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10

The Twentieth-Century Increase in US Home Ownership
Facts and Hypotheses

Daniel K. Fetter

10.1 Introduction

The boom and bust in home ownership in the United States since the mid-1990s has recently revived interest in understanding the much larger increase in home ownership that occurred in the mid-twentieth century. Between 1940 and 1960, the share of households owning their own homes rose from 44 to 62 percent, and home ownership has remained high ever since. A growing literature has explored the causes behind the midcentury increase, but much remains to be explored.

In this chapter I use a variety of data sources to document several facts that potential explanations for the midcentury rise in home ownership should aim to match. The major period of increase was between 1940 and 1960, although the aggregate time series suggests that the Depression interrupted a steady increase in nonfarm home ownership that had begun decades earlier. Home ownership increased in every region of the country and in both rural and urban areas, but urban areas accounted for a larger share of the increase. In part, home ownership displaced renting, but equally important was a shift in household formation, as the young left home earlier in life. Finally, a key characteristic of the 1940 to 1960 period was a transformation in the

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age structure of home ownership: the young became owners at dramatically higher rates, as entry into home ownership shifted earlier in life.

After a discussion of these facts, I discuss the evidence on some of the leading hypotheses for the causes of the 1940 to 1960 rise in home ownership. Among these hypotheses are rising real incomes, the importance of the favorable tax treatment of owner-occupied housing as marginal tax rates increased in the 1940s, and the development of the modern mortgage finance system. Based on the evidence we have, no single factor seems to have had a direct effect sufficiently large to explain the aggregate increase by itself.

10.2 Some Basic Facts

I divide the discussion into two parts, according to how home ownership is measured. The conventional measure of home ownership is at the level of the household, or dwelling unit.[1] This measure represents the share of occupied dwelling units that are owner occupied (or the share of households that are owner-occupiers). This is the measure of home ownership for which the most extensive data exist, and is convenient for discussing the timing and geography of the increase in home ownership. It is also likely to be the more relevant measure for certain types of questions. For example, to the extent that the effort undertaken by the resident to maintain a dwelling depends on whether the resident owns or rents it (Glaeser and Shapiro 2003), one may wish to observe the tenure status of a dwelling rather than of an individual in order to answer questions about the rate of depreciation of an area's housing stock.

It is often more natural, however, to think of home ownership at the level of an individual rather than at the level of the household or dwelling. For example, a society in which most children lived with their parents until middle age, and then purchased a house of their own, would have a high share of owner-occupied dwellings. But one might reasonably wish to account for the fact that few young adults live in a home that they own themselves.[2] As will be evident, focusing solely on the dwelling-level measure of home ownership is particularly problematic for studying the 1940 to 1960 period given the dramatic transformation in household formation over the period. Unfortunately, data to measure home ownership at an individual level are scarce

1. Prior to the 1940 census, tenure was measured at the level of the census "family"; in 1940 and afterward it was measured at the level of the census "household." "Dwelling units" corresponded to households; in the 1940 census, for example, a dwelling unit was defined as the living quarters intended for occupancy by one household (US Bureau of the Census 1943).

2. Haurin and Rosenthal (2007) stressed the importance of considering household formation in interpreting home ownership rates in modern data. In his study of home ownership over the 1940–1960 period, Chevan (1989) used a definition of home ownership similar to the individual-level measure I use.

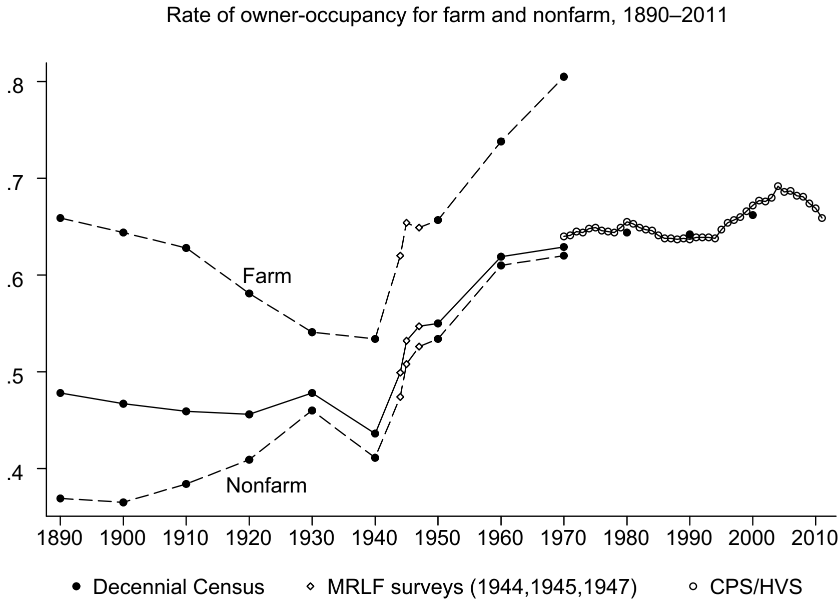

Fig. 10.1 Rate of owner occupancy, 1890–2011

Sources: Decennial census, Housing Vacancy Survey, and US Bureau of the Census (1945, 1946, 1947b).

Note: Figure shows share of occupied dwelling units that are owner occupied.

relative to data available to measure home ownership at the household level. In the second part of this section, I illustrate several facts about the 1940 to 1960 increase based on an individual-level measure of home ownership.

10.2.1 Home Ownership at the Household/Dwelling Unit Level

National Time Series

The pattern of the standard measure of home ownership—the share of occupied dwelling units that are owner occupied—is shown in figure 10.1. Decennial numbers are from the published volumes of the decennial census; annual figures for the overall rate from 1970 to 2011 are from the Housing Vacancy Survey.[3] Less well known are the figures for 1944, 1945, and 1947. These are estimates from supplements to the October 1944, November 1945, and April 1947 sample surveys for the monthly report on the labor force (US Bureau of the Census 1945, 1946, 1947b).

From 1890 to 1920, the overall home ownership rate declined slowly as

3. http://www.census.gov/hhes/www/housing/hvs/hvs.html.

both farm home ownership rates declined and the relative share of nonfarm housing grew. Overall, home ownership saw an increase over the 1920s and a sharp downturn over the 1930s before the dramatic shift from 44 to 62 percent between 1940 and 1960. Over the 1940 to 1960 period the steady prewar decline in farm home ownership was reversed; nonfarm home ownership had been increasing steadily when it was interrupted by the downturn of the 1930s. For understanding the long-run change in home ownership, based on the aggregate numbers it is likely that there was some commonality in the drivers of the increases in nonfarm home ownership in the pre-1930 and post-1940 periods.

Given the emphasis in the modern literature on the drivers of home ownership after World War II, the timing of the increase in home ownership is noteworthy in that the years from 1940 to 1945 saw the home ownership rate reach and surpass its earlier level. This fact complicates the frequently held notion of the increase in home ownership over this period as being a postwar phenomenon, associated primarily with new construction in suburban areas. With new construction severely curtailed during the war, much of the increase must have come from a shift of previously rented dwellings into owner occupancy. Indeed, a special tabulation of the 1950 census suggested that approximately three million units that were owner occupied in 1950 had been renter occupied in 1940 (US Bureau of the Census 1953).

In large part this rapid rise in home ownership in the early 1940s was likely related to the decrease in home ownership over the 1930s to a particularly low level in 1940. As Rose emphasizes in this volume (chapter 7), at the end of the 1930s many foreclosed properties were held by institutional lenders that wished to sell them. Fishback and Kollmann, also in this volume (chapter 6), provide evidence that house prices in 1940 were low relative to their 1930 levels. Yet the low level of home ownership in 1940 is unlikely to be the sole explanation for the rapid rise over the early 1940s. Ratcliff (1944), for example, suggested that many foreclosed homes had already been resold for owner occupancy by the time of the 1940 census. He estimated that on net, only about 600,000 to 700,000 dwelling units shifted from owner to renter occupancy between 1930 and 1940 as a result of foreclosure.[4] Many of these properties may have been held by institutions or individuals with little desire to be landlords, who would have supplied them elastically for

4. In particular, Ratcliff calculates the increase in the number of tenant units between 1930 and 1940, after adjustment for reclassification and demolitions, as 4,202,737. Of these, he estimates that 546,000 were units in new multifamily structures; 967,400 were new single-family units built for or shifted to tenant occupancy; 725,000 were added through conversion of existing structures to create additional units; 345,000 additional units were provided without structural alterations; and 722,300 units were vacant in 1930 but occupied by tenant households in 1940. This leaves a residual of 897,037 to be accounted for by a shift to tenant occupancy through voluntary abandonment, family dissolution, or foreclosure. He estimates that 200,000 to 300,000 were due to the first two factors, leaving about 600,000 due to foreclosure.

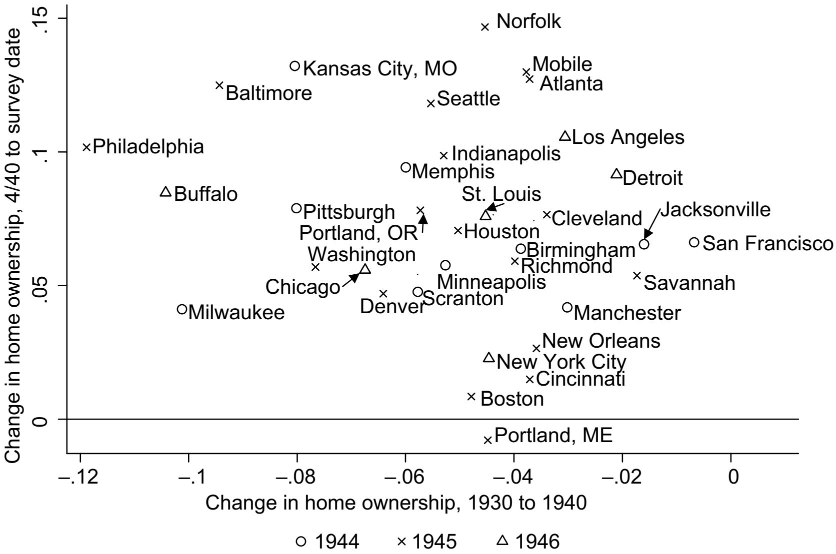

Fig. 10.2 Change in home ownership, 1930–1940 and early 1940s

Notes: Figure shows percentage point change in home ownership between the 1940 census and first housing survey against change from 1930 to 1940. Cities grouped by year of first survey. Sample correlation: –0.18.

owner occupancy in the early 1940s. A shift of these units into the owner-occupied stock would have raised the aggregate home ownership rate by about 2 percentage points in the early 1940s—a substantial share, but still leaving much to explain.

City-level housing surveys carried out toward the end of World War II provide further evidence suggesting that factors other than 1930s foreclosures were important in explaining the increase.[5] Figure 10.2 plots the 1930 to 1940 change in home ownership against the change in the early 1940s. The sample correlation between the two is relatively weak, at about –0.18 (corresponding to an R^2 of 0.033 in a regression of one on the other). This comparison weighs against a simple explanation of the increase in ownership in the early 1940s as a "rebound" effect after the Depression; other factors were surely at work as well. A list of possible explanations would include

5. The Census Bureau and the Bureau of Labor Statistics (BLS) carried out these surveys between 1944 and early 1947 in a selected sample of cities. Data were published in Humes and Schiro (1946), US Bureau of the Census (1947a), and US Bureau of the Census (1948). In order to have a roughly representative sample I use the thirty-four cities that the Bureau of Labor Statistics had begun tracking prior to World War II for its cost-of-living index.

Table 10.1 **Geography of the increase in home ownership**

Census division	Rate of home ownership (%)			Share of all occupied dwellings (%)			Share of overall change (%)	
	1940	1950	1960	1940	1950	1960	1940–1950	1940–1960
New England	42	51	59	6	6	6	4	5
Middle Atlantic	37	48	55	21	20	20	16	17
East North Central	49	60	67	21	21	20	19	18
West North Central	49	62	68	11	10	9	7	4
South Atlantic	41	52	61	12	13	14	15	19
East South Central	40	54	62	8	7	6	6	5
West South Central	41	56	64	10	10	9	12	11
Mountain	52	59	65	3	3	4	3	4
Pacific	47	57	61	9	11	12	17	18

Note: Alaska and Hawaii omitted in all years.

rising incomes and accumulating savings, the growing importance of non neutralities in the tax treatment of owner- and renter-occupied housing as marginal income tax rates rose, and the extraordinary conditions of housing markets during and after World War II. The relative roles of these different factors are not well understood.

Geography of the 1940–1960 Increase

The fact that city-level changes in home ownership were nearly all positive in figure 10.2 suggests that an increase in home ownership was widespread geographically. Indeed, over the longer period from 1940 to 1960 home ownership rose dramatically in all regions of the United States, and in both urban and rural areas. Table 10.1 shows the rate of home ownership in each census division in 1940, 1950, and 1960. From 1940 to 1960, the greatest increases were in the South, from about 40 to about 62 percentage points. The smallest increases were in the West, starting from a higher level—between 47 and 52 percentage points—and ending between 61 and 65 percentage points. The aggregate home ownership rate is a weighted average of the divisions' home ownership rates, with weights given by each division's share of all occupied units (its number of occupied dwellings divided by the nation's number of occupied dwellings). I show these weights and each region's share of the overall change, calculated for 1940 to 1960 as $(own_{d60}y_{d60} - own_{d40}y_{d40})/(own_{60} - own_{40})$, where own_t is the national home ownership rate in year t, own_{dt} the home ownership rate in division d in year t, and y_{dt} is the share of all occupied dwellings that were in division d in year t. By this measure, given the relative numbers of occupied units in each region and the changes in home ownership over the period, the Middle Atlantic, East North Central, South Atlantic, and Pacific regions were the most important in explaining the overall change in home ownership.

Increases in home ownership were large in both urban and rural areas over this period, but a greater share of the aggregate change was driven by increases in urban areas. This fact can be seen by expressing the aggregate change in home ownership between 1940 and 1960 as

$$(1) \qquad own_{60} - own_{40} = \sum_c own_{c60} y_{c60} - own_{c40} y_{c40}$$

where own_{ct} is the home ownership rate (owner-occupied dwellings as a share of occupied dwellings) in county c in year t, and y_{ct} is the share of all occupied dwellings that were in county c in year t. The right-hand side can be decomposed into two components: one associated with increased home ownership in a county, holding its share of dwellings constant, and another component associated with a county's relative growth as a share of all occupied dwellings, holding its home ownership rate constant. Thus, we can rewrite equation (1) as

$$(2) \qquad own_{60} - own_{40} = \sum_c \underbrace{(own_{c60} - own_{c40})\overline{y_c}}_{ownership\ term} + \sum_c \underbrace{(y_{c60} - y_{c40})\overline{own_c}}_{\#\ of\ dwellings\ term}$$

where $\overline{own_c}$ is the average of the 1940 and 1960 home ownership rates in county c and $\overline{y}_c$ is defined similarly. To assess the relative roles of rural and urban counties in the aggregate increase, I order all counties by their 1940 urban population share, and calculate the cumulative sum of the right-hand side of equation (1) as a share of the left-hand side; I plot the result as a solid line in figure 10.3. At a 1940 urban share of 18 percent, for example—roughly the median county—the value of about .03 implies that 3 percent of the aggregate 1940 to 1960 increase in home ownership can be explained by changes in counties that had a 1940 urban population share of 18 percent or below. I also illustrate the decomposition of the increase into ownership changes (the "ownership" term in equation [2]) and changes of counties' relative sizes (the "dwellings" term in equation [2]) by plotting the cumulative sums of each of these two terms.

The convexity of the cumulative share explained by 1940 urban population suggests that growth in home ownership in initially urban areas was the primary driver of the aggregate increase in home ownership. For example, in my sample of 3,095 counties, 1,253 had entirely rural populations in 1940, but by my measure these counties had roughly a zero, or slightly negative, contribution to the aggregate change in home ownership over the following

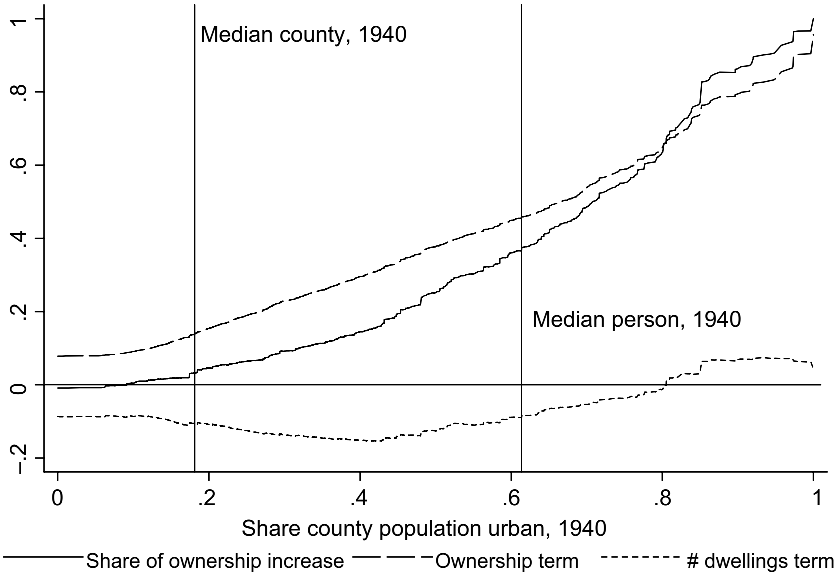

Fig. 10.3 Cumulative share of 1940–1960 increase explained, by 1940 urban population

Notes: Figure shows decompositions given in equations (1) and (2). The relatively large uptick just above an urban population share of 0.8 is Los Angeles County.

twenty years.[6] On average, home ownership increased substantially in these rural counties, but they also shrank relative to more urban counties; these two opposing effects netted out to about zero. As more urbanized counties are added the share of the aggregate change explained increases, but more urbanized counties continue to explain an even larger share. The median individual in 1940 lived in a county that was about 61 percent urban, but altogether the counties that were less than 61 percent urban explain only about 37 percent of the overall increase.

10.2.2 Home Ownership at the Individual Level

National Time Series

Integrated Public Use Microdata Series (IPUMS) census microdata (Ruggles et al. 2008) can be used to measure home ownership at the individual level. The microdata list a single head and tenure status for each household. Conceptually, one wishes to add one major classification to the possibilities of owning and renting, which is that the individual lives with

6. I aggregate some counties into groups as a rough correction for county boundary changes over this period; details are available on request.

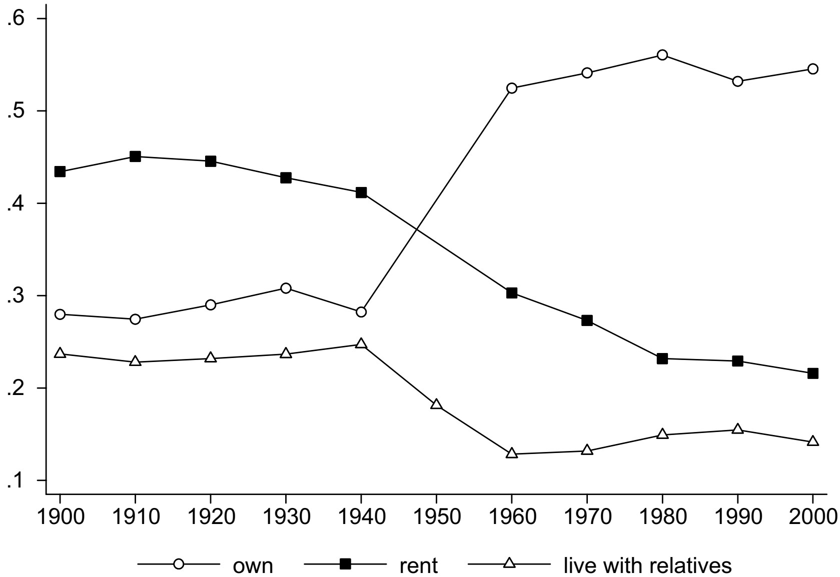

Fig. 10.4 Home ownership at the individual level, 1900–2000
Source: IPUMS (Ruggles et al. 2008).
Notes: Figure shows share of men eighteen and older owning, renting, and living with relatives. Residual category is omitted.

relatives—most often, with parents or with children. The approach I take is to limit the sample to men, and to classify an individual as a home owner if he was the household head or spouse of the head in an owner-occupied dwelling. I classify an individual as a renter if he is the head or the spouse of the head in a renter-occupied unit, or is identified as a boarder in a dwelling owned by someone else, and as "living with relatives" if he is otherwise related to the head. The remainder, always under 8 percent, encompasses group quarters, such as military barracks or rooming houses; domestic employees; and other arrangements that could not be classified. The schedules from the 1950 census of housing were destroyed after tabulation (US Bureau of the Census 1984), so this measure of home ownership cannot be calculated in 1950 (although the share living with relatives can be). Hence, I do not show the shares renting and owning in 1950.

Figure 10.4 shows that home ownership at the individual level also saw a remarkable increase between 1940 and 1960. But what is especially notable is that as much of the increase in home ownership at the individual level came out of living with relatives as did out of renting. The share of men eighteen and older renting, in fact, exhibits a fairly steady decline from 1920 to 1980; the unusual shift from 1940 to 1960 was in the share of men who lived with relatives.[7] In this respect the 1940 to 1960 increase in home ownership differed from the increase from 1920 to 1930: in the earlier period, increased ownership appears primarily to have displaced renting.

Patterns of Home Ownership by Age

It would be natural to expect that much of the change in living with relatives came from the youngest or the oldest individuals. Indeed, there are clear age patterns to the changes in home ownership. The early years of the Survey of Consumer Finances ([SCF]; Economic Behavior Program 1973), carried out annually beginning in 1947, provide a rare source of data to look at living arrangements at a high temporal frequency. The unit of observation in the SCF is a spending unit, defined as a group of related people living in the same dwelling who pool their incomes for major items of expense.[8] Unfortunately, the precise characteristics of the individuals in a spending unit cannot be fully disaggregated in a way that allows full comparability with the individual-level variables defined earlier.[9] For ownership, the 1960 numbers appear to match the individual-level measure from the census well; for living with relatives or renting, the SCF numbers do not match the individual-level census measure quite as closely.

Figure 10.5 illustrates the contrasting patterns of different age groups in their living arrangements from 1947 to 1960. The largest changes in home ownership over this postwar period were for ages twenty-five to forty-four. Yet for the older half of this age group—thirty-five to forty-four—increased home ownership primarily displaced renting, while for the younger half (twenty-five to thirty-four), renting remained roughly constant, and home ownership displaced living with relatives. Meanwhile, the youngest ages—eighteen to twenty-four—saw relatively little net change in home ownership but did see a shift from living with relatives to renting. If one were to attempt to infer life cycle patterns from the cross-age variation in a single year, it would appear that the 1947 to 1960 period was one in which a typical pattern of living with relatives (presumably parents), then renting, then owning, saw a sharp abbreviation of the early phases and extension of the period of ownership. Little change is evident in the oldest age group (sixty-five and older), although by the individual-level measure from the census, there

7. A similar pattern is evident for farm and nonfarm housing examined separately. Morgan et al. (1962) discuss attitudes toward living with relatives over this period.

8. For example, an adult son living with his parents would be classified as a separate spending unit if he does not pool his income with that of his parents, but otherwise would be part of the same spending unit. Spending units are further grouped into "family units" of related individuals, with a single "primary" spending unit and other "secondary" spending units. Housing tenure is not reported consistently for spending units living on farms, so these are excluded from the analysis that follows. Between 1947 and 1960, there were about 3,000 spending units interviewed in each year.

9. Because individuals living with relatives may often pool resources, it is likely that the spending unit-level measures understate the share living with relatives, and overstate the share owning or renting, for the youngest and oldest age groups.

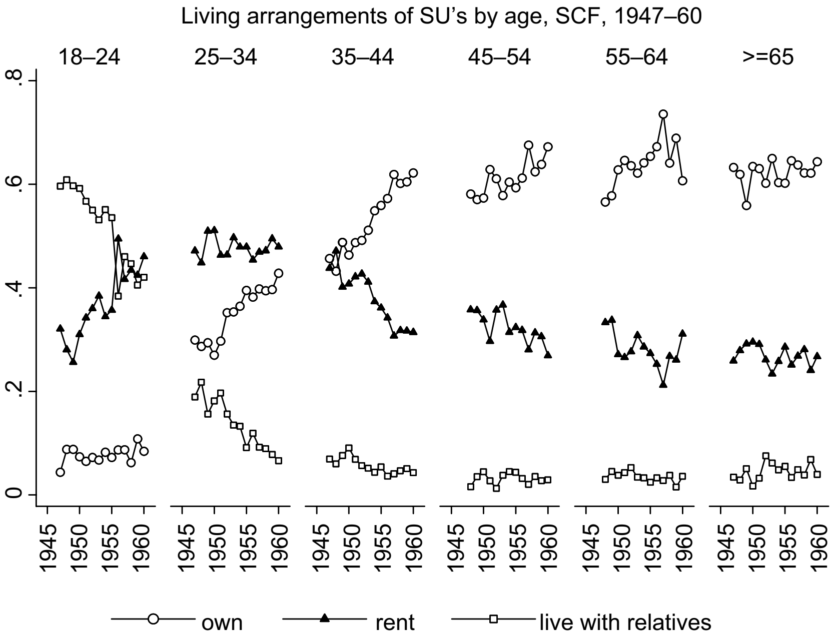

Fig. 10.5 Living arrangements by age, nonfarm, 1947–1960

Source: Survey of Consumer Finances (Economic Behavior Program, Survey Research Center, University of Michigan, 1973).

was an increase in home ownership, and a decrease in renting and living with relatives between 1940 and 1960. It may be that much of this change occurred before 1947, or that measurement of living arrangements at the spending unit level obscures these patterns in the SCF.

These patterns suggest that increases in home ownership between 1940 and 1960 were particularly large for young individuals. Indeed, home ownership rates by age in census data, measured at the individual level, suggest that a transformation in the age pattern of ownership was a crucial part of the midcentury increase in home ownership. Age-home ownership profiles are illustrated for 1900 through 1980 in figure 10.6, from Fetter (2013).[10] The age profile of home ownership was stable in every year up to 1940, and nearly linear up to age sixty, but from 1960 onward became strikingly more concave. Home ownership rates for men in their early thirties more than doubled, while home ownership among older age groups increased substantially less.[11]

10. For visual clarity in interpreting the 1940 to 1960 change, 1990 and 2000 are not shown. In these years, the age profile was somewhat less steep but its basic concavity persisted.

11. Here it is especially important not to condition on household head status, since doing so induces systematic differences in the characteristics of household heads of different ages. Conditioning on household head status gives, as one might expect, higher home ownership rates

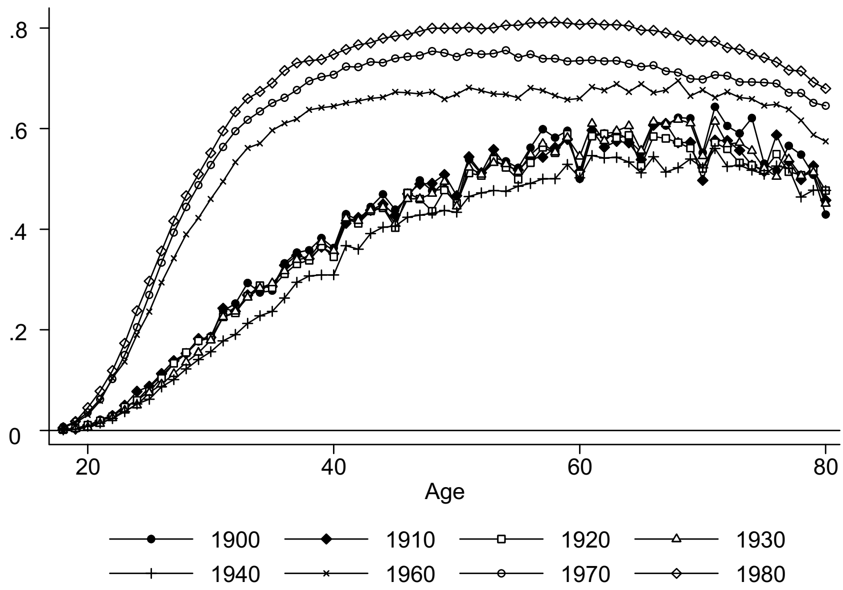

Fig. 10.6 Home ownership by age, 1900–1980
Source: IPUMS (Ruggles et al. 2008).

A natural interpretation is that the increase in ownership in the 1940s and 1950s largely represented earlier purchases among individuals who likely would have purchased later in life.

An alternative way of illustrating the changing age structure of home ownership is to plot home ownership by year of birth in each census. Doing so has the benefit of allowing one to trace the housing experience of a birth cohort more easily. Figure 10.7 and figure 10.8 illustrate cohort-ownership profiles for nonfarm and farm housing, respectively. Plotting the two separately has the added value of showing that the two had distinct age patterns of increased home ownership between 1940 and 1960. These two figures reveal several facts. The increased concavity of the age-ownership profile over these two decades was primarily a nonfarm phenomenon. For farm housing, increased home ownership between 1940 and 1960 was far more equally distributed across ages than for nonfarm housing. The pre-1940 profiles also illustrate contrasting experiences in the first part of the century. In farm housing there was a steady downward shift of the profile from 1900 to 1940, before the upward shift from 1940 to 1960. In fact, the age profiles of ownership in 1900 and 1960 for farm housing are quite close except at the oldest ages. Pre-1940 nonfarm age profiles exhibited more stability from year

for both the youngest and the oldest age groups. It gives a nearly linear age profile of home ownership well beyond age 60 in 1940 and earlier.

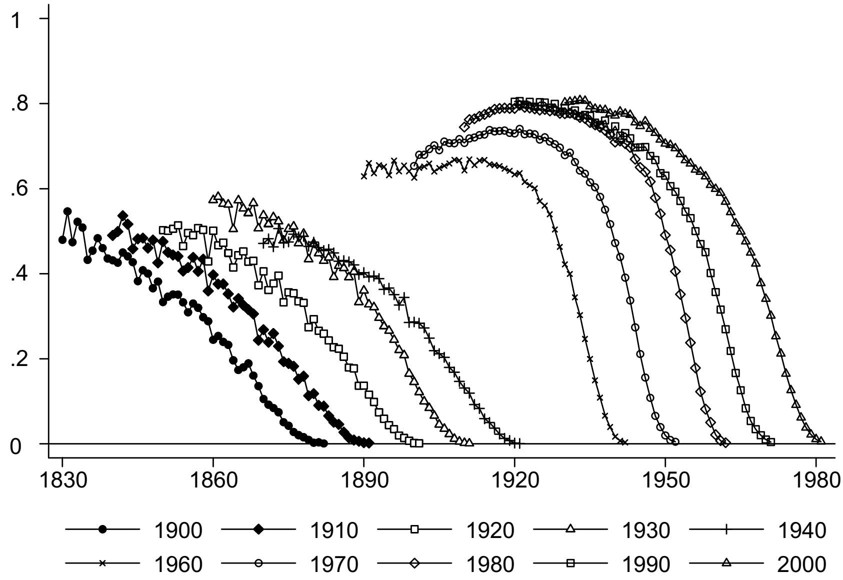

Fig. 10.7 Nonfarm home ownership by year of birth, 1900–2000
Source: IPUMS (Ruggles et al. 2008).

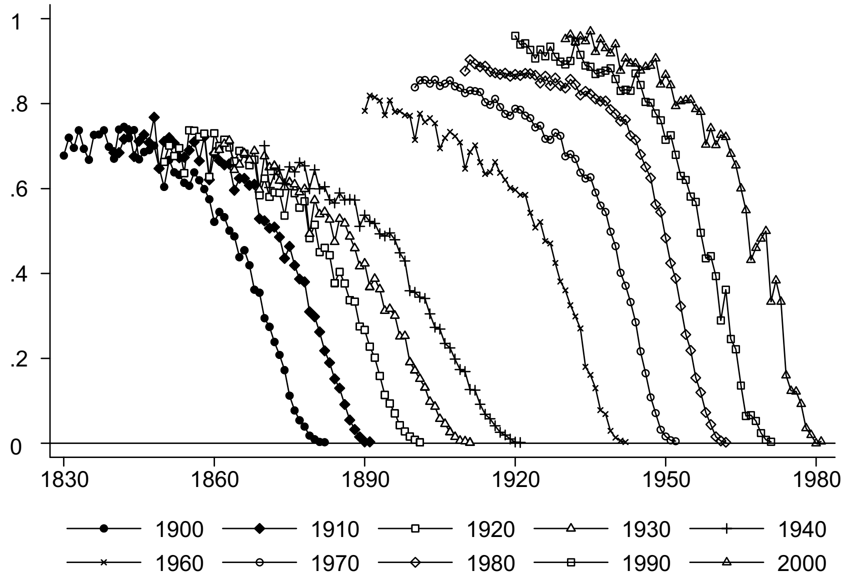

Fig. 10.8 Farm home ownership by year of birth, 1900–2000
Source: IPUMS (Ruggles et al. 2008).

to year, with the notable exception of what may have been a stalled beginning of an age shift over the course of the 1920s.

10.3 Hypotheses

What caused the midcentury increase in home ownership? The aforementioned facts provide some suggestions for places to look: from figure 10.1 it appears that the increase from 1940 to 1960 represented a return to the pre-1930 nonfarm trend; thus, it is possible that the drivers in this period may have some continuity with those of the earlier period of increase. The age-ownership shift observed in figure 10.6 suggests looking at factors that had larger effects at younger ages. Given the broad set of transformations in the United States over this period, a number of factors may have contributed to the rise in home ownership. In this section, I discuss some of the major hypotheses and what evidence we have for them. These hypotheses include a change in the age structure of the population, rising real incomes, the reduction in the relative cost of owning with the rise in marginal tax rates in the early 1940s, changes in the available terms on mortgage finance, decreased transportation costs and changes in city structure, and assistance to the elderly.

I discuss each factor in isolation, but of course these explanations are not mutually exclusive. For example, rising real incomes and changes in mortgage finance may have had a larger impact together than each one would have had individually. Without reductions in transportation costs and the growth of suburbs, other changes may not have had as large an effect on home ownership. In my discussion it will also be clear that, based on the evidence we have, no single factor appears sufficient to explain all (or even most) of the aggregate increase by itself.

A related point is that spillovers in housing markets or mortgage markets were likely a crucial part of the mid-twentieth-century increase in home ownership. Much of the empirical work on each of the possible factors driving the increase has estimated their direct effects, but their indirect effects may have been substantial as well. For example, it is easy to imagine that if a growing share of one's peers are purchasing houses rather than renting or living with parents, one's own preferences may shift in favor of owning; Chevan (1989), for example, discusses changing norms toward home ownership over this period. It is also possible that growth in demand from part of the population may have allowed builders to take advantage of economies of scale. Saulnier, Halcrow, and Jacoby (1958, 348), for example, argued that federal mortgage insurance programs such as the Federal Housing Administration (FHA) and Veterans Administration (VA) encouraged construction of large-scale housing developments, and that "[l]arge projects . . . have made possible the application of methods of production organization that have doubtless lowered costs in the building industry." In mortgage markets, government programs such as the VA and FHA surely influenced the terms on which conventional loans were available. To the best of my knowledge, there has been little work focusing on estimating the size of any spillovers, although in Fetter (2013) I attempt to shed light on the net direction of spillovers from mortgage benefits provided to veterans; I find suggestive evidence that they increased home ownership among nonveterans in the same housing market.

Much of the discussion that follows focuses on the factors likely to be important for explaining the twenty-year shift in home ownership, but it is important to keep in mind that the factors driving the overall shift may not overlap completely with those driving the timing of the shift. For example, factors that would have been temporary and hence might be thought primarily to drive the timing of the shift would include wartime policies such as "forced savings" due to price controls and rationing during the war, or disincentives to invest in rental housing due to wartime and postwar rent controls. Naturally, it is also possible that if spillovers were significant, such "temporary" factors may have had long-lasting effects by shifting the country toward a high home ownership equilibrium.

10.3.1 Demographics

We know from figure 10.6 that age-specific home ownership rates increased substantially over the 1940s and 1950s, but of course changes in the age structure of the population are also likely to influence aggregate home ownership rates; Chevan (1989) stresses the importance of demographic change in the midcentury rise in home ownership. Since home ownership increases more or less monotonically up to middle age, a decrease in the population share of the young will, all else equal, tend to increase home ownership rates.

A simple decomposition of the change in the aggregate home ownership rate from 1940 to 1960 provides a measure of the share of the aggregate increase that can be explained by changes in the age structure of the population. I decompose the 1940 to 1960 difference of .26 for US-born men eighteen and older as follows:[12]

$$own_{60} - own_{40} = \sum_{g=18}^{G} (w_{g60} - w_{g40})\overline{own}_g + \sum_{g=18}^{G} (own_{g60} - own_{g40})\overline{w}_g$$

where g indexes age and w_{gy} is the share of individuals of age g in the population in year y (bars indicate means over the 1940 and 1960 values). The first term gives the difference attributable to the change in the age structure of the population, the latter measures the difference due to increases in within-age rates of ownership. This calculation yields a value of .044 for the first term and .213 for the second, suggesting that changing age structure can account for an important share—about 17 percent—of the aggregate increase.

12. In 1940 I apply sampling weights to calculate averages; the 1960 sample is a flat sample of the population.

10.3.2 Income

Many observers at the time attributed the 1940 to 1960 increase in home ownership to rising real incomes. Humes and Schiro (1946) and Muller (1947) both suggested that rising incomes played an important role in the early years of the 1940s. Reid (1962), in her study of the income elasticity of demand for housing, noted the positive relationship between home ownership and income. Katona (1964) offers an overview of housing over the 1950s and early 1960s based on the Survey of Consumer Finances, discussing both attitudes toward home ownership and economic characteristics of owners and renters. He argues that both the availability of mortgage credit and rising incomes help to explain postwar patterns of home ownership, although he suggests a greater emphasis on the latter. One study that has provided quantitative estimates of the contribution of rising incomes to the increase in home ownership is Chevan (1989), which argues that changes in income can account for roughly half of the 1940 to 1960 increase.[13]

It would not be surprising for rising income to play an important role in the midcentury increase in home ownership, especially in combination with other factors. Yet I am not aware of work that attempts to isolate quasi-experimental variation in income for the purpose of estimating its causal relationship with home ownership at either the beginning or end of the period. Identifying promising sources of variation, perhaps to be used in combination with data from the Survey of Consumer Finances, could be a fruitful avenue for future research.

10.3.3 The Income Tax

An extensive literature has discussed the nonneutralities in the US tax code in its treatment of owner- and renter-occupied housing (Smith, Rosen, and Fallis [1988] provide a review). If a home owner were taxed as if she were her own landlord, she would have to pay taxes on her net rental income: the rent she would have obtained renting the house to a tenant, less deductions for maintenance, depreciation, mortgage interest, and property taxes. Instead, net rental income is not taxable for a home owner, and she can further deduct mortgage interest and property taxes from her gross income.[14] These features had been part of the federal personal income tax since 1913, but these nonneutralities became quantitatively significant only with the rise in marginal tax rates at the beginning of World War II (e.g., Aaron 1972).

13. Margo (1992) presents estimates of the role of income in the closely related phenomenon of suburbanization, concluding that about 43 percent of postwar suburbanization can be attributed to rising household incomes.

14. Hence, two identical individuals living in identical homes would have lower tax liabilities if each owned the home she lived in than they would if they rented to each other. There are many sources discussing the tax advantages of owning in more detail; two lucid expositions that discuss these nonneutralities in the context of the midcentury rise in home ownership are those of Goode (1960) and Aaron (1972).

Another explanation for the midcentury rise in home ownership, therefore, is that the rise in personal income tax rates reduced the relative cost of owner-occupied housing. Adding to these benefits was a provision, introduced in 1951, that capital gains from the sale of a principal residence were excluded from taxable income, provided that another residence costing at least as much was purchased within a year and a half (Congressional Budget Office 1981; Rosen 1985).

A number of studies have considered the role of the nonneutralities in the tax code specifically in the context of the midcentury rise in home ownership. Goode (1960) suggests that the income tax may have played an important role. Aaron (1972) argues that the personal income tax was the most important factor, but does not attempt to calculate a counterfactual home ownership rate in the absence of nonneutralities in the tax system. Rosen and Rosen (1980) provide a quantitative estimate, estimating a time-series regression over the period from 1949 to 1974 to assess the impact of eliminating the special tax treatment of owner-occupied housing.[15] They estimate that the national home ownership rate would have been 4 percentage points lower in 1974—60 percent rather than 64 percent—if the tax benefits to owners were eliminated. This is about a fifth of the increase from 1940 to 1974.[16] Most recently, Chambers, Garriga, and Schlagenhauf (chapter 11, this volume) calibrate a general equilibrium overlapping generations model to estimate home ownership rates under a variety of counterfactual scenarios, among them the taxation of home owners as if they were landlords or the elimination of the home mortgage interest deduction. Their results suggest that the incentives for home ownership induced by rising marginal income tax rates were important in the midcentury rise in home ownership.

I am not aware of any work that exploits disaggregated data and quasi-experimental methods for causal inference to quantify the role of federal taxes in the midcentury rise in home ownership—or, indeed, to quantify the relative roles of different aspects of the favorable tax treatment of home owners. Identifying variation across areas, across people, and over time in the impact of federal tax changes could provide illuminating counterpoint to the studies mentioned earlier.

10.3.4 Mortgage Finance

The middle of the twentieth century saw the development of the modern system of mortgage finance. The growing prevalence of fully amortized, low

15. They estimate their time-series regression at the annual level; their national home ownership rates are from the census for 1950, 1960, and 1970, and are imputed for intercensal years.

16. Hendershott and Shilling (1982) examine the period from 1955 to 1979 and conclude that in the absence of the tax provisions in favor of ownership, the home ownership rate in 1978 would have been 60 percent rather than 65 percent. Rosen, Rosen, and Holtz-Eakin (1984) suggest that both of these estimates may be overstated, due to the assumption that households know the user cost of owner-occupied housing with certainty.

down payment mortgage loans is an explanation for the increase in home ownership heard both now and at the time (Shelton 1968; Jackson 1985; Green and Wachter 2005). To the extent that the young are more likely to be liquidity constrained, the increased concavity of the age-ownership profile in figure 10.6 suggests that the finance channel may have been important. It is also in keeping with modern cross-country evidence that countries that have lower down payments tend to have higher home ownership rates among the young (Chiuri and Jappelli 2003).

The transition in mortgage finance during the 1930s and 1940s can be characterized very broadly as a shift away from high down payment, short-term mortgages (often supplemented with junior mortgage financing at high interest rates) to long-term, fully amortized, low down payment mortgages. Recent work, such as Snowden (2003, 2010), has done much to complicate and enrich this story; mortgage finance in the pre-Depression era defies any simple characterization. Nevertheless, it is fair to say that the mid-twentieth century saw broad changes in the terms on which mortgage finance was available for home purchase.

An important element of changes in mortgage markets over the 1940 to 1960 period was direct government involvement. The federal government played a central role in mortgage markets over this period, in part by guaranteeing and insuring mortgages through the Veterans Administration (VA) and Federal Housing Administration (FHA) programs. Each program provided protection to lenders against losses on loans that had been approved by the insuring agency. Relative to conventional loans—those without government guarantees—VA and FHA loans tended to be longer-term and to have lower down payments and interest rates. The VA loans in particular tended to have the lowest down payments, and over the fifteen years following World War II were often (although not always) available with no down payment.

Given the likelihood that government intervention in mortgage markets, or changes in mortgage terms more broadly, played a meaningful role in the midcentury increase in home ownership, there has been interest in quantifying the impact of credit availability. Yet much of the existing evidence is essentially a time-series comparison. Rosen and Rosen (1980), for example, attempt to estimate the impact of credit availability by estimating a time-series regression of the national home ownership rate on a measure of deposits in thrift institutions (as well as other factors). They find a positive relationship, but one not statistically significant at conventional levels; they draw no strong inferences from this result, admitting that it is an imperfect test. In this volume, Chambers, Garriga, and Schlagenhauf (chapter 11) provide stronger evidence on this question, using their calibrated model to predict what the 1960 home ownership rate would have been in the absence of mortgage market innovations. They find that the growing length of mortgage contracts over the 1940s and 1950s, encouraged by government interventions such as the FHA, can account for 12 percent of the overall 1940 to 1960 increase in home ownership.

In Fetter (2013), I attempt to bring quasi-experimental empirical methods to bear on the question of the role of credit availability. I shed light on this broad question by estimating the impact of the VA program, which allowed borrowing on easier terms than any other broad-based program over the period. I do so in a way that attempts to provide a rigorous empirical link between the aggregate increase in home ownership and the shift in the age structure of home ownership. In particular, I exploit two steep declines in the probability of military service by date of birth, induced by age requirements for military service interacted with the end of World War II and the Korean War. A "between-cohort" comparison allows estimation of the impact of military service on later-life outcomes such as home ownership, alleviating concerns with direct comparisons of veterans to nonveterans. The presence of two "breaks"—one associated with the end of World War II and one with the end of the Korean War—gives estimates of the effect of veteran status at two ages in each census year. Testing for differences at each break in 1960, I estimate the impact of veteran status at multiple ages; following the same cohorts to the 1970 and 1980 censuses allows estimation of the effects of veteran status at older ages. I find large effects of veteran status on the probability of home ownership in 1960. Consistent with the idea that easier credit terms should, roughly speaking, have larger effects at younger ages, the effects are larger for the younger individuals at the Korean War break, and there is no evidence of a positive effect of veteran status in 1970 or 1980, by which time the cohorts had reached their midthirties.

Given the large number of factors that also influenced the probability of home ownership, it is important to rule out alternative explanations of a "veteran effect" on home ownership. But in a number of complementary analyses, I show that the results cannot be explained by other veterans' benefits (such as education or job training) or by direct effects of military service (such as the possibility that service induces preferences for earlier family formation). I then use the estimates of the effect of veteran status in 1960 to estimate a counterfactual 1960 age-ownership profile (and counterfactual 1960 home ownership rate) in the absence of the VA. The results suggest that the VA itself can account for about 1.9 percentage points of the roughly 26 percentage point rise in individual-level home ownership between 1940 and 1960, about 7.4 percent of the overall increase (and 25 percent for the cohorts affected by the program). Because the VA was just one element in a changing mortgage market over the middle of the century, offering the easiest terms in a market moving more generally toward lower down payments and longer maturities, these estimates provide a lower bound on the broader increase in the availability of credit in the midcentury rise in home ownership. I provide a rough estimate that broader changes in finance may explain about 40 percent of the overall increase in home ownership from 1940 to 1960.

These results suggest that easing credit terms played an important role in the midcentury rise in home ownership, and also that government credit aids in particular contributed to this change. An interesting and unresolved question is the extent to which government credit aids influenced terms on conventional lending; this was an area of active interest at the time (discussed, for example, by Break [1961]), but it would be helpful to revisit the question using modern empirical methods.

10.3.5 Other Factors

A number of other factors were surely important in explaining the overall increase. There is a natural link between suburbanization and home ownership to the extent that a lower price of land more distant from city centers facilitates construction of larger, single-family detached dwellings, and for agency reasons these tend to be owner occupied more often than multifamily structures (Glaeser and Shapiro 2003). Baum-Snow (2007) shows that the construction of highways encouraged suburbanization in the postwar era; decreased transportation costs could have increased home ownership by lowering the cost of suburban residence. Boustan and Margo (2011) show that white suburbanization in the postwar period, in turn, increased home ownership rates for blacks who remained in central cities.

Much of the previous discussion has focused on influences on young individuals, but it is clear from figure 10.6 that home ownership increased substantially among older individuals as well. Costa (1999) shows that Old Age Assistance increased demand for separate living quarters for older, unmarried women; it is likely that greater financial security in old age tended to keep older individuals from leaving their homes to live with children, and instead to remain home owners later in life.

10.4 Conclusion

Among the most remarkable changes in the twentieth-century United States was the transformation in housing markets over the 1940s and 1950s. This chapter presents some important facts that hypotheses for the rise in home ownership would do well to address, and suggests that no single factor by itself appears to explain the entirety of the shift.

It is worth noting that the focus of this chapter has in many ways been quite narrow; it has not, for example, discussed the extensive literature on race and housing (see, for example, Collins and Margo [2001]). Yet it seems clear that much remains to be done to understand the drivers of the broad changes in tenure choice in the mid-twentieth century.

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