

*Annual Review of Sociology***Wealth Inequality and
Accumulation**

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Abstract

Research on wealth inequality and accumulation and the data upon which it relies have expanded substantially in the twenty-first century. Although the field has experienced rapid growth, conceptual and methodological challenges remain. We begin by discussing two major unresolved methodological concerns facing wealth research: how to address challenges to causal inference posed by wealth's cumulative nature and how to operationalize net worth given its highly skewed distribution. Next, we provide an overview of data sources available for wealth research. To underscore the need for continued empirical attention to net worth, we review trends in wealth levels and inequality and evaluate wealth's distinctiveness as an indicator of social stratification. We then review recent empirical evidence on the effects of wealth on other social outcomes, as well as research on the determinants of wealth. We close with a list of promising avenues for future research on wealth, its causes, and its consequences.

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INTRODUCTION

In 2000, the *Annual Review of Sociology* (*ARS*) published two articles bringing sociologists' attention to wealth as a previously overlooked dimension of social inequality (Keister & Moller 2000, Spilerman 2000). Seventeen years later, the landscape of wealth inequality, wealth data, and wealth research has changed considerably. Although scholars have resolved several concerns raised by Spilerman and Keister & Moller, the proliferation of data and research has raised new questions and highlighted the lack of consensus about basic modeling decisions. In many ways, then, the field has moved from its infancy to its adolescence: It has experienced tremendous growth and progress, but substantial room remains for continued development, particularly in understanding wealth-generating processes.

In this article, we offer guidance to sociologists interested in studying wealth inequality and accumulation. In Part I, we highlight conceptual and methodological challenges of analyzing wealth. Rather than treating these concerns as secondary to substantive findings, we consider them fundamental to the success of future research on wealth's causes and consequences. In Part II, we discuss wealth data sources and provide updated trends in levels and inequality of US wealth through the Great Recession. We then document how closely related wealth is to a more common measure of socioeconomic status: income. We show that methodological decisions have implications even for a question as simple as the strength of the income-wealth association. Finally, in Part III, with an eye to the methodological and conceptual challenges outlined in Part I, we review substantive evidence for wealth's effects on other outcomes, as well as research on the determinants of wealth, emphasizing studies published since the 2000 *ARS* pieces.

Several recent studies have described the increasing concentration of wealth at the very top of the distribution (Kopczuk & Saez 2004, Saez & Zucman 2016), including an *ARS* article focused on the one percent (Keister 2014). Here we highlight that wealth is also an important dimension of stratification for a broader range of households. In other words, we conceptualize wealth not merely as an aspect of closure among economic elites but as a population-wide phenomenon.

PART I: CONCEPTUAL AND METHODOLOGICAL CHALLENGES IN THE ANALYSIS OF WEALTH

Wealth as a Cumulative Measure

Wealth is typically measured as net worth: the sum of the value of a household's assets, less the value of debts. Whereas income measures the flow of financial resources at a particular time, wealth is a cumulative stock that reflects years of prior circumstances and decisions. This feature raises several analytic concerns, particularly with regard to causal inference. Associations between parental wealth and offspring outcomes net of other parental socioeconomic status (SES) controls may merely capture spurious associations, including those due to measurement or specification error in the other SES variables. This concern is heightened if other predictors are point-in-time, given that wealth carries traces of prior experiences. For example, if offspring outcomes are affected by parental income throughout childhood, but parental income is measured in a single year, the association between parental wealth and offspring outcomes may merely reflect wealth's association with permanent income, net of current income. Averaging income measures across several preceding years, when possible, reduces this concern.

The cumulative nature of wealth has similar implications when it is the dependent variable. Scholars may wish to examine how wealth levels differ by race, gender, and social origins, and to what extent this variation is accounted for by other determinants of wealth, such as education and income. Typically, these latter determinants are measured only contemporaneously with wealth.

For example, scholars sometimes measure the racial wealth gap unexplained by differences in current income levels, rather than the difference unexplained by differences in lifetime income streams to date. Again, averaging income over multiple years, when possible, can alleviate this concern. Although income is the most obvious variable with cumulative effects on wealth, other time-varying wealth determinants, such as marriage and neighborhood context, are subject to the same challenge.

An alternative approach is to model wealth accumulation rather than net worth, using either lagged dependent variables or change models (e.g., Conley 2001b, Hurst et al. 1998, McKernan et al. 2014, O'Brien 2012). The advantage is that, rather than requiring lifetime histories of relevant covariates, fewer data points may suffice; characteristics in one period (including wealth) may approximate the relevant set of factors determining wealth gain or loss achieved by the next period.

Wealth's status as a cumulative measure becomes even more problematic in the presence of reverse causality concerns. Marriage, health, residential selection, homeownership, self-employment, and portfolio composition are all characteristics that may both be shaped by prior wealth and shape subsequent wealth. Panel methods estimating within-individual change can reduce reverse causality concerns. Alternatively, macroeconomic fluctuations or policy changes can serve as exogenous shocks facilitating identification of wealth effects on various outcomes. For example, Lovenheim & Reynolds (2013) exploit exogenous variation in housing value trends across metropolitan statistical areas to estimate the effects of parental home appreciation on offspring college attendance, choice, and completion.

Still, these methods are not a panacea. For example, first-difference models might estimate the short-term wealth consequences of unemployment or health shocks, but they cannot reveal how chronic exposure to unemployment or illness cumulatively affects wealth in later life: Narrowing the time window comes at the expense of fully capturing early life experiences' downstream wealth effects. An alternative is marginal structural models, estimated with inverse probability of treatment weights, which offer one way to model dynamic selection processes over time (Robins et al. 2000). Killewald & Bryan (2016) use this approach to estimate the long-term wealth consequences of time spent in homeownership.

The difficulty of establishing causal relationships has complicated assessments of the processes by which wealth accumulation occurs and between-group wealth disparities arise. In Part III, we argue that future research must seriously engage the methodological challenges posed by wealth's cumulative nature in order to advance sociologists' understanding of the causes and consequences of wealth inequality. As described in Part II, advances in data availability, especially from long-term panel studies, support this endeavor.

Operationalizing an Error-Prone, Highly Skewed Variable

Scholars interested in studying wealth's determinants or effects in net worth face a seemingly straightforward question: how should net worth be operationalized? So far, there is no consensus on best practices. Given measurement error concerns, wealth measures would ideally be averaged across several years to reduce attenuation bias when used as a predictor variable. However, this approach requires measures of wealth at multiple points, which are not always available.

A second problem is that the wealth distribution is highly right-skewed. Top-coding net worth values can help reduce the potential for unduly influential outliers. Using median regression, rather than conditional mean models such as ordinary least squares, also reduces the sensitivity of results to extreme observations. Another common solution is to log-transform net worth, but this approach requires a decision about how to treat zero and negative values. When wealth

is an independent variable, these values may be incorporated with dummy variables indicating negative or zero net worth, or with a separate variable measuring log net debt. When wealth is the dependent variable, there is no straightforward solution, but some common strategies are converting all negative values to a small positive value, shifting all values up by a sufficient amount that the entire range is positive (a started log), or simply excluding nonpositive values. Recoding negative values to a small positive value obscures relative net debt values and creates an outlier mass point at the low end of the log net worth distribution (Friedline et al. 2015), so we advise against it. An alternative is the inverse hyperbolic sine (IHS) transformation, which can incorporate zero and negative values, generating a function that is approximately linear close to zero and approximately logarithmic for large values (Friedline et al. 2015, Pence 2006).

The transformation selected has important implications for the assumed pattern of associations between model predictors and net worth. The log transformation assumes that changes in the independent variables have multiplicative effects on net worth, whereas the untransformed specification assumes additive effects. Wealth transformations are therefore not an incidental technical decision but a conceptual choice with potential consequences for substantive conclusions. For instance, whether bequests increase wealth inequality (Boserup et al. 2016, Karagiannaki 2017) and whether whites experience greater wealth benefits of homeownership than African Americans and Hispanics (Killewald & Bryan 2016) depend on whether comparisons are made in absolute or relative terms. Thus, scholars should justify their operationalization choices and consider whether substantive conclusions change with alternative transformations of net worth.

Recent research has considered that both the consequences and the determinants of wealth vary across the wealth distribution (e.g., Addo & Lichter 2013, Friedline et al. 2015, Killewald 2013, Maroto 2016). When wealth is a predictor, we recommend experimenting with flexible functional forms in order to identify a well-fitting specification. When wealth is the dependent variable, considering the possibility of variation in effects across the distribution is more complicated. We describe two analytic techniques that can reveal such heterogeneity. The first, unconditional quantile regression, estimates how changes in independent variables are associated with changes in various quantiles of the outcome variable, net of control variables (Firpo et al. 2009, Killewald & Bearak 2014). Maroto (2016) uses this approach to show that differences in education, employment, and income explain a greater share of whites' wealth advantage relative to African Americans and Hispanics at the top of the wealth distribution than at the bottom. The second approach, pioneered by DiNardo et al. (1996) for the study of wage distributions, offers a semiparametric method for reweighting distributions in order to simulate counterfactual scenarios. Sierminska et al. (2010) use this approach to simulate how the gender gap in wealth would change at different points in the distribution if partnered women had the same characteristics as partnered men. Given that wealth determinants may vary sharply across the wealth distribution, we encourage researchers to use these and other methods, rather than capture only mean differences.

PART II: WEALTH DATA AND PATTERNS

Advances in Data Availability

Over the past several decades, collecting data on assets and debts has become more common in large-scale surveys fielded in the United States and abroad. Although we recognize that our list may not be exhaustive, **Table 1** describes more than two dozen major surveys that gather data to measure net worth. Many of the surveys are longitudinal and several cover multiple decades, allowing observation of wealth over a large portion of the life course and—for genealogical panel

Table 1 Surveys with net worth data

Abbreviation	Dataset	Overview	Survey years	Years with wealth information	Wealth data coverage
United States—national					
Add Health	The National Longitudinal Study of Adolescent to Adult Health	Panel of American adolescents in grades 7–12 in 1994–1995 (24–32 years old in 2008) with an oversample of black, Chinese, Cuban, and Puerto Rican students	1994–present	2008	All household members
CE	Consumer Expenditure Survey	Rotating panel of American households	1980–present	Yearly	All household members
GSS	General Social Survey	Until 2008, a cross-sectional sample of American adults, with an oversample of black adults in certain years. Starting in 2008, a combined rolling panel and cross-sectional sample	1972–present	2006, 2014	Individual
HRS	Health and Retirement Study	Panel of American adults older than 50, with an oversample of black and Hispanic adults and residents of Florida. Florida oversample dropped after 1993	1992–present	Every 2 years	All household members
NLSY79	National Longitudinal Survey of Youth 1979	Panel of 1957–1964 US birth cohorts, with an oversample of black, Hispanic, economically disadvantaged, and enlisted-military youths. The economically disadvantaged and military oversamples were dropped in 1990 and 1984, respectively.	1979–present	Every year from 1985–1990 and 1992–1994, every other year from 1996–2000, every 4 years from 2004–present	Partners
NLSY97	National Longitudinal Survey of Youth 1997	Panel of 1980–1984 US birth cohorts, with an oversample of black and Latino adolescents	1997–present	When respondent is age 18, 20, 25, and 30, and first interview when respondent is independent	Partners
NSFH	National Survey of Families and Households	Panel of American households, with an oversample of blacks, Puerto Ricans, Mexican Americans, single-parent families, families with stepchildren, cohabiting couples, and recently married persons	1987–2002	1987–1988, 1992–1994, 2001–2002	Partners

(Continued)

Table 1 (Continued)

Abbreviation	Dataset	Overview	Survey years	Years with wealth information	Wealth data coverage
NIS	New Immigrant Survey	Panel of documented immigrants to the US in 2003	2003–2009	2003–2004 and 2007–2009	Partners
NSHAP	National Social Life, Health, and Aging Project	Panel of 1920–1947 US birth cohorts, with an oversample of black and Hispanic adults	2005–present	Every 5 years	All household members
PSID	Panel Study of Income Dynamics	Panel of American families and their descendants' families, with an oversample of low-income families. Additional samples of immigrant families were added in 1997 and 2017, and a sample of Latino families was added in 1990 but dropped after 1995.	1968–present	Every 5 years between 1984–1999, every other year since then	All family/household members
SCF	Survey of Consumer Finances	Cross-sectional sample of American families, with 2 panel follow-ups (1983 sample reinterviewed in 1986 and 1989; 2007 sample reinterviewed in 2009) and an oversample of the wealthy	1983–present	Every 3 years	All household members
SIPP	Survey of Income and Program Participation	Rotating panel (until 2013), single panel changed every 4 years (starting 2014) of American families, with an oversample of poor families	1984–present	Every year, with some gaps	All household members
United States—subnational					
L.A.FANS	Los Angeles Family and Neighborhood Survey	Panel of households in Los Angeles County, with an oversample of poor neighborhoods and families with children and new respondents added to remain cross-sectionally representative	2000–2008	2000–2001 and 2006–2008	Partners
WLS	Wisconsin Longitudinal Study	Panel of 1957 high school graduates in Wisconsin, plus 1 randomly selected sibling	1957–present	1992, 2005, 2011	Partners
Other countries					
Australia: HES/SIH	Household Expenditure Survey/Survey of Income and Housing	Cross-sectional sample of Australian households with, for the HES only, an oversample of metropolitan households whose main source of income was a government pension, benefit, or allowance	HES: 1974–present SIH: 1994–present	HES: Every 6 years since 2003–2004 SIH: Every 2 years since 2003–2004 (except 2007–2008)	All household members

(Continued)

Table 1 (Continued)

Abbreviation	Dataset	Overview	Survey years	Years with wealth information	Wealth data coverage
Australia: HILDA Survey	Household, Income and Labor Dynamics in Australia Survey	Panel of Australian households, with an additional sample added in 2011	2001–present	Every 4 years since 2002	All household members
Canada: SFS	Survey of Financial Security	Cross-sectional sample of Canadian households in the 10 provinces (territories are excluded), with an oversample of high-income areas	1999–present	Every 7 years	All household members
China: CFPS	China Family Panel Studies	Panel of Chinese communities, families, and their descendants, with an oversample of five provinces	2010–present	Every other year	All family members
Finland: HWS	Household Wealth Survey	4-year rotating panel of Finnish households, with an oversample of high-income households	1987–present	Every 3 years since 1994	All household members
Germany: SOEP	German Socio-Economic Panel	Panel of German households, with immigrant and high-income subsamples added later	1984–present	1988 and every 5 years since 2002	All household members
Italy: SHIW	Survey on Household Income and Wealth	Cross-sectional and partly panel sample of Italian households	1965–present	Every 2 years since 1991	All household members
Japan: JHPS/KHPS	Japan Household Panel Survey	KHPS (Keio Household Panel Survey) and JHPS were separate panels of Japanese households that combined in 2014. KHPS had additional samples added in 2007 and 2012.	KHPS: 2004–present JHPS: 2009–present	Every year	All household members
Korea: KLIPS	Korea Labor and Income Panel Study	Panel of Korean households, with new respondents added to remain cross-sectionally representative	1998–present	Every year	All household members
Switzerland: SHP	Swiss Household Panel	Panel of households living in Switzerland	1999–present	2009, 2010, 2012, 2016	All household members
United Kingdom: BHPS	British Household Panel Survey	Panel of British households, with youth panel added in 1994, Northern Ireland and Great Britain low-income samples added in 1997, Scottish and Welsh samples added in 1999, Northern Ireland sample added in 2001; incorporated into UKHLS in 2010	1991–2008	Every 5 years since 1995	All household members

(Continued)

Table 1 (Continued)

Abbreviation	Dataset	Overview	Survey years	Years with wealth information	Wealth data coverage
United Kingdom: UKHLS	Understanding Society, UK Household Longitudinal Study	Panel of UK households, with an oversample of ethnic minorities in original sample; sample of immigrants and ethnic minorities added in 2014–2015; incorporated BHPS in 2010	2009–present	Every 4 years since 2009–2010	All household members
United Kingdom: WAS	Wealth and Asset Survey	Panel of households in England, Scotland, and Wales, with new samples added every 2 years to remain cross-sectionally representative	2006–present	Every 2 years	All household members
Comparative					
HFCS	Household Finance and Consumption Survey	Sample of households in 15 eurozone countries, representative at country and continental level, with panel component and an oversample of wealthy for some countries. The sample will expand to encompass 17 euro area member states beginning with the second wave of the survey.	2010/2011–present	Every 3 years	All household members
ISSP	International Social Survey Programme	Harmonized versions of existing samples of all adults in 30+ countries	1985–present	2009	All household members
LWS	Luxembourg Wealth Study	Wealth microdata compiled from various wealth surveys and harmonized for cross-national research, including Australia, Canada, Finland, Germany, Greece, Italy, Norway, South Africa, Spain, Sweden, United Kingdom, United States, representative at country level. Datasets for Austria, Cyprus, Slovenia, and Slovak Republic currently being harmonized	1995–present	Every 3–5 years	All household members
SHARE	Survey of Health, Ageing and Retirement in Europe	Panel of adults 50 or over in 20 European nations and Israel, with 7 new countries in the field 2017–18	2004–present	Every 2 years	Partners

studies, such as the Panel Study of Income Dynamics (PSID) and its international sister studies—increasingly across generations. A few surveys, including the Survey of Consumer Finances (SCF) in the United States, oversample the wealthy to improve description of the top of the wealth distribution. The Luxembourg Wealth Study; the Household Finance and Consumption Survey; the Survey of Health, Ageing and Retirement in Europe; and the International Social

Survey Programme are multinational datasets that facilitate comparisons across many Western countries, but the availability of wealth data is expanding even to transition and developing countries (Davies 2008, Xie & Jin 2015).

Most surveys construct wealth as a household-level measure, although some treat the respondent and partner (if any) as the wealth-holding unit. One advantage of the latter approach is that it enables the calculation of personal wealth for young adults still living with their parents. In addition, the German Socio-Economic Panel (SOEP) collects asset information at the individual level, including proportional ownership of jointly owned assets by couples, allowing separate wealth measures for each partner within couples.

Among US datasets, the SCF collects the most detailed wealth information. Consequently, it is often used as a benchmark to judge the validity of wealth data collected in other surveys. The PSID and Health and Retirement Study (HRS) compare favorably to the SCF up until at least the 95th percentile of the wealth distribution (Bosworth & Smart 2009, Juster et al. 1999, Pfeffer et al. 2016), whereas the Survey of Income and Program Participation wealth data diverge more sharply (Curtin et al. 1989, Czajka et al. 2003).

Administrative data can supplement or substitute for survey data on net worth. For example, HRS matches survey data to administrative data from the Social Security Administration and employer-provided pension data to construct an augmented net worth measure capturing a broader range of resources available for future retirement (Hauser & Weir 2010). Scandinavian administrative data sources are particularly powerful because they provide very high-quality wealth measures based on tax registers, often allowing the tracking of individuals across their life course and of families across generations for the full population (e.g., Hällsten & Pfeffer 2017 for Sweden and Hansen 2014 for Norway). However, the phase-out of wealth taxation abolishes this data source for some countries, such as Sweden since 2008 (Hällsten & Pfeffer 2017).

Trends in Wealth and Wealth Inequality

Keister & Moller (2000) use data from the SCF and the 1962 Survey of the Financial Characteristics of Consumers to estimate trends in the average level and overall distribution of net worth from 1962 to 1995. In **Table 2**, we reproduce estimates from Pfeffer & Schoeni (2016) to describe trends from 1989 to 2013. The first panel shows trends in wealth levels, including mean and median household wealth in thousands of dollars; the remainder of the table shows various measures of net worth inequality. Inequality in net worth increased in the second half of the twentieth century (Keister & Moller 2000) and still more in the new millennium: Between 2001 and 2013, the wealth share owned by the top 1% increased from 32 to 36%. Inequality also increased throughout the distribution. The ratio of wealth held by households at the 95th percentile relative to those at the median increased from 15:1 to 23:1 and, for households at the median relative to those at the 25th percentile, from 7:1 to 9:1.

Inequality rose particularly rapidly during the Great Recession (Pfeffer et al. 2013, Wolff 2016), and the trend persisted even as the official recovery began in 2009. The tremendous wealth destruction wrought by the recession has left the median US household with less net worth in 2013 than in 1995 (\$81,400 versus \$87,700 in 2013 dollars). In contrast, mean wealth rose from \$323,500 to \$528,400 during the same time span, reflecting the disproportionate growth of wealth at the top as well as losses at the bottom: The share of households with no wealth or in net debt increased from 9.7% to 12.9%.¹

¹Most net worth measures exclude pension wealth (augmented net worth). Survey collection on pension wealth is difficult, as individuals struggle to estimate the value of their entitlements from pension plans and Social Security (Curtin et al. 1989,

Table 2 Net worth distribution

	1989	1992	1995	1998	2001	2004	2007	2010	2013
Median	85.1	80.8	87.7	102.5	113.9	114.8	135.9	82.5	81.4
Mean	342.3	303.9	323.5	405.5	522.1	553.9	625.2	530.4	528.4
Percent with 0 or less	11.4%	10.3%	9.7%	10.4%	9.5%	8.9%	9.7%	13.1%	12.9%
Share of household wealth owned by									
Top 1%	29.9%	30.1%	34.8%	33.8%	32.1%	33.2%	33.6%	34.1%	35.5%
Top 5%	54.2%	54.4%	56.1%	57.2%	57.4%	57.4%	60.3%	60.9%	62.9%
Top 10%	67.0%	66.9%	67.9%	68.6%	69.6%	69.4%	71.4%	74.4%	75.0%
Top 20%	80.7%	80.1%	80.5%	81.4%	82.5%	82.9%	83.4%	86.7%	87.0%
Bottom 50%	3.0%	3.3%	3.6%	3.0%	2.8%	2.6%	2.5%	1.2%	1.1%
Gini coefficient	0.790	0.786	0.791	0.800	0.805	0.809	0.816	0.846	0.850
Ratio of percentiles									
50/25	8.3	6.8	5.8	7.2	6.8	7.0	8.6	9.3	9.3
75/50	3.1	3.0	2.8	2.9	3.3	3.5	3.1	3.9	3.9
95/75	4.7	4.5	4.3	4.3	4.6	4.3	5.1	6.2	5.9
95/50	14.7	13.4	11.8	12.6	15.2	15.4	15.7	24.2	23.0
Number of observations	3,143	3,906	4,299	4,305	4,442	4,519	4,417	6,482	6,015

Note: Reprinted with permission from Pfeffer & Schoeni (2016, table 1). *RSF: The Russell Sage Foundation Journal of the Social Sciences*, Volume 2, Issue 6. © Russell Sage Foundation, 112 East 64th Street, New York, NY 10065. Based on the Survey of Consumer Finances. Dollar values in thousands of 2013 dollars.

Piketty’s (2014) *Capital in the Twenty-First Century* reveals similar aggregate wealth trends throughout the developed world. Building on prior publications, Piketty shows that wealth inequality has followed a U-shaped trajectory across most developed countries since 1900, with the upswing occurring in the United States since about 1970 and in Europe since about 1980. Piketty traces the preceding declines in wealth inequality to war-induced asset devaluation, high tax rates, and skills investments spurring economic growth. He attributes the recent increase in wealth inequality to the rate of return to capital overtaking the economic growth rate (for critiques, see Acemoglu & Robinson 2015, Soskice 2014). In this article, we focus primarily on the determinants and consequences of wealth in the United States. However, Piketty’s (2014) findings show that developed countries have generally experienced similar trends in wealth inequality through the twentieth century, although inequality levels differ considerably.

Wealth’s Distinctiveness in Social Stratification

Although some social scientists view wealth merely as a less error prone measure of lifetime (permanent) income, wealth scholars argue that family wealth and family income are conceptually distinct (Keister & Moller 2000, Spilerman 2000). In recent decades, ample evidence has substantiated this assertion: As we describe later, wealth is associated with a host of outcomes, net of income. Given the theoretical centrality of the claim that wealth captures aspects of economic

Ekerdt & Hackney 2002). Pension wealth has transformed since the 1980s with the broad shift from defined benefit to defined contribution plans. This change has not reduced mean retirement wealth, at least prior to the Great Recession (Wolff 2011, 2015), but it has increased inequality in pension wealth and total wealth (Devlin-Foltz et al. 2016).

well-being distinct from income, the lack of a well-established wealth-income correlation estimate is surprising. The typically cited estimate is based on an endnote in Lerman & Mikesell (1988) (cited in Keister & Moller 2000), which is thin on empirical detail (see also Díaz-Giménez et al. 1997). To address this gap, we estimate Pearson correlation coefficients between total household net worth and total household income based on the SCF (Fed. Reserve 2013) and the PSID (Panel Study Income Dyn. 2013). We analyze data from the first and most recent waves that PSID and SCF collected wealth information in the same year: 1989 and 2013. Using the PSID, we also approximate permanent income by averaging household income across a 10-year period of observed measurement (2003–2013 and 1979–1989), testing whether quasi-permanent income indeed closely tracks wealth. We report wealth-income correlations as they differ across datasets, variable transformations, age groups, periods, and income concepts to help wealth researchers understand the potential consequences of different modeling decisions in light of the concerns discussed in Part I.

To demonstrate the results' sensitivity to different variable transformations, we estimate income-wealth correlations: (a) using raw values, (b) after top-coding both variables at the 99th percentile to reduce the influence of outliers, (c) taking the natural logarithm of positive values to reduce skew (and excluding zero and negative values), (d) using the IHS transformation to achieve a similar transformation of positive net worth values as the log transformation and also to incorporate nonpositive values, and (e) using percentiles as an alternative way to reduce skew and incorporate the full range of values.

Our analysis (see **Figure 1**) reveals that correlations based on top-coding both variables at the 99th percentile, taking the natural logarithm, or using percentiles yield similar estimates—larger than those generated by raw measures or the IHS transformation. For the former three

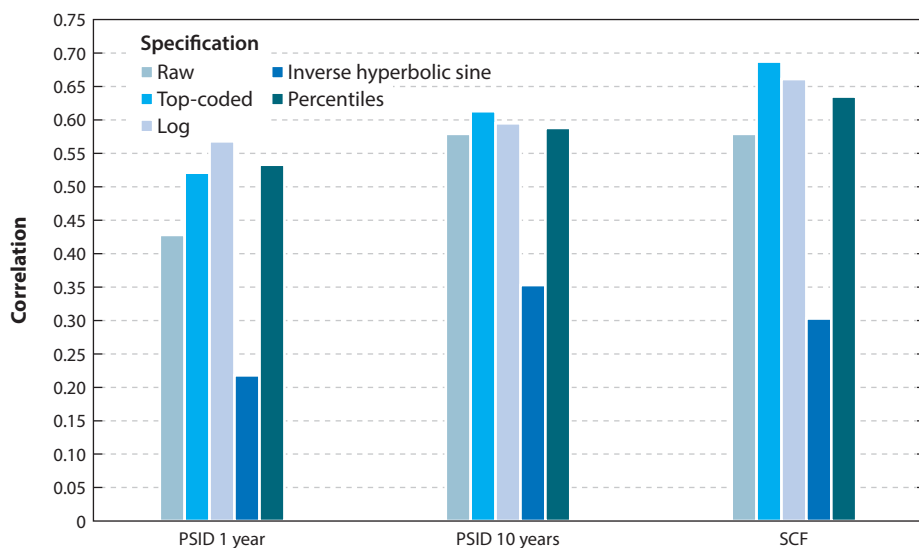


Figure 1

Wealth-income correlations by survey and specification (2013). Data are from the Panel Study of Income Dynamics (PSID) and the Survey of Consumer Finances (SCF). The first block of PSID correlations is based on a single year (analogous to the SCF), and the second block averages income measures over as many reports as are available in a ten-year span. PSID data are aggregated from the family to the household unit level to make estimates comparable to the SCF. Analytic samples are restricted to households with a household head aged 25 to 64.

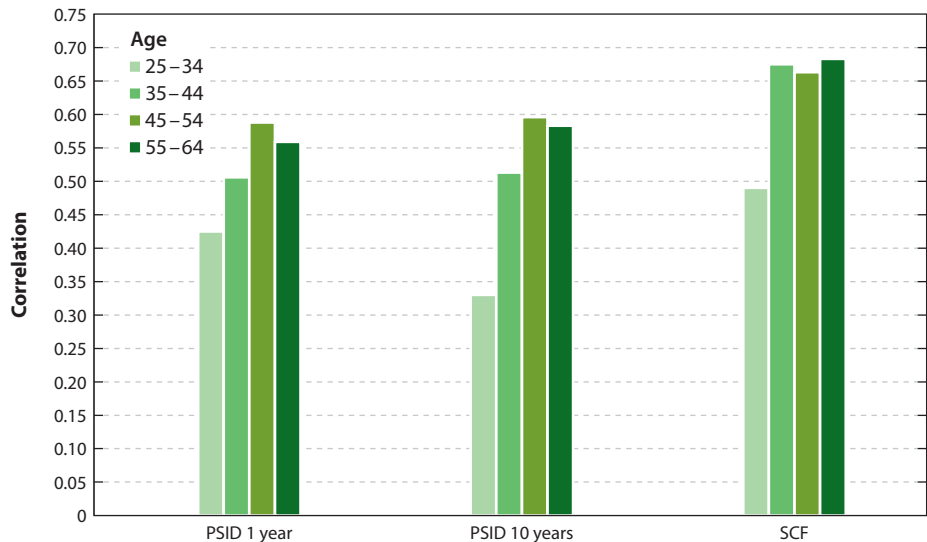


Figure 2

Wealth-income correlations by survey and age (2013, percentiles). Data are from the Panel Study of Income Dynamics (PSID) and the Survey of Consumer Finances (SCF). The first block of PSID correlations is based on a single year (analogous to the SCF), and the second block averages income measures over as many reports as are available in a ten-year span. PSID data are aggregated from the family to the household unit level to make estimates comparable to the SCF. Analytic samples are restricted to households with a household head aged 25 to 64.

transformations, correlations are approximately 0.65 in the SCF, 0.60 when using multiple income years from the PSID, and 0.55 when using single-year PSID data. Thus, our results also confirm that long-term income has a higher association with wealth than single-year income, but wealth remains distinct even from long-term measures of income.

How does the wealth-income correlation vary across the life course and across time? Income and wealth are more weakly associated in young adulthood, underscoring wealth's cumulative nature (see **Figure 2**). Wealth and income have not become more aligned over time; in fact, the wealth-income correlation appears to have decreased over the past quarter century (see **Figure 3**). In the PSID, this trend also holds when we exclude asset income from the income measure. As expected, excluding asset income from household income reduces the wealth-income correlation, but by less than previously thought (**Figure 3**): Keister & Moller (2000) cite a decline from approximately 0.50 to 0.26 by excluding asset income; we observe a drop in the SCF from 0.66 (in 1989) and 0.64 (in 2013) to at least 0.50 in both years.

PART III: EVIDENCE ON WEALTH CONSEQUENCES AND DETERMINANTS

Consequences of Wealth: Wealth as Predictor

A substantial line of research finds that family wealth is associated with other social outcomes, net of standard demographic and socioeconomic predictors, including income. Parental wealth is associated with greater offspring educational and cognitive achievement (Conley 1999, 2001a; Doren & Grodsky 2016; Friedline et al. 2015; Jez 2014; Orr 2003; Pfeffer 2011; Yeung & Conley

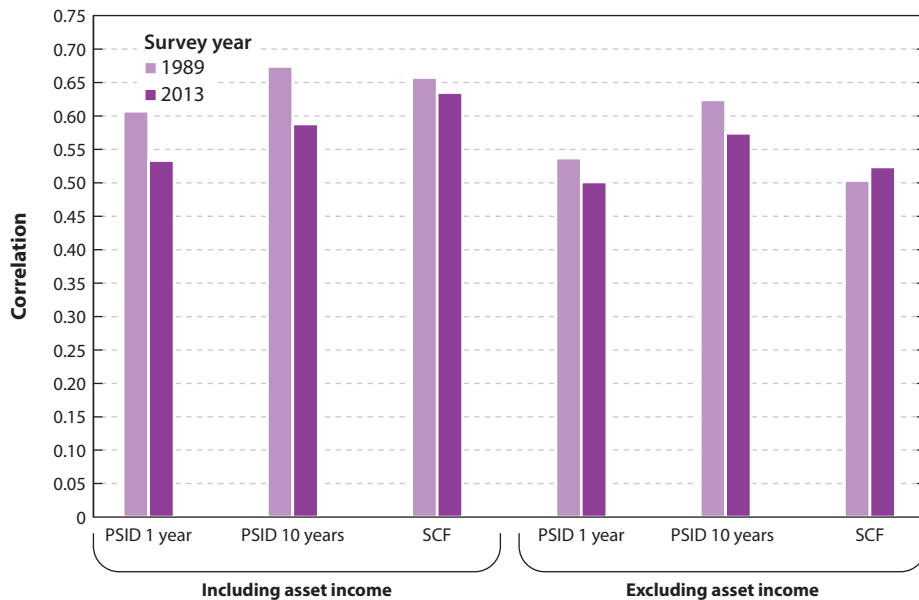


Figure 3

Wealth-income correlations by survey, year, and income type (percentiles). Data are from the Panel Study of Income Dynamics (PSID) and the Survey of Consumer Finances (SCF). The first block of PSID correlations is based on a single year (analogous to the SCF), and the second block averages income measures over as many reports as are available in a ten-year span. PSID data are aggregated from the family to the household unit level to make estimates comparable to the SCF. Analytic samples are restricted to households with a household head aged 25 to 64.

2008) and labor market outcomes, such as occupational attainment and work hours (Conley 1999, Pfeffer 2011). Parental wealth and home value appreciation are positively associated with college enrollment, institutional quality, and bachelor's degree completion (Conley 2001a, Doren & Grodsky 2016, Jez 2014, Lovenheim & Reynolds 2013), as well as transitions to homeownership (Charles & Hurst 2002, Spilerman & Wolff 2012).

Individuals' own wealth also speeds transitions to homeownership (Di & Liu 2007, Killewald & Bryan 2016) and facilitates self-employment (Fairlie & Krashinsky 2012, but see also Hurst & Lusardi 2004). For men, wealth encourages retirement (Conley & Thompson 2013). In terms of family structure, young adults' own wealth supports marriage, whereas debt encourages cohabitation (Addo 2014, Schneider 2011). Among older, previously married Americans, wealth accelerates both cohabitation and remarriage (Vespa 2012). For women, student debt is associated with fertility delay, whereas both mortgages and credit card debt accelerate transitions to parenthood (Nau et al. 2015).

Among older adults, wealth is negatively associated with mortality (Attanasio & Hoynes 2000, Bond Huie et al. 2003) and positively associated with maintaining good health (Hurd & Kapteyn 2003, Semyonov et al. 2013). Yet other scholars argue that the association between wealth and subsequent health changes or mortality is spurious (or nearly so) or specific to particular health conditions (Adams et al. 2003, Banks et al. 2010, Smith 2007). A challenge hampering evaluation of the association between wealth and health is that both are stock measures. Although transitions to marriage and parenthood are point-in-time events, health outcomes, like wealth levels, reflect

many years of prior influences. Therefore, the fact that wealth shocks do not immediately lead to health changes or increased mortality rates does not preclude the possibility that a lifetime of wealth conditions has a cumulative effect on health outcomes in older age. Consistent with this intuition, Adams et al. (2003) find that socioeconomic status is not associated with sudden-onset health conditions but is associated with gradual-onset conditions—as we would expect if wealth has a cumulative rather than immediate effect.

Wealth may affect the aforementioned outcomes for a host of reasons. Financial assets can buffer negative economic shocks. In old age, wealth may be a critical source of financial resources that replaces employment income. Real assets, such as vehicles and homes, have use value. Parental wealth may benefit children by shaping the quality of their neighborhood and school contexts, as well as the resources available at home. More directly, access to parents' financial resources may ease the transition to adulthood by facilitating higher education, the purchase of a first home, or a wedding. Wealth may also provide a cultural signal of status and achievement, potentially conferring political power as well.

Future research should investigate these and other mediating channels to illuminate how accumulated wealth translates into advantages across domains and to reveal potential avenues for intervention. In addition to mediational analysis of net worth associations, another approach is to consider which component of wealth is likely to generate the effect (Spilerman 2000). For example, Schneider (2011) hypothesizes that in the marriage market, possessing an asset may be more important than the asset's value because asset ownership already signals marriageability. Likewise, Addo (2014) hypothesizes that credit card debt and education debt may be associated differently with union formation, owing to the distinct financial structure and normativity of various types of debt. Nau et al. (2015) consider how different types of debt are associated with fertility timing. Although the authors do not always find unequivocal support for their hypotheses, their approaches illustrate the importance both of conceptualizing wealth as a cultural marker, not just a stock of financial resources, and of empirically identifying how wealth produces effects by disaggregating net worth into theoretically relevant components.

Wealth Determinants: Wealth as Outcome

As noted above, wealth's feature as a stock variable complicates empirical analyses of the processes that produce it. As such, the literature exploring wealth determinants has focused primarily on estimating wealth differences by ascribed traits, such as age, race, gender, and social origins, although endogenous processes are sometimes used to explain these gaps. Now that broad consensus on the key ascribed traits determining wealth has emerged, we believe scholars' relative emphasis should shift to the causal pathways linking these characteristics to wealth accumulation. In this section, we first review the more tentative evidence on the causal pathways that produce wealth accumulation. We then describe the stronger evidence on the relationship between ascriptive characteristics and wealth attainment. Although this sequence may seem like putting the cart before the horse, it is necessary to first engage the evidence on the causal mechanisms behind wealth accumulation before evaluating research aimed at determining what processes can explain group-level differences in wealth. For example, we cannot evaluate research estimating the role of homeownership in producing race gaps in wealth without first engaging the evidence that homeownership is wealth-enhancing.

Processes of wealth accumulation. A key determinant of wealth is the flow of income into the household. As demonstrated above, wealth and income are strongly associated. The association with wealth is stronger at higher income and earnings levels (Barsky et al. 2002, Killewald 2013).

Scholars often implicitly assume that causality flows from income to wealth, rather than the other way around, provided that asset income is excluded from income measures.

Causality goes in the other direction for asset income: Wealth causes subsequent asset income, which depends on portfolio allocation. Households with positive net worth must make decisions about the assets in which to invest their money. Particular assets, such as homes, may affect wealth accumulation either through their rates of return, such as the appreciation of the home, or through behavioral effects, such as mortgage payments functioning as forced savings. At the same time, as described earlier, wealth facilitates the acquisition of particular assets, including homes. This potential for reverse causality challenges analyses geared at establishing effects of portfolio decisions on wealth accumulation.

Housing wealth constitutes the single largest component of wealth among middle-class families (Wolff 2016). As a result, the role of homeownership in the accumulation of wealth and reproduction of wealth disparities has attracted considerable scholarly attention. The wealth benefits of homeownership persist even after accounting for prior wealth levels and prior savings rates (Di et al. 2007, Killewald & Bryan 2016). Wealth gains from homeownership and home appreciation rates vary by period, race, neighborhood, and region, yet homeownership appears to generate wealth for most households (Flippen 2004, Killewald & Bryan 2016, Oliver & Shapiro 2006).

Risky assets, such as businesses, stocks, and mutual funds, are assumed to have higher rates of return than either cash accounts or homeownership. Self-employment is associated with higher net worth (Altonji & Doraszelski 2005, Menchik & Jianakoplos 1997), as is stock ownership (Hurst et al. 1998). We view the evidence on the wealth effects of self-employment and other asset choices as less conclusive than that for homeownership because less attention has been paid to accounting for selection. More research is needed to estimate the wealth benefits of different portfolio components relative not just to nonownership but to ownership of alternative assets.

The same concerns of reverse causality surface when estimating the effect of family structure on wealth. Family structure may affect the flow of funds into the household as well as decisions about savings and portfolio composition. But, as we argued above, family structure is in turn shaped by wealth. Married couples accumulate substantially more wealth than unmarried individuals, women who are married only once have more wealth than those who divorce and remarry, and in both cases differences are not entirely explained by other characteristics, including income (Addo & Lichter 2013, Ruel & Hauser 2013, Yamokoski & Keister 2006, Zagorsky 2005). As with asset composition, research in this area has not fully engaged the causal challenges described above. Therefore, the evidence is currently not strong enough to confirm a causal effect of marriage on subsequent wealth accumulation.

An additional unresolved issue is the lack of consensus regarding whether wealth should be adjusted for family size to appropriately capture households' economic well-being. Marriage and cohabitation may be trivially associated with greater wealth as individuals pool assets. If households achieve economies of scale in wealth as in income—for example, two individuals do not need twice as expensive a house as a single person—these wealth gains are still meaningful, if mechanical. Future research is needed to establish both appropriate adjustments (if any) for household size and their consequences for the estimated wealth benefits of family structure.

Finally, we note that, similar to the evidence for wealth's effect on health, evidence for the causal effect of poor health and negative health shocks on wealth is mixed (Adams et al. 2003, Conley & Thompson 2013, Hurd & Kapteyn 2003, Wu 2003).

Ascribed traits as wealth determinants: exogenous predictors. Compared with the tentative evidence on many processes hypothesized to affect wealth, differences in wealth holdings across demographic groups are well established.

Age. On average, wealth increases over the life course at least until approximately age 60 (Díaz-Giménez et al. 1997, Hurst et al. 1998, Wolff 1998), again illustrating wealth's cumulative nature. Furthermore, wealth's role as an indicator of socioeconomic advantage may change over the life course. For example, if net worth is lower for some young adults than others because the former have invested in higher education, their current wealth position is likely not the best indicator of their long-term financial prospects. This possibility is consistent with the relatively lower correlation between income and wealth for young adults we described previously: In young adulthood, investments in higher education may lead to high income before student loan debt is paid off. We encourage researchers modeling wealth outcomes in a sample heterogeneous by age to test the robustness of their results across different age groups.

Social origins. The few available estimates of intergenerational wealth mobility suggest that the correlation of wealth across generations in the United States is roughly 0.3 to 0.4, similar to the intergenerational persistence in other measures of socioeconomic attainment (Charles & Hurst 2003, Conley & Glauber 2008, Mulligan 1997, Pfeffer & Killewald 2015). Strong intergenerational wealth persistence at the top of the distribution also characterizes more egalitarian Norway (Hansen 2014). Conceptualizing family more broadly, the wealth of grandparents is associated with own educational attainment and wealth, net of parental wealth (Hällsten & Pfeffer 2017, Pfeffer & Killewald 2015), and extended family wealth is associated with education, transition to homeownership, and own wealth (Hall & Crowder 2011, Pridemore & Pfeffer 2017).

Some of these associations may operate through direct transfers. The fraction of aggregate US net worth attributable to inheritances or other transfers has been hotly debated, but it is typically estimated to exceed 50% when posttransfer appreciation is considered (Gale & Scholz 1994, Kotlikoff & Summers 1981, Wilhelm 2001). At the individual level, inheritances and *inter vivos* transfers are positively associated with net worth and wealth gains (Conley 2001b, Conley & Ryvicker 2004, Hurst et al. 1998, Karagiannaki 2017, McKernan et al. 2014, Menchik & Jianakoplos 1997, Semyonov & Lewin-Epstein 2013). However, in the United States, direct transfers explain less than 20% of the intergenerational association in wealth positions (Charles & Hurst 2003, Pfeffer & Killewald 2015).

Intergenerational wealth similarity may also reflect indirect processes. As previously discussed, parental wealth facilitates offspring's educational outcomes. Education explains approximately a quarter of the intergenerational persistence in wealth (Pfeffer & Killewald 2015), likely by supporting income persistence across generations (Charles & Hurst 2003). Qualitative research emphasizes the importance parents place on using wealth to improve their children's educational outcomes, particularly through neighborhood selection to access high-quality schools (Johnson 2006, Shapiro 2004).

Beyond parental wealth, other household characteristics may influence children's eventual wealth attainment. Having siblings is associated with lower adult wealth, possibly because parental resources of both money and time are diluted among offspring (Keister 2003b). Religious upbringing is also associated with wealth, with Jews accumulating more wealth than otherwise similar mainline Protestants and Catholics, who in turn accumulate more than conservative Protestants (Keister 2003a, 2007, 2008).

Education. Education is associated with greater wealth and more rapid wealth accumulation, net of income (Conley 2001b; Conley & Ryvicker 2004; Keister 2003a,b, 2004; Yamokoski & Keister 2006). Although the association between education and wealth accumulation is robust, its underlying mechanisms have received little attention. One possibility is that education is a proxy for prior income streams not captured by the current income measure, given the previously

described challenges of modeling cumulative wealth with current income. Alternatively, education may affect wealth through the positive association between education and ownership of assets with higher risks and returns (Hanna et al. 2010, Kim et al. 2012).

Race, ethnicity, and nativity. Racial disparities in wealth in the United States are vast (Conley 1999, Oliver & Shapiro 2006). From the mid-1980s through the mid-2000s, the median wealth of white households was approximately 10 times that of black households and approximately 8 times that of Hispanic households; race disparities nearly doubled during the Great Recession (Kochhar et al. 2011). In absolute terms, wealth disparities between whites and African Americans are larger at higher points in the wealth distribution (Maroto 2016).

The race gap in income (or earnings) is a substantial contributor to the race gap in wealth (Barsky et al. 2002, Campbell & Kaufman 2006, Menchik & Jianakoplos 1997). Although blacks do not appear to save at lower rates than whites after adjusting for income (Conley 1999, Gittleman & Wolff 2004), wealth disparities remain large even among households with similar incomes. Race differences in social origins, including family structure, the economic position of parents and extended family members, and inheritances, also contribute to the black-white wealth gap and to whites' higher rates of homeownership (Avery & Rendall 2002, Charles & Hurst 2002, Conley 2001b, Gittleman & Wolff 2004, Hall & Crowder 2011, McKernan et al. 2014, Menchik & Jianakoplos 1997, Shapiro 2004). Another contributing factor may be that affluent blacks provide financial assistance to family and friends in their networks at higher rates than their white counterparts (O'Brien 2012). Oliver & Shapiro (2006, p. 5) refer to these various processes as the "sedimentation of racial inequality"—a history of discrimination and institutionalized racism that continues to disadvantage the wealth position of contemporary African Americans. Even net of social origins, however, blacks experience higher rates of intergenerational downward wealth mobility (Conley & Glauber 2008, Pfeffer & Killewald 2015).

Although discrimination is notoriously difficult to identify in observational studies, prior research finds evidence consistent with discrimination against African Americans in lending markets for homes, vehicles, and businesses (Blanchflower et al. 2003, Cavalluzzo & Wolken 2005, Charles et al. 2008, Charles & Hurst 2002, Oliver & Shapiro 2006), including disproportionate rates of subprime mortgage loans among black households leading up to the Great Recession (Massey et al. 2016, Rugh 2015, Rugh et al. 2015). Neighborhood segregation increased African Americans' risk of receiving a subprime loan and experiencing home foreclosure (Hwang et al. 2015, Rugh et al. 2015, Rugh & Massey 2010), which may explain disproportionate wealth losses by black households during the Great Recession (Kochhar et al. 2011, Pfeffer et al. 2013). Thus, we consider it likely that institutional discrimination and residential segregation causally contribute to the race gap in wealth.

Likewise, despite the challenges of making causal claims regarding the role of endogenous pathways in producing the racial wealth gap, we believe there is sufficient evidence to conclude that housing markets contribute to it. Compared with whites, African Americans have substantially lower rates of homeownership, transition to homeownership more slowly, own homes of lower values, have less housing equity, and exit homeownership at higher rates; these differences generally persist even after adjusting for race differences in other characteristics (Charles & Hurst 2002; Flippen 2001; Keister 2000, 2004; Killewald & Bryan 2016; Krivo & Kaufman 2004; Sharp & Hall 2014). Coupled with research on homeownership's wealth benefits, the evidence suggests that African Americans are disadvantaged by their lower rates of homeownership. Whites also experience greater (absolute) wealth returns to homeownership (Killewald & Bryan 2016), which may reflect slower appreciation by homes in minority neighborhoods (Flippen 2004, Oliver & Shapiro 2006).

Whites have higher rates of ownership of risky assets, such as stocks and businesses, net of other characteristics (Hurst et al. 1998; Keister 2000, 2004; Oliver & Shapiro 2006; but see also Hanna et al. 2010), which may contribute to the race gap in wealth as well (Altonji & Doraszelski 2005, Conley 2001b, Gittleman & Wolff 2004, Hurst et al. 1998, Keister 2000, Menchik & Jianakoplos 1997, Oliver & Shapiro 2006). As discussed previously, the evidence for the effects of self-employment and portfolio composition on wealth is plagued by endogeneity concerns. Thus, we view the evidence on the role of portfolio choice as strongly suggestive and believe future research should rigorously assess the implications of race differences in these factors for the race gap in wealth.

Race differences in marital histories may also contribute to the racial wealth gap (Addo & Lichter 2013, Campbell & Kaufman 2006), although endogeneity concerns persist. Incarceration is associated with reduced wealth (Maroto 2015), suggesting that racial disparities in incarceration experience may contribute to the racial wealth gap. Compared with the research on homeownership and portfolio choice, these literatures are much thinner and additional analyses are needed to clarify the role of marriage and incarceration in generating racial wealth disparities.

African Americans' wealth appears less responsive than whites' to their traits, including income, education, and marital history (Addo & Lichter 2013, Altonji & Doraszelski 2005, Campbell & Kaufman 2006, Oliver & Shapiro 2006). For earnings, a portion of the stronger association with wealth among whites is due to their greater representation toward the top of the earnings distribution, where the earnings-wealth association is stronger (Barsky et al. 2002). More research is needed to evaluate whether blacks' lower wealth returns to wealth-enhancing traits are due primarily to blacks' lower wealth positions—where changes in factors such as income and asset ownership may generate modest wealth improvements—or to race differences in wealth determinants that persist net of distributional differences. Again, this concern highlights the consequences of wealth operationalization decisions: African Americans' wealth may change less with other traits than whites' in absolute terms, but perhaps not in proportional terms.

Although most research on race disparities in wealth focuses on blacks and whites, recent studies have also included other racial and ethnic groups. Like African Americans, Hispanics are particularly disadvantaged relative to whites in absolute terms at higher points in the wealth distribution (Maroto 2016). Compared with whites, Hispanics have lower rates of homeownership, transition to homeownership more slowly, have higher rates of homeownership exit, possess less home equity, and experience smaller wealth benefits from homeownership (Flippen 2001, Killewald & Bryan 2016, Krivo & Kaufman 2004). Of course, the Hispanic population in the United States is diverse, and wealth patterns may differ by ethnicity, national origin, and immigrant generation. For example, median net worth is higher among Cuban Americans than among Mexican Americans, who in turn hold more wealth than Puerto Ricans; Mexican Americans who have resided in the United States for three generations or more accumulate greater wealth by midlife, on average, than second-generation Mexican immigrants, and both groups exceed first-generation Mexican immigrants in median net worth (Keister et al. 2015).

As for African Americans, Hispanic households had disproportionate rates of subprime mortgage loans leading up to the Great Recession and higher foreclosure rates in the ensuing crisis (Rugh 2015). Segregation may have increased these risks (Hwang et al. 2015), as did the timing and geographic settlement patterns of Hispanic immigrants, many of whom arrived in the sand states (Arizona, California, Florida, and Nevada) and entered the suburban homeownership market at the peak of the housing boom (Rugh 2015). These factors may have contributed to Hispanics' disproportional wealth losses during the recession (Kochhar et al. 2011).

Asians hold, on average, less wealth than whites, but this gap increases after adjusting for other wealth-relevant traits: Asians' wealth is lower than expected, given their relatively advantaged

positions in characteristics such as education, occupation, and income (Campbell & Kaufman 2006). As for Hispanics, the Asian population is highly heterogeneous and wealth patterns are likely to differ by national origin and immigration generation (e.g., Keister & Borelli 2015).

In the United States, variation in wealth by nativity status is modest compared with variation by race-ethnicity and national origin (Hao 2004, 2007). Characteristics including class of admission, naturalization status, English language proficiency, having completed some education in the United States, duration of residence in the United States, and skin tone appear to contribute to variation in immigrants' net worth (Akresh 2011, Campbell & Kaufman 2006, Painter 2013, Painter et al. 2016).

Gender. Among the unmarried, women's median wealth is less than men's (Chang 2010, Yamokoski & Keister 2006). Income and employment differences play key roles in explaining the gap, although female-headed households' lower savings rates (Conley & Ryvicker 2004) and women's investments in safer, lower-yield assets (Chang 2010, Ruel & Hauser 2013) may also contribute.

As described in Part II, most surveys measure wealth at the household or couple level. Using German SOEP data, which tracks solely held assets and the share owned of any jointly held assets, Sierminska et al. (2010) find that wealth gaps are largest in absolute terms among the married. The authors note that these findings question the assumption that wealth is a family-level characteristic, shared equally between spouses or partners. Using qualitative data on a US sample, Chang (2010) documents that wives typically have less access to and control over marital wealth. Together, these findings suggest that research on the processes and practices shaping spouses' abilities to access financial assets and determine their use would benefit if more household surveys measured individual-level ownership of assets among married couples.

Macro-level context. Macroeconomic circumstances, political institutions, and institutional structures also shape wealth levels and inequality. We have already touched on several plausibly salient macro factors, such as the rate of return relative to economic growth and the Great Recession. Institutionalized racism, including redlining and subprime lending, is also implicated in the race gap in wealth (Conley 1999, Massey & Denton 1993, Oliver & Shapiro 2006).

Cross-country differences in the distribution of wealth diverge from those based on income (Jäntti et al. 2008, Skopek et al. 2014). Socialist systems limit the accumulation of private wealth, diminishing the role of inheritance for asset accumulation (Szydlak 2004). More specific institutional and economic determinants of wealth levels and inequality are yet to be identified (Semyonov & Lewin-Epstein 2013). Further cross-national comparative research is needed to explain these differences and establish how wealth patterns are shaped by macro-level factors, such as specific welfare state arrangements (e.g., public pension systems). Higher inflation rates constitute a broader economic factor influencing wealth inequality by advantaging young, middle-class households' wealth positions at the expense of older and richer households (Doepke & Schneider 2006).

Policy. The topic of wealth accumulation among the poor is an active area of research and policy interest. Government transfer programs, including Aid to Families with Dependent Children/Temporary Assistance for Needy Families (AFDC/TANF) and Medicaid, may affect household wealth by reducing saving incentives, encouraging dissaving due to asset tests, or both, but evidence for these effects is mixed (Gruber & Yelowitz 1999, Hurst & Ziliak 2006, Sullivan 2006). Policies to increase savings incentives, such as matching contributions to savings accounts—which are sometimes contingent on using the savings for qualified expenditures such as purchasing a home, starting

a business, or financing education—may also spur asset-building among low-income households. However, whether these programs affect net worth—or merely incentivize the build-up of specific asset components at the expense of others—is less clear, and these effects are small relative to the scope of US wealth inequality (Duflo et al. 2006, Grinstein-Weiss et al. 2014, Mills et al. 2008, Schreiner & Sherraden 2007). Tax policies targeted at the other end of the wealth distribution, such as inheritance and wealth taxation (Bartels 2005, Beckert 2008, Piketty 2014), also provide fertile grounds for further sociological inquiry.

Since the 1930s, active federal government intervention in the housing market has increased the supply of available mortgage capital. Through lending programs administered by the Federal Housing Administration and the Veterans Administration, the creation of a secondary mortgage market through Fannie Mae and Freddie Mac, and the mortgage interest deduction, federal policy has expanded the proportion of Americans who could afford homeownership and likely increased the average size and value of homes purchased (for a review, see Shlay 2006). Policies that subsidize homeownership may promote asset growth for owners, but they also exacerbate inequality by widening wealth gaps by race and between owners and nonowners.

PART IV: CONCLUSION

Since the *ARS* reviews of the literature on wealth and wealth inequality by Keister & Moller (2000) and Spilerman (2000), wealth research has expanded considerably. A core argument advanced in these review pieces—that wealth is an independent and important dimension of social stratification—is now widely accepted. The intervening 17 years have also witnessed a proliferation of data, including the introduction of net worth measures into new surveys, expanded panel time periods that permit the analysis of wealth accumulation across the life course and across generations, and the incorporation of administrative data and other nonsurvey sources to supplement survey-based analyses. Wealth research is no longer in its infancy, but perhaps in its adolescence: Despite the growth of scholarship and data, researchers in this area have not yet reached consensus on fundamental modeling and methodological decisions. We hope that this review makes current challenges and stakes visible enough that, over the next decade, wealth research will move toward increased consensus.

We close by outlining several avenues for future research that promise to enhance the sociological understanding of wealth:

1. **Decisions about appropriately operationalizing net worth are not merely a methodological concern; they may significantly shape substantive conclusions.** We encourage using transformations that permit coverage of the entire range of net worth values (e.g., percentiles) and that align with the analytic intent. For research questions involving the wealth consequences of family structure, scholars should assess their results' robustness to alternative family size adjustments. We currently know little about heterogeneity in wealth's determinants across the wealth distribution and this heterogeneity's consequences for group-level disparities in wealth.
2. **Data availability has greatly expanded, but improvements are possible.** The collection of individual-level net worth data may shed new light on gender and generational disparities in wealth, particularly within households. We also hope that the range of data sources evaluated for their asset data quality will expand, enabling researchers to make informed decisions about dataset reliability. Finally, using administrative data to study wealth inequality appears promising as long as broad data access is possible.
3. **Examining which components of wealth are particularly beneficial for other outcomes may illuminate the causal processes at work.** Whether wealth is more valuable when it

is liquid and accessible, whether its effects operate primarily through cultural signals rather than through the financial resources themselves, and whether schools and neighborhoods account for parental wealth's benefits are all questions ripe for future research.

4. **Advances in establishing the causal role of endogenous processes (e.g., marriage, portfolio composition, self-employment, homeownership) are needed to illuminate the pathways generating wealth disparities by race, gender, and social origins.** This research must engage conceptually and methodologically with the challenges of assessing the long-term wealth consequences of factors that may both determine and be determined by net worth.
5. **Qualitative research is needed to expand our understanding of wealth generation and use.** Although some qualitative studies have described couples' joint wealth management strategies (Chang 2010) and parents' aspirations to use wealth to benefit their children (Johnson 2006, Shapiro 2004), future research could further explore the processes and considerations that underlie households' savings and portfolio decisions.
6. **Research on group disparities in wealth should continue to expand beyond black-white differences to include other racial/ethnic groups, nativity, and gender.** This research will necessitate consideration of different processes, such as immigration experience or the gendered consequences of parenthood.
7. **Comparative research can help reveal the macro-level determinants of wealth levels, intergenerational wealth mobility, and wealth inequality.** Economists dominate research on alternative taxation policies and their consequences for the wealth distribution, but sociologists are well positioned to elucidate how political and social institutions shape wealth inequality.

We consider wealth research to be at a particularly exciting juncture, having grown substantially over the past two decades and awaiting some important new advances. As with the transition to full adulthood, the development trajectory is difficult to predict. However, progress will undoubtedly continue given the rapidly expanding scope of data available and methodological advances. There is ample room and pressing need for increased scholarly attention to wealth in the twenty-first century, as wealth inequality reaches new heights in the United States and abroad.

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