 1-4.99 miles, outside by 5-10 miles, and outside by >10 miles.

Variable Naming Conventions

Apart from AID, all variables in the contextual data file adhere to the following nomenclature:

1st and 2nd characters: Both refer to the wave of data collection.

> W = Wave

> 1/3/4/5 = Waves 1, 3, 4, 5, respectively.

3rd, 4th, 5th, and 6th characters: Refer to the original source of geodata from which the released Add Health variables were derived.

> HOLC = Home Owners' Loan Corporation

7th and 8th characters: The last two characters differentiate between HOLC grades and proximity to HOLC-graded areas.

> GR = HOLC grade nearest to the respondent's geocoded residence

> PX = Proximity to nearest HOLC-graded area

Data Dictionary

The following table lists the variables comprising the Add Health historical redlining database. Note that all variables are measured at the respondent level.

Name	Description
AID	Respondent identification number
W1HOLCGR	HOLC grade nearest to the respondent's Wave I geocoded residence
W1HOLCPX	Proximity of the respondent's Wave I geocoded residence to the nearest HOLC area
W3HOLCGR	HOLC grade nearest to the respondent's Wave III geocoded residence
W3HOLCPX	Proximity of the respondent's Wave III geocoded residence to the nearest HOLC area
W4HOLCGR	HOLC grade nearest to the respondent's Wave IV geocoded residence
W4HOLCPX	Proximity of the respondent's Wave IV geocoded residence to the nearest HOLC area
W5HOLCGR	HOLC grade nearest to the respondent's Wave V geocoded residence

W5HOLCPX	Proximity of the respondent's Wave V geocoded residence to the nearest HOLC area

Missing codes

A respondent will be missing a value on a particular wave if (a) they did not participate in that wave, or (b) they participated but did not have a valid geographic identifier. Users can differentiate between either case by merging on the Wave I, II, III, IV, and V Group (W1_5GRP.xpt) dataset. In that dataset, there are two replacement codes for each of the five waves:

- 999999999992 – Respondent not interviewed in the wave

- 999999999999 – Geocode not available

Source Description

Robert K. Nelson and the Digital Scholarship Lab (DSL) at the University of Richmond provided open access to digital geodata of original HOLC maps used in this Add Health contextual database. Below is the DSL's description of their *Mapping Inequality* project (https://dsl.richmond.edu/panorama/redlining/):

> *Mapping Inequality* opens the HOLC files at the National Archives to scholars, students, and residents and policy leaders in local communities. This site makes the well-known security maps of HOLC available in digital form, as well as the data and textual assessments of the area descriptions that were created to go with the maps. By bringing study of HOLC into the digital realm, *Mapping Inequality* embraces a big data approach that can simultaneously give a national view of the program or a neighborhood-level assessment of the 1930s real estate rescue. Project researchers are providing access to some of the digital tools and interactive resources they are using in their own research, in the hope that the public will be able to understand the effects of federal housing policy and local implementation in their own communities.

Notes

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