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Inequality in the Twenty-First Century (reviewing Thomas Piketty, Capital in the Twenty-First Century (2014))

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INEQUALITY IN THE TWENTY-FIRST CENTURY
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CAPITAL IN THE TWENTY-FIRST CENTURY. By *Thomas Piketty*. Translated by Arthur Goldhammer. Cambridge and London: Belknap/Harvard University Press. 2014. Pp. viii, 696. $39.95.

Introduction

Rising inequality in the developed world, especially in the shadow of the Great Recession in the United States, has made the topic a hot one. Social movements ("We are the 99%!"), university courses, documentary films, and best-selling books have capitalized on—and contributed to—the heat. Thomas Piketty's *Capital in the Twenty-First Century*, the most significant and probably best-received of these books, is provocative, data-driven, very French, pessimistic, widely-reviewed, admirable, and maddening. In contrast to many other works on inequality, it is organized around a single idea. The thesis predicts growing inequality of wealth in the absence of external shocks or interventionist policies. It is set forth in lucid fashion and then surrounded by a great deal of evidence from around the world, from the late-1700's to the present. The data, including available technical appendices, provide context and confirmation. This is a serious book. In its final chapters, it turns to its eponymous time period and suggests a global wealth tax and other means of reversing the present course. Here, it is more speculative than empirical. Unsurprisingly, these prescriptions have garnered a large fraction of the attention paid to this book, although Piketty's data choices have hardly gone uncriticized–or undefended.[1] Data collection and analysis have been Piketty's impressive stock-in-trade for many years, but it is his central thesis and normative prescription that occupy this Review.

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[1] *See e.g.*, Wojciech Kopczuk & Allison Schrager, *The Inequality Illusion: Why a Wealth Tax Won't Work*, FOREIGN AFF. (May 15, 2014) (criticizing reliance on estate tax data and suggesting that it is easy to overestimate inequality), http://www.foreignaffairs.com/articles/141431/wojciech-kopczuk-and-allison-schrager/the-inequality-illusion.

[2] *See* Judith N. Collins, *Salaries for New Lawyers: An Update on Where We Are and How We Got Here*, NALP BULL. (Aug. 2012), http://www.nalp.org/august2012research.

[3] See note 27 (selective Harvard investment returns)

[4] Compare Harry Frankfurt, *Equality as a Moral Ideal*, 98 Ethics 21 (1987) with Thomas Nagel, *Equality* in MORTAL QUESTIONS 107 (1979), and see Cass Sunstein, *Why Worry About Inequality?*, BLOOMBERG VIEW

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Part I sets out the book's central thesis. Whether or not completely correct, it may well emerge as one of the great ideas of social science. This is not just another book about inequality, economic history, or the relationship between labor and capital in production functions, although these subjects do find their way into the book. Piketty presents a big idea. It may not be quite as jolting as comparative advantage or deadweight loss or rational expectations, to name a few of economics' truly lasting ideas from several centuries, but it comes close. The number of copies sold and number of professional reviews suggest that professional and lay readers alike recognize the remarkable potential of this idea. Part I, therefore, attempts to introduce the thesis in plain terms and to show its counterintuitive qualities. Part II widens the picture with some discussion of alternative explanations of some of the data, as well as selected objections to the logic advanced in the book. Part III turns to assets that are excluded from Piketty's calculations. Part IV then explores the book's suggestion about wealth taxation and other means of offsetting the march to destabilizing inequality. The discussion uses the occasion of Piketty's great splash to introduce the idea that optimal fiscal policy needs to include considerations of political decision-making, or public choice. Concerns about inequality might provide the impetus necessary to make us rethink the way we tax and spend.

I. The Basic Thesis: $r > g$

The central idea begins with the observation or intuition that the rate of return available to a passive investor generally exceeds the rate of growth in income available to most people in an economy (pp. 25, 571). One who sits back with inherited wealth, reasonably well-invested, will have an increasingly large claim on resources compared to the hard-working laborer across town who relies on earned income. Over time, the gap between the two will grow and, on a larger scale, wealth (as well as income) inequality in the economy will increase. For a variety of technical reasons, Piketty normally states this thesis—or trend—in terms of the inequality, $r > g$, where r is the rate of return on capital, and g is the growth rate of the economy. Readers who have shielded themselves from this claim or who are meeting it (or large parts of economics) for the first time, would do well to think about $r > g$ before proceeding.

Some simple observations about r and g may be useful. An individual can flourish economically and increase her earnings faster than the economy grows, but all individuals cannot. There are different ways we could measure national income, but the notion is that average (and aggregate) individual income is tied to national income. This growth in income, g, might depend on population, immigration, and technological change, but it is observable, and Piketty will rely not on theories about g but on observations over time.

It is easy to observe one's own savings stagnate in an era of low interest rates while getting raises at work, and imagine that g must exceed r, and perhaps by a fair amount. This was especially so when many families' savings took the form of equity in housing, and that asset class, declined in value. At the same time, when the rate of return from invested savings, or capital, is high, it is often so because the investor had some tolerance for risk. When people imagine what their world would be like if they had bought Google stock when it was first available, or when they observe peers in Silicon Valley becoming wealthy through stock options, they are not really accumulating evidence of high *r* but rather of returns to risk. Myopia is similarly apparent in assessing *g.* An individual might experience low *g*, but the population (and even the working-age population) might be increasing, so that per-capita *g* is low but *g* is relatively high.

Piketty is terrific at helping the reader comprehend these things. One feels in especially safe hands when it comes to the author's specialties: acquiring and explaining available data sets, and analyzing evidence about national income accounts, and the return on capital, including profits, dividends, rents, and interest. The more one reads *Capital in the Twenty-First Century*, the more one will become convinced that over the long run—and in many places—*r* is indeed normally greater than *g.* If it helps to have actual numbers in mind, then it might be useful to think of the long run return on capital, *r,* as 3 or 4% (pp. 208, 358, 361), and the long run growth in income, *g,* as 1.5% (pp. 73, 93). Higher growth rates are often associated with developing economies, technological advances, and sudden improvements in infrastructure. Once economies mature, however, we can expect some convergence in *g*, if not in *r* as well (pp. 69-71). Almost amusingly, Piketty is quick to assure us that even a *g* of 1% is formidable when compounded over many years (pp. 95-96). Fifty years of that kind of *g* yields a complete change in lifestyle. It goes without saying, though it is never quite said, that half a century of sitting back and earning 4% on one's inheritance would produce yet more dramatic material changes.

It bears emphasis that it is the long run that counts. The book, and perhaps all serious discussion of inequality, is about the long run. If we see hedge fund managers making a great deal of money for several years, while school teachers are experiencing stagnant pay, we might have reason for concern, and we can expect passionate discussion of such things as comparable worth and whether markets really work. But seasoned observers know that industries and incomes rise and fall. The starting salaries at large law firms grew about 5% a year for nearly two decades until 2008.[2] No insular law student would have believed that *g* was really 1 or 2%. But the cost, and even the net cost, of law school was also skyrocketing, the stock market and inflation had their own histories over the same period, and the prospects of law school graduates fell quickly after 2008. At various points during those heady years, one might have made all sorts of claims about growing or shrinking inequality. But inequality is a macro-economic topic, calling for data over a long period from many or all industries. Even thirty-year snapshots are entirely inadequate, especially so when the researcher can pick and choose among periods. Piketty might lead us astray with this tactic here and there,[3] but where the all-important *g* and *r* are concerned, his data go back as far as good data are available, and

[2] *See* Judith N. Collins, *Salaries for New Lawyers: An Update on Where We Are and How We Got Here*, NALP BULL. (Aug. 2012), http://www.nalp.org/august2012research.

[3] See note 27 (selective Harvard investment returns)

the reader is treated to discussions of income, capital stocks, and inequality trends over generations and even centuries, and across many countries. If *r* exceeds *g*, then those who inherit wealth will outperform, if that is the word, those who work, and who live off earned income rather than income from capital. Over time, inequality will become more dramatic. The haves will thrive while the have-nots will need to hustle to get a share of the mere 1 or 1.5%. To be sure, *r* is not always greater than *g*, and there can be reversals. If it were not so, Piketty's inequality would be obvious. The data reveal that 1914-1945 was an unusual period (pp. 274-278, 284, 293-94). The World Wars and the Depression were trend-busters. They altered the value of assets and ownership structures; they caused population shifts; and, perhaps as important, they facilitated dramatic changes in tax rates and social welfare policies. In many ways, Piketty's insight is to show that the inequality trends of the last couple of decades are of a piece with hundreds of years of economic history.

Is there a problem? If $r > g$ were embedded in a larger pattern in which *g* was relatively impressive—or even perhaps where *g* increased with the inequality—then for many observers there would be no problem to solve. Inequality for most people is a way of thinking about the well-being of those at the bottom of the income distribution.[4] If their lot is improving rapidly, few begrudge the wealth at the top, and that would probably be so even if the growth at the top were yet faster than that at the bottom. For example, if supermanagers, as Piketty calls them (p. 265), in the United States made increasingly large amounts of money compared to rank-and-file workers, but American companies regularly outperformed their foreign competitors, so that even the lowliest workers received a piece of a rapidly growing pie, then inequality might be accepted as the price of a higher standard of living for all. The American story would be one of incentives to encourage the best managers. Similarly, if American exceptionalism included not only more dramatic inequality than is found in Europe and Japan, but also significantly more rapid technological improvements, then we might insist that greater returns to innovators sparked economic growth. Piketty's evidence blocks this escape. To be sure, the future might prove him wrong, and the great stagnation of the last several years helps Piketty's claim, but the point is that we now have a theory, built on $r > g$, that makes the optimistic story about rewards to innovators and managers less plausible. There have been periods when higher executive salaries in the United States could be associated with better stock market performance, but such optimism about the American Way is sensitive to the time periods chosen for inspection. Over the long haul, we can see that mature economies settle into similar growth rates. Just as the recent superb performance of the Chinese economy does not prove that China's political or economic structures are superior to those found in Western capitalist states, so too some periods of American out-performance should not convince us that a high ratio of executive-to-worker salaries produces magic.

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[4] Compare Harry Frankfurt, *Equality as a Moral Ideal*, 98 Ethics 21 (1987) with Thomas Nagel, *Equality* in MORTAL QUESTIONS 107 (1979), and see Cass Sunstein, *Why Worry About Inequality?*, BLOOMBERG VIEW (May 13, 2014), http://www.bloombergview.com/articles/2014-05-13/why-worry-about-inequality.

But even if inequality does not promote economic growth for the general good, what problem does it represent? *Increasing* inequality is, of course, what $r > g$ promises, so the question has special bite. Is increasing inequality unseemly, immoral, or destabilizing? The latter seems likely only if there is no improvement in the standard of living for the masses. Piketty does not dwell on this question of the precise problem with inequality, and that may be because it is a question that seems unrelated to his expertise in economics. But when he discusses the importance of public investment in education,[5] he seems to be proceeding as if the obvious lesson of stubborn or even increasing inequality is that it must reflect inequality of opportunity. It is likely that for many citizens this is an important feature of inequality. Inequality, and growing inequality, startles us because we like to think that the American dream is a reality for many. If it is not, then we see inequality as likely reflecting unequal opportunities, and that strikes us as inefficient and wrong. Note, however, that this sort of thinking about inequality is not the immediate subject of Piketty's book. The $r > g$ claim is that even with perfectly equal access to good schools, good jobs, and other opportunities to develop one's capabilities, inequality will increase so that correctives are necessary.

If serious inequality goes uncorrected, and the society is not so affluent that even those in the lower part of the wealth distribution can afford good health care, schools, and enriching activities, then inequality is likely to be associated with increasingly unequal opportunities. Citizens who do not have access to good schools or adequate health care are obviously disadvantaged, and often tragically so, and they represent missed opportunities for the society as a whole. Growth and well-being come not merely from our own work but from that of others, and with rare exception we are better off when our fellow citizens, local and global, are allowed to flourish. This is one reason to fear that inequality slows economic growth.[6] Piketty does not press this sort of claim. He assumes that readers will find increasing inequality abhorrent, perhaps as a moral matter or as a threat to political and social stability. To the extent that some reviewers have suggested that more attention needs to be paid to the question of whether inequality, and even increasing inequality, is a bad thing,[7] an easy answer is that of course it is so when there is reason to think that it reflects and brings about suboptimal opportunities for many low-income people. In our era, grave inequality, whether in the United States, China, India, or Britain, is associated with millions of people who cannot flourish and, without basic tools and opportunities, cannot even contribute to the economy as the majority would wish. The prospect of this sort of inequality worsening is horrible to contemplate from every political angle.

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[5] Piketty (pp. 485-86) focuses on higher education even though it is likely that much earlier childhood education has more bearing on inequality.

[6] *See e.g.*, George Psacharopoulos & Harry Anthony Patrinos, *Returns to Investment in Education: A Further Update* (World Bank Policy Research, Working Paper No. 2881, Sep. 2002); James J. Heckman, *Schools, Skills, and Synapses*, 46 ECON. INQUIRY 289 (2008).

[7] See Sunstein, supra note 4.

II. Doubts about the Thesis

Skeptics can resist Piketty's data, extrapolations, omitted variables, or policy prescriptions. Part III tangles with some important exclusions from the data, and Part IV explores Piketty's idea of softening inequality with a periodic wealth tax. But I turn first to the possibility that even unimpeachable data as to $r > g$ do not support the claim that the inequality will continue in the future. Perhaps r has had a good run, but diminishing returns to capital must eventually set in. On the other side of the inequality, the recent emergence of very highly compensated professionals and entrepreneurs may be temporary, or may reflect technological changes that will soon trickle down to the middle and lower classes which, in turn, change in composition because of immigration. At the same time, the fortunes created and enhanced by r may shrink because of consumption patterns, bequests, and philanthropy, so that inequality will not grow as predicted.

A. Diminishing Returns to Capital

The stubborn character of the $r > g$ centerpiece must puzzle students of introductory economics as it has professional economists. If the rate of return to capital is high, then there should be more investment in capital. Individuals can be expected to save more and to defer consumption. Further increases in the capital stock can be anticipated if we allow for capital mobility and foreign investment, so long as r has not already settled into some transnational equilibrium. But as high returns attract capital, opportunities to earn high returns ought eventually to diminish, and decreasing returns should be expected. Moreover, if capital remains expensive, because its suppliers need to be paid high returns, then there is room to substitute labor for capital. This demand for labor ought to increase g. Piketty's response to this doubt about the long-term claim regarding $r > g$ is essentially to report that it simply has not been so. He has examined the long term, and r in particular has been remarkably stable.

There are reasons to be surprised about long-term stability of r. For example, returns to land can be expected to rise as the population increases, because the supply of land is almost fixed (landfill has done wonders in Chicago and Hong Kong, but these were unusual and very expensive projects). If the return to land is stable, it must be because building up reduces price pressure on land itself. Technological change has improved yields per acre and this, along with better transportation to distant lands, must have offset the effect of increased population on the returns to agricultural land. With respect to other forms of capital, perhaps technological change has offset diminishing returns.

In a theoretical vacuum, $r > g$ might seem implausible. In turn, any prediction about increasing inequality would be weakened by the claim that the rate of return to capital, r, will surely fall in the future. Piketty's book has attracted attention because it says, essentially, that data do not lie. The evidence now amassed from the last couple of hundred years suggests that optimists stop waiting for something that has never happened in the absence of war or similar shocks. At every turn it is useful to remember that this is a thesis driven by data rather than by theory. This is one reason why some of the critical reactions to the book focus on the data.[8] Piketty, in turn, has defended and been defensive about his methods.[9] I leave that debate to economics journals and assume, if only for the sake of argument, that a good case can be made for Piketty's choices and interpretation.

B. Consumption, Bequests, and Philanthropy Should Dissipate Fortunes

But why would the rich want to be so rich? If the rate of return is reliably stable over long periods with diversified investments, why do wealthy people not spend more and then, in the aggregate, offset or even reduce the growing inequality? Piketty proceeds with the idea that rich people reinvest more than 60% of their returns (p. 395), and this leaves plenty of room for the wealthy to put yet more distance between themselves and those who started behind them. However, even if wealthy people enjoy amassing fortunes rather than spending them down, the same is unlikely to be true for their heirs, who will need to spend a greater proportion of the capital on hand in order to maintain the lifestyles to which they become accustomed. Fortunes are often divided through inheritance and even a casual look at lists of the wealthiest people shows that new names appear all the time, and old names fall off the list, often because of division through inheritance.[10]

Piketty's thesis does not require that the richest people remain on any list. Increasing inequality is consistent with the children and grandchildren of the super-rich falling only so far as down to the top .1% or even 1%. These wealthy people may also "spend" money in ways that preserve capital. They may, for example, buy multiple residences and gain utility from the ownership of these properties; the actual consumption cost is limited to foregone rents, or earnings available from other investments they might have made instead. More generally, many super-wealthy people behave as if money is not a medium of exchange but rather a means of keeping score. The pleasure is in the accumulation and, for a subset of these people, the perception by others that one's score is impressive or that the score signals something important.

Piketty's argument does not require an understanding of why wealth is retained rather than consumed. It is hard to know whether he is more offended by passive wealth

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[8] *See, e.g.,* Chris Giles, *Piketty Findings Undercut by Errors*, FIN. TIMES (May 23, 2014), http://www.ft.com/intl/cms/s/2/e1f343ca-e281-11e3-89fd-00144feabdc0.html#axzz39SQelkgz.; William McBride, Thomas Piketty's False Depiction of Wealth in America, August 4, 2014, http://taxfoundation.org/article/thomas-piketty-s-false-depiction-wealth-america.
For an overview of some of the issues, see Scott Winship, Financial Times vs. Piketty on U.S.: Smoke, No Fire, June 3, 2014http://www.economics21.org/commentary/financial-times-vs-piketty-us-smoke-no-fire; Scott Winship, Is Wealth Inequality Rising? (On Paul Krugman's Ambiguity Denial), June 2014, http://www.economics21.org/commentary/wealth-inequality-rising-paul-krugmans-ambiguity-denial.

[9] Thomas Piketty, *Technical appendix of the book,* Capital in the Twenty-first Century*, Appendix to chapter 10: Inequality of Capital Ownership, Addendum: Response to FT* (May 28, 2014), http://piketty.pse.ens.fr/files/capital21c/en/Piketty2014TechnicalAppendixResponsetoFT.pdf

[10] The point is made in many reviews, including the excellent Lawrence H. Summers, The Inequality Puzzle, Summer 2014, http://www.democracyjournal.org/33/the-inequality-puzzle.php?page=2.
Note that inherited wealth is a large fraction of wealth but there have been periods, at least in some countries, during which wealth was mostly earned in one's lifetime (p. 402).

or by the rich getting richer, as they would if they also worked. The problem is likely rhetorical rather than political or economic. If he holds up Bill Gates or Warren Buffet as exemplars of the inequality problem, readers will rebel and insist that these people work for some of their money, and that huge returns might well give them an incentive to work more and to create wealth for others. But when he returns several times to Liliane Bettencourt, heiress of the cosmetics company, L'Oreal, the reader begins to chuckle at the prospect of Ms. Bettencourt's choosing to go to work (p. 440). Had she done so with any success, the inequality meter would have tipped yet further to the right. The book is at its best when it clings to its central thesis; Gates and Bettencourt leave the rest of us further and further behind because the rates of return they earn on their capital exceed the increases in income earned by the rest of the pack.

Gates and Buffet have, famously, done much more than consume or count points; they have spearheaded a remarkable initiative by beginning to give away more than half their fortunes and encouraging other billionaires to do the same.[11] Their behavior is not unusual in the United States, which has a long history of great philanthropy.[12] Many donors work hard to avoid taxes and to accumulate wealth, and then they turn around and give most of it away–often (but obviously not always) to causes the government would have funded with additional tax revenues. They are like the customer who negotiates the price of a trip to the airport, and then arrives at the destination and tips the driver more than the amount saved by hard bargaining.

Private philanthropy, and the tax deduction for charitable giving, may be socially efficient if it outsources the identification and monitoring of recipients to persons with better information than the government possesses.[13] It is even possible that this delegation of decision-making to a small number of wealthy people and foundations overcomes collective action and interest group problems. The topic is of little interest to Piketty, perhaps because private philanthropy is much less important in Europe, and even less important in Asia. American economists, and certainly law-and-economics scholars, are far more likely to think of philanthropy as enabling (healthy) private-public competition in such things as education, and especially higher education, and health care.

Private philanthropists have influence on the institutions they support, and some of it is probably good. Universities must answer to their donors and try to show that marginal contributions really make a difference. Large-scale philanthropists may well determine the priorities of some universities. Academics are likely to find this appalling,

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[11] To date, 137 individuals or couples have joined Buffett and Gates in taking the pledge. THE GIVING PLEDGE, http://givingpledge.org/index.html (last visited Aug. 4, 2014).

[12] Zoltan J. Acs, Why Philanthropy Matters: How the Wealthy Give, and What It means for Our Economic Well-Being (2013).

[13] See Saul Levmore, Taxes as Ballots, 65 University of Chicago Law Review 387 (1998) (characterizing tax treatment of charitable giving as a means of political decisionmaking); David Schizer, *Subsidizing Charitable Contributions: Incentives, Information and the Private Pursuit of Public Goals*, 62 TAX L. REV. 221 (2009). But see Ilan Benshalom, The Dual Subsidy Theory of Charitable Deductions, 84 Ind. L. J. 1047 (2009) (criticizing generous view of deductions as antidemocratic).

but the real question is how this compares to systems in which government bureaucrats make all the decisions.

Finally, for many donors, philanthropy may be a kind of consumption activity. For some, philanthropy is a positional good, and they compete with one another to be more generous, to associate their names with good causes, and to gain access to celebrities. Even the most consumptive philanthropy often produces benefits for others. Most low-income citizens would prefer that the wealthy try to outdo one another with philanthropic endeavors than that they compete with lavish yachts.

In the United States, philanthropic transfers are of the same order of magnitude as the amount that Piketty would extract through a progressive wealth tax, discussed in Part IV below,[14] and so it might seem as if philanthropy can undo a good deal of inequality. But any claim of equivalence, or substitutability, between a plausible wealth tax and voluntary philanthropy is speculative and approximate. For one thing, government spending and then redistribution (of the putative wealth tax) might or might not be more progressive than this philanthropy. Charitable gifts to churches, like gifts to well-endowed universities, will strike some readers as excellent alternatives to government spending and as the best means of creating an equal opportunity society. More skeptical readers will deride such gifts, especially if the donor is a member of the church or an alumnus of the university receiving the gift, for these can seem like transfers to one's own clubs. But even if we think of all philanthropy as socially desirable or as redistributive as government programs would be, it is hard to know whether a wealth tax would displace private philanthropy. It is possible that philanthropy in the United States is much more significant than it is in Europe because higher taxes and greater social welfare programs encourage wealthy Europeans to think that they have done their part through taxation. There are other explanations for the philanthropy gap between the United States and Europe (and Japan). Tax laws play a role; a significant fraction of philanthropy is to or through churches, which have thrived in the United States and declined in Europe; and American entrepreneurial traditions may simply carry over to philanthropy. Note that even if wealthy people are less inclined to be charitable when they perceive that higher taxes are doing the work, the higher tax rates might also induce more charitable giving than would otherwise be the case, in either Europe or the United States, because the conventional tax deduction is a more potent incentive in higher income tax brackets.

In any event, it is plain that even in the United States philanthropy does not undo inequality. For one thing, lower income people also give away significant amounts, in part because of the relative importance of religious organizations. More important, total

[14] American philanthropy, as a percentage of GDP, has varied between 1.7% and 2.2% in the last four decades. *See Giving USA 2013: The Annual Report on Philanthropy for the Year 2012 36 (2013)*. A substantial portion of that philanthropy comes from high net worth households. *2012 Bank of America Study of High Net Worth Philanthropy*, INDIANA UNIVERSITY LILLY FAMILY SCHOOL OF PHILANTHROPY (Oct. 9, 2012), http://www.philanthropy.iupui.edu/news/article/2012-bank-of-america-study-of-high-net-worth-philanthropy-finds-donors-firmly-committed-to-and-highly-engaged-with-nonprofits.

giving by the top decile or one percent is a large amount, but not nearly enough to offset the increasing share of income that has gone to these groups in recent years. We return, as always, to *r* and *g.* Over the long haul *r* is much greater than *g*; even after the owners of capital consume more, bequest more, and give away more, they are left with returns that exceed *g*.

C. High Earners as a Temporary Phenomenon

Technological change in the last several decades has helped generate great wealth for a few people and very substantial incomes for a subset of professionals, but economic growth and the standard of living for the vast majority of Americans have not enjoyed similar advances.[15] Piketty's readers are encouraged to see American stagnation as part of the long run story of $r > g$. Viewed from Europe, the United States looks like a greedy place where the rich get richer, finance political candidates including themselves, resist providing health care and other necessities to the poor, and decline to be taxed at just rates. But when Americans look in the mirror, they continue to see the American dream. Most ignore the fact that Bill Gates's father was a successful lawyer, probably a member of the 1%, and visualize instead the college dropout who became a billionaire, as did his competitor, Steve Jobs, who started Apple in his family's quintessentially American garage. There are data to support the optimistic view that inequality is or can be transitory because there is significant upward mobility even from the lowest rungs on the income ladder.[16] At the high end, the richest Americans in 2010 were not the same as the richest in 1985, just as the Fortune 500 corporations have turned over a great deal.[17] If ours were among the most unequal societies, but today's poor became tomorrow's wealthy, there would be less concern. Inequality would seem like the natural outcome of an incentive-based society, and the turnover would be taken as proof of equal opportunity. Upward mobility has, however, probably decreased in the United States, though it remains to be seen whether this short-term trend continues. It is especially troubling that upward mobility is extremely low in some regions of the country.[18] Nor is it clear that the problems of the underclass have much to do with $r > g$. In any event, a critic might say, if $r > g$ is the key to understanding inequality, then should we not expect a great deal of stability at the top?

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[15] Compare Erik Brynjolfsson & Andrew McAfee, The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies (2014) (optimistic view of digital age) with Tyler Cowen, The Age of Stagnation (2011) (the "low-hanging fruit" has been picked).

[16] Compare Raj Chetty et al., *Is the United States Still a Land of Opportunity? Recent Trends in Intergenerational Mobility* (National Bureau of Economic Research, Working Paper No. 19844, 2014) (mobility has been fairly constant) with Katherine Bradbury, *Trends in U.S. Family Income Mobility, 1969-2006* (Federal Reserve Bank of Boston, Working Paper No. 11-10, 2011) (upward mobility has decreased).

[17] For an in depth look at the trends among the very rich in the 1990s, *see* ARTHUR B. KENNICKELL, FED. RES. BOARD, A ROLLING TIDE: CHANGES IN THE DISTRIBUTION OF WEALTH IN THE U.S., 1989-2001, 2-4 (2003).

[18] http://www.equality-of-opportunity.org

One explanation for the upward and downward movement at the top is that very high earners, like successful hedge fund managers, have made their way into the ranks of the rich and super-rich. This might be a source of doubt about Piketty's claim of increasing inequality because the conditions that brought about these high earners may not be long-lasting. These high earners come from three sources. The first is ranks of corporate officers, where supermanagers have garnered remarkable compensation packages. The second is the financial sector, where the pattern of compensation allows successful managers and investors to make enormous fortunes. The third significant source of high earners is the entertainment industry, including professional sports, where digital media and globalization have created a superstar economy. The economic success of such standouts as Oprah Winfrey and Michael Jordan has no counterpart in earlier centuries.

It is difficult to know whether these industries will continue to produce high earners. Corporate governance or markets may change; hedge funds and their compensation packages already seem like a fad; and entertainment markets are in flux, especially where income streams depend on intellectual property rights. But even if the conditions bringing about these high earners change, the $r > g$ story will remain. Episodic high earners have more to do with the turnover at the top than with the larger issue of inequality. Further, these high earners may also be the source of some miscalculations. Piketty excludes human capital, partly because it is difficult to measure (p. 46). It is tempting to object that this is like limiting one's search for lost keys to the sidewalk beneath the street-lamp. It is, to be sure, difficult to separate labor from capital where compensation in the corporate and financial worlds is concerned. But there is no reason to think that human capital is distributed in a more egalitarian fashion in the United States than in Europe, and no reason to think that if we included human capital in the calculations, the overall picture would be very different from that set out for us by Piketty.

Furthermore, Piketty's focus on highly-paid corporate officers is revealing. The basic claim is that a fair amount of recent inequality is the product of the generous compensation packages paid to those who run large corporations. It is well known that these compensation packages, comprising salary as well as stock options and other components, have risen in dramatic fashion compared to the compensation of the median worker in these firms. Wages have stagnated while incomes at the top have skyrocketed. Piketty, along with many economists and law professors, thinks it unlikely that such high compensation is necessary or even closely related to corporate performance.[19] Corporations are sprawling entities and it is difficult to calculate the value added by one or a few managers (p. 331). A respectable school of thought thinks that there is a kind of circularity at work, in which companies are pushed to raise compensation packages in order to be competitive with other companies; no one wants to insult the CEO and imply that he or she is sub-average. Moreover, the directors and consultants who help set the

[19] *See* LUCIEN M. BEBCHUK & JESSE M. FRIED, PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISE OF EXECUTIVE COMPENSATION (2006).

compensation packages are often appointed, or at least identified, by the managers whose pay they are to determine. These directors and consultants often benefit when the compensation packages they recommend are part of an upward spiral.

There is surely a good deal of truth in this line of argument, but it is revealing that Piketty prefers to dwell on these highly paid CEO's, or supermanagers, rather than on hedge fund managers or other new entrants to the ranks of the super-rich. This may be because he, like most economists, clings to the idea of rational actors in efficient markets. The story about supermanagers' excessive compensation is palatable because shareholders are dispersed; few find it worthwhile to object to managerial compensation, and their objections would not amount to much anyway. They can exit, or not invest in these corporations in the first place, but it is difficult for other corporations to promise that their compensation packages will not also spiral upward. Some managers shirk a little, exhibiting the classic principal-agent problem, while some extract more compensation than necessary. Economists can accept this story and even claim to have predicted it.

In contrast, the stratospheric compensation of hedge-fund managers is more difficult to rationalize. A typical hedge-fund investor pays an annual fee of 2% of assets and 20% of profits earned. It is possible that in the beginning there were some gifted managers who could find extraordinary investments, but with thousands of funds and trillions of dollars in the industry, the reality of efficient markets prevails. The managers earn fortunes in good years, even if it was the overall market rather than their choice of investments that did well, and then need not rebate money in bad years, when they must make do with the modest fortunes available from the 2% component. Nevertheless, apparently sophisticated customers have flocked to these funds, apparently disagreeing with Piketty's (in my view reasonable) judgment that they earn "pay for luck" (p. 335). Our inability to understand why so many people pay so much to money managers, or stock brokers for that matter, may illuminate Piketty's inclination to notice supermanagers rather than other high-income workers in the financial sector, but it has little bearing on the question of what these compensation packages have to do with long-run inequality. If these high-earners are not episodic, perhaps because investors will continue to play a kind of lottery, then perhaps in each decade we will find a new group of lucky managers. If so, there will be some turnover at the top, but not much impact on the larger picture of inequality. A few thousand lucky superstars per decade do not change the overall picture in a country of some 300 million people.[20]

D. Immigration

Piketty describes the period between 1914 and 1945–when *r* was abnormally low and inequality was shrinking–as unusual because of the wars and Depression that marked the period (pp. 274-278, 284, 293-94). An alternative view is that it was a period in which

[20] It is of course possible that superstar markets will expand. Perhaps donors to universities, or organizers of massive (and not necessarily open) online courses), will pay millions to attract the best physicists or lecturers on Shakespeare, in which case competition among these providers will bring about a new set of super-rich. The top .1% will turn over, but the overall share of income going to the bottom 50% will likely stay the same.

the New World came into its own. New countries and large-scale immigration may undo the inexorable march toward greater inequality that $r > g$ seems to dictate. If so, then it is especially interesting to imagine, as Piketty briefly allows (p. 538), a world in which workers flowed—just as easily as capital did—across borders to higher returns. At present, virtually all countries restrict labor mobility. They do so to protect some groups of domestic workers, ensure stability, maintain ethnic and other identities, and prevent sharing of resources, public goods, and welfare benefits with newcomers.

Free movement across borders seems so unlikely as a political matter that I will not dwell on it further. However, another aspect to immigration, insofar as it impacts inequality, deserves of attention. Immigrants may forestall upward mobility out of the bottom half of the wealth distribution in the United States either because the supply of immigrants depresses wages, or, to the contrary, because many immigrants are skilled, energetic, and educated, and quickly occupy the middle class.[21] First- and second-generation Americans (and their counterparts elsewhere) may also have different spending and saving patterns. If all these things add up as suggested, then the recent decline in upward mobility (assuming that contested fact)—and even the increased inequality—might not reflect any fundamental problem or presage social instability. In any event, much more work is needed to understand the interaction between immigration patterns and inequality.

III. Social Security and Other Public Benefits

Perhaps the most misleading aspect of Piketty's data and lament is his treatment of social security, which is more or less excluded from the calculations (p. 392). We are told, for example, that 50% of Americans have, essentially, no wealth at all (p. 336). The financial assets of this 50%, and even the lower 75%, was, of course, dramatically worsened by the Great Recession of 2008, especially with the decline in the value of housing. A remarkable fraction of the population emerged with negative housing assets, as mortgage liabilities exceeded the values of their properties. Unlike their counterparts in Japan and other countries, many of these people had no other savings. They may have been overly optimistic about their future earnings or the value of their real estate holdings, may have felt compelled to support extended family members, or may have calculated that low savings would eventually bring about greater public benefits.[22]

Most Americans without individual retirement savings can expect to live on social security income, and they would surely be surprised to read that they have "nothing." Social Security, like most public pension systems here and abroad, is not—at least technically—a savings plan. Benefits are best understood as the product of ongoing

[21] See, e.g., Magnus Lofstrom & Joseph Hayes, *H-1Bs: How do They Stack Up to US Born Workers?* 20-22 (Forschunginstitut zur Zunkuft der Arbeit, Working Paper No. 6259, 2011) (skilled immigrants do well).

[22] See Saul Levmore, From Helmets to Savings and Inheritance Taxes: Regulatory Intensity, Information Revelation, and Internalities, 81 U. Chicago L. Rev. 229, 23839 (2014) (suggesting that the failure to save may have an interest group dimension as non-savers might develop political power and induce relief).

congressional decision-making, and money in the Social Security Trust Fund is not earmarked in the manner of accounts in most private pension plans. On the other hand, Social Security benefits are largely a function of earnings and therefore of the taxes one paid into the system, although payouts do not consist of these taxes plus interest earned on them. It is not inaccurate to describe Social Security, and most countries' public pension systems, as of the pay-as-you-go variety, but benefits are probably more predictable and reliable than the returns on most private savings, and they are obviously influenced by aggregate contributions in addition to the individual's earnings and "contributions," even though these are designated as taxes.

Piketty's exclusion of current and expected public pension plan benefits from his data may be conventional and defensible, but it gives a terribly misleading picture of the distribution of wealth. Apart from the value of expected benefits, there is the fact that, in the absence of Social Security, many people would surely have saved more and accumulated more wealth. In the absence of Social Security taxes, it would have been easier to increase savings. To be fair, Piketty states, "it is quite difficult to say how different wealth accumulation would have been in the twentieth century in the absence of pay-as-you-go public pension systems" (p.392).[23] But the amounts at stake are so great—and the exclusion so dramatically darkens the picture of inequality—that the book ought to come with a warning that "the dire story told herein excludes Social Security benefits and other public pension plans even though these make a large percentage of the bottom 75% much better off than they appear in these pages."

Piketty further justifies the exclusion of "assets" such as Social Security benefits by arguing that the expected benefits do not belong to the individual. They cannot be sold or transferred. This distinction is weak. First, loans are available from private creditors who take future benefits into account. The more certain these future payouts are, the easier and cheaper the loans, though that is true for many assets. Indeed, we might think of Social Security as a cousin of human capital. A lender can evaluate the likelihood that a borrower will have a stream of income from either of these sources. Student loans are an example of such lending; an entering law student can borrow more easily than can an unemployed twenty-five year old. Lenders recognize the earning potential, or human capital, of the student. Neither human capital (unless reified in intellectual property) nor Social Security is available as collateral that can be repossessed, but the wealth represented by these assets is recognized in the market.

The inclusion of human capital would not obviously alter the prediction of growing inequality. It would probably flatten the picture at the top, as the top 20% would close the gap with the top 1%, but the bottom 50% might look yet worse off. On the other

[23] There is disagreement about the magnitude of the effect. *See e.g.*, Martin Feldstein, *Social Security and Saving: New Time Series Evidence*, 49 NAT'L TAX J. 151 (1996); William G. Gale, *The Effect of Pensions on Household Wealth: A Reevaluation of Theory and Evidence*, 106 J. POL. ECON. 706 (1998); Jie Zhang & Junsun Zhang, *How Does Social Security Affect Economic Growth? Evidence from Cross-country Data*, 17 J. POP. ECON. 473 (2004); Michael Hurd, et al., *The Displacement Effect of Public Pensions on the Accumulation of Financial Assets*, 33 FISCAL STUD. 107 (2012).

hand, the incorporation of public pension plan benefits would soften the entire picture,[24] except for the observation that the United States is in the lead in growing inequality, inasmuch as many European countries offer more generous retirement benefits. The average Social Security benefit is about $15,000 per year.[25] Roughly speaking, one who expects that payout to begin in ten years and last for twenty years can think of herself as having $115,000 in capital. Other reasonable assumptions would yield much larger amounts. For millions of Americans, and their working-class counterparts in many other countries, the promise of Social Security is likely to have an enormous impact on savings behavior.

The best argument for excluding Social Security from the inequality calculations is not that people are unable to trade or monetize their retirement benefits when they like, but rather that unfunded or non-earmarked benefits are not, in principle, different from other public services that are expected but not contractually guaranteed. For example, national parks are also valuable assets.[26] An individual might think of herself as owning a share of national parks and look forward to visiting them when she retires. Indeed, if these parks were privately owned, an individual might save more for retirement in order to afford the entry fees that private owners would charge. If the capital represented by these parks were divided among the population, the inequality picture would also look rosier.

Despite the comparison, it is easy to distinguish Social Security from parks. The former is an expectation about future disposable income, easily measured, while the latter is of uncertain benefit to the future self. Our existing police forces, health care system, and public transportation infrastructure might also cause one to save less; in their absence, taxes would be lower and people would likely save more in order to purchase private services in later years. These examples will seem different from Social Security because they are further removed from disposable income; they concern "assets" not normally included in wealth calculations because it is not obvious that most of us would spend more on these services when old than when young. If Piketty were to include some of these benefits from public goods, it is unclear whether the claim about *increasing* inequality would change much, and whether the United States would look yet less egalitarian than other countries. But it is almost certain that as the public sector has grown, there are more assets that are shared in egalitarian fashion than there were during the Gilded Age, the Belle Epoque, and other periods we are warned against re-creating. Inequality may be growing, but once we take the value of public services into account, not to mention the material goods now available at very low cost, it is plain that those in

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[24] *See* James Poterba et al., *The Composition and Drawdown of Wealth in Retirement*, 25 J. ECON. PERSP. 97 (2011).

[25] http://www.ssa.gov/policy/docs/quickfacts/stat_snapshot/ (Table 2 shows average monthly benefit in June 2014 of $1300 for retired workers and $1188 for all beneficiaries).

[26] Piketty is likely to have dramatically undervalued public land (p. 123) but, unlike public pension plans, this has little affect on the argument about inequality.

the bottom half of the wealth distribution are in no danger of being returned to the world their counterparts faced before the first or second World War.

A different perspective on this last point is to think about proportional and progressive taxation. If the government provides for necessities such as health care, then it is likely that the government must raise taxes to pay for those new benefits. If this tax is proportional to income, then the net effect is likely to be quite *progressive,* inasmuch as the good was previously purchased by individuals. At the individual level, privately supplied health care surely occupies a larger fraction of a lower income person's budget than a higher income person's budget. Its universal provision with a proportional tax is therefore likely to be quite progressive in overall terms. In turn, unless the government is largely funded through regressive taxes, a growth in the government sector at the expense of the private market will almost always decrease inequality. Piketty's enterprise largely ignores this phenomenon.

IV. Taxing Towards Equality

Part Four of *Capital in the Twenty-First Century* advances the idea of a wealth tax designed to undo the described growing inequality that is perhaps made inevitable by $r > g$. Piketty illustrates the idea—or at least suggests how it might take hold—by imagining a European tax of 0% on fortunes under 1 million euros, 1% annually on fortunes between 1 and 5 million euros, and 2% (or much more) on larger amounts. He estimates that this tax would affect 2.5% of the population and bring in revenues equal to 2% of GDP (p. 528). He opines that the tax rate on fortunes above 100 million euros should be above 2% and depend on observed returns, which he estimates at 6 or 7% (p. 529).[27] Inasmuch as capital might quickly exit a jurisdiction enacting this sort of tax, Piketty sketches out the tax as pan-European, and then global. He recognizes that the plan is utopian (p. 515).[28]

But is it even that? It is difficult to evaluate a tax without knowing what it would displace, or how its revenues would be spent. If it were to take the place of the property

[27] In an interesting discussion of investment strategies and the rates of return available to very wealthy investors, Piketty insists that the $r > g$ problem is exacerbated by the fact that very high-end investors earn yet higher rates of return because of economies of scale in acquiring and using information about alternative assets. Some of these returns are not risk-adjusted and some are chosen ex post; indeed, the Harvard University endowment's 5-year return in 2008-13 was especially poor, though Piketty stresses its high points (by using 1980-2010, p. 448) as an example of the high r available to the best-endowed investors. It might have been worth his puzzling over the failure of intermediaries to close the gap between average and high-end investors. The low-fee mutual fund provider, Vanguard, ought to do as well as Harvard, and then pass along most of the gains.

[28] Of course many countries, including the United States, have substantial estate taxes in place. A 40% tax on estates above $10 million, for example, should go a long way toward breaking up large fortunes. But these taxes can be reduced through strategic gifts and other means. At present, and excluding state taxes, the top marginal estate tax rate in the U.S. is 40%, a married couple can pass along more than $10 million with no tax planning, and the tax is paid by less than .2% of estates, and even they pay an average rate of less than 20%, because of various exemptions and deductions. See http://www.cbpp.org/files/estatetaxmyths.pdf (collecting information about estate tax liabilities) An annual wealth tax might be more difficult to avoid.

tax, for example, it would be important to specify the transition rules before evaluating the impact of sudden, dramatic changes in property values. And if the revenues were used for government spending or debt reduction, one needs to consider both the rent-seeking that would take place and the likely winners and losers in the political process. For example, if the revenues were earmarked for government health care costs, the inequality trend would likely be reversed unless doctors and pharmaceutical companies managed to acquire a great portion of the new expenditures. In any event, a global tax on capital is interesting to contemplate and would almost surely yield a more egalitarian distribution of wealth. It is also, however, impossible to imagine in the foreseeable future.

Considerations of a progressive and even global capital tax – with or without human capital and pension plans in the tax base – and how its revenues should be spent demonstrate the importance of politics in any discussions of inequality. There are several reasons why our tax system is not more progressive, and these reasons are weighted differently according to one's political intuitions. Economists focus on incentives and the tradeoff between work and leisure. As the marginal tax rate rises, people might choose to work less. This is a distortion caused by the tax system, and in this case it translates into a smaller pie for others. X benefits when Y works harder, both because of economic growth and tax revenues from Y, and X loses these benefits when Y chooses more leisure. There is also the fear that a high tax rate will drive Y and her work out of the jurisdiction, though we can understand this to be part of a more comprehensive version of the incentive problem. Despite these concerns, however, Piketty remains confident that a wealth tax of several percent will not cause our pie to shrink (pp. 525-27).

But even a 1% tax on wealth could easily have unintended consequences with respect to high earners' incentives. Imagine that one who earns $1 million faces an immediate and significant income tax of 33% and then a kind of double, or two-tier tax, of another 1% in each subsequent year unless the money is consumed. Imagine further that the individual is able to earn Piketty's *r* of 6% each year. Over ten years the impact is roughly equal to an additional 6% levy, or a 39% income tax in that first year. An annual capital tax (on wealth, not merely on accretions to wealth) of 6%, added to prevailing income taxes, would be devastating. Each year's rate of return is subject to the 33% income tax, leaving a 4% net return, which is less than the wealth tax. Slowly but surely the two tiers of taxation would confiscate that original income, and surely discourage the work required to earn it.

A subfield in the economics of public finance begins with the ingenious idea that an "optimal tax" introduces no distortion at the margin and thereby suggests a tax of 0% at the margin.[29] Imagine that a law school graduate can expect to earn $100,000. Imagine also an income tax rate of 10% on the first $17,400, 15% on the next $62,600, and 25% on earnings above $70,700, for a total tax of $17,080. The average rate is about 17% and the marginal rate is 25%. If offered a chance to work extra hours for more pay or

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[29] *See* J.A. Mirrlees, *An Exploration in the Theory of Optimal Taxation*, 38 REV. ECON. STUD. 175 (1971) (showing that the optimal marginal rate on the highest earner is 0%).

permitted to take a second job, this worker might decline since 25% of her new earnings (not to mention other taxes) goes to the government. If the tax rate were higher, the disinclination to work might be yet greater.

The optimal tax literature proposes a world in which this worker faces a tax of 0% on additional income. To collect the same amount of revenue, she could instead be taxed $17,080 on her human capital and its potential when she passes the bar; she then keeps 100% of all her earnings. Alternatively, she might be taxed at a 34% rate on the first $50,000 of income and nothing thereafter, on the grounds that virtually every law graduate can be expected to look hard for a job paying at least that amount.[30] Piketty toys with an optimal wealth tax along these lines and is well known for his work in the area (p. 642-3 n.19).

A serious problem with this way of thinking is that it ignores political decision-making regarding the forces that determine tax rates and government spending.[31] A full discussion of the idea that follows would require some discussion of complexities introduced by representative democracies and other realities, but a Book Review is a place for suggestions rather than complete theorizing.

Consider a majoritarian system in which voters, or even the median voter, determine government spending and tax policy. The median voter might be expected to vote for higher taxes on the wealthiest one percent, or even twenty-five percent, because this voter has absorbed the idea that she is unlikely to find herself in this group in the near future. If productivity falls because the wealthiest groups are taxed too highly, then our median voter might scale back her redistributive inclinations. With some mastery of the optimal tax idea, the median voter – now or behind the veil of ignorance – might design a system in which the marginal tax on wealth is very low; Piketty's global capital tax may be just the thing. But this raises another issue: the median voter will be tempted to raise taxes and spend the revenue on projects that appeal to the median voter, regardless of its efficiency. She expects to bear none of the costs associated with these projects, and so she will support inefficient projects so long as they provide her with some benefit. The median voter will surely favor proposals to redistribute away from the top one percent or decile to the rest of the population but, setting redistribution plans aside, the danger is that the low marginal tax rate causes bad decision-making about other government projects.

This problem demonstrates that the optimal system is not simply an optimal tax system, but an optimal fiscal system. Incentives need to be in place so that government spending is on projects with a positive rate of return, even after redistribution decisions

[30] Note that optimal taxation of this kind requires a great deal of information about individuals. Two individuals earning the same income might easily have different earning capacities, and yet the idea is have each face a 0% marginal tax rate.

[31] There is some literature on integrating public choice and optimal taxation perspectives. Much of it focuses on ex ante constraints in order to avoid rent-seeking. For this perspective, and one that comes to a similar intuition about the advantages of proportional taxation (though not at the margin), see Randall G. Holcombe, Tax Policy from a Public Choice Perspective, 51 Nat'l Tax J. 359 (1998).

have been made. It can be a disaster if the median voter faces a 0% marginal tax, because this voter will want to approve new tax-and-spending programs with negative present values. So long as there is some benefit to the median voter, she will be better off externalizing costs on the wealthy taxpayers who bear positive marginal rates in order to enjoy costless benefits herself. Most thinking about optimal taxation ignores the incentives of voters, but an optimal fiscal approach should take into account not only taxes and work effort but also taxes and spending.

The point is not that redistributive taxes are a bad idea. Rather, it is that they ought to be structured so that, on the margin, voters do not face *lower* tax rates with corresponding incentives to spend while others are being taxed. Redistributive taxes probably should not draw from the margins, and the bulk of voters should face modest, non-zero marginal taxes so they internalize both the costs and benefits of government programs.

In short, a perspective that begins with the work-leisure tradeoff suggests the advantages of low marginal rates, but the political decision-making perspective, regarding taxing and spending, suggests more substantial marginal rates. One possibility is for each voter, or at least those who might be swing voters, to face a marginal tax rate equal to either the average tax rate or, more precisely, the median tax rate of the country as a whole.[32] Something of this kind represents the "optimal voter tax rate," and it is obviously much higher than zero. Piketty's tax on capital falls short because it fails to account for the inclination to overspend once there is a revenue source that comes from the wealthiest taxpayers alone.

Conclusion

Piketty's thesis about the root cause of increasing inequality is a conjecture, but a tremendously important one. It has justifiably drawn notice from various quarters and put *Capital in the Twenty-First Century* at every highly educated person's bedside. If evidence mounts in its favor, attention will turn to the question skirted in this Review—as in the book itself—of exactly why we care about inequality. Severe inequality may be politically dangerous, unseemly, or immoral, but it may also be energizing or episodically inevitable. Picketty casts a dark shadow over the American political and economic systems, but public pensions and other benefits that the middle class now enjoy brighten the picture. Public services available to those near the bottom of the wealth distribution—

[32] Imagine 10 citizen-voters with different levels of wealth. These voters consider building a bridge at a cost of 100 with aggregate benefits of 80, and also consider a new sewer system at a cost of 100 and aggregate benefit of 120. Setting many complexities aside, the median voter will internalize the costs and benefits correctly if she faces a personal—or tax—cost of 10 for each project that passes, and if she is likely to be a typical user of the bridge as well as an average beneficiary of the new sewer system. The problem is complex because the median voter is unstable, but one rough idea is for the voter to face a marginal tax rate equal to the voter's proportion in the population. In this illustration, the voter should pay one-tenth of the cost of each project, and, more generally, the median voter should face a marginal rate equal to the median *average* tax rate of the population. Optimal fiscal policy thus requires that we integrate optimal tax theory, with its focus on the work-leisure tradeoff, and optimal political decision-making. That task must be left for another day.

many of whom do not qualify for Social Security benefits—may be harder to value but also should not be overlooked. In fact, the greatest change in the twentieth century, insofar as inequality is concerned, was surely the dramatic growth of the public sector worldwide, and it surely reduced inequality. Piketty's data and approach obscure that connection, but his recommendation for yet more government intervention should be taken with caution. If inequality indeed worsens and the interventionist route is to be taken, we will need to educate ourselves and our voters not only about the forces that produce inequality, but also about the unintended consequences of redistributive programs.

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