

**Is the One Percent Permeable?**  
**Ascribed and Achieved Traits in**  
**Top Incomes, Top Net Worth, and Both**

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## ABSTRACT

It is well-known that the one percent control disproportionate quantities of income and net worth, but knowledge about who occupies these top economic positions is limited. We explore whether the one percent is permeable by studying the relative weight of ascribed and achieved traits in generating membership in top income and net worth positions. We make two important contributions. First, rather than focus on *either* income or net worth as previous research has done, we simultaneously study *both* income and net worth. To do this, we disaggregate the top one percent into three groups: top income earners, top net worth owners, and those at the top of both distributions; this takes seriously the nuanced relationship between the two resources and provides new insight into both resource concentration and the permeability of the top. Second, we develop a set of theoretically grounded propositions regarding the permeability of the one percent. We propose that (a) the degree to which there is overlap between the top one percent by income and net worth (i.e., the size of the third, joint income-net worth group) and (b) the particular mix of traits evidenced in members of the top three groups indicate whether the top is permeable. Analyses of the Survey of Consumer Finances both suggest that the one percent is permeable and offer insights into who occupies these top positions.

It is clear that the one percent—those at the top of the income and wealth distributions—disproportionately own the financial resources that provide economic, social, and political advantages in the United States. However, little is known about who occupies these top positions and whether it is possible to move into the top from other locations in these distributions. Since 2001, the top one percent by income have received 17% to 21% of total household income, and the top one percent of wealth owners have held 32% to 34% of net worth (Keister 2014). Understanding the factors that are associated with membership in these top financial positions is fundamental to sociological research on stratification and inequality: if inheritance is the primary driver of membership in the one percent, those in top financial positions may constitute an ossified social class that is accessible only to a privileged few who re-create themselves and maintain their advantages over generations. By contrast, if it is possible to achieve top status through education and work, then top positions are part of a more fluid social structure in which upward, downward, and lateral mobility are conceivable. These questions motivated early sociological research (Pareto 1991 [1916]; Parkin 1979; Weber 1978) and have been central to research on status attainment (Blau and Duncan 1967a; Kerckhoff 1976), mobility (McCall and Percheski 2010; Warren and Hauser 1997), and elite (Domhoff 2013b; Zweigenhaft and Domhoff 2014) research until recently. Yet, sociological interest in top income and net worth owners is relatively new and has not begun to address the permeability of top positions (DiPrete, Eirich and Pittinsky 2010; Keister and Lee 2014; Volscho and Kelly 2012).

Research on the one percent is more established in economics; however, the focus of this work has largely been on explaining inequality and has typically treated income and net worth separately rather than addressing the nuanced relationship between the two resources. That is, the primary goal of this research has been understanding why income inequality (Atkinson, Piketty

and Saez 2011; Piketty 2013) and, to a lesser extent, net worth (Edlund and Kopczuk 2009; Kopczuk and Saez 2004; Piketty and Zucman 2014) inequality have grown. Sociologists have made important contributions to this literature, but their focus has also been on explaining inequality (DiPrete, Eirich and Pittinsky 2010; Volscho and Kelly 2012). The few studies exploring who occupies top positions have most typically examined the components of total household income in order to understand whether rentiers (i.e., those receiving income primarily from capital investments) or the working rich (i.e., those receiving income primarily from wages and other work-related sources) dominate top positions (Atkinson, Piketty and Saez 2011; Piketty 2013; Piketty and Saez 2003). Although this research points to important trends in income sources, the focus on either income or net worth excludes households with high levels of one resource but not the other. As a result, those who have high net worth but not high income (e.g., retirees, nonworking wealthy whose capital income is below the top income threshold) or those who have high incomes but do not have top net worth (e.g., high salary earners who have not saved) are omitted. One important exception (Wolff and Zacharias 2009) used a wealth-adjusted measure of income to study income components, incorporating both income and wealth; however, this research did not study top wealth owners who do not have high incomes.

In this paper, we explore whether—within a context of extreme and growing inequality—the one percent is permeable. We accomplish this in two steps. First, we propose that in order to understand the relative weight of inheritance, education, and work in determining membership in the one percent, it is important to simultaneously study income and net worth. To do this, we disaggregate the top one percent into three groups: the top one percent of income earners, the top one percent of net worth owners, and the top one percent of both distributions. This disaggregation allows us to study income and net worth simultaneously and to take advantage of

the nuanced relationship between the two resources to better understand permeability. Second, we synthesize ideas from research on stratification and elite research to develop a theoretically grounded set of propositions regarding the permeability of top positions. We propose that studying three top groups will show that there is some permeability at the top that will be evident in (1) moderate levels of overlap between top income and top net worth positions (i.e., the one percent of each distribution will be in neither completely different nor completely the same households); and (2) a predictably different mix of ascribed and achieved traits associated with membership in each of these top positions. We explore these ideas empirically using household data from the 1989–2010 Survey of Consumer Finances (SCF).

### **Using the One Percent to Study Social Ossification**

Studying the one percent has its origins in early work on income and savings (Kuznets 1953). There were other early uses of the concept (Burchell 1989; Reich 1972), but it did not become common in academic research until the early 2000s (Frank 2000; Piketty and Saez 2003) and in popular discourse until the Occupy Wall Street movement in 2011 (Dunn 2011; Sharlet 2011; Stiglitz 2011). Studying the one percent provides a metric for research on advantaged households that is somewhat comparable to the poverty line used in research on the disadvantaged. Using other cutoffs to study top groups—such as the top five or top ten percent of households—can also be effective. However, studying the one percent has become common because the extremely high levels of income and assets accruing to this group underscore the magnitude of resource concentration. Moreover, the one percent is meaningful as a group because its members represent more than a loose affiliation of millionaires and billionaires; rather, evidence suggests that these households are unified in their unique lifestyles, social attitudes, political opinions, and efforts to shape public policies in their favor (Bartels 2008;

Bonica et al. 2013; Domhoff 2013a; Page, Bartels and Seawright 2013).

The primary focus of most recent research on the one percent has been identifying reasons for increasing income concentration. Explanations include growing managerial power (Bebchuk and Fried 2003, 2004; Fligstein 2002), changing nature of economic rents (Bivens and Mishel 2013), declining union power and slow wage growth for most families (Macunovich et al. 1995; McCall and Percheski 2010; Volscho and Kelly 2012), greater acceptance of very high salaries (Piketty and Saez 2006), and tax policies that affect how surpluses are divided between employers and employees (Piketty, Saez and Stantcheva Forthcoming). Two particularly intriguing explanations stand out in this work. First, a study at the market (rather than firm) level shows that compensation benchmarking and leapfrogging have contributed to changes in the income distribution (DiPrete, Eirich and Pittinsky 2010). Second, Piketty's (2013) work, which attracted popular attention shows that because the rate of return on capital has exceeded the rate of economic growth, the concentration of wealth has remained extremely high.<sup>1</sup>

Underlying some of this work is a concern with structural rigidity (i.e., who occupies top positions); however, the focus in this literature has been either high income or high net worth households, and the research has not included direct analysis of whether top earners inherited or were self-made. One analytic strategy that offers some evidence regarding structural rigidity involves decomposing total income into its earned and investment components to study whether the working rich (i.e., those with high levels of earned income) outnumber rentiers (i.e., those with high levels of investment income). For example, Piketty and Saez (2003) found that the working rich outnumber rentiers, a finding that has been used as evidence that inheritance has become a relatively less important—and work, a relatively more important—determinant of

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<sup>1</sup> See Keister (2014) and Neckerman and Torche (2007) for reviews of the income inequality literature.

membership in top positions. However, those with high net worth but not high incomes were excluded from this work. Another paper began to address the omission of high-wealth households by including unrealized capital gains and imputed rents to reckon income from wealth; this study shows that approximately half of the income of the top centile is work-generated, suggesting that the working rich and rentiers now share top positions (Wolff and Zacharias 2009). This approach is compelling because it comes closer to using both income and net worth to study permeability; however, the focus is still on income, and those with top net worth but not top income were excluded. Moreover, research in this tradition does not *directly* study the relative weight of inheritance and other factors in producing top households, perhaps overlooking more-nuanced processes that may be at work. For example, given that many of those in the top one percent by income both inherited and work for a family business at a time when CEO salaries are rising, inheritance might be associated with high incomes even when earned income surpasses investment income.

A small subset of research on the one percent focuses on top net worth holders, but data challenges in this literature contribute to contradictory findings about permeability. Two studies concurred with the income decomposition finding that inheritance is a less important determinant of top wealth membership, but both drew inferences from aggregate data: one observed that income inequality increased but net worth inequality was steady between 1980 and the early 2000s (Kopczuk and Saez 2004); the other found fewer women in top net worth positions even though inheritance is gender-equal (Edlund and Kopczuk 2009). In contrast, an important recent study using unique longitudinal household data on top net worth owners found that inheritance is still a strong predictor of top wealth ownership; unfortunately, this work used a constrained Norwegian cohort sample and proxy variables to measure inheritance (Hansen 2014). Also

informative is Domhoff's research on the wealthy (2013b), which shows that owners and top-level managers of large corporations work together to maintain their top positions, suggests little permeability at the top. Unfortunately, however, these ideas have not been studied using representative survey data on those in top positions.

### **Reconsidering Top Positions: Top Income, Top Net Worth, and Both**

To better understand the relative weight of ascribed and achieved traits in generating top financial positions, it is important to study income and net worth together because these two resources have a nuanced relationship that would otherwise be lost. Income (flows of money into a household) and net worth (total saved assets less liabilities) are jointly determined: having one can clearly increase ownership of the other. High income facilitates saving, and wealth generates income; thus, the correlation between income and net worth should be high. Yet, life course processes, cohort differences, interpersonal variation in saving propensities, structural differences in opportunities to save and invest, and business cycle variations combine to reduce the correlation and to suggest that a direct, simultaneous analysis of income and net worth would more effectively identify the correlates of membership in top positions. Moreover, isolating those with either top income or top net worth risks generating general conclusions about permeability of top positions from information on an overly limited group of households.

To study income and net worth simultaneously, we disaggregate the standard two top groups (i.e., top income, top net worth) into three groups: top income earners, top net worth owners, and those at the top of both distributions. These three groups differ conceptually. Those with either high income or high net worth are both clearly advantaged and potentially powerful but in qualitatively different ways and in different arenas. Those at the top of both distributions enjoy the advantages of both resources and may have additional influence given their unique



financial positions. Perhaps most importantly, members of these three groups are likely to have distinct financial profiles, and disaggregating them may reveal new facts about resource concentration and the relative weight of inheritance and other factors in generating membership in top positions. Those at the top of both distributions are particularly important: because it takes extremely high levels of both resources to be in this position, they are likely to have higher median income and net worth and to control larger portions of both than those who are at the top of one distribution. One scenario for membership in the top of both distributions involves having very high earned income. A high salary alone can lead to membership in the top one percent of the income distribution, but a high salary is often accompanied by asset-related compensation, such as stock options, that can lead to high net worth. Moreover, asset-related compensation can feed back into income through investment earnings, adding even more to both income and net worth. Similarly, very high net worth typically produces high levels of income, which, if accompanied by additional earned income, can lead to high values on both resources. In contrast, top income earners (who are not top net worth owners) and top net worth owners (who are not top income earners) will be less privileged than those at the top of both distributions.

### **Theoretical Underpinnings of Permeability and Membership in Top Positions**

Ideas from research on status attainment and elite research are useful starting points for understanding who occupies top income and net worth positions and why.

#### ***Status Attainment***

Status attainment research addresses how a person's origin combines with other factors to affect adult destination or well-being. Work in this tradition specifies the combinations of individual attributes (e.g., family background, education, work behaviors) and mechanisms that contribute to adult attainment. Attainment was traditionally measured as occupational status

(Blau and Duncan 1967b; McClendon 1976; Sewell, Haller and Ohlendorf 1970; Sewell and Hauser 1975), but the focus has expanded to include measures of income and net worth (Campbell and Henretta 1980; Keister 2005; Spilerman and Wolff 2012; Warren 2012). Status attainment research identifies several mechanisms that relate origin to adult status, including socialization, allocation, social psychological traits, and social network processes. Socialization is the influence of family and others have on young people's trajectories and outcomes (Sewell, Haller and Ohlendorf 1970; Sewell and Hauser 1972); allocation refers to the structural factors that select, classify, and assign individuals to groups (Kerckhoff 1976; Knottnerus 1987). These processes work with social psychological traits and social capital to facilitate, constrain, and direct individual outcomes. Although social psychological factors underlie status attainment processes, ideas related to the former are relatively understudied in attainment research. Another weakness of status attainment models is that they do not study the unique factors that lead to membership in top social and economic positions. Even status attainment research with a focus on wealth outcomes has devoted little attention to the behaviors and processes that operate at the top of the wealth distribution (Keister 2005; Spilerman 2000; Spilerman and Wolff 2012).

### ***Elite Circulation***

Elite theorists study more directly the combinations of traits and mechanisms that lead to membership in top social and economic positions. The ideas of one theorist, Pareto, have attracted little attention from sociologists, yet his work on elite circulation is particularly relevant here. Pareto defined elites as those who rank highest on social values or commodities, which can include power, knowledge, and even artistic ability or religious piety, but also includes scoring highest on the control of financial resources (Pareto 1991 [1916]).<sup>2</sup> Pareto also identified six

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<sup>2</sup> Mosca's (1939) ideas are similar. See Zetterberg (1991) for a detailed comparison.

motivators of human action and used two of them to explain elite circulation. First, *preservation* is the inclination to reaffirm the status quo and maintain prevailing circumstances and conditions. Second, *combination* is the inclination to invent, create, and otherwise engage in new activities. Although all people exhibit these traits at some times and to some degree, the traits are more dominant in some individuals. Pareto referred to those with strong preservation tendencies as *consolidators* and those with strong combination tendencies as *innovators*. Consolidators prefer consistency, safety, and security; attempt to maintain the status quo for themselves and their offspring; and are overrepresented among those in top positions given evidence that they engage in social closure (Domhoff 2013b; Weber 1978). By contrast, innovators make new things, take risks, and reinvest the rewards in additional, novel ventures; this category includes Schumpeter's entrepreneurs and Weber's modern capitalists (Schumpeter 1934; Weber 1968; Zetterberg 1991). These are not simply different labels for potential versus actual elites or for old versus new money: Pareto emphasized that new and established elites have both traits, and he conceptualized elite circulation as the process by which those for whom innovation is dominant replace—and then become like—those for whom consolidation is dominant.

### **Proposition 1: Permeability of the One Percent**

Two broad propositions regarding the one percent in the contemporary United States follow from these ideas. First, *some degree of permeability of top positions is likely*. Status attainment suggests that the right combination of socialization, selection, and social psychological processes will allow some people to move up from a lower socioeconomic status (SES) while many retain their high-SES origins. At the same time, less conducive permutations of socialization, selection, and social psychological factors will prevent others from retaining privileged positions.

Pareto's ideas provide a mechanism for understanding how this happens: elite circulation occurs as those in top positions fail to maintain their status and are replaced by those who were not formerly in top positions. Those who start in top positions are likely to have a strong tendency to consolidate, which is likely to manifest itself in exclusionary behavior. However, because those who start in top positions will also vary in their tendencies to innovate, they will vary in their educational outcomes as well. Those who start in positions other than the top may not deliberately attempt to move up, but if they have strong innovative tendencies, their educational attainment may lead to upward status movement, which may put them in top positions. In addition, those who are in top positions and have innovative tendencies may invest in other innovators (e.g., by providing capital to nascent entrepreneurs) and thus support both the new ventures of others and facilitate income and net worth attainment for them. Ironically, this investment might contribute to the replacement of the original investors at the top of the income and net worth distributions. The result is likely to be a continuous, fluid flow of people into and out of top positions; this flow is likely to be subtle rather than revolutionary, but it is likely to occur continuously nonetheless. As a result, vacancies in top positions will be filled by the upwardly mobile. Lateral mobility—or mobility among positions at the top of the income, net worth, and both distributions—is also likely, reflecting the nuanced relationship between income and net worth and people's changing financial situations over the life course.

Importantly, permeability does not deny inequality, the concentration of resources at the top of the income and net worth distributions, or the reality that structural constraints prevent access to top positions for some groups. Rather, we expect that within a context of high and growing inequality, the distribution of traits of origin leads to circulation of individuals into, out of, and across top positions. Despite disagreement about who occupies top positions, income

decomposition research concurs that there have been changes at the top (Atkinson, Piketty and Saez 2011), suggesting some amount of circulation; rates of both upward and downward net worth mobility are higher than we would expect by chance (Keister 2005); members of the Forbes 400 are less likely to have inherited their wealth or to have grown up wealthy (Kaplan and Rauh 2013); and some groups have experienced upward net worth mobility in recent decades (Keister 2007).

Although identifying empirical indicators of the permeability of top positions is challenging, one measure is evident in the notion of three top groups that we identify: the degree to which there is *overlap between top income earners and top net worth owners* (that is, the size of the third, joint income–net worth group) indicates whether there is permeability at the top. The degree to which top income earners and top net worth holders *either* are two completely separate groups *or* overlap with each other to create a third group at the top of both distributions is likely to vary across contexts and over time. We propose that the closer the overlap is to halfway between no overlap and total overlap, the higher the level of permeability. To understand why, imagine the extremes.<sup>3</sup> First, in a society with no overlap, saved incomes would contribute little to membership in top net worth positions; similarly, even the highest net worth would not generate as much income as that of top income earners. Thus, two distinct elite groups would exist—one with high income and one with high net worth—each with distinct advantages and potentially different interests. By contrast, in a society with complete overlap, net worth would be the dominant source of income, and saved income would simply reinforce the status of those with top net worth. Thus, a single, privileged group, or core economic elite, would monopolize both resources. In both extreme examples, there is high structural rigidity or limited movement

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<sup>3</sup> This idea is akin to Piketty’s hyperpatrimonial and hypermeritocratic societies (2013:264–65).

into, out of, or between (in the case of two groups) the core elite. A society with a more permeable elite, however, is likely to have a third group that is high in both income and net worth; that is, the top income and net worth groups are likely to overlap. In this scenario, the overlap is a snapshot at one moment in time of ongoing upward, downward, and lateral mobility.

For the top one percent, high permeability will be evidenced in an overlap that is near 0.5. That is, although the top one percent by income or net worth alone is 1% of the population by definition, the size of the group at the top of both distributions can vary. Specifically, overlap between the tops of the two distributions can vary from none or 0 (i.e., the one percent by income and by net worth are completely unique) to complete or 1 (i.e., the one percent by income and by net worth are exactly the same). Thus, for the contemporary U.S., we propose:

*Proposition 1: The percentage of the population that is at the top of both the income distribution and the net worth distribution will be close to 0.5%.*

## **Proposition 2: Membership in Top Positions**

The second broad proposition that follows from status attainment and elite circulation ideas is that in the contemporary U.S., *a different combination of traits will be associated with membership in the top one percent of income earners, the top one percent of net worth owners, and the top of both distributions.* Research on the one percent that studies either high income or high net worth households assumes that the same processes lead to membership in both top groups (Atkinson, Piketty and Saez 2011; Piketty and Saez 2003; Wolff and Zacharias 2009). However, because these three top positions are distinct and there is some permeability of each, a unique and predictable set of factors will be associated with membership in each top group.

Inheritance, for example, is often assumed to prohibit mobility and to lead directly to inequality (Brown, Coile and Weisbenner 2010; McNamee and Miller 1998; Piketty 2013; Wolff

2002). This is logical given that intergenerational transfers allow families to pass accumulated assets directly from one generation to the next, contributing to social ossification: if a small number of families retain access to large estates over the generations, those who are not born into privilege are unlikely to be able to move up the wealth distribution. Yet, studies of inheritance have drawn varying conclusions, with some taking for granted that inheritance reduces mobility (Keister 2005; Laitner 2001; Menchik and Jiankopoulos 1998; Piketty 2013) others (more in line with Pareto's ideas) arguing that inherited wealth accounts for a small portion of total net worth for the wealthiest households and that many of today's wealthiest families are entrepreneurs who created their fortunes recently (Gokhale and Kotlikoff 2000; Gokhale and Villarreal 2006). Janet Yellen, Federal Reserve Board chair, recently offered the intriguing proposition that although inheritance is concentrated at the top of the wealth distribution, these transfers are less concentrated than total wealth. She proposed that inheritances are likely to contribute a sizable additive effect for households with modest wealth, concluding that inheritances are a potential source of economic opportunity for most Americans (Yellen 2014).

In reality, the effect of intergenerational transfers is likely to vary across top groups and with the size of the inheritance. That is, Yellen's proposal may be overly optimistic. Receiving a large inheritance will certainly increase the likelihood of membership in all three top positions; but because an extremely large inheritance is required to generate a top income and transferring large incomes in other ways is more difficult (i.e., transferring ownership of a business is one way that incomes can be bequeathed), the effect of inheriting is likely to be stronger for membership in top net worth positions (i.e., top net worth only and top of both distributions) than for membership in top income positions. Inheriting can also dampen innovation by reducing the motivation to innovate and reducing incentives for personal achievement (Hurst, Luoh and

Stafford 1998; Keister 2000b; Spilerman 2000). Moreover, if households at the lower end of the income and wealth distributions who have substantial debt receive an inheritance, they may be inclined (or required) to pay off their debt before saving (Wolff and Gittleman 2011), suggesting a reduced long-term impact of inheritance for households with limited resources. For these reasons, the association between receiving a modest inheritance and membership in any of the three top groups is likely to be negative. Thus, we expect the following:

*Proposition 2A: A large inheritance will increase the likelihood of membership in all three top groups, but the effect will be stronger for membership in top net worth positions.*

*Proposition 2B: A modest inheritance will reduce the likelihood of membership in top positions.*

The effect of education on top memberships is also likely to vary in ways that are consistent with permeability. Overall, education is likely to be an important predictor of membership in top positions because human capital is positively associated with both income and net worth at all levels of SES background. Those from privileged families (i.e., those who also inherited large fortunes) are likely to have educational advantages as well. For those from less privileged backgrounds, human capital is likely to be an important contributor to adult income and net worth. Although we expect education to have a strong and positive effect on membership in both top income and net worth positions, the effect is likely to be stronger for top income positions after inheritance is controlled, reflecting the human capital effect on earnings for those from more modest backgrounds. In addition, human capital is more directly tied to labor income and thus facilitates mobility into top income positions more readily than it does top net worth positions:

*Proposition 2C: High levels of education will increase the likelihood of membership in all three top positions, but the effect will be stronger for membership in top income positions.*



Similarly, self-employment, which is influenced by both ascribed and achieved components, is likely to have varying effects on membership in each of the three top positions. Not only does self-employment embody the notion of innovation (Pareto 1991 [1916]), but mobility research has also found a strong, positive effect of self-employment on upward mobility (Aldrich, Renzulli and Langton 1998; Keister 2005). The effect of self-employment, however, is likely to be weaker than inheritance and education in predicting membership in any of the top three positions because the self-employed vary considerably in both income and the ownership of business-associated assets. Indeed, evidence suggests that incomes and net worth among the self-employed are more highly skewed than incomes and net worth for employees (Kim, Aldrich and Keister 2004). Specifically, a small group of the self-employed earn much more than their self-employed peers, inflating the mean income for all those who do not work for others. Similarly, the self-employed whose businesses are relatively large (i.e., in terms of revenue and employees) are likely to have relatively high levels of business equity, thereby contributing to high levels of net worth and inflating the mean net worth for all those who are self-employed. That is, the self-employed who are in the upper tails of the income and net worth distributions for the self-employed are likely to occupy top income and net worth positions. Thus, owning a large business will increase the likelihood of membership in both top income and top net worth positions. Nevertheless, self-employment is unlikely to allow an individual to overcome the well-established effects of inheritance and educational attainment. Specifically, we expect:

*Proposition 2D: Self-employment will increase the likelihood of membership in all top three positions, but the effect will be weaker than that of inheritance and education.*

Of course, inheriting alone will not guarantee membership in top positions, and permeability of the top implies that some individuals who are born privileged will not remain so.

For example, those who are in top positions because they inherited but do not go on to complete education or otherwise distinguish themselves are likely to be replaced. It follows, then, that those who inherit and *either* achieve high levels of education *or* start or inherit a business are likely to remain in top positions. Permeability of top positions also suggests that those who did not inherit may become members of the top three positions. Naturally, however, the road to a top position is more difficult for those who do not inherit; for this reason, we expect that the combination of attaining high levels of education and becoming self-employed represents the most likely path to membership in top income and top net worth positions. Thus, we propose:

*Proposition 2E: Inheritors who also attain high levels of education or are self-employed will increase their likelihood of remaining in top positions.*

*Proposition 2F: For those who did not inherit, attaining high levels of education and becoming self-employed represent the most likely path to membership in a top position.*

## **Data and Research Methods**

To study these ideas empirically, we use data from the Survey of Consumer Finances (SCF). The SCF is a triennial survey of U.S. households collected by the Federal Reserve System since 1983 that is ideal for this study because it uses a dual-frame sample designed to adequately represent all households, including top income earners and net worth owners. The sample provides good coverage of both broadly distributed variables (e.g., checking accounts) and narrowly held variables (e.g., corporate stock) (Kennickell and Woodburn 1999). A multistage national area probability sample ensures representation of broadly distributed traits; a list sample, including an oversample of high-income households identified with Internal Revenue Service data (Johnson and Moore 2005; Kennickell 2007), ensures representation of variables that are narrowly held and highly skewed in ownership. Although the high-income respondents are not

specifically chosen to be high net worth, the resulting sample includes households at the top of both the income distribution and the net worth distribution (Kennickell 2007).<sup>4</sup> The SCF contains detailed information about household income, assets, debts, and related financial information; it also contains detailed information on inheritance, education, and other demographic traits useful for controlling the various factors that contribute to income and net worth ownership (Johnson and Moore 2005). We use SCF data for 1989, 1992, 1995, 1998, 2001, 2004, 2007, and 2010; we also use a pooled version of the data in which we combine all cross sections into a single large data set. We use the consumer price index (CPI-U) to inflate values to 2010 dollars.

One downside of the SCF is that it is a repeated cross-sectional survey. Ideally, we would use longitudinal data that would allow us to identify life trajectories and movement into and out of top positions. Unfortunately, no data are available that include longitudinal information and sufficient data on top income earners and net worth owners. The National Longitudinal Survey of Youth, the Panel Study of Income Dynamics, and the Survey of Income and Program Participation are commonly used to study income and wealth ownership over the life course, but none of these contain the data needed to understand who occupies top positions.

### ***Variables***

The dependent variables in our regression models are binary indicators of membership in three mutually exclusive groups: the top one percent of (1) income earners only, (2) net worth owners only, and (3) both income earners and net worth owners.

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<sup>4</sup> The SCF excludes households identified as Forbes 400 members using current information at the time of the survey. Because the Forbes 400 are the top 0.00034% of households, few of them are likely to be sampled; thus, only a small number of respondents will be excluded. This exclusion may affect income and net worth estimates, but the effect is likely to be minimal.

**Income.** Total income is the sum of income from all sources for all members of responding households, including wages; self-employment and business; taxable and tax-exempt interest; dividends; realized capital gains; food stamps and other government transfer programs; withdrawals from pensions/retirement accounts; Social Security; alimony; and miscellaneous sources. Investment income and stock options are included as interests/dividends, capital gains, or miscellaneous income when executed in the year prior to the survey. Unexecuted stock options are not included because their value is uncertain until the exercise date. Capital gains and stock options that were executed prior to the calendar year preceding the survey are reflected in household assets. Income from sources other than wages and business/self-employment constitutes a large portion of total income for the self-employed, and self-employed respondents have more-diversified income portfolios than those who work for others. For the self-employed, 46.7% of income comes from wages; 39.9%, from self-employment; 6.0%, from interests or dividends; and 7.0%, from capital gains. Comparatively, wages constitute 90.1% of income for those who work for others. Only 0.58% of households report negative or zero income. Because businesses often report losses, more self-employed households (1.41%) report negative or zero income than those working for others (0.21%). Similarly, a small percentage (0.03%) of those whose capital losses exceed their other income report negative income. Sensitivity analyses indicated that negative and zero income values do not change our results.

**Net worth.** Net worth is total household assets (financial plus nonfinancial) less total liabilities. Financial assets include transaction accounts and certificates of deposit, bonds; publicly traded stocks, pooled investment funds, retirement accounts, cash value of life insurance, other managed assets (e.g., annuities, trusts); and miscellaneous financial assets (e.g., cash, future proceeds, and business items). Nonfinancial assets include vehicles, the primary

residence and other residential real estate, net equity in nonresidential real estate, net equity in privately held businesses, and miscellaneous nonfinancial assets (e.g., jewelry, antiques, art objects). Omitting vehicles, jewelry, antiques, and art does not change our results because these assets have little value for most households. Debts include principal residence debt (e.g., mortgages, home equity lines of credit), lines of credit other than those secured by the primary residence, debt for other residential property, credit card debt, installment loans, and other debt (e.g., loans against pensions, loans against life insurance, margin loans).

**Top income and net worth.** We define the threshold for membership in the top one percent of each distribution empirically: we identify the dollar value that includes one percent of the sample, and we identify those with greater than the threshold as members of the top one percent. A small number of cases (52 or fewer) have incomes or net worth equal to the threshold, which results in our top one percent occasionally exceeding 1% by a small margin. For example, 16 households in 1989 and 52 households in 2001 had an income equal to the 1% threshold for those years, resulting in 1.02% and 1.03% (respectively) of households considered in the top one percent. Similarly, for two years (1998 for income, and 2001 for net worth), the threshold is the midpoint between two reported income/net worth values, resulting in slightly less than 1% (0.98% and 0.99% respectively) of households falling in the top one percent. For years in which no households have income or net worth equivalent to the threshold, the top one percent is exactly equal to 1%. Because income has a smaller variance than net worth, income is more often exactly at the threshold than is net worth. These sorting rules affect few households, and using different sorting strategies does not change our results substantively.

**Independent variables.** We use four dichotomous indicators to measure *inheritance*: (1) the top 1% of inheritors are those who received an inheritance above the 99<sup>th</sup> percentile for all

households; (2) the next 9% of inheritors are those who received an inheritance between the 90<sup>th</sup> and 99<sup>th</sup> percentiles; (3) the remaining inheritors are those whose inheritance was less than the 90<sup>th</sup> percentile; and (4) non-inheritors. The SCF asks respondents to report the total value of up to four inheritances received and the dates on which they received those inheritances; dates are recorded for the first three instances, and the fourth includes all other funds inherited. We sum of the four reported inheritances and inflate them to 2010 dollars; our percentiles are year-specific. We experimented with using a dichotomous indicator for ever inheriting and a continuous measure of the amount inherited, but the four dichotomous measures more accurately reflect the patterns in the data. We also use dichotomous (less than college, college degree, graduate degree or more education) measures of *education* because the data reveal a clear difference between having a graduate degree and the other educational levels. Our *employment* variables are not working, self-employed, working for others, and retired. We include a dichotomous indicator of *occupation*: managerial/professional, with other occupations omitted. We explored including more fine-grained occupation indicators, but the dichotomous variable produced the best-fitting models. Finally, we control for gender, age and age squared, race/ethnicity, and marital status. Because preliminary analyses indicated that the dichotomous race/ethnicity and marital status controls produced the best-fitting models, we do not include more-detailed indicators of these concepts. Finally, we include dichotomous indicators of survey year, omitting 1989, to control for changes in economic and social conditions over time.

### ***Research Methods***

We use descriptive statistics and multinomial probit regression models to study our propositions. First, we compare the financial profiles of those in the top of the income, net worth, and both distributions between 1989 and 2010. Next, we examine the size of the overlap between

the top one percent by income and the top one percent by net worth (i.e., the size of the group that is in the top one percent by both resources) to provide an estimate of the degree of permeability of top positions. Finally, we use multinomial probit models to evaluate the relative importance of various influences on being in the top of the income and net worth distributions. The multinomial probit model simultaneously computes a set of probit regression equations predicting membership in three mutually exclusive groups: (1) the top one percent by income only, (2) the top one percent by net worth only, and (3) the top one percent by both income and net worth. The omitted (i.e., base) category is membership in none of the top groups. The multinomial probit model is a generalization of the probit model that is used when the dependent variable has multiple categories (Greene 2009). An alternative method of estimating these models is to use a multivariate probit model, another generalization of the probit used to jointly estimate correlated binary outcomes and that includes a term estimating the correlation between the occurrence of both outcomes. We experimented with using multivariate probit as well and found no substantive differences in our results. Because we want to understand these as three separate but interrelated groups, we report results from the single, multiclass classification rather than independent but correlated models of each outcome. We also considered using logistic regression; however, probit models produce more-consistent estimates when the dependent variable includes rare events and probabilities close to 0 or 1.

### ***Sample Weights and Imputed Values***

The unique SCF sample design, the potential for nonresponse bias, and the inclusion of multiple imputations require careful weighting; and the SCF provides a specially constructed analytic weighting variable for this purpose (Kennickell 1999, 2000; Kennickell and Woodburn 1999). The weights correct for three issues. First, they correct for selection into the original

sample. The two-stage sample is critical for accurate population estimates of top incomes and wealth, but it is not an equal-probability design. The analytic weights combine information from the two samples to provide accurate population estimates. Second, the weights correct possible bias from nonresponse to the survey and nonresponse to particular survey items. Some evidence suggests that SCF response rates are low compared with other major government surveys, such as the CPS (Kennickell 1999), and nonresponse tends to be higher for pecuniary variables (e.g., net worth, income). The analytic weights adjust for these issues. Third, the weights provide a measure of the frequency with which households similar to those in the sample could be expected to be found in the population. That is, the total sum of weights for all observations across the five imputations is the total number of households in the United States for each survey year. Thus, the analytic weights provide an efficient way to compute descriptive statistics and to run multivariate analyses of continuous dependent variables. However, the multivariate analysis of categorical dependent variables does not allow for using analytic weights; it requires sample (or probability) weights in which the sum of the observations is equal to the sample size. We construct sample weights by dividing the analytic weight by the average analytic weight for each survey year, and we use these constructed sample weights in the regression analysis.

An important strength of the SCF is that the Federal Reserve Board provides five imputed values (i.e., replicates) for each household. The primary focus of the imputations is pecuniary (e.g., net worth, income) rather than nonpecuniary (e.g., race, age) traits. Indeed, very few of the nonpecuniary traits are imputed: gender and marital status are not imputed, 0.26% of households have imputed race, 0.66% of households have imputed education, 0.08% of households have imputed employment status, 0.45% of households have imputed occupation, and 0.08% of households have imputed age. We treat the five replicates as separate observations for three



reasons. First, there are large differences in net worth and income for households with the same nonpecuniary traits. Only 18.2% of households in the SCF have the same value for net worth across the five imputations, and less than one-half (48.6%) of households have the same income value across the five imputations. For our dependent variable (membership in one of the top three groups), only 31.8% of households have consistent membership across imputations. That is, only about one-third of households are consistently in the top income only, top net worth only, or top of both groups across replicates. Second, the same household often has a different value on the weight variable across imputations depending on its imputed net worth and income values. It follows that to create population estimates (our focus), it is necessary to treat the replicates as separate observations. Third, the SCF defines the population as total U.S. households (i.e., 117.6 million in 2010). The weight variables are created such that the sum of the weights across observations for each replicate is one-fifth of the U.S. population, suggesting that the SCF intends for the five imputations to be treated as independent observations.<sup>5</sup>

(Table 1 about here)

### **Results: Financial Profiles of the Three Groups**

Table 1 illustrates the distinctive income and net worth holdings for the three top groups. The columns show estimates by year as well as for the pooled 1989–2010 data. The income and net worth thresholds are the lowest observed value for each measure; these thresholds indicate the income and net worth required for membership in the one percent. As we would expect, those

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<sup>5</sup> Running our multivariate analyses using the imputed values as five estimates for the same household decreases our sample size from 177,565 to 35,513; it also increases the standard errors and makes some previously significant variables insignificant. However, treating the imputed values in this way does not change the substance of our results.

with only top income have higher median income and receive larger portions of total household income than those with only high net worth in each year. In the years prior to the 2007–2009 recession, the income gap between these groups became notably larger, consistent with research showing that income gains to the top one percent of income earners grew during the economic bubble (Smeeding et al. 2011). The income threshold is also instructive: for those with top income only, the income threshold ranged from over \$343,000 in 1992 to more than \$727,000 in 2007. In contrast, for those with top net worth only, the income threshold was zero in every year except 1989 (when it was only \$26,391). Of those in the top one percent by net worth only, 1.69% have zero income, 89.6% of whom are self-employed (details available upon request).

For each year, those with only top net worth have higher median net worth and own larger portions of total net worth than those with high income only. Again, that gap grew in the years prior to the 2007–2009 recession, as other work on that period suggested it would (Wolff, Owens and Burak 2011). The net worth threshold underscores how different these groups are. For those who are top net worth only, the net worth threshold ranged from just under \$3.5 million in 1995 to more than \$8.7 million in 2007. For those with top income only, the net worth threshold is negative in the majority of years, exceeding –\$20 million in 1989, 1995, and 1998.

Those in the top of both distributions are distinct from those in the other two groups and are extremely privileged: they have higher median income and net worth and control higher percentages of each resource than those in the other two groups in each year. Median income for those in the top of both distributions ranged from nearly \$700,000 in 1992 to more than \$1.5 million in 2007; they received between 6.65% and 14.42% of total household income. Notice that summing the percentage of total income earned by those in the top one percent by income only and the percentage earned by those in the top of both distributions yields the percentage that

is typically cited as being earned by the top one percent of income earners; a significant portion of this is earned by those at the top of both distributions. Similarly, those at the top of both distributions had median net worth ranging from more than \$6.5 million in 1992 to nearly \$16 million in 2007, and they owned between 16.94% and 22.26% of total household net worth. Note that those in the top of both distributions are not the same as the top 0.5 percent of either distribution. The top 0.5 percent are certainly privileged, and the top 0.5 percent of income earners have a higher median income and greater portions of the total house income than the top of both distributions (see Appendix Table A). Likewise, the top 0.5 percent net worth holders have higher median net worth and larger shares of the total household net worth. Nevertheless, those in the top of both distributions are distinctive in that they have higher net worth profiles than the top 0.5 percent of income earners and higher income profiles than the top 0.5 percent net worth holders. Moreover, 38.55% of the top 0.5 percent income earners are not the top one percent net worth holders, and 44.52% of the top 0.5 percent net worth holders are not the top one percent income earners (not shown). This suggests that those at the top of both distributions are not simply the top 0.5 percent of either the income or net worth distributions.

(Figure 1 about here)

### **Results: Overlap Size**

The size of the overlap between the top of the income and net worth distributions contains important initial evidence regarding the permeability of the one percent. To be clear, we are not asking why resources are more concentrated at the top of the distributions of income and net worth; rather, this result speaks to who occupies top positions within a context of growing inequality. Figure 1 shows that the overlap has been relatively stable recently, ranging from .41 to .54. The average overlap for the eight years included in the figure is .46. Both the range of values and the average indicate that there is neither complete overlap nor complete separation of

the top groups. In fact, the overlap value is very close to .5, consistent with our expectation that this value would approach the midpoint between 0 and 1.<sup>6</sup> Whereas it is difficult to imagine a society in which there is complete nonoverlap (i.e., overlap of 0)—having completely distinct top income earners and net worth owners—the opposite (i.e., overlap of 1) is relatively easy to envision. Indeed, much of the sociology literature on elites assumes or explicitly argues that the elite (which it takes as synonymous with the one percent) is a coherent group that is impervious to outside entrants (Khan 2012). Similarly, wealth and inheritance research often suggests that membership in top positions is virtually guaranteed to be passed across generations, implying that outsiders are highly unlikely to have access to these positions (Keister 2000a; Spilerman 2000). Although there is no question about the advantages of a privileged upbringing, Figure 1 suggests a more-nuanced picture than the elite and wealth literatures suggest. Having high income certainly increases the likelihood of membership in the top net worth group, with the majority of top net worth holders also in the top one percent by income. Yet, the incomplete overlap of the tops of the two distributions suggests that there are multiple combinations of traits that can contribute to membership in top positions. Also noteworthy is that the overlap is relatively constant over time except for the changes around 2004, during the economic bubble and lead-up to the financial crisis. Of course, the overlap provides only preliminary evidence that the one percent is permeable. A more thorough understanding of who occupies top positions requires a direct consideration of how ascribed and achieved traits are associated with membership in top positions. Our remaining analyses explore this question.

(Table 2 about here)

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<sup>6</sup> The size of the overlap is about 0.5, or half of the top one percent. The general pattern does not change if we use different cutoffs (e.g., top five percent, top ten percent) to define top income earners and top net worth owners.

## **Results: Constant Overlap Despite Changing Income Composition**

There is debate in the literature on the one percent about the income composition of top earners. Early evidence (Piketty and Saez 2003) suggested that the working rich (i.e., those with predominantly labor income) had replaced rentiers (i.e., those with predominantly capital income) at the top of the income distribution. Other work, however, has found that capital income is an increasingly important component of the total income of top earners (Wolff and Zacharias 2009; Piketty 2013). Our objective is not to address this debate, but if either of these changes holds, it might follow that the overlap between the top one percent of the income and net worth distributions would be changing rather than remaining stable.

Yet, we find that the overlap between top income earners and top net worth holders has been relatively constant. There are two broad reasons that the overlap would remain stable even if income composition is changing. First, the composition of total household income varies considerably for those in the top by income, by net worth, and by both; and it is this variation, rather than the size of capital or labor income alone, that affects the overlap (and thus permeability). Table 2a shows the distribution of those in the top one percent of capital income earners across the top three groups in our analyses, where capital income includes interest, dividends, and capital gains. The table shows that large portions of top capital income earners are not in any of our top groups: for example, in 1989, 13.45% of top capital income earners were in the top one percent by income only, 9.08% were top net worth owners only, a mere 26.96% were in the top of both distributions, and 50.5% were not in any top group. The pattern is similarly high across all years in our data.

Most importantly, Table 2a shows that capital income is not strongly associated with net worth holdings. Indeed, the correlation between capital income and net worth is rather modest (at

.35), and 54% to 64% of those in the top one percent by capital income are not in the top one percent by net worth. As a result, the overlap between top income earners and top net worth owners would not necessarily increase even if income composition were changing.

Similarly, other changes to the income composition of top earners do not change the overlap size substantially, at least in the short run. For example, as Table 2b demonstrates, growing wage income accruing to top income earners does not change the overlap; this table shows the location in our top three groups of those whose wage income puts them in the top one percent of wage income earners. Consistent with the finding that wage income has become more important for top earners over the period we study (Piketty and Saez 2003), 48.16% ( $27.24 + 20.92$ ) of top wage earners were at the top of the income distribution in 1989, but 57.55% ( $37.50+20.05$ ) were at the top of income distribution in 2010 (Table 2b). Yet, this change does not affect the overlap size because the top three groups consist of qualitatively different members (see Table 1 as well). Table 2c shows the distribution of several combinations of those in the top one percent by wage, business, and capital income. In this table, the columns represent all those in the one percent of each top group (i.e., the columns sum to 100%). Among top income households, those in the top one percent by wages are the majority group (43.7%), followed by those in the top one percent by business income (19.3%) and households not in the top one percent by wage, business, or capital income (10.8%). By contrast, among top households of both income and wealth distributions, households with multiple top income sources constitute the majority group (48%). Thus, overlap size is a function of the degree to which households have multiple income sources rather than the extent to which one source dominates total income. The very long-term effect of these income composition changes on the overlap size may be more pronounced, but the short-term effect is minimal.

The second reason that the overlap is likely to stay constant despite changing income composition is that other social processes override changing economic conditions. Underlying all our findings is the fact that social factors—including status attainment processes and elite circulation—are operative. Life course processes are particularly important contributors to the composition of the top three groups that we study. Younger high-earners are more likely to be members of the top one percent by income only, the middle-aged rich are more likely to be in the top of both distributions, and the older rich are likely to be at the top of the net worth distribution only. These life course patterns have not changed markedly in recent decades, and thus the overlap has not changed. Finally, inheritance, human capital, entrepreneurship may also contribute to the stable overlap size. Irrespective of changes in macroeconomic factors, social factors consistently affect mobility prospects. That is, the three groups seem to have distinct members who are defined by their backgrounds. As long as the members of top three groups are selected with social filters, the overlap size should be constant over time.

(Table 3 about here)

### **Results: Demographic Profiles of the Three Groups**

Demographic profiles of the three top groups, shown in Table 3, provide additional evidence of some permeability of top positions.<sup>7</sup> The table also begins to identify the combinations of traits that lead to membership in top positions and the mechanisms through which households arrive at these positions. The table shows that members of each of the three top groups were more likely than other households to inherit, and when they did inherit, those at the top inherited larger amounts than the rest of the population. More importantly, the three top

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<sup>7</sup> In the “everyone else” column in Table 3, 72% are male because the SCF includes gender for head of household. The household is our unit of analysis because most assets are owned jointly by married couples; as a result, we do not deal directly with gender differences.

groups clearly differ in inheritance: those in the top of the net worth distribution only and those in both distributions were more likely to inherit than those at the top of the income distribution only. Consistent with Proposition 2A, the amount inherited is much larger for those in top net worth positions (net worth only and top of both distributions) than for those in top income positions: mean inheritance for those in top income positions (when we calculate the mean including all respondents) is slightly less than \$170,000. By contrast, top net worth owners received more than \$930,000 in inheritance, and those at the top of both distributions inherited the largest amounts, at more than \$1.1 million. Differences in inheritance across top groups are even more extreme when we calculate the mean for just those who inherited any amount. In this case, the amount inherited by those at the top of both distributions is more than \$2 million greater than the amount inherited by those at the top of the income distribution only. Naturally, these extremes are less pronounced when we consider the median, but the median inheritance is still larger for top net worth owners than for top income earners. We do not include the median inheritance for all respondents because the value is zero across all groups. Notably, median inheritance is lower for those at the top of both distributions than for those at the top of the net worth distribution only. One conclusion that could be drawn from this is that inheritance can increase the odds of being a member of the one percent by net worth, but it does less to move people into top income positions. Given that high incomes can ultimately lead to high net worth, some individuals might follow a path that starts with entry into top income positions and eventually leads to membership in top net worth positions as well. Of course, high net worth also contributes to high income, and those who inherit, in particular, might follow this path .

(Figure 2 about here)

Figure 2 illustrates the relationship between inheritance and membership in the one



percent slightly differently: it shows the percentage of households, by level of inheritance, that are in our three top income and net worth groups. Along the horizontal axis is the percentile for amounts inherited. For example, p99 represents those whose total inheritance places them in the top one percent of inheritors. That is, these are bivariate relationships between the amount inherited and membership in any of the three top groups. As the figure illustrates, those who inherit relatively small amounts are not likely to be members of any of the top groups.

Membership in the one percent begins to increase only for those whose inheritance was above the 90<sup>th</sup> percentile, and even then, the relationship is relatively unremarkable. The influence of inheritance at the 98<sup>th</sup> percentile, however, is striking: membership in top net worth positions increases dramatically. Above the 99<sup>th</sup> percentile by inheritance, membership in the top one percent by net worth is virtually assured. Indeed, it is this relationship—which is visible in popular fascination with wealth—that likely creates the foundation for the assumption that inheritance is a guarantee of top status (Khan 2012). Yet, Figure 2 shows that the reality is more nuanced: even receiving an extremely large inheritance (i.e., in the 99<sup>th</sup> percentile) does little to affect membership in top income positions, and it has only a modest bivariate association with membership in the top of both distributions. This pattern is consistent with prior literature studying membership in the one percent by income (indirectly using income components) that has found an overrepresentation of earned income among top earners (Piketty and Saez 2003). Again, though, because our finding is bivariate, it is only suggestive.

The descriptive statistics are agnostic on the role of education in determining membership in top positions, but they are consistent with our expectations regarding self-employment and membership in the one percent. Table 2 shows that educational levels are higher for members of all three top groups than for other households, but it shows no notable difference in educational

levels across the members of the top three groups. In contrast, the percentage of those in the top three groups who are self-employed varies across the three groups. Members of all three groups are more likely to be self-employed than those who are not in the one percent. Consistent with Proposition 2E, the three top groups differ on self-employment: 47% of top income earners, 51% of top net worth owners, and 58% of those in the one percent by both resources are self-employed. This suggests that self-employment may be an important path to top income and net worth; we explore this in more detail in the multivariate models included in upcoming Table 4.

Other demographic traits also provide insight into the distinctiveness of the three top groups. Those in the top one percent only by income were very likely to be employed by someone else and to be managers, suggesting that they might be top CEOs; that is, many are likely to be corporate managers who have high salaries but not enough net worth to place them in the top of the net worth distribution. Unfortunately, the SCF does not provide sufficient information to determine whether the respondent is a corporate CEO or to identify particular professions. Those who are top income earners and not top net worth owners are relatively young, consistent with the idea that they may still become members of the top of both distributions. The group of top net worth owners who are not also top income earners includes large percentages of the self-employed and retirees; notably, the self-employed may still become members of both top groups, but retirees, who may once have had top incomes as well, are unlikely to become top income earners (or return to the top of both distributions).

(Table 4 about here)

### **Results: Inheritance, Education, and Self-employment**

The results shown in Table 4 show more clearly that multiple combinations of traits contribute to membership in top positions, providing support for our proposal that different traits

are associated with membership in the top one percent of income earners, the top one percent of net worth owners, and the top of both distributions. Recall that the multinomial probit models simultaneously compute a set of probit regression equations predicting membership in our three top groups. Consistent with Proposition 2A, Model 1 shows that receiving a large inheritance (i.e., top one percent or the next nine percent of inheritors) is strongly associated with membership in each top group; but the association is stronger for membership in top net worth positions (coefficients = 1.452 and 1.227, respectively, for top net worth and top income and net worth) than for top income positions (coefficient = 0.48). The coefficients suggest that being among the top one percent of inheritors increases the probability of membership in the top net worth only and in the top of both distributions by 1.1% and 0.75%, respectively.<sup>8</sup> By contrast, it increases the probability of membership in the top income group (only) by just 0.11%.

Those who receive a modest inheritance (i.e., below the 90<sup>th</sup> percentile) are *less* likely than non-inheritors to be members of any of the top income and net worth positions, consistent with Proposition 2B. Supplementary analyses (not shown) indicate that the negative effect is driven largely by the upper tails of the inheritance distribution: inheritors who receive an amount just below the 90<sup>th</sup> percentile do not enter top income or net worth positions. For those in the 83<sup>rd</sup> through 89<sup>th</sup> percentiles by inheritance, inheritance has a negative effect on membership in top income and net worth positions. Although we cannot say with certainty that lack of motivation caused by inheriting a modestly large sum accounts for this pattern, the finding is consistent with that interpretation.

Educational differences across those in top income and net worth positions appear minor in the descriptive statistics (Table 2), but education is strongly and positively correlated with

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<sup>8</sup> We report average marginal effects, an estimate of the population average marginal effect, because it controls sample composition and is thus more robust (Greene 2011; Mitchell 2012).

membership in these positions when other factors are controlled (Table 4, Model 1). Consistent with Proposition 2C, high levels of education increase the likelihood of membership in all three top positions; however, the effect is stronger for membership in the top one percent by income (coefficient = 1.118) and the top of both the income and net worth distributions (coefficient = 1.103) than for the top one percent by net worth (coefficient = 0.765). Holding a graduate degree, on average, increases the probability of membership in top net worth (only) positions by only 0.54%, but it increases the probability of membership in top income (only) positions and in the top of both distributions by 0.92% and 0.72%, respectively. The models shown in Table 4 include measures for having a graduate degree and having a college degree and omit those with less than a college education. Although a college degree is positively associated with top membership, the effect of having a graduate degree is stronger. The finding that education, net of other factors (including inheritance), increases membership in top income positions more than membership in top net worth positions adds additional evidence that top positions are permeable: it suggests that top income positions may be a gateway to individual membership in the one percent and may portend longer-term family well-being if that income is also translated into high levels of net worth. The somewhat stronger effect of having a graduate degree compared with a college degree is noteworthy, as well. Although status attainment research has acknowledged the critical role of educational attainment in generating adult status, a focus on differences between college completion and completion of graduate programs has been minimal in prior research. This is partly because when early status attainment models were developed, graduate school degrees were more rare than they are today (Sewell, Haller and Ohlendorf 1970; Sorensen 1979; Treiman and Terrell 1975). Yet, contemporary research using a status attainment framework has found relatively minimal differences in some outcomes, including net worth status, between

those with college degrees and graduate school degrees (Keister 2005; Warren and Hauser 1997). Our finding suggests that, at least for understanding membership in top positions, this distinction is important. Ideally, we would be able to differentiate within the broad category of graduate degrees to identify the importance of types of degrees (e.g., business, law, medicine, and various doctorates), but this level of detail is not available in the SCF.

Self-employment is another important correlate of membership in top positions. Consistent with Proposition 2D, self-employment is strongly associated with membership in all three top positions, although the effect is weaker than the effect of inheritance or education: the coefficient relating self-employment to membership in the top of both distributions is 0.732, compared with 1.227 for being a top inheritor and 1.103 for having a graduate degree. The association between self-employment and membership in the top of both distributions appears to be strongest, but the difference in the effect of self-employment across top positions is not statistically significant. The role of self-employment in membership in top positions is noteworthy and highlights the importance of self-employment as a means for achievement and for permeating top positions—a finding that would not surprise Pareto. Indeed, if there were a single, contemporary indicator of Pareto’s concept of innovative tendencies, it would perhaps be self-employment. Pareto’s idea that those with a proclivity to innovate, regardless of their starting position in life, are likely to become a society’s elite is clearly manifest in the association we find between self-employment and membership in top positions. Pareto would probably prefer that we use an indicator of individual orientations to study this more directly, and future research might usefully address that challenge. We are unable to do so using the SCF, which does not include psychological or social psychological measures.

Naturally, inheritance, education, and self-employment do not operate independently. To

explore the connections among these important traits, we include estimates from a second multinomial probit model in Table 4. Model 2 includes a set of dummy variables: (1) being a top inheritor (top one percent of inheritors); (2) having a graduate school degree; (3) being self-employed; (4) being a top inheritor and having a graduate school degree; (5) being a top inheritor and being self-employed; (6) having a graduate degree and being self-employed; and (7) being a top inheritor, having a graduate degree, and being self-employed. The omitted reference group is those who are non-inheritors, have less than a college degree, and are currently not working.

Figure 3 illustrates more clearly the mechanisms underlying top membership and the various combinations of traits that lead to these elite positions. The figure graphs predicted margins generated using Table 4 (Model 2) to illustrate the relative weight of these interactions in generating membership in each of the three top positions. We used the average marginal (or partial) effects method to calculate the predicted probabilities, a widely used method for calculating predicted probabilities for nonlinear models that has the added advantage of accounting for correlations between the focal variables and other covariates (Cameron and Trivedi 2005; Greene 2011; Wooldridge 2002). Using Model 2 in Table 4, we calculated the predicted probability of being in the top three positions for every observation in the sample by manipulating the values corresponding to every combination of top inheritance, self-employment, and having a graduate degree while retaining original values for other covariates. We then averaged the calculated predicted probabilities across all observations.

Figure 3 shows that multiple combinations of traits lead to membership in top positions. The combination effects are clearly an important part of the explanation for membership in top positions. Inheritance still matters, but consistent with Proposition 2E, inheritors who also have graduate degrees or are self-employed are more likely to retain their privileged positions. Among

top inheritors who not only have a graduate degree but also are self-employed, 2.25% are predicted to be top income earners; 4.78%, to be top net worth holders; and 8.08%, to be at the top in the both distributions. Of these, 15.11% (i.e., 2.25% + 4.78% + 8.08%) are predicted to be in either the top income or the top net worth group; thus, 84.89% are predicted to hold no top membership. These predicted probabilities are much higher than 0.5%, the expected probability of membership in each top position for all respondents. These results also show that those who simply inherit (and do not attain high levels of education or start a business) are at a clear disadvantage for retaining their top positions. Conversely, for those who did not inherit, the combination of completing a graduate school degree and becoming self-employed is the most likely route to membership in top positions, as Proposition 2F predicted. Self-employed non-inheritors with a graduate degree have a higher probability than simply top inheritors of being top income earners (2.56% compared with 0.62%) and of being at the top in the both distributions (2.40% compared with 1.12%). These findings are consistent with Pareto's notion of circulation: those who start at the top but are not innovators and do not otherwise distinguish themselves may, indeed, move down and free up space for those with less advantaged backgrounds to move up. Again, because we do not have longitudinal data on the same individuals, we cannot say with certainty whether these are the same people moving up over their lives, but future research might explore this more directly.

(Figure 3 about here)

A related issue is whether different sources of inherited wealth will differentially affect the likelihood of membership in top income and net worth positions. Unfortunately, because the SCF does not include detailed information on the sources of inherited wealth, we are unable to evaluate the effect of different inheritance sources on top memberships *directly*. Nevertheless,

our results indirectly provide insight into this issue. First, we assume (using Model 2 of Table 4) that those who inherit a large family business are most likely to be self-employed top inheritors (with or without graduate degrees) and that those who inherit a large amount of money (other than a family business) are most likely to be top inheritors (with or without graduate degrees). Then, we can compare two groups: top inheritors versus self-employed top inheritors, and top inheritors with graduate degrees versus self-employed top inheritors with graduate degrees. As Figure 3 illustrates, those who inherited a large business (self-employed inheritors and self-employed inheritors with graduate degrees) are more likely to be in the top of both the income and net worth distributions than those who inherited a large amount of money (top inheritors and top inheritors with graduate degrees). The predicted probabilities of being in the top of both distributions for self-employed inheritors and self-employed inheritors with graduate degrees are 1.98% and 7.39%, respectively; the predicted probabilities for top inheritors and top inheritors with graduate degrees are 1.15% and 3.53%, respectively. This suggests—albeit indirectly—that receiving a large business inheritance provides a notable advantage in generating high income and net worth over receiving a large nonbusiness inheritance.

Given that we do not have data on the same individuals over time, it is not possible to draw conclusions about life course processes. However, the age and age-squared coefficients offer some insight into the role that life stage might play in generating membership in the top of the income, net worth, and both distributions. That is, the age/age-squared inflection point varies for each of our top three groups: it is 57.8 for those who are top income earners only, 78.8 for those who are top net worth owners only, and 66.2 for those who are at the top of both distributions. This pattern highlights the potential for top income status to serve as a gateway to membership into top net worth positions and positions at the top of both distributions. That is,



the age pattern suggests that at least part of the process underlying our findings is a movement over the course of a career into the top of the income distribution (i.e., as earnings increase but assets have not yet reached top net worth levels) and then into the top of both distributions as asset values increase. For many, the next step is then, in retirement, into the top of the net worth distribution only. Again, this interpretation is speculative, but it hints at an underlying dynamic life course process that drives circulation at the top of these distributions.

### **Conclusion and Discussion**

The one percent has attracted renewed attention in recent years, and although basic facts about their income and net worth are now well-known, it is less clear who has access to these top positions. In this paper, we studied the relative weight of ascribed and achieved traits in predicting who occupies top income and net worth positions. We made two primary contributions. First, we proposed that a redefinition of the one percent is in order. In particular, rather than looking at the top one percent either by income or by net worth, we looked at three groups: top income earners, top net worth owners, and those at the top of both distributions. We showed that these three groups are, indeed, distinct and that disaggregating them clarifies our understanding of resource concentration and adds new insight into what we know about the determinants of membership in top income and net worth positions. Although all three groups are privileged, our results show that those at the top of both distributions receive higher median incomes and larger percentages of total household income than those who are in the top one percent by income only. We also found that those at the top of both distributions own higher levels of net worth and control larger percentages of total net worth than those who are in the one percent only by net worth. Conceptualizing the one percent in this slightly different fashion underscores the degree to which income and net worth are concentrated in the United States.

More importantly, however, our findings show that there is a more-privileged group at the top of both the income and net worth distributions that is more advantaged than previous research might have anticipated. Notably, our supplementary analyses show that those at the top of both distributions are not simply the very top (i.e., the top 0.5 percent) of either the income or the net worth distributions. Approximately 40% of the top 0.5 percent income or net worth group does not overlap with the top of both distributions.

Our second main contribution was to draw on ideas from research on status attainment and elite circulation to develop a set of propositions regarding the permeability of top income and net worth positions. We proposed that disaggregating the one percent into three top groups would likely show that there is some permeability at the top and that different traits are associated with membership in each of the top three positions. Our analyses of the overlap between top income and top net worth positions provided initial evidence for permeability: the overlap between the top one percent by income and net worth was relatively constant across the years we studied. Recall that this indicates that the top positions are neither completely separate nor completely identical. We also found that the overlap has been relatively constant despite capital income becoming a more pronounced form of income for top earners, a reflection of the importance of having multiple top income sources for membership in top positions. Given that having multiple top income sources is a function of various socioeconomic traits, individual traits rather than financial profiles are more fundamental determinants of top membership.

To explore which traits are associated with top membership and to address the issue of permeability more directly, we then turned to evaluating the relative weight of inheritance, education, and occupation (particularly self-employment, which we proposed has contemporary significance as an occupational status) in generating membership in top positions. We found that

a large inheritance is certainly an advantage it increased the likelihood of membership in all three top groups, particularly top net worth positions. Moreover, we found that not all those who inherit continue to occupy top income and net worth positions. Rather, inheritors who also complete college or, more importantly, graduate school or are self-employed increase their chances of remaining in top positions, particularly top net worth positions. We found important evidence that a modest inheritance can actually have a negative effect on membership in top positions, perhaps reflecting a dampening of motivations among inheritors that becomes apparent for those whose inherited assets are not sufficient to guarantee membership in top income and net worth positions. Those with high levels of education and the self-employed are also advantaged in attaining membership in top positions, and these effects vary by top income group: the effect of education is stronger for top income positions, while the effect of self-employment is relatively constant across the three groups.

Although our research question is closely related to issues discussed by scholars of class, we were unable to address some of the important issues addressed in that literature. In particular, we were unable to study the social processes that underlie membership in any of the positions we studied. For example, we could not speculate about the degree to which social closure motivates those at the top of the income and net worth distributions. We could not determine whether those who occupy top positions act to deliberately prevent others from entering their ranks. Similarly, we drew on Pareto's ideas about elite circulation to develop our ideas about whether there is permeability of top positions; however, we were unable to test his ideas about human propensities (e.g., innovation, consolidation) that constitute the mechanisms for circulation. Theorists remind us that it is not necessary to test directly each component of a theory (Cohen 1988), but we recognize that this is unsatisfying. It would be preferable to study individuals in

various portions of the income and net worth distributions to better understand their motivations. Researchers studying elites have made considerable progress in this area. Domhoff's work, in particular, is exemplary and offers important insights that suggest social closure is, indeed, in operation at the top (Domhoff 2013b). An important next step would be to use Domhoff's ideas to generate representative survey data with social psychological measures to test the ideas across the income and net worth distributions.

Our research also opens the door for asking other, related questions. Although the SCF data are an excellent resource for studying top income earners and net worth owners, they are not perfect. The SCF contains information on key indicators, but the data are cross-sectional. Ideally, we would have data that follow the same individuals over time to allow us to study whether there is intragenerational mobility by income and net worth. The National Longitudinal Survey of Youth and the Panel Study of Income Dynamics have both been used effectively to study income and net worth over time, but neither of these data sets contains sufficient numbers of households with high income or high net worth to address questions about the one percent. Information on inheritance is also suboptimal in these longitudinal data sets, which would make it difficult to thoroughly explore the role of inherited resources. Similarly, the SCF does not have sufficient data to study other influences on membership in top positions. We do not have detailed information on occupations, types of graduate degrees earned, or social networks. Another important issue that is beyond the scope of this work is the role of race/ethnicity in generating membership in top income and net worth positions. Our results suggest that few nonwhites occupy top positions, but recent work shows that this trend might be changing (Zweigenhaft and Domhoff 2003, 2006, 2014). Because the SCF provides limited information on race and ethnicity in the SCF and because nonwhite membership in top positions is quite low, we are unable to

speak to the degree to which race and ethnicity matter here. Future research might address these issues.

Finally, another important area that future research may want to explore is how these patterns vary across countries. Our data are limited to the United States, but recent cross-national research on inequality suggests that national context leads to important variations in the nature and determinants of inequality and the permeability of top positions (Piketty and Saez 2006; Skopek, Buchholz and Blossfeld 2014). One particularly interesting study compared stratification patterns across 18 developed Western countries and showed that these countries can usually be grouped by the nature of income and wealth inequality (Skopek, Buchholz and Blossfeld 2014). For example, they found that countries can usually be grouped into four groups by high and low net worth and income inequality. Spain and Portugal have relatively high income inequality and low net worth inequality, whereas Sweden and Denmark have low income inequality and high net worth inequality. The United States was not included in their study, but it would fall in their third cluster, along with countries that have high inequality on both income and net worth. The varying levels of inequality across these clusters are likely to correspond to variation in the overlap between top income and top net worth positions that we discuss in this paper. For example, in countries with low income inequality as a result of strong state redistributive policies and with strong norms regarding the transfer of inheritances across generations, the overlap across top positions is likely to be significantly less than 0.5. Exploring these cross-national differences inform basic research and might lead to more-concrete policy recommendations that could address the permeability of top positions.

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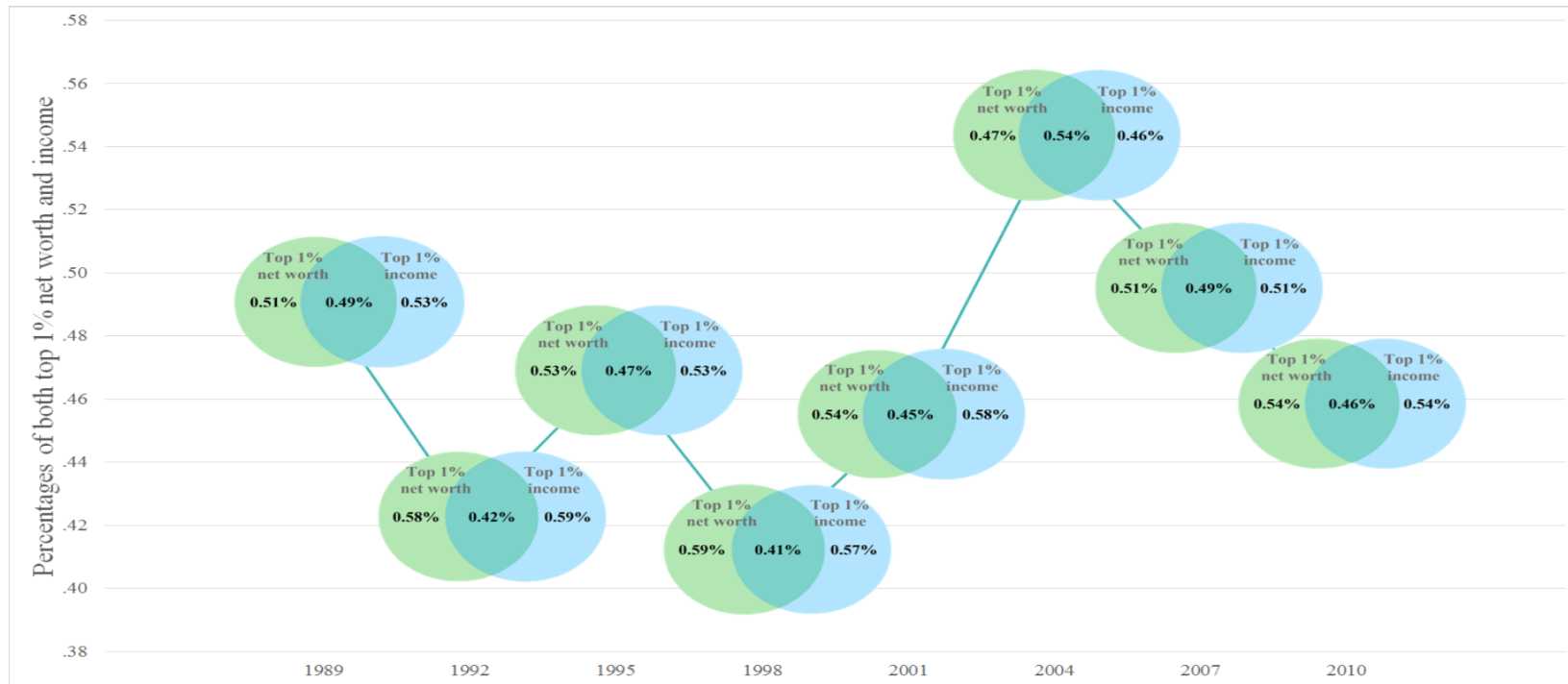
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**Table 1. Financial Profiles for Three Top Groups, 1989–2010**

|                                   |                     | 1989        | 1992      | 1995        | 1998        | 2001       | 2004       | 2007       | 2010       | Overall     |
|-----------------------------------|---------------------|-------------|-----------|-------------|-------------|------------|------------|------------|------------|-------------|
| Top 1% both<br>income & net worth | Income threshold    | 411,702     | 343,546   | 358,259     | 476,083     | 629,882    | 561,328    | 726,169    | 614,987    | 343,546     |
|                                   | Median income       | 791,735     | 699,528   | 786,139     | 1,114,467   | 1,146,385  | 1,165,200  | 1,575,055  | 1,158,819  | 1,007,811   |
|                                   | % total income      | 12.10       | 6.65      | 9.99        | 10.15       | 11.94      | 12.25      | 14.42      | 10.52      | 11.37       |
|                                   | Net worth threshold | 3,919,764   | 3,523,039 | 3,491,267   | 5,071,746   | 7,194,167  | 7,313,504  | 8,793,817  | 6,821,700  | 3,491,267   |
|                                   | Median net worth    | 8,122,885   | 6,520,427 | 7,598,782   | 10,548,518  | 13,156,721 | 12,622,582 | 15,599,492 | 12,065,000 | 11,155,581  |
|                                   | % total net worth   | 18.59       | 16.94     | 20.51       | 19.30       | 18.04      | 22.26      | 21.60      | 19.61      | 20.05       |
| Top 1% income                     | Income threshold    | 411,702     | 343,546   | 356,808     | 476,083     | 629,882    | 561,328    | 727,247    | 614,987    | 343,546     |
|                                   | Median income       | 541,898     | 446,143   | 413,376     | 608,629     | 975,057    | 712,592    | 1,005,217  | 791,860    | 719,325     |
|                                   | % total income      | 5.01        | 5.09      | 4.36        | 6.33        | 8.23       | 4.69       | 6.82       | 6.66       | 6.07        |
|                                   | Net worth threshold | -35,845,453 | -1,668    | -20,462,054 | -20,224,673 | -3,953,388 | 612,028    | 819,915    | 175,551    | -35,845,453 |
|                                   | Median net worth    | 2,005,000   | 1,726,802 | 1,416,052   | 1,655,355   | 3,498,485  | 3,570,453  | 4,867,841  | 3,969,800  | 2,493,036   |
|                                   | % total net worth   | 3.18        | 3.45      | 2.41        | 3.12        | 4.06       | 3.48       | 4.36       | 4.22       | 3.71        |
| Top 1% net worth                  | Income threshold    | 26,391      | 0         | 0           | 0           | 0          | 0          | 0          | 0          | 0           |
|                                   | Median income       | 226,964     | 186,541   | 191,458     | 250,214     | 322,500    | 313,162    | 284,434    | 308,002    | 248,861     |
|                                   | % total income      | 1.61        | 1.77      | 1.61        | 2.05        | 2.06       | 1.70       | 1.95       | 1.98       | 1.85        |
|                                   | Net worth threshold | 3,921,266   | 3,522,433 | 3,484,185   | 5,071,174   | 7,189,081  | 7,314,079  | 8,773,849  | 6,816,200  | 3,484,185   |
|                                   | Median net worth    | 5,565,931   | 5,016,518 | 5,893,882   | 7,223,002   | 10,004,965 | 10,267,153 | 10,830,195 | 10,922,000 | 8,890,414   |
|                                   | % total net worth   | 11.35       | 13.09     | 14.33       | 14.55       | 13.98      | 11.08      | 11.93      | 14.50      | 12.95       |

Notes: Data are from the Survey of Consumer Finances. “Overall” includes all years, pooled to create a single data set.

**Figure 1. The Joint Distribution of Income and Net Worth, 1989–2010**



Notes: Data are from the Survey of Consumer Finances.



**Table 2****a. The Distribution of Top Capital Earners Across Top Three Groups**

|                           | <b>1989</b> | <b>1992</b> | <b>1995</b> | <b>1998</b> | <b>2001</b> | <b>2004</b> | <b>2007</b> | <b>2010</b> |
|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Top income only</b>    | 13.45       | 9.68        | 4.59        | 13.49       | 11.01       | 12.28       | 12.97       | 8.76        |
| <b>Top net worth only</b> | 9.08        | 20.42       | 19.83       | 16.31       | 15.42       | 13.42       | 8.83        | 19.43       |
| <b>Top of both</b>        | 26.96       | 23.98       | 22.37       | 26.99       | 27.43       | 30.64       | 31.13       | 26.3        |
| <b>No top group</b>       | 50.5        | 45.93       | 53.22       | 43.21       | 46.14       | 43.66       | 44.07       | 45.5        |

Notes: Cells are the location in our top three groups of those whose capital income puts them in the top one percent of capital earners. For example, 13.45% of those who have capital income in the top one percent of capital income earners are in the top income only group in 1989.

**b. The Distribution of Top Wage Income Earners Across Top Three Groups**

|                           | <b>1989</b> | <b>1992</b> | <b>1995</b> | <b>1998</b> | <b>2001</b> | <b>2004</b> | <b>2007</b> | <b>2010</b> |
|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Top income only</b>    | 27.24       | 23.10       | 32.16       | 21.03       | 38.88       | 27.89       | 30.97       | 37.50       |
| <b>Top net worth only</b> | 1.59        | 2.67        | 1.92        | 6.06        | 8.36        | 6.33        | 2.34        | 4.27        |
| <b>Top of both</b>        | 20.92       | 21.96       | 18.7        | 20.37       | 26.96       | 29.98       | 22.23       | 20.05       |
| <b>No top group</b>       | 50.25       | 52.27       | 47.22       | 52.54       | 25.79       | 35.8        | 44.47       | 38.18       |

Notes: Cells are the location in our top three groups of those whose wage income puts them in the top one percent of wage income earners. For example, 27.24% of those who have wage income in the top one percent of wage income earners are in the top income only group in 1989.

**c. The Distribution of Top Income Earners (Various Sources) Across Top Three Groups**

|  | <b>Top income</b> | <b>Top net worth</b> | <b>Top of both</b> |
|--|-------------------|----------------------|--------------------|
| <b>Top wage income</b>                       | 43.7              | 5.8                  | 16.9               |
| <b>Top business income</b>                   | 19.3              | 16.6                 | 13.8               |
| <b>Top capital income</b>                    | 7.4               | 23.7                 | 18.1               |
| <b>Top wage and business income</b>          | 5.8               | 0.4                  | 6.8                |
| <b>Top wage and capital income</b>           | 6.7               | 1.6                  | 19.1               |
| <b>Top business and capital income</b>       | 5.2               | 3.3                  | 15.4               |
| <b>Top wage, business and capital income</b> | 1.1               | 0.4                  | 6.8                |
| <b>No top income</b>                         | 10.8              | 48.2                 | 3.1                |

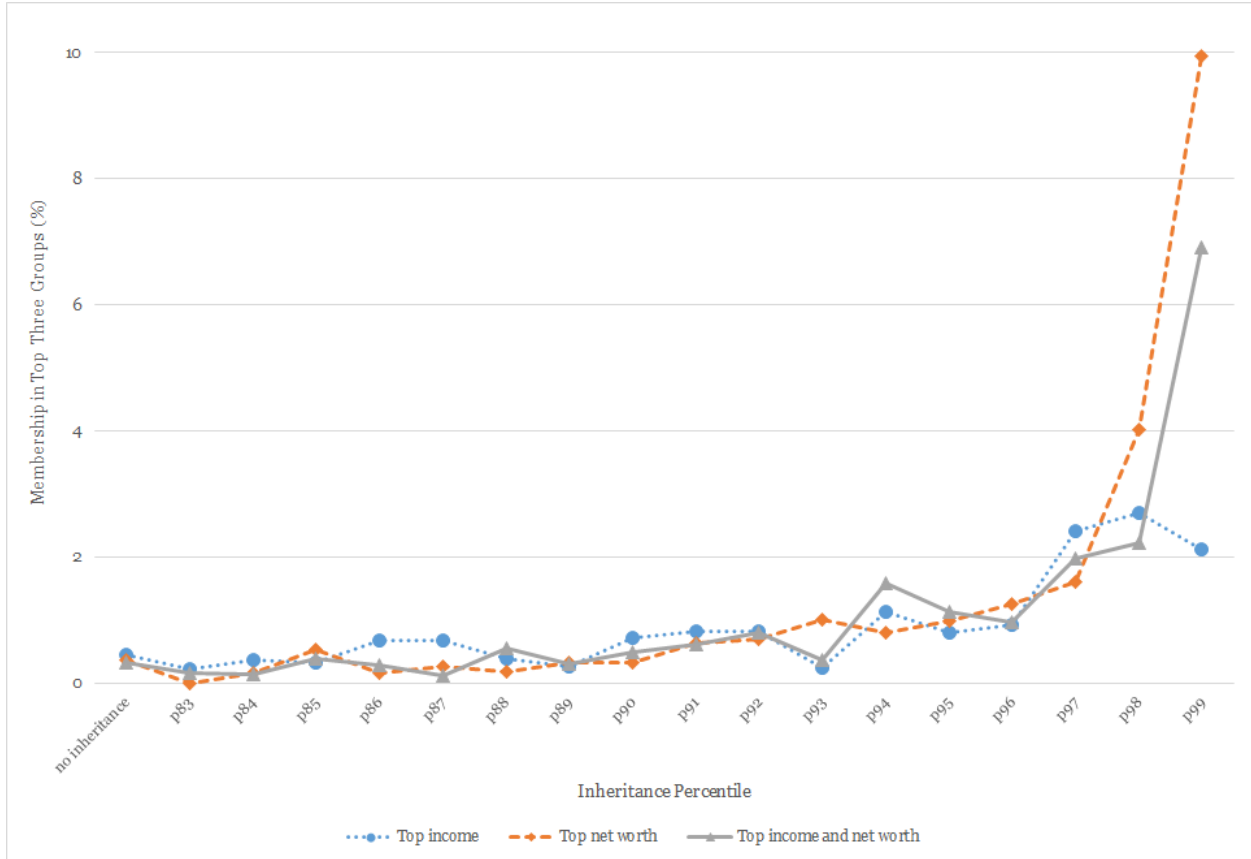
Notes: Cells are the location in our top three groups of those whose income from various sources puts them in the top one percent of earners. For example, 43.7% of those who have wage income in the top one percent of wage income earners are in the top income only group in the combined 1989–2010 SCF.

**Table 3. Demographic Profiles of Top Three Groups**

|   | Top 1% income | Top 1% net worth | Top of both | Everyone else |
|---|---------------|------------------|-------------|---------------|
| <b>Inheritance</b>                            |               |                  |             |               |
| Ever inherited                                | 30.72         | 45.02            | 41.64       | 20.25         |
| Average amount inherited, all respondents     | 168,501       | 932,509          | 1,162,147   | 33,904        |
| Average amount inherited, those who inherited | 548,569       | 2,071,239        | 2,790,794   | 167,467       |
| Median amount inherited, those who inherited  | 190,117       | 548,640          | 333,680     | 48,818        |
| <b>Education (mean years)</b>                 | 16.02         | 15.45            | 16.05       | 13.03         |
| <b>Employment</b>                             |               |                  |             |               |
| Self-employed                                 | 47.03         | 50.81            | 58.15       | 10.5          |
| Work for someone else                         | 45.09         | 18.63            | 28.12       | 58.89         |
| Retired                                       | 6.39          | 29.12            | 13.09       | 24.78         |
| Unemployment/ not in labor force              | 1.48          | 1.43             | 0.64        | 5.83          |
| <b>Occupation</b>                             |               |                  |             |               |
| Managerial/professional                       | 79.09         | 54.76            | 73.41       | 24.31         |
| Technical/sales/services                      | 12.15         | 10.87            | 10.73       | 22.87         |
| Other   | 0.88          | 3.82             | 2.13        | 22.21         |
| Not working                                   | 7.88          | 30.56            | 13.73       | 30.61         |
| <b>Male</b>                                   | 97.74         | 93.11            | 97.37       | 71.86         |
| <b>Age</b>                                    |               |                  |             |               |
| <i>Mean age</i>                               | 50.67         | 60.39            | 57.11       | 49.04         |
| <i>Age categories</i>                         |               |                  |             |               |
| < 35  | 4.45          | 2.58             | 1.16        | 23.83         |
| 35 - 44                                       | 26.81         | 7.68             | 12.29       | 21.37         |
| 45 - 54                                       | 36.75         | 22.95            | 29.70       | 18.96         |
| 55 - 64                                       | 22.00         | 28.64            | 33.29       | 14.32         |
| 65 - 74                                       | 6.78          | 24.78            | 17.38       | 11.33         |
| ≥ 75  | 3.22          | 13.37            | 6.18        | 10.18         |
| <b>Race/ethnicity</b>                         |               |                  |             |               |
| White non-Hispanic                            | 91.30         | 92.13            | 95.22       | 74.60         |
| Black / African American                      | 1.40          | 1.07             | 0.75        | 13.09         |
| Hispanic                                      | 3.46          | 1.86             | 0.84        | 8.39          |
| Other   | 3.84          | 4.94             | 3.19        | 3.92          |
| <b>Marital status</b>                         |               |                  |             |               |
| Currently married                             | 91.12         | 82.54            | 91.09       | 58.04         |

Notes: Data are from the Survey of Consumer Finances, pooled over 1989–2010. Median inheritance for all respondents is zero.

**Figure 2. Inheritance and Membership in the One Percent**



Notes: Data are from the Survey of Consumer Finances, pooled over 1989–2010. Top income indicates members of the top one percent of income earners only, top net worth indicates members of the top one percent of net worth owners only, and top income and net worth indicates those in the top one percent of both distributions. The horizontal axis is the percentile for amounts inherited; for example, p99 represents those whose total inheritance received places them in the top one percent of inheritors.

**Table 4. Top Income, Top Net Worth, or Both? Multinomial Probit Estimates, 1989–2010**

|  | Top income        |                   | Top net worth     |                   | Top income & net worth |                   |
|--|-------------------|-------------------|-------------------|-------------------|------------------------|-------------------|
|  | Model 1           | Model 2           | Model 1           | Model 2           | Model 1                | Model 2           |
| <b><i>Inheritance</i></b> (ref = non-inheritors)       |                   |                   |                   |                   |                        |                   |
| Top 1% inheritors                                      | .480**<br>(.089)  |                   | 1.452**<br>(.050) |                   | 1.227**<br>(.042)      |                   |
| Next 9% inheritors                                     | .094*<br>(.039)   | .095*<br>(.039)   | .223**<br>(.032)  | .218**<br>(.033)  | .112**<br>(.032)       | .108**<br>(.032)  |
| Remaining inheritors                                   | -.358**<br>(.056) | -.356**<br>(.056) | -.424**<br>(.052) | -.434**<br>(.052) | -.437**<br>(.048)      | -.442**<br>(.048) |
| <b><i>Education</i></b> (ref=less than college degree) |                   |                   |                   |                   |                        |                   |
| Graduate degree  | 1.118**<br>(.044) |                   | .765**<br>(.034)  |                   | 1.103**<br>(.031)      |                   |
| College degree   | .799**<br>(.042)  | .792**<br>(.042)  | .725**<br>(.031)  | .713**<br>(.032)  | .959**<br>(.030)       | .959**<br>(.031)  |
| <b><i>Employment status</i></b> (ref=not working)      |                   |                   |                   |                   |                        |                   |
| Self-employed  | .372**<br>(.093)  |                   | .539**<br>(.097)  |                   | .732**<br>(.106)       |                   |
| Work for others  | -.402**<br>(.092) | -.388**<br>(.092) | -.629**<br>(.097) | -.670**<br>(.100) | -.316**<br>(.106)      | -.326**<br>(.107) |
| Retired  | -.216*<br>(.101)  | -.220*<br>(.101)  | .000<br>(.097)    | -.013<br>(.099)   | .051<br>(.107)         | .051<br>(.108)    |
| <b><i>Interactions</i></b>                             |                   |                   |                   |                   |                        |                   |
| Top 1% inheritor                                       |                   | .713**<br>(.123)  |                   | 1.762**<br>(.086) |                        | 1.512**<br>(.073) |
| Graduate degree  |                   | 1.044**<br>(.054) |                   | .939**<br>(.042)  |                        | 1.198**<br>(.042) |
| Self-employed  |                   | .318**<br>(.095)  |                   | .668**<br>(.098)  |                        | .819**<br>(.106)  |
| Top 1% inheritor & graduate school degree              |                   | 1.685**<br>(.197) |                   | 2.392**<br>(.085) |                        | 2.371**<br>(.075) |
| Top 1% inheritor & self-employed                       |                   | .441*<br>(.195)   |                   | 1.963**<br>(.128) |                        | 1.856**<br>(.128) |
| Graduate school degree & self-employed                 |                   | 1.524**<br>(.105) |                   | 1.274**<br>(.108) |                        | 1.840**<br>(.112) |
| Top 1% inheritor, grad. degree, & self-employed        |                   | 1.695**<br>(.164) |                   | 2.202**<br>(.144) |                        | 2.862**<br>(.139) |
| <b><i>Control variables</i></b>                        |                   |                   |                   |                   |                        |                   |
| Gender (male = 1)                                      | .692**<br>(.079)  | .693**<br>(.079)  | .509**<br>(.052)  | .508**<br>(.052)  | .660**<br>(.057)       | .660**<br>(.057)  |
| Age  | .121**<br>(.009)  | .121**<br>(.009)  | .094**<br>(.008)  | .096**<br>(.008)  | .170**<br>(.007)       | .170**<br>(.007)  |
| Age <sup>2</sup>                                       | -.001**<br>(.000) | -.001**<br>(.000) | -.001**<br>(.000) | -.001**<br>(.000) | -.001**<br>(.000)      | -.001**<br>(.000) |
| Race (white = 1)                                       | .338**<br>(.056)  | .335**<br>(.056)  | .290**<br>(.044)  | .291**<br>(.044)  | .543**<br>(.044)       | .544**<br>(.044)  |
| Marital status (currently married = 1)                 | .511**<br>(.052)  | .516**<br>(.052)  | .279**<br>(.037)  | .276**<br>(.037)  | .502**<br>(.043)       | .501**<br>(.043)  |
| Occupation (managerial/professional =1)                | .701**<br>(.044)  | .702**<br>(.044)  | .574**<br>(.036)  | .592**<br>(.036)  | .695**<br>(.033)       | .698**<br>(.032)  |
| <b><i>Survey year</i></b>                              |                   |                   |                   |                   |                        |                   |
| 1992   | -.047<br>(.070)   | -.050<br>(.070)   | .010<br>(.057)    | .005<br>(.057)    | -.167**<br>(.055)      | -.169**<br>(.056) |
| 1995   | .028<br>(.075)    | .023<br>(.074)    | .020<br>(.053)    | .027<br>(.053)    | -.014<br>(.051)        | -.011<br>(.052)   |
| 1998   | -.048<br>(.074)   | -.052<br>(.073)   | -.002<br>(.056)   | -.002<br>(.056)   | -.219**<br>(.052)      | -.220**<br>(.053) |

(continued)

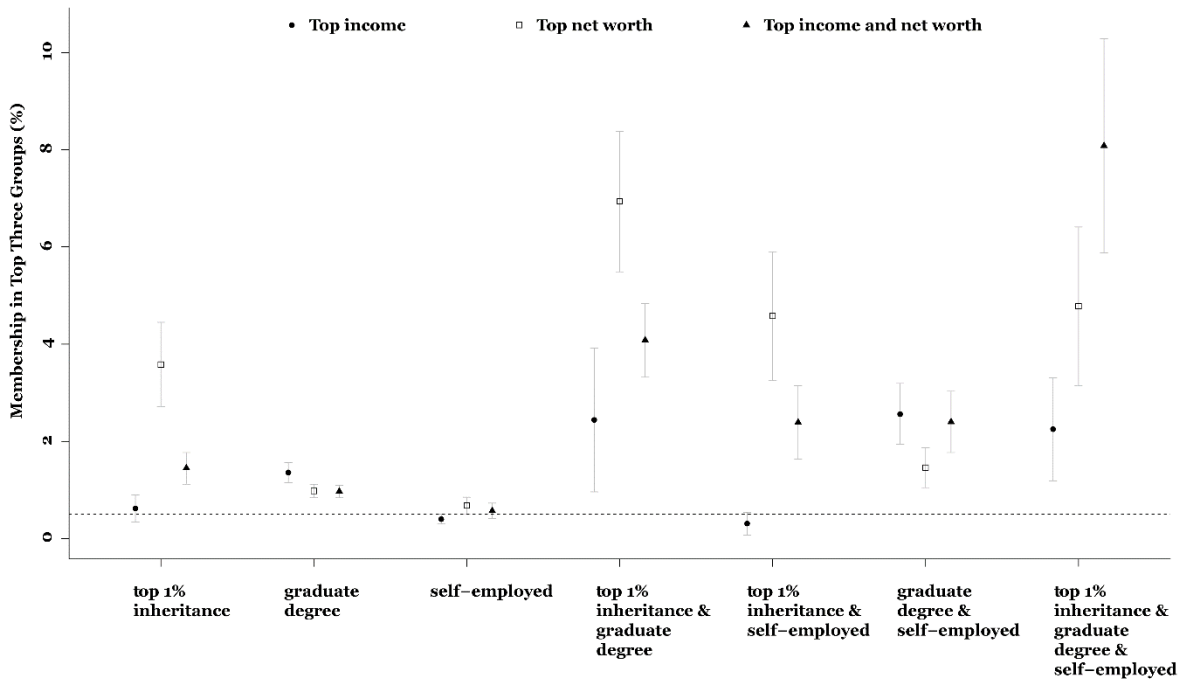
(Table 4, continued)

|          |          |          |          |          |           |           |
|----------|----------|----------|----------|----------|-----------|-----------|
| 2001     | -1.61*   | -1.61*   | -.152**  | -.157**  | -.296**   | -.299**   |
|          | (.071)   | (.071)   | (.055)   | (.055)   | (.055)    | (.055)    |
| 2004     | -.284**  | -.282**  | -.241**  | -.251**  | -.219**   | -.223**   |
|          | (.071)   | (.071)   | (.056)   | (.056)   | (.051)    | (.052)    |
| 2007     | -.178**  | -.181**  | -.148**  | -.149**  | -.205**   | -.203**   |
|          | (.067)   | (.067)   | (.057)   | (.057)   | (.052)    | (.052)    |
| 2010     | -.199**  | -.199**  | -.192**  | -.198**  | -.315**   | -.317**   |
|          | (.068)   | (.068)   | (.054)   | (.054)   | (.053)    | (.053)    |
| Constant | -8.650** | -8.636** | -8.086** | -8.181** | -11.041** | -11.094** |
|          | (.271)   | (.272)   | (.285)   | (.284)   | (.239)    | (.239)    |
| LL       | -12615.0 | -12586.6 | -12615.0 | -12586.6 | -12615.0  | -12586.6  |
| BIC      | 26027.7  | 26116.0  | 26027.7  | 26116.0  | 26027.7   | 26116.0   |

Notes: Data are from the Survey of Consumer Finances, pooled over 1989–2010. Estimates are from a single multinomial probit model in which the dependent variable has three mutually exclusive categories: membership in the top one percent by income only, the top one percent by net worth only, or the top one percent of both distributions. Robust standard errors are shown in parentheses;  $n = 177,565$ .

\*\*  $p < .01$ , \*  $p < .05$ .

**Figure 3. Membership in the One Percent: Predicted Probabilities**



Notes: Data are from the Survey of Consumer Finances, pooled over 1989–2010. Estimates are predicted probabilities generated from Model 2 in Table 4 with a 95% confidence interval. Top income indicates members of the top one percent of income earners only, top net worth indicates members of the top one percent of net worth owners only, and top income and net worth indicates those in the top one percent of both distributions. Variables on the horizontal axis refer to those who were in the top one percent by inheritance, have any graduate degrees, are self-employed, or specified combinations of these traits. The dotted line represents the average probability for the full sample (0.5).

## Appendix Table A

|                   |                     | 1989        | 1992      | 1995        | 1998        | 2001       | 2004       | 2007       | 2010       | Overall     |
|-------------------|---------------------|-------------|-----------|-------------|-------------|------------|------------|------------|------------|-------------|
| Top .5% income    | Income threshold    | 619,312     | 512,987   | 517,807     | 689,779     | 1,074,579  | 840,220    | 1,131,273  | 940,270    | 512,987     |
|                   | Median income       | 1,055,646   | 763,262   | 897,823     | 1,165,862   | 1,461,326  | 1,335,371  | 1,950,099  | 1,311,295  | 1,232,549   |
|                   | % total income      | 13.45       | 8.35      | 11.20       | 12.65       | 15.31      | 12.99      | 16.27      | 12.47      | 13.18       |
|                   | Net worth threshold | -35,800,000 | 2,274     | -20,500,000 | -20,200,000 | 301,439    | 1,068,490  | 1,018,556  | 1,034,500  | -35,845,453 |
|                   | Median net worth    | 4,857,540   | 4,030,315 | 5,153,479   | 6,580,068   | 6,760,303  | 10,300,000 | 12,500,000 | 8,738,800  | 7,649,000   |
|                   | % total net worth   | 14.93       | 14.58     | 18.07       | 17.14       | 13.48      | 18.44      | 19.23      | 17.46      | 16.97       |
| Top .5% net worth | Income threshold    | 26,391      | 0         | 0           | 0           | 0          | 0          | 0          | 0          | 0           |
|                   | Median income       | 462,725     | 379,299   | 381,466     | 463,910     | 655,077    | 740,954    | 1,185,143  | 680,044    | 592,571     |
|                   | % total income      | 9.80        | 5.82      | 8.38        | 8.41        | 8.78       | 9.92       | 11.95      | 8.08       | 9.10        |
|                   | Net worth threshold | 6,252,598   | 5,494,231 | 6,379,176   | 7,848,596   | 11,000,000 | 11,000,000 | 12,500,000 | 11,200,000 | 5,494,231   |
|                   | Median net worth    | 9,717,946   | 7,933,569 | 10,600,000  | 12,600,000  | 16,100,000 | 16,300,000 | 18,300,000 | 16,100,000 | 14,286,531  |
|                   | % total net worth   | 22.68       | 22.57     | 27.27       | 25.54       | 23.27      | 24.47      | 24.79      | 25.37      | 24.56       |

Notes: Data are from the Survey of Consumer Finances. Care should be taken in estimating percentages owned by using information from this table and Table 2. For example, some households that are classified as top 0.5 percent in this table might be in the top of both distributions in Table 2. For example, it is not possible to calculate the percentage held by the top 0.5% and the “next” 0.5% by subtracting values taken from both tables.